# Host Plants, Butterflies & Neoliberal Spaces: Environmental Subjectivities & the Challenges of Conservation Ecotourism in Kwa-Zulu Natal, South Africa

**by**

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## Table of Contents

## List of Pictures

**Pictures:**

## List of Maps

## Collaborators or Cast of Actors

*Picture 1 Manukelana towards 1999: Rasta Mlambo Ernest, Bro' Musa (with back to camera, Baba Phungula (back to camera and Mduduzi with the paddle).*

*Picture 2 Manukelana in 2012: Mduduzi, Bro' Musa, Rasta Mlambo Erne st, and Baba Phungula.*

**Rasta Mlambo Ernest Maphekulile**

The youngest of the Manukelana Project founding-managers. He grew up in Dukuduku Forest and shortly after he completed high school, the former Natal Parks Board recruited him as a park ranger. Following, he studied Community Conservation at the Mangusotho Buthelezi Technikon (a college in Durban) but dropped out due to political tensions. He resumed work with the Parks Board and followed with its successor Ezemvelo KwaZulu Natal Wildlife. By the time he left them, he had already managed and stabilized four community forest reserves in the Drakensberg area and in northern Zululand. He jointly fiunded the Manukelana Art and Indigenous Nursery where he became the publicity secretary and assumed the role of leadership. Mlambo is an ardent Rastafarian and presently doubles as a host of a local community radio program on Rastafarianism and Community Conservation.

**Baba Phungula**

An ex-South African Defense Force (SADF) soldier. Formerly worked at a mine in the Johannesburg area where he trained as a stores accountant. He also held the same position in the military, besides being a bookkeeper and occasional truck driver. Phungula found his

elementary education compromised during the events that led to the Soweto Uprising in June 16, 1976. Thereafter he sought for recruitment into the African National Congress but was refused entry or training in exile since he was still 14. The anxious Phungula ultimately joined the military to educate himself. Baba keeps a pocket notebook where he jots ideas, highlights of chats and lines for poetry. He's always punctual, has a very sharp memory and listening skills and speaks very good English. He is also an avid reader that enjoys intellectual discussions when not gardening or attending to his family. Most journalists to the project enjoy interviewing him. Baba Phungula is a meticulous collector of archives, books, and magazines. His colleagues at the Manukelana Project often entrust to him the role of accounting and negotiating business deals with outsiders. On the first Saturday of every month for the past ten years, he has undertaken a fast-paced four-hour pilgrimage on foot along the beach from St Lucia to Cape Vidal. The first time I did the trip with him, I was bedridden for days.

**Bro Musa Mzikhali**

Bro' Musa is a former welder, woodcarver and a soccer coach. He has various certificates for having attended workshops and training in practical conservation, woodcarving, vermiculture and aquaponics. He is a keen observer of plants and other life forms as well as details of environmental changes in Dukuduku Forest and its wetlands. He practices "gardening by the moon" and 'communicates' with the plants in the nursery while watering them at dusk, sometimes at night and very early in the morning before the world wakes. Bro' Musa would talk endlessly about the "language of plants" which is not the same as traditional indigenous or esoteric Zulu knowledge over plants. He brews traditional drinks from berries and wildfruit and has a rich orchard of mangoes, avocadoes, guavas and papayas.

**Mduduzi Mhlongo**

Woodcarver and founding member of the Manukelana Project. He is credited for having brought up the concept of 'gardening for conservation'. From oral and written bits of information that I gleaned about him from his colleagues, family relations, white Afrikaans-speaking friends in St Lucia, Mduduzi was a poet at heart, quiet, deeply introspective and conflict-avoiding. He spent much time meditating on creativity, plants, seeds, and assembling people. His passing away in 2012 affected experts of the African Conservation Trust as well as volunteers that had worked on the project and who weren't aware of his situation. He shared

very deep bonds with Bro' Musa and the effects of his passing away are still evident on the latter.

**Sabelo Mhongo**

He's a nephew to Mduduzi. In his early twenties and a graduate of the University of Zululand in accounting. He was elected by the surviving founding members of Manukelana Project and his family to replace his late uncle. That way the 'business' could ensure that Mduduzi's family continues to benefit from his initiative. Sabelo, a much younger generation to his colleagues, runs his own community environmental NGO and hopes to study micro-fauna biology and conservation at university. Mduduzi used to ask him hypothetical questions relating to the dilemmas of a tour guide when he was six.

**Nicolas de Oliveira**

Argentinian natural scientist who migrated to South Africa following its embrace of multiparty democracy and constitutional rule in 1994. He carried out extensive research in the community forests of northern Zululand and switched from the practice of conservation science to community conservation. Along with the African Conservation Trust, and the youth in various communities, he has established four butterfly houses in Kwa-Zulu Natal: the Isiphaphalazi, Eshowe, Tembe, Mac Banana, and of recent, the dome at the Durban Botanic Gardens. Nicolas organizes frequent workshops on butterflying and indigenous gardening for butterflies across the province.

**Vusi Pearl**

Vusi completed high school in 2013 and was recruited in November 2014 as a tour guide and interpreter at the Manukelana Project. Nicolas gave him and Nomvula (below) initial training, in which I also took part.

**Nomvula Musa**

Daughter of Bro' Musa Zikhali and office secretary of Manukelana Project since December 2014.

**Sabelo Mthembu**

Manager of the Tembe Butterfly Dome which is located at the periphery of the Tembe Elephant Park in northern Zululand.

**Vukani Mthembu**

Assistant manager and tour guide at the Tembe Butterfly Dome.

**Prince Tsaka KaMsabe**

Nature interpreter and tour guide at the Mac Banana Butterfly Dome and Agri-project, Margate, South Coast. One of the founding interpreters at the former Isiphaphalazi Butterfly House.

**A Note on the Use of Real Names**

I use the actual names of the founding members of the Manukelana Project as a continuation of video projects they requested me to carry out to market their project. They argued that indigenous nurseries and butterfly conservancies cannot operate without public support and so using their names would advertise their project and enable them to access financing. I also use their actual names because they are public figures. The founding members of the project and main collaborators or actors are well-known to the local and provincial media in Kwa-Zulu Natal. Fourthly, because all of them have been subjected to a history of misrepresentation and non-representation, they insisted that I feature their names, characters, and stories as correctly as I could. Finally, all of them wanted to be seen and to take credit for fighting state corruption, racism, ethnic chauvinism as well as ardent advocates of Pan-Africanism, Ubuntu, a world without borders and ardent conservationists. Most of the clips that I made (about several dozens of them) and which are on You Tube are a part of my contribution to their project.

## Abstract

This is an ethnography of a community-based conservation project in the iSimangaliso Wetland Park, a UNESCO-designated World Heritage Site in South Africa which encompasses St. Lucia Estuary, Dukuduku Forest 'Reserve', the 'English' village of Monzi, Afrikaans-speaking St Lucia Town and several villages featuring largely impoverished black communities. The park faces multiple threats from capital-rich mining prospection, longstanding white settler plantations, a raft of land-restitution claims by historically disenfranchised communities as well as coastal erosion and climate change contingencies. The dissertation is based on nearly two years of participant observation in two of the communities abutting the forest, including two other butterfly conservancies in the province.

The project traces the rise of an indigenous plant nursery started by four Rastafarian-leaning marginalized black South African youth. Through laboring for and obtaining diverse forms of material and immaterial support i.e. from community, state, corporate and international donors, the project morphs into a butterfly conservancy, an urban greening and landscaping project, a tea garden, alongside a community permaculture training tunnel and a vermiculture project. Over a decade, the project becomes a model of grassroots empowerment and NGO-community cooperation and an attractor to the various multiracial communities in the estuary. Could its plants and butterflies give the projects' founding members 'wings to fly' or reconcile the socio-ecologically fragmented estuary?

After seventeen years of experiments, the Manukelana Project has fallen prey to different ideologies of conservation ecotourism, scientific and indigenous knowledge, race as well as conflicting meanings of empowerment. This dissertation evokes how conservation practices generate different meanings for various communities, including state and 'conservation experts' over the status of the environment, ecotourism, human-place-nature relations and knowledge production. Secondly, it outlines how the group's attempt at carving a space for their aesthetic and religious practices is shaped by their ideas of conservation and sustainable development and that such ideas and practices are embedded in a particular history, and in this case, that of racial segregation, absence of religious freedom and post-apartheid state's neoliberal and political policies including its black empowerment program.

In examining the logics, dispositions and techniques of conservation and sustainable development practices, and how these interact with ideas of belonging and state policies such as black empowerment and ecotourism, the project equally shows how a particular history of racialized conservation practices produces different actors who shape new modes of interaction with nature in post-apartheid South Africa. It establishes the links between liminality, creativity and assemblages in conservation ecotourism, and more critically, the role of affective labor in sustaining gardening practices. More critically, it evokes how human, floral, faunal and environmental relations intersect with community practices at the peripheries of state-managed conservancies. It demonstrates that human ecology must train attention not only on the human component and its relationship with/to ecological environments but also on non-human species, both plant and animal, and their agency, which yields dynamics that cannot be predicted or assumed. It proposes that empowerment in community conservation goes beyond the ability to change the material order. It implicates how things are known and enacted. More saliently, it calls for empowering non-human life forms and the living landscapes with which human livelihoods and becomings are inextricably entangled. Field methods underlined the significance of emergent, affective and embodied approaches to understanding assemblages and networks, including multispecies relations.

## Neoliberalism, Estuaries, and Environmental Entanglements

In this section, I establish how iSimangaliso Wetland Park rescinded my original research project on freshwater relations thus obliging me to engage a newer project on indigenous plant propagation and butterfly conservation-ecotourism. Next, I introduce the effects of emerging neoliberalism and discourses of decentralization and black empowerment on a pioneer project of environmental care - a multipurpose 'gardening for conservation' project. Founded by two woodcarvers, a park conservationist, and finally an ex-soldier who team up into an almost frenetic collective, they seek firstly to save the age-old wood carving tradition through saving the rare and damaged Dukuduku indigenous sand dune forest; secondly, to green emerging and neighboring dusty settlements composed largely of apartheid and protected area evictees; and, thirdly, to position themselves as "business conservationists". Their project, however, goes against the grain in two main ways. Firstly, it challenges entrenched community disaffection towards efforts directed at fostering conservation on land that it does not own. For the isiZulu-speaking wetland communities that have lost all their land and heritage resources to the protected area beginning from 1911, "Conservation" equals consolidating oppression and dispossession. On the other hand, as ardent conservationists, the project founders seek to reclaim politics from the state, economy from the market and knowledge from science to benefit their project and their community. Will they succeed against the current of historically and institutionalized framings that represent them as lacking civilization and culture with the implications that these discourses have in terms of property ownership, community development, resource management plaguing the estuary environment, and above all knowledge production? Could optimism be found in resisting the past? If not, then how would one characterize processes of globalization, and policies/practices that aim at neoliberal environmental change, black empowerment, decentralization and devolution of power?

**“Fieldwork” in a Wetland: Knowledge Production vs. Institutional Legitimacies**

A few days after reaching St Lucia Estuary in April 2014, when I went to the iSimangaliso Wetland Park Office to sign the necessary papers to begin fieldwork, a devilish knot popped up. The Research and Education Officer, who was in her early to mid-thirties, and had done her own Master’s Degree project years earlier on tourism in the conservancy, and with whom I had enjoyed a productive e-mail relationship, mildly welcomed me. She empathized with me for all the troubles I had undergone to get to South Africa. I had spent about a year waiting to get a new passport from my home country and to renew my research authorization from the park as well as obtain a research permit from the South African state. The officer informed me that there was a little snag with my intended project. She hoped that it could be resolved before they see about my work. A few weeks ago, the park executive held a meeting and a moratorium was placed on research at the separate St Lucia Estuary and Mfolozi River mouths. This was due to an on-going reconstruction project to link the two mouths together and then the joint mouth to the sea. Perhaps, I had read about the project already? Yes, I replied and reminded her that I had talked about it in my previous research proposal and how I longed to see my research help in that regard. “Right, we decided during that meeting that you have to revise that project proposal and present it to us, before we can authorize your research”. I responded that I would gladly revise it, believing that what the proposal required were minor revisions. What she next told me left my feet feeling jittery on the floor.

She informed me I had to change my research subject entirely because they were not authorizing any natural or social science research on freshwater issues in the estuary mouth until 2017. I felt my heartbeating over what had been my most innermost fears. Right from the beginning as I wrote my proposal, I hadn’t trusted that the park would allow me to carry out research on the meanings and values of freshwater flows at the lake and river mouths without wanting to control the research outcomes. She suggested that the only alternative I had was to change my research topic entirely. She asked whether I had any suggestions. I thought a little and couldn’t bring up any. I had already spent a year working on a proposal on conflicts over Dukuduku Indigenous Sand Dune Forest, which one could see from the windows of the park office. The high risk that I would not be granted field entry by the dwellers of the forest, and even so, that my comings and goings in the forest might place my life at risk had made me rescind the topic. After that, I had embraced the topic on freshwater, which I found closer to my personal and scholarly pursuits, and which had seen me visit the park a few times at the

turn of the 21st century. Foolishly I had thought that researching water, rather than land and forestry over which there was much acrimony in the wetland, was safer.

"What about working with wildlife?" she asked. "We are trying to introduce lions here and maybe you could look at how it would boost tourism here?"

Besides that the subject was a little far off from my thematic concerns, I didn't want to do quantitative research: counting wildlife or counting tourists. And I didn't want to do any work where I would be subject to the control of the conservancy, as this could in the end lead to a hostage situation. Conservancies in South Africa are not the safest places for researchers that tend to ask too many questions or see "too much." I was aware that many African Nationalist guerilla fighters had vanished in iSimangaliso – which means the park had a history of working with the apartheid government, which hasn't been investigated by virtue of their control over their territory.

"What about local participation in tourism?" The last was a favorite topic for students and social science staff coming from the nearby University of Zululand and Kwa-Zulu Natal. I suppose that they found the topic politically 'safe' subject and not threatening to the park. Even so much of this research was still carried out among the isiZulu community of Khula Village, Dukuduku Forest, both of which lay outside the park's confines. In fact, the Education Officer herself had written her Master's thesis, which I found quite uncritical, on tourism within the park. As a whole, I wasn't emotionally and scholarly prepared to switch to any topic outside of water. For virtually two years I had lived and bathed in literature over water and wetlands. I had also spent a year at the Atchafalaya Basin, South Central Louisiana, and I saw my present research simply complementing what I had already done. I gathered courage and suggested to her that might I perhaps alter my topic and research surface and groundwater flows outside of the park proper, let's say in Dukuduku Forest, the Mfolozi Flats, Khula Village, and St Lucia Estuary, over which the Afrikaans residential community of St Lucia shared joint jurisdiction with the park?

"And what would you be looking at in the above places and at the estuary?" She asked.

"I could look at different knowledges and experiences, for instance gender perspectives on freshwater flows, or even better, terrestrial and aquatic perspectives in iSimangaliso Wetland?"

“I don’t know what that means”, she said, “but so long as you don’t go close to Lake St Lake and the Mfolozi River mouths.”

I informed her that I had been there and found tourists traipsing about the place as well as fishermen fishing.

“But not researchers,” she said. “And you’d be putting yourself at the risk of being shot by KZN-Wildlife guards that regularly monitor the area. Besides you won’t be having any permit from us to work anywhere. We won’t authorize any of our scientists to work with you, and if anything happens to you in the area, we are not accountable.”

As I was wondering how we could possibly arrange a project over water, I found her expression getting increasingly irritable. Now, I tend to be very cheerful and would go out of my way to cheer up interlocutors so as to always make any meeting a cheerful and positive event.

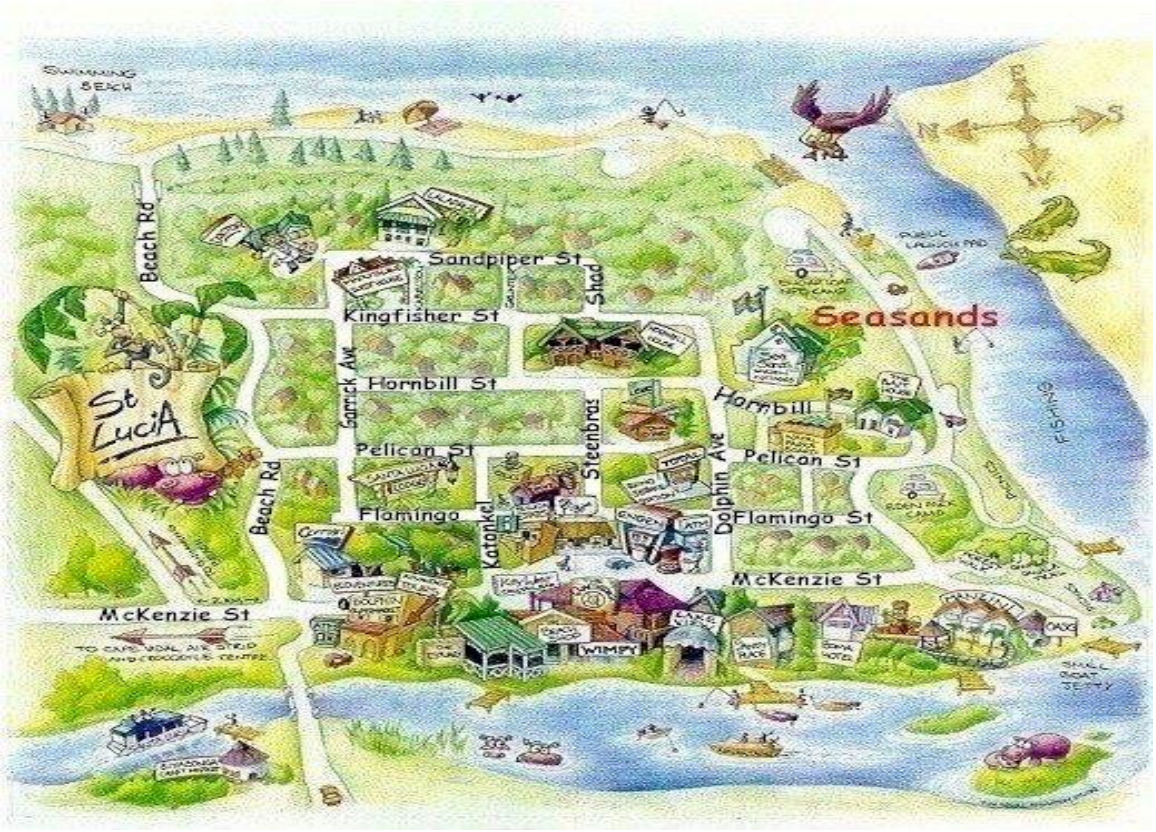
“See”, she breathed out without warning, “the problem is that some of you researchers are not to be trusted. Some of you publish things that *I just don’t know*…” she counted her words. “Just a week ago one researcher we trusted has published a dissertation online that has put us in a very difficult position.”

The utterance left me entrapped. “I’m sorry to hear that,” I said.

The dissertation she was talking about was Melissa Hansen’s *Struggles over Conservation: Space Social Justice in the iSimangaliso Wetland Park, South Africa*, which she defended on the 27th of February 2014, and which was published online just as I reached the park in April of that same year. I had downloaded the dissertation and hoped it would help me in terms of theory and data on spatial conflicts. It was pretty critical about the park’s handling of land and spatial conflicts with the communities within its problematic jurisdiction.

“What does she think she’s going to achieve by what she’s written? How does it help her publishing it online?”

I kept quiet. I could see that she was exasperated as the education and research officer. The dissertation definitely threatened her office and position. She suggested that should I change my mind about working on water, I should give them a call, and so saying she left. A security guard ushered me outside.




*Map 1 Lake St Lucia and St Lucia Town (Compliments: Seasand Lodge, St Lucia Town).* While St Lucia Town is mapped and laid out, just like iSimangaliso Wetland Park is mapped into zones and tourist trails, one cannot say the same for Khula and Dukuduku Forest Village. Until recent, Dukuduku Forest and Khula Village didn't appear on the maps or brochures or maps of the region, whether on those produced by iSimangaliso Wetland Park or by the tourist lodges in town. Almost all the housing structures seen above are lodges.

The idea of a call sounded ridiculous to me. The iSimangaliso Wetland Park office lay barely half a mile away from St Lucia Town where most people enjoyed taking leisurely walks either to observe one of the many colonies of vervet monkeys, have a chance to see any of the colonies of the black-banded mongoose, some of the more than eighty species of birds in the estuary, the hippos and crocodiles in Lake St Lucia and other biodiverse phenomena that brought together more than they separated people.

As I began the ascent towards the huge garbage dump that lay between the office and the road to town, my head was spinning. What if I continue my research outside of and without the park's authorization? Whereas I was initially afraid when I went past a huge and burning

garbage dump that lay between the branch road and the park office – which I found five scary and disheveled youth rummaging through the dump all of which was odd because the scene lay less than two minutes' walk from the park office – my original fear was now replaced by anger and frustration. I had thought that my research was intended to help create understanding in the park and that researching in the park meant working with people with whom one shared similar aspirations, i.e., nature conservation as a common and affective heritage. The outcome was an acute contradiction of the thinking that I had shared in a year or more of correspondence with a few park officials. Following the extended freshwater drought in St Lucia estuary and the Mfolozi River since 2002, the management of the park had underlined its drive to formulate longer term solutions to the crisis based on the "best available scientific knowledge" and research collaboration (iSimangaliso 2011; Taylor 2011). My impression as such was that the park actually desired to re-assemble the wrecked estuary. I didn't expect myself to be welcomed as a savior, or a heroic researcher from the US but as a humble figure who wanted to learn a thing or two and to contribute modestly in my area expertise to academic knowledge over the wetlands and in association with various local collaborators. The reality that ecological restoration or biodiversity conservation meant different and often contradictory things to different actors came to pre-ocuppy me. At its worst, I felt that racial issues which I sought to avoid at all cost unless they forced their way into my research were emerging now emerging not from the Dutch Afrikaans community of St Lucia, or the English settlers of Monzi, but from the park that had historically united likewise divided many of the actors in the area. I could then understand the plight of many of the older folk in Ndonyana settlement - Dukuduku Forest that went about their neighborhood at daytime with hair unkempt, and who often stared at visitors in the forest like people from outer space.

**Post-Colonial Nature Conservation and the Persistence of Colonial Regimes**

Kwa-Zulu Natal Wildlife was a paramilitary force that had terrorized for many years, the communities that lived inside the park or on its peripheries. They were and are known for not taking chances with suspected individuals, poachers or otherwise, within the jurisdiction of the conservancy. The above threat, coming from an institution with a troubled past, took me by surprise. During the apartheid years there were many deaths and disappearances in the park that were never accounted for. Few South Africans weren't aware that protected area conservancies had been de facto states with powers over life and death for blacks and dissidents of the apartheid state. The particular relations between the in-coming ANC and the precursor

of iSimangaliso Wetland Park, the Greater St Lucia Wetland Park and Kruger National Parks, were very acrimonious due to allegations that many ANC soldiers that were escaping the country to Swaziland or Mozambique had been caught, executed and buried in still-to-be-identified graves in these wilderness areas. In some instances torture camps and biochemical and neurological weapon test sites were set up as in Dukuduku Forest (Gould 2005: 133-136).

Besides, no institution in South Africa would investigate the death of a foreigner outside of the major cities e.g., Johannesburg or Pretoria, where human rights organizations are headquartered. For anyone to threaten the vested interests of particular institutions in South Africa was to risk dying.

It occurred to me that the project to reconnect the Mfolozi River to resource Lake St Lucia, so that both could flow into the Indian Ocean wasn't going as expected. The World Bank had funded the project, and had clearly stipulated that in case the conservancy as the titular authority for managing the ecosystems in the estuary couldn't complete the project by 2017, it would have to refund the loan (The World Bank 2011). This realization only came to me months later, when two World Bank officials visited the estuary to access the project and lodged next to my room. When I received them as the temporary caretaker of the lodge and they asked if I could take them down and show them the birdlife in the estuary, I obliged. In the course of their conversation, the obligations of the park to the bank and their dilemmas at the estuary and river months became clear to me.

Thus, while the conservancy had issued me a research permit in 2013, difficulties with obtaining a passport from my home country had delayed my research project and in the interval things had also changed in the wetland. It was the first instance that reminded me of the slipperiness of wetland research, of how fortunes could change so easily, and why one had to stress more of waterscape rather than landscape perspectives.

**Understanding Place: Kinship from Unexpected Quarters**

When I reached McKenzie St and met Dave, my temporary landlord, he took me to the Fisherman's Club to listen to my narrative. The Fisherman's is one of the oldest bars in the estuary town, and a popular meeting spot for conservative Afrikaans fishers and tour guides. I inquired from a few Afrikaans-speaking anglers about the estuary's freshwater problems and

if the closed lake mouth and river mouths were out of bounds. After some initial uneasiness at my presence (as a black) and finding that Dave and Darren, a room- mate at the lodge where I lived, had my confidence, the anglers and divers at the table opened up.
knowledge over the environment.

"You better change your topic, if you don't want to get killed," another, this time a tour guide, suggested. "The lake mouth remains clogged for a reason," one said. "It's been clogged for years now and the fish are not reproducing. They are strangling the lake because they want to strangle us."

When I asked who "they" are, a sunburnt burly fisherman shot back, "Who else but the badshit iSimangaliso manager and his cronies?"

"They say they won't open up the Lake Mouth because of the oil spill from the Jolly Robino. How many years has the Jolly Robino been sunken in the ocean? What about the Chinese ships that we see fishing at night out there?" the guy at the counter added.

"There's a lot of money at stake in this project, and at the end of the day, the river and the lake are not going to be connected. Why do you want to research with the park anyways? What do you think will come out of it?" someone asked.

I was surprised at my Afrikaans interlocutors. Their reaction contrasted with the accusations that I had read about them online and heard from acquaintances for the two weeks that I had been in St Lucia. Various scholars have drawn attention to the swearing and crudity of St Lucia's white male residents in particular. Picard (2000) grates in her Master's dissertation over their racism towards blacks, while Brennan and Allen (2004) allude to them as "beer-swilling cowboys with more horsepower than brainpower". From The Fisherman's I would be subject to the empathy and friendship of the Afrikaans community as they would accommodate me, provide me with water duing times of drought, and shelter me through the April 2015 xenophobic crisis that would begin from a royal speech in Northern Zululand and rage through the rest of Kwa-Zulu Natal leading about thirty black Africans dead.

That afternoon, Dave, his Afrikaans girlfriend, her son, and two other friends took me fishing and asked me to take along my camera since I love filming. The waters of the lake immediately

established new relations between us. Dave began pointing out the berms and the now forested levees across the lake that looked almost like natural hills.

The following day again, Darren, an Afrikaans tour guide, and my roommate at Dave's Place, who would be a companion for the rest of my stay, and would often take me to explore the park during the day and during night drives, took me to the Mfolozi Mouth. He readily dismissed the idea that the lake mouth was still blocked to protect it from the effects of the Jolly Robino oil spill. In 2002, the tanker got stranded several miles offshore spilling huge amounts of oil that poisoned the sea. In 2007, the ship was demolished with explosives, which further polluted the sea.

All these details, however, didn't give me a new research topic. I was in a difficult situation. In any case, before I left the US for St Lucia, my experience of Atchafalaya as a wetland, had left me with a premonition of what I might face.

Nine months in the Atchafalaya Water Basin in South Central Louisiana had seen the waterscape disorient me quite deeply as I sought to understand

(*1). the relations of diverse actors with freshwater flows in its bayous,*

*(2). the bases of significant conflicts over space and resource uses,*

*(3). the ways in which decision-making processes were reached, and*

*(4). how conflicts were resolved.*

My mixed success left me apprehensive about orienting myself yet again to another wetland and facing similar challenges. Two questions that focused on background knowledge occupied my mind:

*(1). how to understand the specific ways in which the biophysical character of wetlands complicates sociocultural understandings, and*

*(2). how this disposition translates into social processes.*

Cultural anthropologists that have done research in biophysical waterscapes, e.g., Walley (2004), Hughes (2006), Raffles (1999), Mclean (2009), Aiyer (2007), and Carse (2010) have agreed that watery habitats are far more challenging sites for ethnographic study than uniquely terrestrial habitats. Orlove and Canton (2010) outline how the character of water and wetlands both forge water regimes, waterscapes and waterworlds without whose knowledge expert interventions e.g., the much acclaimed integrated water management planning would run into

the sort of contestations that often produce “wicked environmental problems” (Balint, Desai, Stewart et al 2011). Hughes and Raffles, however, do not delve at length into the character of water, how it complicates expert interventions and research processes, or how such interventions often exacerbate fresh water flows. Typical examples of the latter are seen in the threat posed by the damning of the Mississippi by the US Army Corps of Engineers and the 58 years of recurrent droughts that have shaken Lake St Lucia and its surroundings due to river engineering. Both projects were dependent on and created by modernist interventions.

Being in-between and transitional zones, wetlands pose problems of scientific definition (Mitsch and Gosselink 2007). Scientists are still to agree on how to position themselves in defining such spaces: are coastal wetlands to be seen from the perspective of the sea interacting with land or from that of the land interacting with the sea? Being neither land nor water, wetlands, swamps and bogs are indeterminate, precarious and at-risk environments. As such their fluid and unpredictable biophysical character easily complicates the terrestrial character of ethnographic “field” approaches. Methods come up short in terms of descriptive efforts (McDermott Hughes 2010). The researcher is often complicates trying to abstract or to empirically understand change processes. If (s)he is sensitive enough, (s)he soon finds out as the term “fieldwork” points more to work that is done in agrarian cultures e.g., clearing, establishing boundaries and fences, tilling, seeding weeding, harvesting, or laboring the soil rather than in watery spaces e.g., fishing. As “landscapes on the move” in various spatiotemporal senses, littoral spaces call for particular sensibilities from any researcher e.g., a keen sensibility to the constant changes and movements in wetlands and to human and institutional adaptations. For example, in the Atchafalaya Basin, I mistakenly assumed that freshwater from the Lower Mississippi River that was channeled into various canals, regularly flowed towards the ocean. That is, until I discovered one afternoon that the flow often reversed direction at a particular time of the day. While the fact that the saltwater inflow and freshwater outflow could occur inland, hundreds of kilometers from the ocean was common knowledge among locals, without spending time by the canals, fishing, observing the clouds moving in the skies, and the ripples before me, I wouldn’t have observed it. And none would have told me because the event was commonplace. And yet, it influenced fishing and the movement of boats up and down the canal. More so, the color of the waters in the cypress bayous changed frequently from daybreak to sunset, e.g., from purple to blue to crimson and variously assorted colors and in so doing informed fishermen and crabbers of the time of the day and place. Stones and rocks and knolls were completely absent in the waterscape. These were replaced by state-

constructed levees that ran along the Atchafalaya or Mississippi Rivers. The highways, which were introduced into the sprawling water basin by the state as well, were equally raised higher than the waters that residents used to live in (through their house boats), or navigate when going out. Most confounding was the ubiquitous presence of water at the end of every field. The sprawling bayous with their tupelo and water cypress trees were both exciting and scary. For a first time visitor, the exotic character of the landscape, of water forests and endless bodies of shallow water, along with the presence of fish, shrimp, waterfowls, dragonflies and uncountable species of insects as well as bird songs is exciting and intriguing. However, the tales of foreigners that often went missing while boating, of countless accidents, devastating floods and cyclones, endemic corruption wrought by the "northern government", oil companies, business people and the traffic police, alongside a high crime rate and no-go oil exploration or polluted zones in the bayous rendered it a fearful place as well. Unlike in the north where one had four regular seasons, I found that there were probably about eight seasons in the basin. The seasons changed every couple of weeks, bringing diverse insects and plants in the garden some of which often found their way into my room. No doubt then that the *bayous* and basin constituted a confounding waterscape that some felt strongly attached to and others dreaded.

Fears of time-space constraints were also top on my list of troubles. *How long would it take for one to understand such biophysical (water)landscapes and to begin appreciating people's relationships to it as well as processes of knowledge production?* Becoming cognizant of changing patterns in the weather, climate and seasons in wetlands or littoral places, as I found, took time for one used to such habitats, while talking of their effects on humans, wildlife and the flora equally called for medium to long-term alertness and investigative effort. I was forced to experience a lot of environmental phenomena up close and personal while asking lots of questions from acquaintances or just anyone I met. Tropical or subtropical littoral wetlands are prodigious and productive environments in terms of the natural elements and abundance of flora and fauna. In gathering diverse kinds of abiotic and biotic life forms into place, wetlands and to an extent saltmarshes have been called natural laboratories, supermarkets and biological nurseries. In terms of research, they have provided ecologists such as Teal and Odum (see Silliman 2009: 105) with a space to develop understandings of the role of physical factors in regulating ecosystem productivity and structure, and of trophic cascades and processes of predation —all of which have provided prerequisite knowledge in modeling for ecological sustainability. From a sociological viewpoint, in attracting groups and categories of peoples

from near and far, coastal and littoral wetlands stimulate intensive mutual exchanges. In so doing they also become spaces of intense conflict over material-symbolic 'resources'. In short, despite their productivity and being formerly places of refuge, modern and ancient, estuaries, wetlands and salt marshes have come to be socially oppressive places. If Teal & Teal in their pioneer and landmark work *The Life and Death of the Salt Marsh* (1969) constantly harp on the everyday reality of food chains and predators**,** social science scholars, such as Griffith (1996), Gibblet and Garrard and Kerridge (2016), have focused on "post-modern" wetlands as spaces of exploitation, oppression, and repression due to processes of modernization and neoliberal capitalism emerging from the cities. More recently, the scale and complexity of exploitation and oppression has deepened with destructive resource practices as seen in the instance of oil extraction in the Mississipi Basin, Niger Delta, and Amazon Rainforest.

Some of the reasons have to do with their distance from urban areas and their frontier character. In most cases, this remoteness and productivity has influenced modernist zoning patterns that have often converted wetlands into meshwork of conflicting extractive and non-extractive resources uses with little provision for accountability. Thus while the biophysical character of wetlands complicates sociocultural understandings, how this disposition translates into social conflict is equally daunting. Evidently, environmental anthropologists and political ecologists have been quite slow to consider the ontological significance of wetlands and watery spaces in their quest to understand human ecological relationships.

**Communities of Actors in St Lucia Estuary (what of non-human species?)**

Much of the politics in St Lucia Estuary as in in the Atchafalaya Basin revolves around everyday struggles to wrest a livelihood (and profit as well) out of freshwater, fisheries, wildlife tourism, plantation agriculture and subsistence gardening. That was where my interest derived: how they shared and managed the commons.

Unfortunately, these activities were realized in the past against political economic contexts that were laid down by the imperial, colonial, apartheid, and of recent, post-apartheid systems. Preliminary reading indicated to me that to tease out the ways in which these actors' relations have tensioned critical surface and groundwater flows or other natural "resources" and human social relations in the estuary, it was necessary to go beyond *understanding the specific ways in which the biophysical character of wetlands complicates sociocultural understandings, and*

*how this disposition translates into social processes, to* recognizing the above actors' particular histories with race, land or place, the market, capital, science and technology. While I had contemplated multi-specie relations (humans whales and hippo relations in St Lucia) at one point, the topic of water had taken that perspective out of my view until difficulties sent me back, though this time, to some other non-mammalian specie.

The St Lucia Estuary is split between three groups of South Africans. Dutch descent Afrikaans-speaking and English-speakers of British descent who have observed conflictual relations over space and identity that culminated in the Anglo-Boer Wars of 1880-1881and 1889-1902 and which have influenced their relations to date. Added to these two communities are other Euro-African migrants from Southern Europe (mostly Italy and Portugal) who settled in the estuary following WWII. The latter did so through the eviction by the South African state of resident isiZulu speakers. IsiZulu speakers in the estuary number about 30,000-40,000. Contrary to popular perception, northern Zululand was traditionally inhabited by various kingdoms, some of which still survive, e.g., the Tembe people, although in a subdued form. Most are assimilated peoples that Shaka Zulu conquered through violent warfare and obliged to adopt the Zulu language and cultural norms as he sought to impose a Pan-African society in the South Eastern African region. Also, among this population one finds various generations of the offspring of former Mozambican migrants that trooped to the estuary between 1911 and the 1960s as indentured labor to the English Farmers of the Mfolozi Floodplains. The grandparents or parents either intermarried with amaZulu women, or bore children with them and moved on in search of better employment elsewhere in the province or country. Some of the parents, who are now naturalized citizens, and others with double passports, live on the Mfolozi Floodplains-Dukuduku Forest area where they practice sugarcane farming or ply subsistence farming on the Mfolozi Floodplains.

The iSimangaliso Wetland Park is the titular authority that is currently managing this historical frontier wetland along with its operational partner Ezemvelo Kwa-Zulu Natal Wildlife. Both took over from the Greater St Lucia Wetland Park and Natal Park's Board in 2002, after the conservancy became a world heritage site in 1999. The park is made up of fifteen adjacent conservancies that expanded from the St Lucia Reserve, Africa's first prototype conservancy established in 1897 to stop the mass slaughter of elephants (for their tuska and for sport) as well as hippos by European hunters (McCracken 2008: 27; Delegorgue 1827). Beyond the above actors are a cluster of non-governmental organizations and European and Australian

expatriates involved with conservation, health and social welfare, as well as development. There are also nationals from other African countries e.g., Zimbabwe, Kenya, Somalia, that live in adjacent Khula Village but work with eateries and catering services in St Lucia. And there are seasonal Mozambican craft vendors too that trek across the colonially constituted South African-Mozambican border, and follow the coastline right down to St Lucia to sell their wares and often to return to Mozambique for more wares. With such a diversity of population, conflicting views of how resources are to be managed or what they even mean are to be expected.


*Map 2 St Lucia Estuary. Manukelana and Isiphaphalazi Butterfly Dome are situated between Lake St Lucia and Khula Village. (Compliments: Annas B&B, St Lucia Town) The map shows the intersection to Charter's Creek and the lower third of Lake St Lucia made up of conservancy space, Khula Village (isiZulu speakers), St Lucia Town (Afrikaans-speaking), Monzi (English-descendants) and Dukuduku Forest (green patches from across the Mfolozi River opposite Mapelane Reserve. Only of recent did Khula Village appear on maps of the estuary or iSimangaliso though the settlement was created in 2002. The still on-going struggle over the dune forest has seen the nature conservancy, international environmental organizations and the ecotourism lodges of St Lucia and Monzi refuse to represent the "still to be wrested forest" (as educated forest dwellers believe) on their maps.*

**Wetlands and the Landscape Perspective**

Critical to understanding the crises in St Lucia Estuary are the ways in which water and wetland conflicts are socially and academically framed (see Strathern 1980: 181; Helmreich 2010; Ortner 1974; Schaffer 1989; Rose 1992, 2003; Strang 2003 and Vela 2004). While much foundational work has been done in anthropology of conservation and development in the first decade of the 21st century (e.g., West 2002; Walley 2004 Lowe 2006; Tsing 2005, 2004; Li 2007, 2014), little attention has been paid to wetlands qua wetlands. The best angle I found from which to scrutinize the ways in which environments have been historically structured, contested and destabilized; or discourses that have naturalized the landscape (Bender 1993); or newer forms of organization and participatory governance that are being proposed and the challenges that they face in terms of implementation e.g., neoliberal market policies, protected area decentralization, community based natural resource management programs and black empowerment, is from the landscape perspective. This perspective outlines how individuals and institutions come to shape a landscape and endow it with meaning (see Gomez 1998: x) as well as how subsequent socio-ecological tensions arise.

The landscape perspective, however, is still to be adequately scrutinized in terms of the political ecology of wetlands and water spaces (i.e., the way nature is understood and the politics and impacts of environmental action). It draws in affective and embodied dimensions of human-to-human and human-to-object interactions (Stewart 2015: xv-xvii) and in so doing it enables both concrete and abstract analysis. It makes it possible for the researcher to hone in on small scale, ordinary, everyday encounters (Seigworth and Gregg 2010: 2, 12) and for evoking the seen, the felt, the heard, the tasted and the smelt and so forth (see Seigworth and Gregg 2010: 2). As such it enables giving value to things (Ahmed 2010:31) besides situating events within the context of the broader political economy (Bender 1993; Rodman 2001; Low and Lawrence-Zúñiga 2003: 30). At its best, the landscape perspective (which I see as inclusive of affect) enables close and vivid understandings of processes of assemblage (Deleuze and Guatteri X, also Li 2007). However, when drawn into a physical wetland context, it confronts contradictions posed by the aquatic character of such spaces.

In terms of ethnographic "representation", it enables the researcher to avoid the 'diet of isms' (Berberich et al 2016: 2) or the language of fragmentation and substantivization that is increasingly receiving scholarly attention (see MacDermott Hughes 2012; Bohm 1980: 34-60

on the rhemode or "flowing mode"; Seigworth and Gregg 2010: 2) as opposed to language characterized by a focus on fluidity, thus verbs of action, doing, changing expressions or states. It also enables inter-disciplinary approaches and boundlessness over fragmentation. For the researcher to resolve the tensions involved in moving from the physical world that is subject to natural laws to the world of representations/re-enactments, meanings, and stories, otherwise, of human creation and reflection made manifest through language (Ghosh et al 2009:2), the reality of wetlandscapes imposes an additional burden in that it calls for sensitive attention to the ontological links between field processes and representation/re-enactment. It calls into question the very texture and framings of language, from questions of vocabulary and syntax to the cultures embedded within. In other words, if language is not culture-free it raises questions over translation or co-construction of knowledges with collaborators whose thinking is structured by other cultures and languages, an issue raised by Harold Conklin (2007). Various scholars of recent years have raised questions over contemporary ideologies of capitalism and its influences on English expression, such as Bohm (1996) and Billig (2013) who talks of the tendency towards substantivization in academic writing. In what way could one strive to accurately envision and evoke human struggle with unbounded realities? While Bohm (1996) and Campbell (2011) suggest that this could be partially done through striving to accurately evoke field realities (e.g., seeing nature as human, and humans as embedded in wetlands rather than wetlands being "a backdrop for human action" (Rodman 2003), or recognizing the notion of ecosystem as implying multiple inter-acting agencies and using this to influence narrative patterning, it is hard to imagine how this could be done in practice.

## Wetlands and Conceptual Approaches in the Anthropology of Conservation and Development

Varying efforts have been made to foreground rather than theorize on the fluidity of wetlandscapes. Political ecologists working on wetlands e.g., Mole, Foran, and Kakonen (2009); Baviskar (2006) have scrutinized the delta as a machine. In other words how states and other actors create delta waterscapes (physical) through total management schemes, mechanical approaches to water management, and how these are unmade by natural and man-made effects as well as the trends in adaptation and disaster response (Biggs et al 2009: 203). At the same time, while much foundational work has been done in anthropology of conservation and development in the first decade of the 21st century e.g.; West 2002; Walley 2005; Lowe 2006; Tsing 2005, 2004; Li 2007, 2014, little attention has been paid to wetlands

qua wetlands. Less attention has been paid to how to bring ethnography into dialogue with theory on place and identity as they relate to conservation and development within wetland spaces. Or still in attending to contemporary calls from cultural anthropologists to re-examine the validity of terrestrial perspectives in ethnographic approaches to water, wetland and marine research. This would of course include: the ways in which wetlands and watery spaces have been historically structured, contested and destabilized; discourses that naturalize the wetlandscape; and newer forms of organization and participatory governance that are being proposed and the challenges that they face in terms of implementation e.g., neoliberal market policies, protected area decentralization, community based natural resource management programs and black empowerment.

**Understanding Zoning and Deterritorialization Processes**

Critical to understanding the above is the role of colonial zoning processes and how they have created and entrenched contested material-symbolic boundaries between the wetland's populations for over a century. And not just the populations but also other institutions such as the post-apartheid state in its on-going efforts to bring the peoples and resources in the wetland under state control, international organizations that seek to turn the 210-mile long wetland into a piece of global patrimony subject to 'global' cultural norms; scientists that seek to maintain the green spaces to advance national research; Non-Governmental Organizations that seek to advance their mandates, and the various ways in which the market influences all the wetland zones. The outcome of the above has been contrasting perceptions of the environment and contested senses of place, e.g., different understandings of conservation and development, even entrenched accusations between anti-development and anti-conservation constituencies; and opposing epistemologies of nature (Hansen 2014; Nustad and Frodes 2013, Nustad 2011a; 2011b). Feelings of loss of sense of place e.g., by isiZulu-speakers and also poorer Afrikaans and English sugarcane floodplain farmers, have come with consequences on the environments that are still to be examined. In intertwined material symbolic senses, in spite of their openness in terms of flows in every sense possible, estuaries and wetlands also appear to be very closed and oppressive spaces for humans and wildlife. Nevertheless, because the requirements of adaptation see estuarine residents come to develop sensitive, dynamic, and resourceful natures to their aquatic environment over the long term, wetland dwellers become very capable of rising to challenges when necessary. In this light, the entry of state and other projects that are often inimical to their interests also sees them adopt refractory attitudes towards these

institutions when necessary (personal discussion with Rebecca Hardin 2015). For all the above reasons, wetlands pose particular challenges for governance and for social science researchers.

Why is this so? Firstly, its very fluid properties inspire ambiguity, risk and uncertainty; and secondly the highly terrestrial nature of both managerial frameworks and social science approaches often produce blockages rather than flows of information, positive affect, and of resources. In a sense then one could talk of two inseparable systems, one bio-physical and the other cultural and which are in tension. This leads us to ecological anthropologists (e.g., Vadya and Walters 1999; Walker 2005) who have often wondered whether it is possible to do political ecology without paying attention to ecology? The discrete division between the two disciplinary practices is problematic when dealing with water, plants and species especially in terms of their ontological properties, constructed discourses, and naturalized identities.

Using her ethnographies of water in Aboriginal north Australia and Dorset, England, Veronica Strang (2005:98) concludes that the variety of meanings attached to water issue from its form: "Water's diversity is ... a key to its meanings". She suggests that water's qualities of mutability "are crucial in that they provide a common basis for the construction of meaning" (97). Helmreich (2011) sees Strang's argument as offering one kind of theory machine - that formal flexibility in nature determines flexibility in culture, a claim that places Strang into part of a larger turn to "the form of water" (97) in recent anthropological and social theory. However, while he concurs with Strang on the mutability and multiple meanings of water, he underlines that such mutability has no meaning apart from human conceptions of it. Going further, McDermott Hughes (2012) underlines that "water has properties and capacities that can effect change in the world and some of these capacities are essential, rather than socially constructed". Very potent examples of this include the recent tsunamis in Japan, Sri Lanka and the flooding of New Orleans during Katrina (Kelly Askew, personal communication March 2017). Hughes' experience and analysis of the "racialized hydrography" of the Zambezi enjoins the above ecologists. As opposed to Helmreich's arguments against the essentialization of the properties of water by some scholars (he refers to McDermott Hughes and Strang) and its social constructedness on the other (see Helmreich 2012), the question should rather be in what ways does each of the above processes apply to each setting? Rather than argue over how much of each abstraction should apply to all watery settings and intended ethnographies, empirical analysis should examine for cultural specificities. Empirical analysis should equally allow for the problematization of land-based perspectives and metaphors in human engagements with

watery spaces and to explore alternative concepts (e.g. fluidity, risk awareness, dynamic systems) and waterscape perspectives. Again, while Helmreich (2011, 2012) goes further to consider water as a theory machine capable of reinvigorating the anthropology project, he appears to be entangled by the very arguments he puts forward when he sees all reality in terms of discourse construction. From reading the above scholarly analyses and reflecting, I became befuddled, as there was little in terms of clarity in confronting the various challenges I faced.

I began to wonder how could one avoid the pitfalls of terrestrial perspectives with all its hermetic boundaries for the more aquatic? *How could one deconstruct social constructions of nature and naturalized categories to reflect alternative or possible realities more convincingly?* In terms of ethnographic practice, McDermott Hughes (2012) adduces Malinowski's pioneering *Argonauts of the Western Pacific* (2002) to explain that a field once steeped in marine travel now operates mostly within a "terrestrial, dirt-clod framework" rather than the opposite. The landscape perspective questions and enables a reflexive scrutiny of the ethnographic practice and of anthropological analysis. In terms of academic approaches then, the shells that came with the birth of the discipline, e.g., through kinship studies and structural-functionalism, are still to be struck off. Hughes (2012) suggests that anthropologists will have to develop an aquatic substitute for the sedimentary, village study. But how to approach this substitute?

While disentangling these conflicts calls for fluid approaches and methods, the nature of field itself as well as ethnographic practice didn't make the situation any easier to access or even legible. The problem of zoning or spatial structuring was both a focus of the research and a challenge. The different actors that were implicated with freshwater flows seemed to be all antagonistic towards one another. How to establish a rapport with them and following, gain and sustain their confidence it in the long run while dealing with the others became a nightmare. One of the main reasons I felt was that most white South Africans experience great fear and suspicion whenever a black person walks into their premises or private space. The levels of distrust are extremely high and fostered by an unusually high rate of violent crime, especially homicides in the country. Working relations between both races are limited uniquely to working places, and where the researcher's presence might influence black workers, a white employer will avoid entertaining one on his premises.

Ethnographers for the most part e.g., Impey (2002, 2013); Nustad (2010, 2011); Sudnes (2013) have preferred to sidestep scrutinizing the basis of racial tensions in St Lucia Estuary and how it affected their informants or their projects. A few exceptions exist. For example, Guyot (2007) who finds post-apartheid South Africa, "a good 'laboratory' to study 'race' related topics"; Allen and Brennan (2004: 84) who characterize the Afrikaans in St Lucia and draws a sharp contrast between St Lucia as a white eco-tourism run destination and the destitution in Dukuduku Forest; and Picard (2003) who explodes emotionally in her work about racism in St Lucia Estuary. There's little doubt as Guyot (2007: 6) underlines, "environmental legislations and philosophies during the colonial and apartheid eras were orientated towards discrimination of non-white groups, both in urban planning and protected areas making". The position of taken by scholars that neglect race relations and affective politics runs contrary to that of Gluckman (1954) who engaged directly and methodologically with social conflict and the cultural contradictions of colonialism and racism among other social themes in South Africa decades earlier. What highlights this contradiction is that few ethnographers that have worked in St Lucia estuary and its environs have come away unaffected by the racial issues that beset social relations. While some have mentioned their own dilemmas and the stressors they had to overcome, this has mostly been in private conservations that left me stunned. While one might not fault the analysis of non-ethnographers who eschew analyzing the affective influences of race on their projects or research processes, the substantive focus of their ethnographer colleagues that sees them do away with sentiments and affects related to land, water, agriculture, protected areas conservancies, tourism or other objects of contention leaves much to be desired.

On the other hand, as a result of their apprehensions of black-white relations, black South African researchers that have worked in the wetland, including university lecturers e.g., Magi (2009, 2006, 2000, 1996, 1989, 1986); Magi and Nzama (2009a, 2009b, 2008, 2002); Nzama (2008); graduate students e.g., Ntombela (2003), Ngema (2009), Gumede (2009), Ntuli (2009), all construct their research topics in ways that enable them to avoid interviewing or scrutinizing whites as a broad category and "sub-categories" such as Euro-Africans and park officials. In other words, most or all their work and corpus focuses entirely on black participation in tourism. In a way one could suggest that their approaches to their subject matter are shaped by their internal landscapes. It was my efforts in imagining these landscapes that troubled me the most. If they didn't dare to cross the racial divide to investigate the black and Euro-African experiences how could I succeed being an outsider?

The three problems that occupied me then in terms of the above analysis were:

(1) the ontological status of things in the wetland;

(2) how things came apart in the wetland and the nature of on-going efforts to assemble place;

(3) as well as the appropriateness of social science theory and ethnographic field approaches to the research problems at hand, including language.

Due to the very nature of the "object" of my research, that is wetlandscapes, and the intense politics in such a racialized, thus cramped up space, I wasn't certain about my research processes, more so when the fluidity of the context stood in opposition to my "field" methods and terrestrial perceptions. If my research methods were similar to the modernist approaches that have compromised flows in the estuary how effectively then could I read the landscape? Most importantly, thinking often how to establish rapport left me with trepidation. Firstly, how to gain and sustain the confidence of diverse actors that may hold mildly or fiercely contradictory positions and affects towards one another a nightmare. Secondly, even if I were to put aside the above, how would I manage issues that had to do with naturalized identities, for example, racial divisions and beliefs? The likelihood of being rejected by Euro-Africans because of my racial make-up was very high.

**Watching Butterflies: From a Pastime to a Research Topic**

Driven by the above uncertainties, my mind fluctuated in search of an activity that would have a calming influence on me when troubles arose. To be flexible, I also wanted an activity that could substitute my primary research in the case where wetland politics entangled or ensnarled it, though I was willing to slug it to the end. I wanted an affective exercise that would warm me up during cold days. More importantly, I wanted something that would enrich my knowledge of place through obliging me to traverse the estuary every now and again so as to closely observe and monitor from one season to the next the entanglement of humans with both surface, ground, fresh and saltwater in and outflows.

Kayaking the estuary regularly would enable me to acquaint myself over the southern seasons with the shifting configurations of land, water, human, plant, and wildlife. And not only that, but also past and on-going claims and counterclaims to rights of ownership and use of the above

life sources or re-sources. The flatness and lay of the estuary (see Maps on the appendix) welcomed such as approach. However, I couldn't afford a used kayak in South Africa as I was footing my fieldwork. Besides, I was also wary about my ability to navigate the crocodiles and hippos that territorialize the lake. Following twelve years of freshwater drought that have seen the weedy banks of Lake narrow in closer towards the middle, thus bringing hippos and crocodiles too close for comfort, I couldn't predict their reaction towards human intruders.

As such, I wisely settled on the more nimble, drafty, harmless, and 'boundless' butterflies and their close cousins, dragonflies. My choice of these less recognized living others emerged firstly out of a lost childhood fascination with their aesthetics; secondly, an interest in how they animate socio-natural landscapes; thirdly, on the role they play as indicators of biodiversity, healthy ecosystems, and climate change; and finally, a need to appreciate how different actors in the estuary approach less visible yet colorful forms of life that populate and enrich wetland life. In fact, the contrast between research on water and taking time off on more terrestrial delights looked promising. Fortunately for me, alternative conservation ecotourism developments in St Lucia Estuary had seen the emergence of the Manukelana Indigenous Plant Nursery and Isiphaphalazi (Butterfly Dome) in 2007, and this nowhere than in Dukuduku Forest, along the R618, three kilometers to St Lucia! More interestingly, the project was founded and run by a group of four "dread" men (i.e., Rastafarians) from the forest, who possessed an undaunted spirit. I was intrigued. *How come?*

A brief article on the web page of St Lucia Wilds Lodge gives a glimpse of "the Butterfly House". The write-up does not include the other projects on the Manukelana site. Take note that the butterfly house, for some reason is not given a name. The objectives of the project are not listed – e.g., the butterfly project is not also associated with the ecological rehabilitation of Dukuduku Sand Dune Forest, which was the project's initial objective.

**The Original Butterfly House & Teagarden**

The butterfly house is located 3km outside of St. Lucia on the R618 towards Mtubatuba. Focus is on conservation, biodiversity and eco-tourism. Local indigenous butterflies are bred, which are found within a 50km radius of St. Lucia, and displayed live, in our Butterfly house. All the butterflies in the house are bred on site, and not collected from the wild. We catch the initial females, which we hope are pregnant, and breed from them. When they turn into pupae's we put them in the butterfly house. Early in the early morning, with a bit of luck, you can see them emerging from *there* pupae form into butterflies.

*Picture 3 Isiphaphalazi Butterfly House*

The tour is as follows: A guide will meet you and firstly take you through to the interpretation room where a computer/visual presentation & introduction to butterflies are offered. This takes about 10-15 minutes depending on how many questions are asked.

After that you go into the butterfly house where the guide accompanies you to show you all of the different butterflies, their host plants and other interesting facts. Guests can spend as much time in the butterfly house as they wish, take photos or just unwind. The butterfly house is very tranquil and therapeutic. Most visitors are amazed at how interesting and diverse butterflies as a species are and then that the tour is so very informative.

The butterfly house is open from Tuesday to Sunday from 8am-4pm. The tea garden is also open with a view of the Butterfly house and water pan, very tranquil under trees and homemade treats.

A more comprehensive article focuses on the tour guides and founding managers of the project.

**Article 2: St Lucia's Isiphaphalazi Butterfly House** December 8, 2011 by Roxanne Reid.

How does checking out some gorgeous **butterflies** at the same time as contributing to the local community sound?

Next time you're visiting iSimangaliso's Lake St Lucia or Cape Vidal north of Durban on the KwaZulu-Natal coast, allow time to stop at Isiphaphalazi Butterfly House. You'll find it a few kilometres west of St Lucia on the main road from Mtubatuba. Look for the signs to the Manukelana organic nursery and Butterfly House at Khula Village and you'll enter another world.

*Picture 4 Prince Tsaka*

It all started back in 1998 when 'four dread men with Rastafarian spirit' started an organic nursery. They were Mdudi Mhlongo, Bhekinkozi Phungula, Musa Zhikali and Ernest Mlambo.When something started devouring the plants, they were worried. Then a butterfly specialist came to visit and told them the culprits were caterpillars that would soon become butterflies. This gave them the idea of building a butterfly house but, short of funding, it struggled for a while.

Then in 2007 a funding boost came from the African Conservation Trust. Today you will find an admittedly rather ramshackle-looking but thriving earthworm farm, permaculture unit, nursery, and of course the butterfly house itself.

A smiling Prince Tshaka greets us and shows us around. We learn that these guys have taught 37 schools in the surrounding district not to cut down shrubs and trees that are hosts for butterflies. They have also helped them to create organic vegetable gardens to feed their communities.

Prince explains how the worm tunnels work, shows us the nursery of host plants for butterflies, and takes us on a tour of the organic vegetable garden before leading the way to a wooden hut that serves as his mini lecture hall. There he uses posters to explain the life cycle of butterflies and show us photographs of what some of them look like.

Then, for the Main Event, he takes us into the butterfly house to see the real thing.

*Picture 5: Pupa at Isiphaphalazi at Isiphaphalazi Butterfly Dome*

*Picture 4: African Monarch at Isiphaphalazi Butterfly Dome*

He confidently spews out the Latin names of the various host plants we find eggs or caterpillars on, confounding us with his grasp of names we can't remember even five minutes later. Fizzing with enthusiasm and an obvious passion for his subject, he explains that each butterfly is very particular, choosing a specific species of plant to lay its eggs on.

If you're in the area, make time to stop and find out about this valuable and interesting project that aims both to uplift the local community and conserve butterfly habitat. You'll learn some things to put into practice in your own garden, and the kids will love the butterflies and caterpillars. The tour costs R35 per adult and R15 for kids under 16. You may even want to ask about the butterfly trail through the nearby Dukuduku Forest. Groups and schools are welcome; they're bound to come away with a new appreciation for these intricately beautiful creatures.

Contact Prince on 073-495-9163, office 035-550-4445 or
see www.butterflyroutes.org for more info about this butterfly house project, as well as others at Tembe and Eshowe in KZN.

While the first article is peculiar for what it excludes, the second brings into focus science in action. It was the second among a handful that I collected which interested and inspired me. Among these handful only one article was on the nursery while the rest were on the butterfly project. Nieu Matilda (female and black South African) wrote the article on the nursery while a number of white or Euro-African journalists or writers who were appreciative of the project, wrote those on the butterfly project. (I frequently emply the term "Euro-African" introeuced by Macdermott Hughes to differentiate South Africans whites from Europeans and Americans).

This bifurcation in appreciation of the project would became significant as time went on in terms of how local blacks appreciated the Manukelana Projects. Isiphaphalazi Butterfly House, also known as St Lucia Butterfly House or simply "The Butterfly House" looked very much like an out of the way project. Firstly, it focused on micro-fauna conservation ecotourism with the larger goal being indigenous forestry restoration. As such it occupied a very specialized niche in a landscape where the drive for macro faunal conservation and ecotourism has historically fostered blindness to the multidimensional significance of micro fauna. Mandela himself had promoted the former view when he said of Isimangaliso Wetland park and World Heritage Site upon its inauguration in 1999: "Isimangaliso wetland Park is the only…. [COMPLETE]" More critically, the project was founded and run by blacks with no prior history of butterfly relations. Part of what rendered the butterfly house managers as intriguing personalities is the history of belittlement that characterized countless descriptions of Dukuduku Forest dwellers between the late 1980s and 2007, when the emergence of the butterfly house and other indigenous nurseries for urban greening began to challenge this very history. As such I was interested in finding answers to several questions of interest about the project, which most visitors also asked.

*(1) How did the nurserymen overcome the intense local disaffection over "Conservation" and their socio-cultural challenges to found a nursery for a forest?*

*(2). In what ways did working on the project transform them?*

*(3). How did they overcome the scientific and expressive aspects of plant breeding and butterfly conservation e.g., plant and butterfly propagation, mastering scientific plant and butterfly names, to become so knowledgeable to tourists?*

When I turned up at the Isiphaphalazi Butterfly Project, where I had originally intended to pursue my hobby as a butterfly watcher, and informed the project founders of the dilemmas I was facing in my research project, they too had a few questions for me. The project founders who were black, in their fifties and Rastafarians with dreadlocks, wanted to know why I planned to research with the conservancy and with Afrikaans fishermen and tourism outfitters and the English farmers of the floodplains in the first place. This, even though I had also mentioned that my list of actors included the dwellers of Dukuduku and Khula as well as the state, research scientists, and international actors. What profit would come out of it working

with the above? They asked. The cynicism or was it realism stunned me. "Who was it that told you that the river and lake mouths were out of bounds?" one asked me.

The publicity secretary, who was to take me on a dive through the risky floodplains right down to the river mouth, asked me. When I informed them that it was the research secretary, one reckoned that it's "the Indian lady".

"They did it deliberately to keep you out. They don't want trouble".

I wasn't aware of the historical tensions between Black South Africans and Indians in Kwa-Zulu Natal, and of the view held by isiZulu-speakers that "Indians" who were represented in the tricamera apartheid parliament, were accessories to white power. It was a simplistic categorization as I later found out from an Indian family that visited the estuary regularly, with whom I struck friendship, and who often took me sea fishing.

"Why don't you come and help your black African brothers who are suffering rather than waste your time?" the gardeners asked me.

A few days later, six political leaders, elders, who were spearheading land claims over a huge swathe of territory from Mtubatuba to the estuary, and which enclosed parts of the conservancy and settler land and exotic plantations, held a meeting at the Manukelana premises. The public relations officer of the project was happy to introduce them to me as an African "brother" who had come to study water issues in the estuary and wetland. After exchanging words with me, they pried into my purposes. When they learned that I had come to study "the meanings of water" they were excited. "He looks wise, this one", the most elderly one smiled at me. "Are you married?" another asked. When I hesitated to answer, the head of the delegation cut in, "Get a young woman from the community, and marry her, and we'd give you land to settle. Thereafter we can talk about your research on water and whatever you want to do. Be one of us". And so saying they turned and left the tea garden.

Implicit in the invitation was a sense of creativity: incorporating outsiders to reproduce kinship, prestige and wealth. The intimate and inter-subjective connection between women, land, children, and kinship surprised me. In his very elaborate analysis of Nengikini landscape perspectives Leach's *Creative Land: Place and Procreation on the Rai Coast of Papua New*

*Guinea* (2003) social relations as a source of value and creative energy. His narrative describes cultural practices where the creation of new things and the ritualized forms of exchange enacted around them, function to "create" individuals and bind them in social groups, thus "creating" the community they inhabit. In conceiving creativity as an innate and emergent property of social relations or interactions, the Nengikini contradict instrumentalist views of creativity that search for “economic” value in all transactions. The elderly men didn’t ask of me what I could do or what I had to give them a priori. They asked me to engage with them and then we could figure out our needs as we got along. Such was my homecoming to Dukuduku Forest and Manukelana Indigenous Nursery and Butterfly Dome. It was like a frightened and skittish butterfly finding a familiar host plant perch and a new space where it could proceed to reproduce.

The elder’s invitation was a joking event: Dukuduku Forest was a heterogeneous and generous space, perhaps the most generous in all of post-apartheid South Africa. I had lived in the Transkei area of the Eastern Cape Province and Xhosa-speaking friends had suggested to me that if I wanted land on which to settle, all I had to do was to have a Xhosa-speaking wife and ask the *induna* in any rural settlement that I was familiar (and there were several) for land to settle. The cost was hardly more than $40. As opposed to white settlements like St Lucia, Monzi, and urban areas, land among the rural Nguni-speaking peoples on the length and breathe of the Eastern Coastline of South Africa was and is hardly seen as a commodity. It is more of a medium of kinship and social reproduction. I had neighbors in St Lucia where I rented a room and who lived in the forest and Khula Village. Some came from Kwa-Zulu Natal Province, some from Mozambique, and others from Zimbabwe, and even some as far afield as Tanzania and Kenya. All spoke isiZulu and expressed the same feeling to me. “Why aren’t you renting in Khula Village? How can you be paying R3000 ($300) monthly in St Lucia, when you’d pay R300 ($30) for the “same” room in Khula Village? With that you should get a plot and build a house for yourself and your family.”

The Rastafarian community at the butterfly project and others in the forest even went further with their hospitality measures: they wanted to obtain land further north in the Pongolo Plains to create a community for Rastafarians that would originate from the African continent, the Caribbean and wider diaspora – just like the town of Shashemene outside Addis Ababa where a couple of a thousand Caribbean and African-Americans had settled. I was welcome to join them and see about the organization. Though I was enthused with the welcome, I didn’t let go

my research on freshwater issues easily. I was wary of Rastafarians as a group I only had stereotypes about and didn't trust for stability. After a few attempts to reach a compromise with the conservancy failed, I found that the indigenous nursery and butterfly project was the only option I had if I had to make good my doctorate research project. It was a huge contradiction because it was my affection for nature conservancies that brought me to iSimangaliso as a tourist and following, as a research student. Strangely, I was following the footsteps of peers that had done Masters, PhD or other significant ethnographic research in the vicinity, among which, Sylvain Guyot (2002), Catherine Picard (2003), Angela Impey (2006), Knut Nustad (2013, 2011), Frode Sundnes (2013), and Melissa Hansen (2014). The above had first visited the park as tourists, felt attracted to it, and returned for research influenced no less by the contradictions between the wild profusion of biodiversity and beauty of place alongside the daily struggles of a historically underserved and disenfranchised populations.

**Establishing Rapport, Biopolitics and a Garden of Conspiracies**

The garden meeting as such left me excited and too hopeful. Following official acceptance that I do research at the project, the founding members held a first meeting where they asked me how much I was ready to pay for doing research on their project? How come, if I wasn't sponsored by some international occult network? For the first few weeks, I was subject to intense scrutiny and conspiracy theories. Out of my travels and status as an African living and studying in the US was spun a theory that it was all made possible because I was Free Mason. At first, I thought with increased sharing of knowledge, they would get to know me, these fears would give way. But when these ceded and then came up again six months later, after I made a trip to the US to obtain a long-term research permit, I became worried. The management of the project was in factions, and some did not trust my presence there as I refused to take sides. In short two of the managers were not of the opinion that I should be allowed to work on the premises. For a moment, I was deeply troubled. I came to devote all my energy towards impressing on them the need for me to remain neutral in their conflict if I was to help them.

My first efforts indicated to me that that my interlocutors' conspiracy theories had less to do with me than with a broader crisis of trust that South Africans were facing with both apartheid and post-apartheid neoliberal institutions. The project founders echoed that globe as an empire that was run by a few select European royal families and corporations headquartered in London, Switzerland, and other formerly Western European capitals, including surprisingly the Vatican.

Back in St Lucia Town after the day's work, other isiZulu-speaking acquaintances working with the conservancy in various capacities would echo the same feelings. One brought out his cellphone and showed me images that he claimed to be evidence of meetings between world figures e.g., of the Pope greeting Mugabe during a visit: "You looked at this greeting there and tell me if these two are not Freemasons".

While out in the estuary studying and inventorying butterflies, it wasn't unusual to come across park guards who'd show an interest in my work. Occasionally they would bring up topics for discussion, for example, the reality of theory of evolution, whether I believed in it or not, that would eventually end with conspiracy theories, for example, whether the theory of natural selection was true as opposed to divine action, if not a ploy for whites to subjugate blacks, dispossesses them and run the world like a wildlife park. Such conclusions made me wary about my responses, about my own safety, and how I framed my research. A wrong answer could send the wrong message and make me a target. In a landscape where people went about with handy weapons and robbery was common, it could also shut out cries for for help when one needed it the most.

**Estuarine Entanglements, Conspiracy Theories and False News in a New Media**

Bit by bit I realized that limited access to the digital media, and the lack of transparency in state and institutional politics fueled these conspiracies. My interlocutors gave me the image of a virtual octopus whose tentacles stretched out from Europe and North America, reaching out to the brains of the world's population to pilfer it its life sources. I was surprised at the intensity of with which the project founders expressed their beliefs. Efforts to elicit evidence, met with cutting questions geared at me that I prove the contrary. I had the early foresight to express their right to ask hard questions about governance issues and broader issues over contemporary life; to query the African Conservation Trust, visitors to their project, the African National Congress, researchers with whom they intended to work (including me) and not to be satisfied until they were convinced. I accepted their rejection of the tendency in the younger generation towards complacency in terms of knowing the world (something which they found with many in their community.

But I also insisted on a need for material evidence to buttress their arguments, and a need to moderate their views and to avoid extremism. I hinted them about the pitfalls of the tendency

to lump groups e.g., whites, into one category, leaving out their different histories and everyday concerns as individuals. More critically, I was troubled (and I made this known about the effect of the above conspiracy theories on the project and their individual and collective senses of agency. If they believed that the world was out to get them and every black person and had employed Obama and Zuma for the purposes, how then what role did they give agency? How could they be models of empowerment from the garden space, which they had constructed? It dawned on me that these theories were a symptom of a deep crisis that the founders of the indigenous nursery and butterfly project had faced not only in their personal lives but also with the various actors and agencies that had intervened in their project in a bid to build capacity, foster community empowerment and development as well as sustainable biodiversity. It was then that I realized the frontier and liminal nature of the setting I was working and that working through and weathering these conspiracies even as sought to establish the emergence of the project was going to be a challenging task. I found that these two threads i.e., the entrenched conspiracies and the garden as a life project were entangled, and one could not disentangle the second without dealing with the first. In other words, my project was deeply implicated with the politics of space-place identities. My dilemma, as I expressed to them, was that I had not paid attention in my coursework to understanding conspiracies about how the world was run or governed, and it is only through honest dialogue and in line with our common interests in butterflies in both material and symbolic terms as well as given our differing experiences that we could enrich each other's understandings of the world. Unknown to me, my preachy tendency, a fact that I inherited as a result of my position in my family (I am my father's second son and my mum's first child), which imposed on me a need for openness, acceptance, and at the same time a need to be attentive to the welfare of my siblings and cousins, most of whom are younger than me. The trait seems to be pan-African, and is encapsulated in the South African expression notion of "Ubuntu". As I was to learn from every Afrikaans person met in St Lucia who were acquainted with the managers of Manikelana, they are a very difficult lot to work with, stubborn, obstinate and too critical even for their own good. "They were okay when Mduduzi was still alive. But after he passed away, they became radicalized. Unfortunately, they can't develop with that attitude", Dave, a close admirer of the group muttered to me. Dave, I realized had been very close to Mdududi, the one who first brought up the idea of the project, a rarity given the pause relations between blacks and whites in the estuary.

**Saving Dukuduku Forest: The Manukelana Indigenous Nursery and Art Project**

The Manukelana Indigenous Nursery and the Isiphaphalazi Butterfly Project emerged in 2001 as a cooperative project by two "out of work" woodcarvers that previously squatted on the R618 to St Lucia. Mduduzi and Mzikhali aimed to rehabilitate the degraded Dukuduku Forest in a bid to protect their craft. Despite the risk that the idea entailed, the iSimangaliso Wetland Park supported the venture. Through arduous footwork, and encouraged by President Thabo Mbeki's policy of an "African Renaissance" the two recruited two other out of work youth and were able to apply for and to obtain a permit to establish a community-based organization and to operate an indigenous nursery, the first in Khuka Village and the Dukuduku Forest area. As a collective, the four convinced the local traditional leader about their conservation-development goals. The venerable Baba Shiekeshela who was barely more than ten years older than them yet had a deep foresight about changing trends in the area's development, gave them a six hectare piece of former pine plantation land, which they reclaimed and began seeding with indigenous trees. While plying their woodcraft, they also worked on an extensive indigenous, lived frugally, just as they warded off armed threats from their own community for doing "Conservation".

Then by a twist of fate, the plant nursery, after many months of growth was stripped of all leaves by caterpillars. A visiting Argentinian entomologist doing research in the community forests of northern Zululand, happened to stop by the project site, and informed the four gardeners that the caterpillars were actually butterflies. He pondered whether the four could run a butterfly dome as well? At the same time, the four gardeners were found out and hired by the African Conservation Trust, a post-apartheid environmental non-governmental organization, to green a nearby urban settlement. The Trust had discovered, by chance, their passion over indigenous plants and their commitment to conservation and community development. So began a close partnership that would see the Manukelana Project obtain through the mediation of the African Conservation Trust, a loan from the South African National Lottery, the United Nations Development Global Environmental Facility (GEF) small loans program, as well as financial and technical assistance from South African government agencies. All the above, to establish an indigenous plant nursery project, operate take a butterfly conservation and ecotourism project, a permaculture garden where they would train local community women in permaculture and rainwater harvesting methods as well as through which they would establish school gardens and effect urban greening as well as alien plant eradication in the estuary. Other projects too would follow: a beehive, a cultural tour project and a dizzying array of other ventures. Through the initiative of the ACT, volunteers came in from abroad to

help construct the necessary infrastructure. In the course of that an international weekly "soccer" competition would be instituted to add to the cultural tourism project. Gradually, the site attracted the attention of the Afrikaans speaking community in St Lucia, the English settlers of Monzi, the agro-forestry plantations, and of course the iSimangaliso Wetland Park that had suggested the idea of the community based organization. All of the above came in with critical resources. Various local state agencies also limped in. The indigenous plant nursery and butterfly project began to look like a model of collective action, networking, and empowerment for communities that were critically impoverished yet living in resource rich areas. More importantly, it looked like a model of racial and cross-community healing.

However, by the time I arrived in April 2014, all the significant actors that had supported the project, and each of who had a vested interest in its success, were gone. Few tourists or visitors turned up to see butterflies or to buy indigenous plants. The gardeners were caught up in often bitter and intractable personal and ideological feeds that paralyzed management and often showed no little signs of ending. And while some often contemplated selling the garden to the highest bidder and leaving, the very idea of ceding the business to a white person, and next facing their community, or leaving the indigenous garden, plants and butterflies on which they had invested the best of their labors, imagination and youth, was difficult to imagine.

After several months of research in Manukelana, I moved to the Tembe Butterfly Dome at the periphery of the Tembe Elephant Park about four hours further north. There I also found another community and an NGO driven grassroots project that was initiated with corporate funding as well and modeled on Manukelana. The project was close to abandonment. I spent over two weeks in the dome and community reserve, sleeping on a piece of plywood with a thin blanket for warmth on the floor in the interpretation room and with snakes. I was in the middle of a wildlife forest all-alone with not a single tourist ever turning up. Yet, everyday, the tour guide would turn up, plant few host plants, take care of the yard, spend the rest of his time chatting with other tour guides working in the close-by Tembe Elephant Park, while waiting for the managerial problems of the dome to be solved. Along with the dome manager, who had ran away for fear of his life (reason being that he occupied a critical post in a community project in a village to which he didn't belong), they shared far more extensive knowledge of butterflies and breeding and of the neighboring ecosystem than I encountered in Manukelana. Yet, they too talked of exploitation by white researchers, their inability to make use of their knowledge, their unwillingness to leave biological and heritage Conservation for any other career, or to

troop into the cities for that matter. More critical was the lack of community support to the project due to feuds over ownership and control by mostly old men with little knowledge of butterflies or project management. Of all the butterfly conservancy projects I visited, Tembe was the most bitterly fought over not by those that had a hand in its everyday management but by distant village heads that wanted to exert symbolic control over the project.

The above narrative indicates that neoliberal dynamics, following its introduction into South Africa in 1996 – to replace the African National Congress' socialist policies (see Allen and Brennan 2004) - have reshaped or continue to reshape subjectivities at the peripheries of protected area conservancies in very surprising ways. One of these is the revolution in urban greening and indigenous forest sustainability, happening against a background where one would have least expected such projects, and a community context characterized by trenchant land claims and ethnic cultural assertion. In other words, there is strong will to re-assemble place against a landscape characterized by discontent. The second is that these projects are grassroots rather than entirely top-down development projects. They are also projects through which underserved and long disfranchised communities envision new identities for themselves. The third is the allure of science that has overtaken these projects at the same time as a revitalization of indigenous or local knowledge. Having believed for long that science and technology is the domain of Euro-Africans, the introduction of high school graduates to indigenous and scientific botany, butterfly breeding and ecology, and forest biodiversity is energizing. It also opens up their minds to comparative valuation of indigenous knowledge and a questioning of mainstream science and the influence of European or settler cultural landscapes. The fourth is community tensions and dissentions over control and management of these projects for the symbolic recognition that they bring, among other benefits. And the fifth is the struggles between these projects and the state and market as institutions through which they seek to reclaim autonomy.

To place into perspective the import of the questions that preoccupied me on how projects or places get to be assembled and groups of marginalized people or communities come to be transformed, I outline some of my earlier experiences of the estuary when I first visited it years ago and some of the experiences of the black communities in St Lucia Estuary and inside of the Greater St Lucia Wetland Park as the park was known then.

**Affective Spaces: iSimangaliso Wetland Park as a Nature Conservancy and Frontier Wetland**

In taking up anthropology as a graduate student in the Eastern Cape of South Africa, I was particularly attracted to the ecologies and cultures of watery spaces, which I figured out to be ontologically and theoretically fruitful spaces to contemplate modernity. In line with the above, I first visited the Greater St Lucia Wetland Park in the summer of 1999 with a close writing colleague and a PhD student at the University of Cape Town. She was researching on the travel accounts of 16th century Portuguese shipwreck survivors on South Africa's rugged and turbulent eastern coastline. My interest lay in the evolution of the (wet)landscape and its portrayal in glossy travel magazines e.g., Africa Geographic and Gateway Magazine as South Africa's most "natural hydro resort" or a watery low-lying freshwater Mecca. More critically, I was interested in understanding in-depth the freshwater relations of the diverse actors that were drawn to this frontier space and the meanings that they made of the exchanges of water bodies and the landscape as well as its profusion in terms of wildlife. St Lucia was a fateful crossing not only for Portuguese shipwreck victims in the 15$^{th}$ and 16$^{th}$ century, but also one of the bloodiest scenes in European Elephant and Hippo hunting in the 19$^{th}$ century and of the Nagana or Tsetse fly epidemic in the early 20$^{th}$. It was a trip made on a whim during Easter break to a part of the eastern coastline that we hadn't checked out.

A three-hour drive from Durban, one of South Africa's busiest and colorful cities, the sees one drive through dark green indigenous tree boulevards in capital of the "garden province" towards northwards. Outside the city, the patches of indigenous thickets that trail the wide N2 trunk road to the north reminds one that the landscape was once a coastal forest that had quickly fallen to human occupation in the 19$^{th}$ century before latter day efforts to halt an already checkered forest. Soon after the deep green thickets often garnished by the ever present coastal silver oak, comes open spaces of lush hills vegetated with industrial sugarcane plantations that taper down to the waves of the Indian Ocean. Formerly owned by white settlers, they were now owned and managed by a new class of Indian owners whose ancestors had been shipped to South Africa more than a century ago as indentured labor. This was when iSiZulu-speaking men refused to contract themselves as indentured labor to settlers on their appropriated ancestral lands. The effect of these contradictory land, labor and ownership relations has been to tension relations between isiZulu people and Indians as well.

Two hours rolling through green, trimmed, and aesthetically laid out landscapes, the highway brings one to a succession of miles of tall, shady, and serried plantations of Australian eucalyptus trees. The only interruption of the view is the approach of the "smokestacks" of Richards Bay, South Africa's eastern industrial hub, which like Durban, is a formerly English imperial and colonial outpost. It's after Richards Bay that that human presence begins to be felt in the landscape, as if up till then the living had been swept off the land except for farm hands. Stragglers appear walking along the dangerous highways, some in green fatigues idling about sawmills, truckloads of others being moved about the plantations and others in "bush taxis" and that speed past or open-back *bakkies* that trundle past. The side-roads from the plantations see tractors and timber-bearing trucks often emerging into the highway without warning, often leading to with that have made the highways in this part of northern Zululand a death trap.

Leaving the eucalyptus plantations aside and the at-risk mobile population, the highway begins its descent into the historical and mythic Mfolozi lowlands. Thus opens a vista of an undulating country intensively populated by the iconic mint-producing Australian gum. The gorged out river bed of the Mfolozi appears, dry and almost listless, a "terra incognita" (Datry et al. 2011), with stretching beds of red sediment, and little trickles of water here and there. Flanking the embankment are idle and stunted acacia shrubs that appear to stand vigil beside the drought-prone riverbed. The dryness of the Mfolozi for part of the year and its "aquaticness" during the period of heavy rains, followed by crocodiles in the floodplains, as well as its unpredictable flashfloods even when the sun is burning in the skies has seen the river terrorize and carry away shipwreck victims, elephant hunters, and even today unsuspecting tourists. Unknown to me, my future research will implicate the waterscapes of this river downstream. Before you have enough time to savor a herd of cows halting on the sediments of the riverbed to drink from runnels of water, the vehicle begins the ascent on a stone-studded hillside where a receding eucalyptus plantation is gradually giving way to a barren and treeless hillside with a rickety human settlement.

Kwamsane "Township", with its industrial litter, tattered yard fences, matchbox houses and 1x1 meter outdoor 'long-drop' toilets, and roamed by goats, cows (or "speed brakes" as they are cynically known on the east coast), opens up to the now breathless traveler, the hidden realities of landscape engineering that characterize much of black South Africa. Five minutes later, Mtubatuba, a colonial trading station emerges. The town is named after a wealthy local chief that competed with the imperial and colonial government over wealth. While setters have

perpetuated the narrative that his name derived from his fondness for fondling young girls' breasts, locals isiZulu subjects hint more at the force with which he pummeled himself out if the mother's womb at birth (Harrison 1999?). Mtubatuba is a hard-scrabbled and rugged city, intimately hugged on all sides by encroaching eucalyptus plantations, disappearing marshes and carpeted by fleeting industrial litter. The endless drone of loudspeakers playing *kwaito* and South Africa gospel deafens the ears a massive population hauling groceries and other household wares keeps the city's streets and taxi rank endlessly busy. Soon after we leave "Matuba", happy that we didn't need to tardy long in buying a few days' groceries as we were scared, we broached the branch road to the nature conservancy. How did so much population come to be squeezed in a small unproductive part of the country? We asked ourselves time and again.

Just a week short of being inaugurated as iSimangaliso Wetland Park and World Heritage Site, The Greater St Lucia Park was an amalgamation of thirteen adjacent or contiguous conservancies stretching for about 210 miles all the way to Mozambique. Just as we were pondering how it's declaration as a world heritage site would change its status, we noticed an altercation at the intersection of the N2 trunk highway and a branch road we were looking for. We slowed down the car to find out.

We were just in time to witness an altercation that led to gunfire and powder mixing with the morning mist. The event jolted us out of our reverie. I had expected that of northern Zululand, but not close to a protected wildlife park. A group of protesting young men had blocked the intersection with tires and tree trunks and were manning the blockage when a military police detachment in army personnel carriers approached. Some of the police had taken cover around the carriers which are called *nyalas* or buffaloes in Eastern South Africa, due to their impregnability, and began firing with sub-machine rifles. In spite of the mist, the other policemen pursued the disheveled and poorly-clad young men into an indigenous forest patch. I wasn't sure they'd get far as it wasn't their environment.

The conflict didn't represent the senses of place that we had read in glossy travel magazines. My first thoughts were that it was an isolated event where police were ransacking some marijuana farms as it often occurred on the coastline further south. Caught unawares, visiting tourists sat in their vehicles wondering what was amiss. The two of us were left wondering what could possibly drive young men to block highway traffic on the N2? Were they stopping

tourists from visiting that part of the country during an Easter break? Who were they angry with? And w*hy had the policemen opened fire against them, instead of talking to them?* The answer came from a bystander, a "colored" South African traveling to the park who was saying that it was all about "Dukuduku". The name, which insinuated to me a struggle between two boxers, kept cropping up as he told the story to two other visitors.

I left the car and invited myself into his company. The problem he said was about Dukuduku, which lay on the R618 (the first branch road into the conservancy) about 30 kilometers away. How then did a crisis in Dukuduku influence the conflict we were witnessing? The speaker went on to talk in a quiet tone about conflicts between the nature conservancy, historically displaced and angry communities, and the ambiguous role of the post-apartheid state in the conflict.

**The Future Park as a Contested Landscape**

So how come the policemen don't understand or see the suffering of these young people? I asked. If the young men were bitter about dispossession, why were the police, who were all black also angry? He felt that the policemen, due to their closeness to their white bosses and the regime, often hated blacks that troubled the status quo. "They see these as animals."
"What about they themselves?" I quietly asked.
"They don't see themselves as black. They think they are white."
The analysis struck me in the ways in which the black police officers transgressed conventional norms. "Whiteness" was no longer a question of X but rather of affinity in terms of power and control. My feet shifted on the ground. In spite of the on-going Truth and Reconciliation Talks which exposed many contrite black policemen that carried out horrendous crimes on other blacks for the apartheid regime, there were still indications that relations between black policemen and the black communities remained very fraught. The image of young men with primitive arms, black policemen leaping out of "buffaloes'" with sophisticated automatic rifles angrily coupled with the landscapes of sugarcane fields lying endless and aesthetically beautiful, as well as of green eucalyptus plantations, followed by signs of the "wilderness" and streams of leisure visitors, including me, floated before me as the policemen returned from the forest patch, swearing. A crushing sense of guilt befell me over my status, even before one entered the park. Like in T.S. Eliot's poem "Journey of the Magi", our trip seemed like a long

preparation for a disappointing revelation. For me it was the first inklings I had of how non-human relations intervened in constituting the human in rural South Africa.

Inside the park, authorities presented to "us" narratives of illegality of the forest dwellers in occupying it, and the threat that their existence posed to the "state" forest. The contradictions of the "pristine" argument did not dawn on me as I hadn't read of anything to the contrary. Affected isiZulu-speakers that served tourists and park management underlined on their part their claims to the park and forest, and a history of evictions, racial injustices and blindness to their suffering. Women and children from IsiZulu-speaking families that were employed by the park were tasked with fetching water on their heads in heavy water gallons and buckets from boreholes for tourist use. I went with them to fetch water for our own use, refusing to see them as water carriers, and this to the consternation of the "white" management at the camp. During the trip to the borehole, I picked up chatting with the women and children, as they would not respond to sensitive questions on the camp premises. They were surprised and ill at ease that I, being "African" or black like them, spoke to them in English, which they didn't understand. So, I reverted to broken iSiXhosa, which is intelligible to iSiZulu speakers. The families that worked for the park, labored from dawn till dusk almost daily and with little time to look after their children. There were no schools in the region, which left me wondering about the future of the young. On reaching the boreholes, I realized that not only were they distant (we had to attempt several), they were also muddy, used by wildlife, and fouled by saltwater.

The advent of drought meant that the isiZulu park workers saw themselves reduced more or less to "animals" as they put it. "Even the wildlife are treated better than people here," one of my informants told me with a twinge of cynicism referring to the practice of park management trucking water supplies to hippos, elephants, and warthogs. I chatted with another, a family head who cursed the evergreen commercial plantations ringing Lake St Lucia, for guzzling up more water than humans could obviously find for domestic use. "Look how green and fresh they look, these water thieves! Look at how one looks!" And as if the suffering, wasn't enough, the park's tour guides informed us after a day spent viewing wildlife (which I refused to participate in) that we could either go on night drive to view wildlife or attend dancing performances by (bare-breasted) teenage girls in a Zulu cultural village or a clearing. Still unable to overcome my feelings, or to contemplate indulging myself at the spectacle of bare life, I relented.

Equally, just as with the women with whom I went to fetch water, I found that the isiZulu-speaking staff at the bush camp had a hard time communicating in English. They were perplexed by my presence within the tourist group. How come I was black like them and could not speak isiZulu? Where did I learn English? Was the woman beside me my wife? Did I come to the park to see wildlife too? Or was I simply accompanying her? Most, I realized were very cut off from the park and the outside world. So much so that the young not only dreamt but also hastened to the cities as soon as they came of age. On the other hand, I wasn't surprised at their incessant mobility and to learn about the high crime rates in the region and as a result, the park's warnings to tourists to be careful about how they drove.

The landscapes we went through and what we experienced at the park affected us right from the beginning of our visit in spite of the "pristine" and conducive biophysical environment. While my colleague could readily express her shock and irritability in words, I had to pull away from her, from the others at the camp and the game wardens, into the woods in a bid to contain or process my thoughts and feelings. The park didn't feel like Africa to me. It had never occurred to me that there were many Africas (as Nustad would later spell out in his ethnographic work done in the same area: *Creating Africas: Struggles Over Nature, Conservation and Land* (2015)) as conservation interests, industrial forestry, commercial farming, and local communities all seek to define and create their own realities, with very differential resources at their disposal and with differently distributed outcomes. In *Landcapes of Privilege: The Politics of Aesthetics in an American Suburb*, Duncan and Duncan (2004) talk of people in Bedford, Westchester Country, New York, seeing landscapes as communicative of identities and community values. "They speak of landscapes symbolizing – and even inculcating - political and moral values, as well as creating and conveying social distinction. They also know that the landscape depends upon a politics of anti-development. But while at a certain level being aware of this, for the most part, they tend to naturalize that privilege, having no reason to trace the far-reaching, unintended consequences and unacknowledged conditions of that privilege". The naturalization of the conditions of the isiZulu dwellers of the protected area left me with a deep sense of anguish, alienation and pain that I found inexplicable at the time except through questions. How could Conservation turn away the very people that were supposed to be the first in line to take care of it, those it was supposed to invested in, and to benefit from its projects? The more the dwellers of the park asked me questions about myself, the more I saw into their alienation. It was then that I realized how different my background was and how very fortunate I had grown up. In the Western

Cameroon grasslands, I grew up with a strong aesthetic attraction for natural and "pristine"-looking landscapes peopled with bird life, forms of wildlife that were not threatening and that had the privilege of lacking human presence.

Between the 1930s and the 1970s, my paternal grandmother and my father had procured a handful of extensive woody hillsides, flood plains, and open grassfields in the "country", in anticipation of an extended family in the future. It's in these environments that I spent my childhood and pre-high school years, when not reading; exploring nature, transplanting nurseries with my dad, taking care of fishponds, working on gardens with my mum, or relishing indigenous fruits most of whose names I am still to find in English or French. I had grown up more comfortable in largely natural environments, more attuned to natural sounds, the textures of daylight and the beauty of different species of life forms than to rural or urban environments with their contrived sounds and interminably demanding exchanges and rules.

At Charters Creek where I had expected to immerse myself into the indigenous forest trails and the lake-side spaces as well spend time charting the tracks of shipwreck refugees, my excitement suddenly gave way to concerns about those that were evicted or reduced to squatters. My own very understandings of the values and meanings of protected area conservancies collapsed. My mind also began to replay voices or complaints I overheard from less fortunate village neighbors where I grew up that my family's acquisition of far more land than it needed was a sign of capital and greed. Charter's Creek drew me out of a dreamlike contemplation of the landscape and brought me closer to reconsider nature as shared patrimony or by default, a brutally repressive ideological space. As I left St Lucia Estuary, images of abundance and social crisis, of diverse water sources flowing into Lake St Lucia, the largest coastal fresh water lake South Africa and estuarine system in Africa forded on one side by the Indian Ocean, and yet a landscape that suffered from drought, hardly stopped flickering through my mind. Later on, I was to read about South Africa and the 'resource curse' in James Michener's historical novel *The Covenant* (1980). It appeared to me that the notion was unyoked from processes of modernity. I found the estuary to be the best place to return for research if I ever had the occasion.

# Introduction
# Estuarine Communities and Place Histories

## Chapter Summary

*This chapter introduces the context of the research as a prerequisite to understanding the actors, their networks, and their goals, modes and outcomes of collaboration. It establishes a historicity of St Lucia Estuary and the themes of modernization, wetland zoning, economic activities, and regulatory processes. In so doing, it underscores how the lacustrine and coastal estuary has been constituted through community evictions, environmental enclosures and the fostering of colonial monocultures in material-symbolic senses. It concludes that successive colonial and apartheid regimes have produced and sustained often-counterproductive and dis-affective economies in environmental relations in South Africa and these instances have become critical to understanding environmental processes. Moving from the "molar politics" of space and collectivities to a "minor politics" of cramped up spaces and interpersonal relations (See Deleuze and Guattari 1987, 2004) I equally examine the significance of the Manukelana Project and situate the project anthropologically. Finally, I offer a project outline.*

The first-time visitor to the Isiphaphalazi Butterfly Dome or the Manukelana Indigenous Nursery and Art Project soon finds that the project is entirely run by blacks. The response is often bewilderment. Nothing in the journey to the wetland from Johannesburg Airport has prepared the visitor to find a significant conservation project, 6 hectares large, run by blacks who appear very at ease with themselves and without white supervision. How did it happen? How come when Khula Village that encircles the project on two sides is a derelict settlement, often deserted in the morning by inhabitants that troop into St Lucia Town as uniformed gardeners, maids, shopkeepers, restaurant waitresses and maintenance workers and serving exclusively white businesses only to return to the settlement again at dusk? How come that the gardeners had the patience and stamina to engage and sustain a long-term project i.e., establish a garden and various groves of slow-growing indigenous trees, a majority of the pioneer trees

about four to five-meter high and some very large like the Mkhulu or Natal Mahogany? How come when all activity in Khula village is limited largely to housing construction (attested to by the endless banging of nails on roof tops, an event that worries conservationists), women selling wares by the roadside, touts jostling for passengers and taxis ferrying commuters to and from St Lucia and Matubatuba, as well as tour guides and interpreters taking tourists from St Lucia to show them ethnic Zulu heritage and customs? The ensuing doubts and questions from visitors make for a good starting point for the interpreter or tour guide to trot out for the umpteenth time, a history of the Dukuduku land problem. This, in order to explain the complex motives that drove the founding members to engage a multifaceted green project that they still found hard to define.

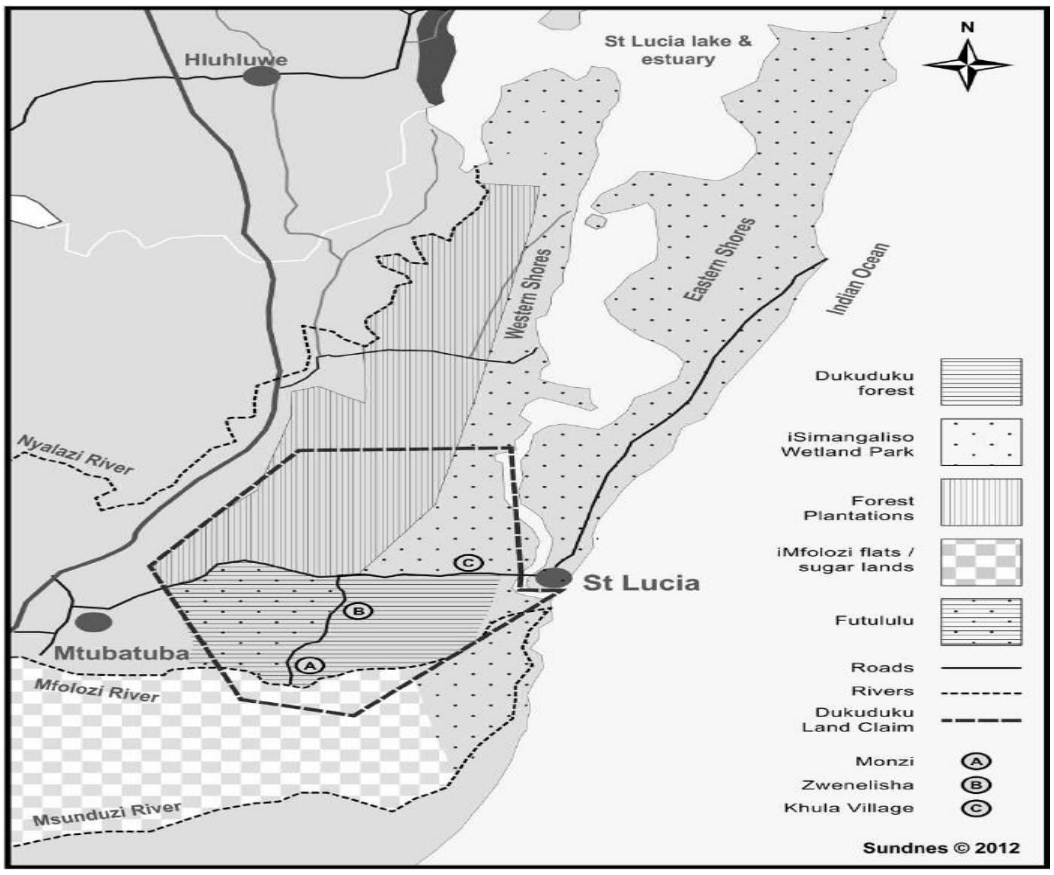
Critical to this history is how successive colonial regimes pulled the land like a carpet from under the feet of the Zulu, and left them in a perpetual struggle to regain their foothold. The longlasting condition of alienation and frustrating struggle which lasted for more than a century and took a toll on my amaZulus and black South Africans meant that much of their intimate relations with the land, its flora and fauna and tenure methods were lost. And as if the pain of loss wasn't enough, white South Africans have emerged after the end of official apartheid to hypocritically blame the historical losers and victims for (a) lacking practical as well as conceptual knowledge of both farming and Conservation (b) being unable to do business (c) having no identity and (d) lacking the ability to understand contemporary problems.

The only problem as I followed this recurrent narrative of place was that the founding managers or tour guides had grown tired of telling the fuller story over time. They would quickly make short shrift of the complex histories of people and land, freshwater and forestry as they knew them, collect their fees, and move on to the next tour. More so, these histories often left most visitors uneasy before they got to interacting practically with things they could smell, touch, see, taste and sometimes hear in the present. However, the interested listener with a who were Rastafarians that were enamored with performances would see them delve into the fuller story of land, water, and forest and a congerie of ill-fated historical actors, while underlining at every turn, the various forms of denigration that have occupied successive generations of black South Africans of which they were descendants.

**Modernist Zoning: Process of Deterritorialization and Reterritorialization**

From the early decade of the 20th century up till the 1960s, zoning processes in South Africa had responded entirely to the needs of the state and South Africa settler communities. Only as an afterthought did the state pressurize the conservancy respond to the subsistence needs of black communities. In St Lucia Estuary, following the Commission for the Delimination of Zululand (1906) which reserved all the land in the region for the use of European settlers as they saw fit, process of industrial forestry (Australian gum and European pine plantations), sugar cane plantations, white settlement and nature conservancy all tensioned the landscape and created a host of socio-ecological dilemmas.

Firstly, conservation, plantations and white settlement squeezed out local isiZulu dwellers from their lands rendering subsistence gardening and settlement problematic. These also reduced of pastures for the forest dwellers cattle while the introduction of exotic plants e.g. the *cromolina odorata* and *lantana lantana* exploited gaps within indigenous indigenous forestry as well as poisoned the locals' grazing cattle. Exotic forestry came to exert competing claims to soil nutrients and space (over indigenous forestry, displaced wildlife, and poisoned soils, an already scarce resource in a largely dune forested landscape. Worst, these created competition through reducing freshwater availability by way of high evapotranspiration rates, which in turn has instigated the inflow of saltwater into the lake and floodplains. Nustad (2013, 2011, 2010) has examined how conservation and extractive pursuits came to co-exist in the estuary until recent when relations between both became increasingly untenable.




*Map 3 Zoning Processes: exotic forestry (plantations), indigenous forestry* (Dukuduku), sugarcane plantations, nature conservancy, segregated white/black towns.

He finds the two as different sides of a logical colonial policy that was geared at once towards extracting natural resources as well as providing leisure pursuits to setters both activities being imperative to the survival of colonial cultures. Inevitably the above has brought bad blood in social relations in the estuary**.** The next part of this project will examine the various spaces in the estuary and how they transformed social relations in particular.

**Machining the Floodplains**

South of Charter's Creek is the Mfolozi Flats where the lifeline of St Lucia's Estuary has been reduced to a part-time trickle river bed and a rainfed river. Oral and written sources indicate that until 1900, the fluxes and flows of water in the Lake St Lucia System were pretty stable. Beginning from 1911, the development of commercial sugar cane mono-cropping along the floodplains saw long-term African residents caution the farmers who were largely of English-descent about their strivings to contain the shifts and flows of the iMfolozi River against their

advice, the farmers increased massive upstream river channeling and extensive irrigation in their efforts to secure freshwater abstraction for their crops (Nustad 2011a). Harrison in *Memories of Early Matubatuba* reports that (1989) reports from correspondence at the time that their goal was to reap quick profits before they could migrate to Australia. However, the fertility of the floodplains and the dazzle of sugar was too tempting, if not overpowering. What followed was soil degradation and riparian habitat loss leading to complex sedimentary processes and frequent closures of the river mouth (Grenfell et al 2009; Ellery et al 2003; Copley 2009). By the 1930s, competing water uses and the increased machining of the river system began to exacerbate the river's flows and shifts. In 1952, acting out of frustration, the floodplains farmers along with conservation spliced the Mfolozi River from Lake St Lucia system and channeled it straight into the Indian Ocean. The goal was to save the sugar cane fields from backwater flooding and Lake St Lucia from high yield sedimentation. The outcomes were disastrous for the lake on which the Afrikaans of St Lucia Town depended for angling and ecotourism. Relations between the Afrikaans and the English farmers of the floodplains, which were already acrimonious since the Anglo-Boer Wars of 1901 – 1902 and 1904-1905, a prolonged bitterness that lasts to date.

Following the separation of river and lake, costly remedial dredging and technological fixes to supply Lake St Lucia in turn with freshwater flows from the iMfolozi followed. Remedial dredging, without the flushing currents of the Mfolozi, brought saltwater intrusion and alien weed infestation of the lake and exposed the mangrove estuary and coastline to the devastating effects of cyclical cyclones (Steinke 1987, 1989; Forbes and Cyrus 1989). In the late 80s the "Great Drought" (Clarke and Holt-Biddle 2002: 144) hit the water basin and scientists began to back off from the machining of the system to allowing "nature" to take its course. They advised the state and iSimangaliso Wetland Park to reconnect the Mfolozi River back with Lake St Lucia sustem and to rehabilitate the floodplains. Even with a hefty loan from the World Bank and the United Nations Development GEF Program in 2012, the proposal which was billed to be completed by the end pof 2016, wasn't able to take off by 2014. Natural factors, alongside the cultural politics of freshwater and land ownership in the Mfolozi Floodplains had gradually converted the problem into a "wicked" ecological problem.

Dismantling the gridlock over the floodplains has been a Sisyphean task that's foreseeable by some of the main actors in the estuary. This is partly as a result of deeply rooted self-interested calculations and affective relations with the floodplains. Restoring the flats means limiting

sugarcane production, and this implies either evicting, paying off, or enabling the farmers to switch to ecotourism. Efforts in this regard on the part of the state have met with stiff resistance as the farmers have questioned the state and conservation's own interested calculations as well as claimed more than a century-old emotional attachment to place as well as economic reasons. Besides, whereas it had been easier migrating to Australia a century or decades ago, processes of accelerated globalization have seen a tight lid placed on migration processes in the highly industrialized countries. Removing the black African communities "squatting" in the plains to reduce peat swamp gardening, the exploitation of Dukuduku Forest, and to roll back on African livestock watering is not also possible. Most of the gardeners are former Mozambicans with nowhere else to go and nowhere else to obtain farm employment that's subsidized by gardening.

Except for processes of deforestation of state-initiated exotic plantations that were established in the estuary and expanded rapidly since the 1940s, none of the above proposals appeared feasible without the incoming post-apartheid regime incurring the loss of political affection and social capita, which it desperately needed. St Lucia Estuary remains mired up in century-old intensely affective and place-based histories. The drought problem has persisted with the unresolved identity claims by the floodplain's estuary's actors. The outcome is a wicked problem that ensnares any emerging propositions and including my future research proposal on freshwater meanings.

**The "English Village" of Monzi**

On the Southwest of Lake St Lucia and Dukuduku Forest is the English village of Monzi inhabited by the owners of the Mfolozi Flats, members of the century old Mfolozi Sugarcane Planters Association who have a tram railway that cuts through the floodplains. Stationed on the top of a running hill the village has a commanding view of Dukuduku and Futululu Forests on one side, the Mfolozi Flats and the Mfabeni Swamps on the other, and Ezwenelisha and Khula yet on another. White mansions with extensive gardens, well-primed lawns and an extensive golf course characterize Monzi village. The entire settlement and forest is ringed by a running two meter high and spooked barbed wire installed by iSimangaliso Wetland Park to keep wildlife at bay while another gauze wire fence is planted inside by home owners to render criminal penetration almost impossible. While the golf course acts as a security buffer between the settlement and the black neighborhoods of Ezwenelisha, another fenced clearing separates

the settlement with Dukuduku Forest to provide further security. All homes in Monzi, where I spent my first six weeks of pre-fieldwork, are gated and heavily equipped with alarm systems that are regularly maintained. Monzi with all its aesthetics and strong love of the nature theme is clad in ambiguity due to its surroundings. While its dwellers take pride in their mansions, yards, and sugarcane farms, they are increasingly anxious about security issues that might come from the presence of their black neighbors, farmworkers and house servants whom they can't do without.

Monzi is a village also of domesticated animals like horses, donkeys, turkeys, an exotic bird park and wildlife such as monkeys, bush babies, and lots of snake species including the rare Gaboon adder. The butterfly specie variety in the nearby Futululu Forest once made it the envy of every South African butterfly collector. Draconian policies and measures over collection in the area by the Natal Parks Board turned Fultulu Forest in the 1980s into a risky butterfly poachers' destination (personal communication with a member of LEPSOC South Africa). In any event, the neighborliness between the residents of Monzi and those of the forest has seen enduring tensions over an increasing and insatiable demand for a buffer separating the two communities.

**St Lucia Estuary: From an Afrikaans Angler's Holiday Refuge to a 21st century Eco-Tourism Resort**

Northeast of the floodplains is St Lucia's town, the hub of St Lucia Estuary. It boasts six residential streets, one main street, a post-office, a police-post in a container, no schools at all, three shops, three liquor stores and several eateries for tourists. The rest of the lake island is composed of tourist lodges and residential homes surrounded by indigenous woods. In 2015, a new Catholic church and a guesthouse sprung up close to where I lived. The conservancy surrounded it and I once noticed a leopard nursing its young in a thicket behind the back fence. The church is dedicated to St Lucia; the blinded saint on whose day the survivors of shipwrecked Sao Bento reached the vicinity in June 1554. Often beginning their ill-fated journeys from the "Wild Coast" down South up through the subtropical Zululand coastline to Sofala, a Portuguese trading port in present-day Mozambique, the passage through St Lucia was often uncertain. The estuary mouth, which has shifted its position several times over the past centuries, constituted a critical point in the survivors' walk to "freedom". Because the estuary was dwelled (travel writers often used the term "infested") by crocodiles and hippos,

the survivors often had to circumvent the mouth about thirty kilometers inland, which brought them close to "natives". While the wildlife rendered crossing difficult, the coastline's miles upon miles of smooth dune soils and thirst-generating salt sea winds rendered walking arduous. More so the Mfolozi River being prone to unpredictable flash floods often caught these travelers unawares just as it does today to unsuspecting tourists. Tales of sneaky crocodiles creeping up on unsuspecting tourists wading through the river mouth are also recurrent in spite of warning signs.

Gazetted as an Afrikaans village in 1822 by English colonists, St Lucia was only accessible to the outside world through a ferry. As such the village town, which is completely cut off from the mainland by the ox-bow Lake and by the Indian Ocean, remained a fishing mecca and seaside resort for Afrikaaner settlers. The construction of the St Lucia bridge in the 1940s saw increased traffic to the village, and the advent of ecotourism in the 1980s transformed it into the "gateway to the Greater St Lucia Wetland Park, dubbed as "South Africa's first terrestrial and marine park".

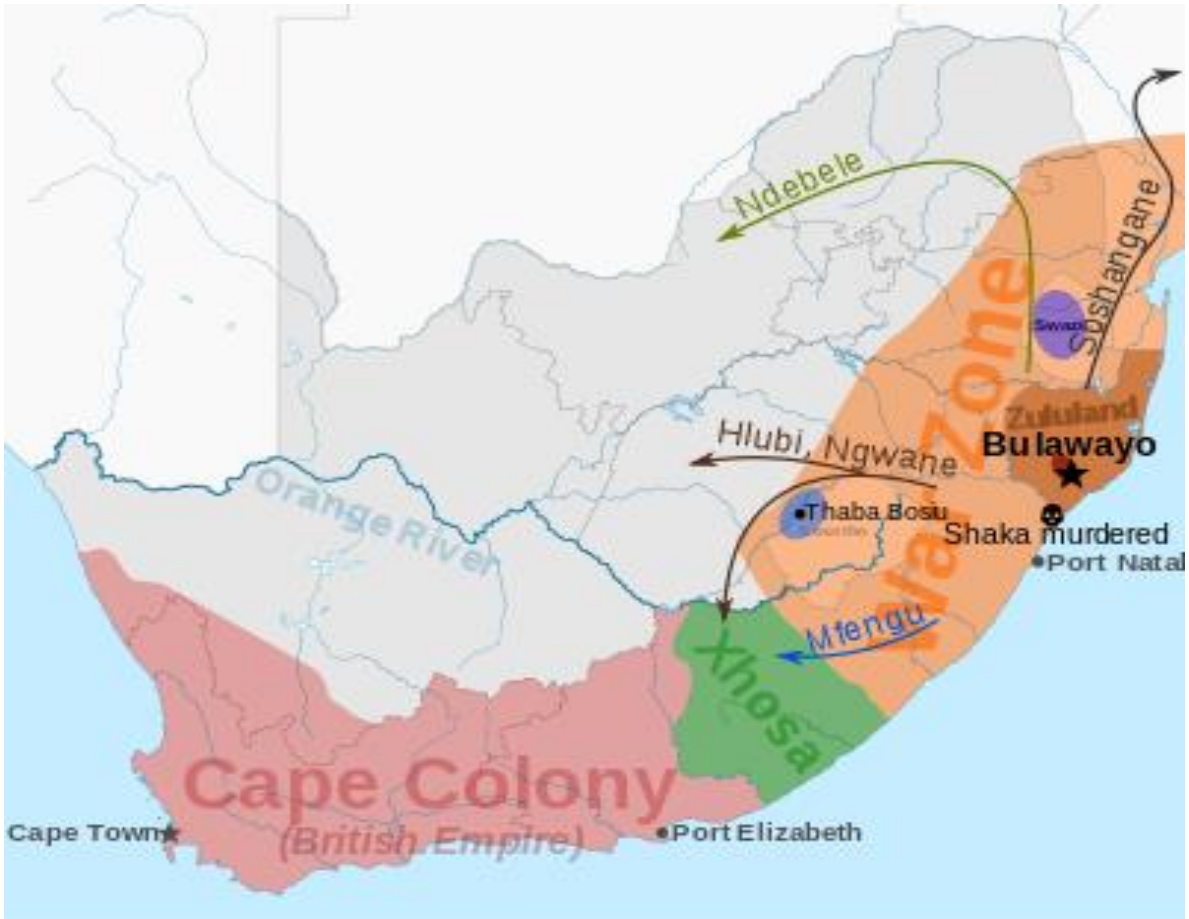
Yet, in 2002, when I next visited, St Lucia, eight years after the official abolishment of the apartheid system, was still a gated town. A hundred or more people from Dukuduku Forest, and women for the most part, would cross the lake bridge, go past a boom pole (where vehicles driven by blacks were screened) to offer their services to the numerous tourist lodges, shops, restaurants and outfitters in town and then troop out of town again at six pm. While underpaid, none, even tourist lodge maids were allowed to put up in St Lucia. Cross-racial couples (international tourists or otherwise) were not allowed to book for accommodation or lodge in St Lucia until a few years ago. An entrenched culture of racial segregation pervades the town, often to the embarrassment of visiting tourists who can do little to change the status quo. No black is allowed to own any business on the seven streets in town. Town meetings and decision-making processes are exclusively run by the Afrikaans residents whose opposition to the ruling party is strong. Because blacks working in St Lucia aren't allowed to vote there, they have to travel 15kms to vote in other rural areas. Even so, most white employers would not allow them unless they promise to vote for the parties of the employers' choice.

Due to the various restrictions and infringements on the persons of the dwellers of Khula village who offer their labor in St Lucia and other black visitors, St Lucia has been labeled as the most 'racially segregated" town in South Africa'. Blacks are excluded from owning property in the

town. Occasionally, the national media often picks up episodes of racial violence in St Lucia. Strangely, few outside social scientists except for Picard (2002) and Guyot (2007) that have worked in the area have mentioned in their research work the pervasive racism they witnessed in St Lucia and in the wetland. Institutional racism apart, the daily influx of international tourists since the turn of the 21st century has spared the town of some of the excesses of racist violence on people of color practiced in other remote Afrikaan-speaking settlements or towns in the country.

**Dukuduku Forest: Pristine Nature, Uncivilized Dwellers & Resistance to Colonial and Postcolonial Evictions**

It was during my second visit that I discovered Dukuduku. Nested in-between the state-managed conservancy, the floodplain sugarcane farmers of Monzi, the ecotourism resort of St Lucia (owned by Afrikaaners of Dutch descent), and extensive stretches of state-managed pine and Australian eucalyptus plantations, the "indigenous forest" (as outsiders know it) was a former wetland refuge for communities those that had escaped the violence of King Shaka's "final solution". This was a policy meant to address once and for all the irritations on the frontiers of the Zulu Empire in the 1820s.




*Map 4 This map illustrates the rise of the Zulu Empire under Shaka (1816–1828). Shaka forced neighboring chiefdoms and clans to either submit to Zulu hegemony or be utterfly cushed. Due to the far superior might of the amaZulus, most of their neighborbors preferred to flee across a wide area of southern Africa. These included the Amatonga-Soshangane that fled into present-day Mozambique. Some hid in Dukuduku Forest (present day Zululand). Relations between the Amatonga of present day presenday Mozambique and St Lucia have been continous in terms of iindentured labor and trade.*

While the South African mainstream Conservation and Environmental lobby has made efforts to fix Dukuduku as a "pristine" forest, Marxist academics for the most part, that sought to rewrite South African history from "below" have hardly scrutinized the name, the historicity of the forest, and the myths around it to contest Conservation claims or the "deliberate ignorance" or latent racism embedded in these claims. English travel writers and naturalists deemed the forest inaccessible to "outsiders". One described it as harboring rebels from the Zulu empire, and having a standing army of intrepid mercenaries whose rumors of participation in any battle was enough to scare the hearts of opposing forces. Empire planners and geographers described Dukuduku as a derelict and unproductive malarial thicket in an uninhabitable swamp. Others outline the forest dwellers as smiths who mined the minerals of the coastal dunes for iron to smelt out weapons for King Shaka's *impis*.

More locally, the dwellers have always known the place as their ancestral home. “Dukuduku”, which translates in English as “the place of the heartbeat”, “the place where people crawl,” “the hiding place”, or “the place where people disappear” all attest to the status of the forest in the past as a wetland refuge to communities fleeing from the traumas of the the outside world.

Since the 1930s, efforts by successive colonial, apartheid, and post-apartheid regimes have sought to dislodge the dwellers from the forest. The motivations for enacting these policies unfolded with time and with the prevailing needs of colonial, apartheid and post-apartheid political economy. Evictions from the Mfolozi Flats and neighboring Dukuduku Forest began with English settlers’ desire to establish floodplain commercial sugarcane plantations. These were shortly followed in the mid-30s by more evictions to create the St Lucia Game Reserve; in the early 40s to create exotic agro-forestry plantations for the be benefit of WWII project; in the late 40s to establish farmlands and settlements for Italian immigrants and liberated prisoners of war (Sundnes 2013); and following the establishment of the apartheid state in 1948, to create space for expansion of ecotourism by Afrikaans-speaking practitioners in St Lucia. Up till the 1970s, these recurrent evictions saw not just the state, protected area management, or forestry displacing black communities. White settler neighbors and post-WWII arrivals also took advantage of the system to demolish their black neighbors’ homesteads in a bid to chase them off. For those that resisted, they threw them into prison and claimed their land for residential purposes or commercial expansion. As the 1990s approached, white neighbors felt an increasing need to establish buffer zones for security purposes, and in so doing adding to health and aesthetic reasons. The outcomes were that processes of modernization and colonization disoriented and entrenched a deep-seated existential anguish in the minds of the forest dwellers. These trudged off homeless into the nearby colonial trading station of Mtubatuba, or sought refuge among other communities that had some land to spare.

In spite of their close physical proximity then, relations between the various communities in the estuary had never been harmonious. The notion that European colonists and settlers considered animals, birds, and trees better than people sunk deep into the minds of the dwellers of Dukuduku. This rendered it difficult for most to view Conservation otherwise.

**The Turning Tide: Nature Conservancy in Northern Zululand under Attack since the late 1980s**

Towards the late 1980s, the state, settlers alike and the protected area conservancy were coming under assault from various directions. Firstly, the impending collapse of the apartheid system saw a substantial and heterogeneous population of isiZulu-speakers begin to push into the forest, among them, former evictees, those that came to escape intensifying political violence across African communal areas – an outcome of the jostling for space and power by African National Congress and the Inkatha Freedom Front. There were those attracted by the growth of international tourism in St Lucia and the vacuum created by prior evictions. Equally, as a "zone of ambiguity", that is, officially owned by the state but tenured and contested by local communities, the status of the forest invited occupation. Beefed up by this influx of new populations, the long-term dwellers of the forest began to constitute land restitution claims on the Greater St Lucia Wetland Park, on white settler land, and on "state" land that was occupied by indigenous and exotic forestry.

*Picture 7 Dukuduku Indigenous Forest and Its Open Patches. Image by Cedric Nunn (Africa Media Online, No: APN9412; Date taken: 2004-01-30)*

The once secure 240-mile long Greater St Lucia Wetland Park, which until then had appeared like a state onto itself, found its territorial integrity about to unravel. It feverishly sought to consolidate its borders, just as Euro-African settlers sought for spatial buffers against the threatening "migrant frontier". Unfortunately, with the apartheid police force and military stretched thin by conflict, the state could no longer flex its muscle. Worse still, the size of the migrant population saw extensive clearing of the forest for settlement and subsistence livelihoods in a way that was never seen before. In view of the inability of the post-apartheid state to recognize the rights of the forest dwellers and to peacefully resolve the crisis, many

forest residents that were already weary of fighting back eviction, or pursuing land claims, decided that the only way for the community to keep their ancestral land and to have peace was to do away with the indigenous trees. This concretization of the role of affect – described elsewhere as "learning to hate the environment" out of helplessness - has been less examined in the literature on nature and the environment in the Greater St Lucia Wetland Park or its successor Isimangaliso Wetland Park and World Heritage Site.

**Dukuduku Forest Wakes up against Racial and Spatial Oppression**

By 2001, St Lucia Estuary had become iconic of the intractable nature of environmental conflicts polarizing South Africa. The combination of questions over land eviction, race and poverty, and the fierce resistance of the forest dwellers, rendered Dukuduku into a lightning rod for attacks and claims on other protected areas across the country. The crisis over the forest invited national attention as agrarian and rights NGOs e.g., Association for Rural Advancement moved in to support the land claimants. On August 9, 2001, the forest dwellers sent a contingent of some 100 participants in three mega buses to attend the World Conference Against Racism in Durban. While the conference lasted till September 8, 2001 the participants through speeches, strikes, and demonstrations, drew the world's attention to their plight and embarrassed the post-apartheid South African government. Participation in the conference brought the protesters into direct alliance with other movements fighting for land restoration and human rights in South Africa and worldwide. It also focused international research and publications on the forest conflict. However, while the presence of the protesters from the forest alongside others make a lot of news, the outcomes of the conference were eclipsed by the September 11 attacks on the US.

**Intensification of the Struggle**

The conference changed the dynamics of the struggle over the forest in terms of affect: thus, self-perception, intensification of knowledge over legality, humanity and human rights, a questioning of different "natures" and ideologies of resistance on the part of the forest dwellers. The post-apartheid government had little knowledge of the many historical problems that entangled environmental flows in iSimangaliso and less so about how human society and the environment had shape each other over time. Coming in from exile or from Robben Island or other internal prisons, most of the leaders had little knowledge about relations between state

and society in the estuary; between the Dutch-descent Afrikaans speakers of St Lucia Town and the settlers of "English"-descent in Monzi or the Mfolozi Floodplains; or between the above and more recent Europeans. Above all, it had little knowledge of the historical relations between these groups and isiZulu-speakers. Among the isiZulu-speakers, the state could not differentiate who were the original inhabitants of the forest who were displaced migrants from within the park, or from outside the park, or from Mozambique, or elsewhere. The state was also at a loss at understanding the conflicts between conservation and agro-industrial forestry, their respective roles in the long-term freshwater drought in the estuary, and more crucially, the different meanings of freshwater, forestry, and space held by the above actors. In terms of land "ownership", there was no certainty about who "owned" what piece of land, or where it came from, or even about the meanings of "ownership". According to AFRA, there were various historical maps over the histories of land conflicts in the estuary and each was harshly contested.

In short, a palimpsest of successive regimes, policies, and territorial displacements ensured that any "truth" from any of the above actors was at best situated and immediately contested as soon as it was uttered. The reality that began to emerge with those that had a vital interest in resolving the conflicts plaguing the estuary indicated that any solutions to the fundamental problems in the estuary had to be created or invented and negotiated rather than found (also see Braun 2002, 1997). This proposition, however, also came with its own demands: for any invention to hold, it would depend on the will of the various actors in the conflict, the modes of participation and understandings of power relations (Nustad 2015). Unfortunately, the sedimented affects and effects of power struggles in the estuary had gone on for too long to enable trust or any rational solutions. Like many other actors, even including the NGOs that were there to help, the state saw the local forest community in frames that evoked them as sub-human, undeserving of equitable justice and lacking in modern culture, "civilization" or "enlightenment". Many state agencies that were charged with resolving the conflict, including the courts, saw the forest dwellers as only worthy of the imposition of their own writ. The fate of the dwellers came to hinge on sympathetic individuals in positions of significance within the courts and state agencies as well as in opposition parties seeking their votes. More so, the increasing recognition of the plight of the forest dwellers by outside sympathizers beyond international environmental organizations rendered the state, settlers and conservation nervous.

While the white-controlled media and the white South African environmental lobby and various apartheid environmental NGOs e.g. the Wildlife and Environment Society of South Africa (WESSA), demonized the forest dwellers and pressured the state to evict them, the state equally responded in the 90s and early 2000s with violent force and other unethical approaches to assert its authority so as not to lose its precious political capital or see resistance spread to other protected areas in the country. Crops and homesteads were burnt and destroyed, electricity pylons were disconnected, freshwater boreholes were filled up with soil and whereas pipelines had been laid for pipe-borne water provision, these were ripped off and carted away. The cruelty of the post-apartheid state wasn't lost to the dwellers of the forest till date. Reports about Dukuduku became a staple in the mainstream media and other publications even as a groundswell of support among rights activists sought to expose the hypocrisy of Conservationist without a human face. Even the tamest articles in the press faulted the forest dwellers.

> "Conservationists face an endless battle against the effects people have on the environment, whether they live in formal or informal settlements, within Reserves or on their boundaries. This is evident from reports of squatters in Zululand's vital Dukuduku Forest, whose slash-and-burn farming methods are wreaking havoc on the ecology of the area." (Goetz 2000).

In the end, Conservation, the state, and settlers in St Lucia Estuary came to realize, with much bitterness that evicting the "illiterate" and "uncouth" "savages" (as they called them) from the forest was almost impossible. More critically, Dukuduku began to look like a sore in the new post-apartheid state's efforts to assert its sovereignty over Kwa-Zulu Natal, its most resistant and traditional region that was the homeland of more than 10 million of the country's 49 million population.

**The Outcomes of Intractability**

Arson which settlers and the apartheid state had deployed to torch the huts and projects of forest dwellers or other communities, was not limited to the ruled. It became an integral technology of power for aggrieved parties in the environmental and racial conflicts along the length and breath of iSimangaliso Wetland Park. These used fire as a sanctioned or unsanctioned measure to attain particular effects or to elicit particular responses. Just as fires

were set on houses, gardens, grazing fields, including unwanted squatters, or used for eviction enforcement by the police or white communities, so too did the marginalized employ fire as a resistance practice that simultaneously attacked commercial interests, notably the timber and sugarcane plantations. Highway blockages became common just as protest marches.

In the early 2000s, the failing state resorted to authorize the police as well as pay killers (a practice very common during that time in Kwa-Zulu Natal) to assassinate the activist leaders of the most radical land claim groups and sympathetic and newly elected councilors. Some were shot while driving, had their cars crushed by armored vehicles, just as others had their cars pushed off the highways. If they happened to jump out, their bodies were riddled with bullets as they fled. While some groups retreated into the forest where they lived for years shunning people, modern medication, clothes and meat, others formed a militia in the heart of the forest and underwent rituals of invincibility against bullets. Their magic didn't saved them from the police or military. Many died. Until Khula village was founded on a tract of land that the state appropriated from a gum and pine plantation, the tensions over Dukuduku Forest never showed signs of subsiding.

**Doing away with the Indigenous Forest to own the Land**

In addition to asserting what Guha (1989) Peluso (1992) and Bryant (1997) have termed as pre-existing local use `rights', e.g., through `illegal' forest use, a fraction of those that refused to leave Dukuduku South began clearing the underbrush and lianas and chopping down the age-old indigenous trees. The immediate purposes were to make space for building projects, or to burn down trees for charcoal to sell to urban masses that could not afford gas or for barbecues in colored and Afrikaans neighborhoods. However, their clearing of the forest received additional impetus from its status as an obstacle between them and "ownership" of the land. If the indigenous forest were gone, settlers, Conservation and the state would also take their eyes off the land and leave them in peace with their ancestral heritage. It was the most disturbing piece of information that came to me in the forest long after the dwellers accepted my trust. And it indicated to me how place politics could invert human and non-human relations. Many a time Afrikaans and iSiZulu speakers would respectively ask me what I thought of the never ending killing of rhinos in the park, and I would prefer to say that as a visitor I have not formed an opinion yet on the matter and would rather hear from them.

When tourists happened to point out the survival of indigenous trees in St Lucia as what made St Lucia a veritable resort, Dukuduku forest dwellers or those from the newly constructed village of Khula would point out that the indigenous trees that made St Lucia Town a profuse and biodiversity rich garden were of secondary growth. If the dwellers of Dukuduku did away with the forest and were left alone with their land, these argued, future generations that wanted to have indigenous trees and to mitigate the effects of climate change could always replant new trees.

**The Role of the State**

In 1993, shortly after Mandela came out of jail, he decided to visit Dukuduku Forest. His visit was part of a quest to quell the bloodshed in KwaZulu Natal that had claimed hundreds of thousands of lives due to the transition to post-apartheid rule. He sought to mediate the tensions between the militants of the monarchist and Zulu nationalist Inkatha Freedom Front (that had collaborated with the apartheid government to ensure the autonomy of the Zulu people) and the nation-wide African National Congress, which the former saw the latter as a threat to ethnic Zulu hegemony. He also wanted to use the visit to reconcile the communities of the region with Conservation. The problem was that Mandela was from the ANC which also appeared to support Conservation, otherwise, the Greater St Lucia Wetland Park. This was in contrast with the IFP which supported the land claims of the local community against the park, and even helped to shoulder some of their legal bills.

Hundreds of supporters of the Inkatha Freedom Front amassed themselves on a football pitch opposite the present Manukelana Project site. They were armed with makeshift weapons ranging from sticks, stones, to homemade guns and were ready to attack Mandela's helicopter in case he insisted on landing in Dukuduku Forest. Militants too of the nation-wide African National Congress began to assemble on the pitch with weapons to ensure that the helicopter would lan and that they would welcome Mandela. When Rasta Mlambo found that he and his father, Baba Mlambo, were on opposite sides of the vying parties, he realized that something had to give way. His intervention yielded no fruit as he was pushed aside. When it became evident that landing on the pitch would orchestrate intra-community bloodshed, i.e., if he could himself escape being hurt, Mandela made a last-minute decision and turned away. The helicopter landed at a nearby military facility where local traditional leaders drove to brief him on the intractable conflict over the forest. Mandela had underestimated the emotions of the

local communities against the state and the seething violence in the region. Yet, such a significant reaction, which would scare many outsiders from venturing into the forest, was not given any mention in the mainstream media.

## Redressing a Deeply Scarred Landscape: The Affective Dimension of Conspiracy Theories

Scholars e.g., Walker (2008) have criticized Mandela's transitional government for not including land restitution in the deliberations of the Truth and Reconciliation Commission. In failing to do so, the addictive pain and the moral and psychological damage that rural Black South Africans have sustained from various colonial and apartheid regimes over several centuries has been left intact. In initially pushing the land question to the back burner of South African politics, the government either wittingly or unwittingly sustained the social wounds stemming from forced evictions, land loss, and racism thus ensuring the grounds for future instability. The danger posed by "the land question" (some critics have seen it as a knife perched over South African democracy and society) has been exhaustively written about. Over a period of nine months in Manukelana, hardly did three days go by when speakers failed to connect diverse social contentions to the land issue. At Manukelana, Dukuduku Forest, the land issue seemed like a mesh that entangled all other social problems and emotions. As one visitor to the garden mentioned, if the African National Congress were to resolve the land issue, they'd soon find themselves out of power. It's hard to tell whether the inability of the African National Congress to solve the land issue is deliberate, due to the lack of will, or due to its realization that too many intervening variables have over time transformed the issue into a wicked environmental problem.

## Narratives of Degradation, Stereotypes of Lack, and Sociologies of Absence

To trace the experiences and contestations of the communities of Dukuduku Forest dating since colonial times, I appropriate Bonaventura de Souza dos Santos (2008) notion of "a sociology of absences". This consists of an inquiry to explain that what does not exist, or is actively produced as non-existent, non-credible alternative to what exists. Dos Santos states, "Nonexistence is produced whenever a certain entity is disqualified and rendered invisible, unintelligible, or irreversibly disposable". He sees these as deriving from and manifestations of the same rational monoculture: a monoculture of knowledge which enshrines modern

science and high culture into the sole criteria of truth and aesthetic quality, while relegating to non-existence whatever appears in the form of ignorance or lack of "culture". This perspectives that behold time as necessarily linear and that ahead of time precedes the core countries of the world system, thus relegating as 'backward' (pre-modern, under-developed, etc.) whatever is asymmetrical. There is also the monoculture of classification, based on the naturalization of differences and consisting of the distribution of populations according to categories that naturalize hierarchies, of which race and sex are the most salient manifestations, the racial being one of the one most deeply reconstructed by capitalism. There is also the monoculture of the universal and the global which privileges entities or realities that widen their scope to the whole globe, thus earning the prerogative to designate rival entities as local, particular and non-existent or captured in scales that render them incapable of being credible alternatives to what is assumed to exist globally and universally. And finally, there's the logic of productivity, which resides in the monoculture of criteria of capitalist productivity and efficiency, which privileges growth through market forces and which is evident in the introduction of neoliberal market structures to the environment. Applied to nature non-productiveness is sterility; applied to human labor, it envisions laziness, professional disqualification, lack of skills and non-productiveness, thus giving rise to "disposable populations".

**Black Empowerment, Micro-Enterprises and Race Politics**

After ending official racism and engaging initial efforts in the 1990s to resolve the infamous land problem in South Africa, the post-apartheid state also embraced a mix of neoliberal economic and environmental policies particularly from the late 90s and early 2000s. These included the decentralization and devolution of power and governance to localities. In a memorable speech to the parliament on behalf of the African National Congress on the 8$^{th}$ of May 1996, former president Mbeki declared himself an African. Subsequently, he called upon South Africans to culturally transform themselves and work together to overcome the evils of racism, colonialism and Eurocentrism. However, when the desired cultural transformation didn't seem to go far enough, Mbeki's ANC further adopted affirmative action policies known as Black Economic Empowerment. The goals were to reduce wide disparities in the distribution of wealth and income between whites and blacks across the country, deracialize the economy, and attend to "the gross under-development" challenging millions of blacks and large swathes of impoverished areas of the country. At the same time the party hoped that the policy would create new wealth and productive capacity, which would eventually lead to growth and

development. How was this wealth and capacity to be created? Through increasing the meaningful participation of black South Africans in wealth ownership, management and skills-training.

What happened was the exact opposite.

The policies opened spaces for an avaricious black elite, which Moeleketsi Mbeki (2009) saw as "hungry for its own homes, cars and designer clothes… while doing nothing to boost South Africa's economy." As the hardest critic of his brother's often-misguided but sometimes well-intended policies, Moeleketsi underlined an emerging elite culture of cronyism and entitlement that has since discouraged black entrepreneurship and education, keeping millions in poverty and entrenching the country's shocking economic inequalities. "BEE tells blacks—'you don't have to build your own business, you don't have to take risk, the whites will give you a job and shares in their company."

The outcomes of the above policies have hit the majority of black South Africans very hard since 2007 while entrenching visceral disappointment against the ANC regime, the black elite, whites as a category, and more successful foreigners. A side effect of the failure of BEE has been the entrenchment of long-standing essentialized assumptions that most South African whites along with some of the black elite have held about blacks. These assumptions, which undergird colonialism and the apartheid system, see blacks essentially in terms of lack as outlined by de Souza Santos (2008; 2015). More pervasive is the belief that blacks as individuals or collectives can't manage commercial ventures, corporations, or cooperatives due to their inherently inferior capacities. Scarcely is the instance of black education, labor histories, and landlessness evoked. Once naturalized, the above attribute have invaded black thought in South Africa and have come to constitute a stock response to failed black projects. Leaving aside the black elite, the mismanagement and liquidation of large farms that the post-apartheid state procured at very high cost from white farmers and turned over to black community cooperatives have only fueled these stereotypes. Across small towns and remote rural areas in South Africa such as Dukuduku, hardworking and honest blacks, like the founders of Manukelana, found themselves not only challenged by race-based essentialized attributes that discouraged entrepreneurship, creativity, and progress but also by the blowback of state-engineered class politics.

Ultimately, the struggling black masses and poor whites have responded to these realities and challenges in diverse, sometimes conflicting, and often ambiguous ways as we will see with the nurserymen. Srivinathan (2014) finds that spaces of social change that are characterized by a salient desire for progress and reform are often underlined by tensions between existing and emerging ways of thinking and acting that are productive of bio-power. Hannah (2011) finds the reality of bio-power in this instance as capable of being either affirmative or harmful.

Intertwined with the broader histories above, is the diversity of local subjectivities that have emerged over land, water, terrestrial and aquatic life forms and indigenous forestry in St Lucia Estuary over time, and this, due in part to the contested uses and meanings of these life forms.

**The Uses of Forestry in St Lucia Estuary**

Contemporary framings of Dukuduku Forest, for example, which is located at the confines of the 210 miles iSimangaliso Wetland Park and World Heritage Site and buffers Euro-African settlements, breaks down into various perspectives. A majority of the English settlers of Monzi see the forest as a buffer against invading black populations. Most Afrikaans settlers in St Lucia see it as a pristine wilderness in spite of evidence to the contrary. They underline that it should be saved at all cost from the communities living within even if it means expelling them without alternative land or compensation. On the other hand, there are black forest dwellers, who having failed to assert their "rightful" place in the forest and driven to the end of their wits by a life of resistance, have come to see the indigenous trees as an obstacle to their being and livelihood. Much of this population have concluded that they would rather torch the forest, or clear it away if possible, if that is what it would take for state and settler to leave them alone with the bare land. There are also those that have given up on the forest as their home, unable to sustain the fight against the state, nature conservancy, or the young those that have turned to a life of crime to justify their expropriation. And there are diverse Euro-African non-governmental organizations (agrarian, conservation and heritage, development), international environmental organizations and treaties that long to preserve the forest, in whatever form possible. Finally, there are those that in spite of their past victimization and oppression, still long to work, hard as it might seem, with the state nature conservancy, white settlers, the state, private corporations to save the forest.

The policy currents and practices discussed above would coalesce over St Lucia Estuary from

the late 1990s and complicate already existing agonistic forces that were competing to impose their ideas of nature over elemental life forms.

**Framing Environmental Action**

Mainstream Western scholarship has advanced the notion of rational self-interested calculations by *homo economicus* as sustaining the logic of modernity and neoliberal economics. While these might explain some of the contentions over Dukuduku forest, and advance, e.g., the notion of individual property rights as a solution, these postulations have been challenged for not dealing with the realities of kinship, or emotions and affect, as elusive as they may be. Otherwise how does one explain the lose-lose proposition which the clearers of the Dukuduku Forest hold having waited in vain for the forest to be restored to them? The question of how and why people care or do not care about the environment has been central to understanding environmental action. Besides the above, human consciousness of change processes, ecologists underline, not only often lags far behind the ecological. It is also unevenly distributed and mediated by diverse institutions. Acceptance of change processes in most cases, does not always imply accepting actions or decisions that would mitigate harm. Recognizing the reality of change, finding the causes and agreeing on common courses of action are often politicized issues. While the contingencies of climate change are accepted by many in St Lucia estuary in view of the summer temperatures and the increasingly frequency of drought, reaching a concerted consensus on what is to be done and how to go about it appears largely to be an issue that many tend to leave to the state and to international environmental organizations or donors to local non-governmental or community-based organizations.

**Literature Review**

A historical ecological view of human-wildlife and plant relations in iSimangaliso sees definitions and redefinitions of nature and the environment beginning from the colonial, apartheid, to 'post-apartheid' periods. Various scholars e.g., Picard 2003, Walker 2005, Guyot 2005; Harris, Branch and Clark 2007; Nustad 2011, Impey 2013 have attempted to come to grips with the complex socio-ecological changes in estuary. In so doing, they have produced substantive contextual historical analysis. However, the lived phenomenological aspects of human social and ecological relations have escaped their analysis e.g., micro-ethnographies of human-freshwater relations (including fish and amphibians) in the watershed, human-wildlife

(e.g., terrestrial and arboreal), or human-plant interaction (e.g., "indigenous" and "exotic", which could have problematized what constitutes a forest and a plantation). In short, the intertwined material-symbolic and ideological ramifications of human ecological interventions and phenomena are still to be unraveled. In most respects, some ethnographies seem to either take a bird's eye view or yielded a broad survey of policy changes and environmental impacts. Intimate and affective human ecological relations from the perspective of individual interacting actors that could have yielded the dense relations that often constitute "place" (Raffles 2010) remain unexplored. In some cases, researchers have been forced to rely on the views of accessible "settlers," and in so doing assumed these as an undifferentiated category; or they have equally portrayed the black African residents of Dukuduku Forest as an undifferentiated ethnic category. Perhaps, more significant is the elusive significance of race in place-making and researcher-"informant" relations in a landscape that is highly racially charged. Equally too is the elusive agency of the environment in its entanglement with changing policies, local modes of appropriation and ecological and social outcomes including knowledge production.

Security reasons, consciousness of race, and time limitations explain much of this meta-analysis. Journalists and researchers, like 18th, 19th and 20th century travel writers have been generally fearful of entering the forest - this fear has never entirely escaped the outsider to northern Zululand or much of peri-urban or even rural South Africa. Different patterns of crime and violence remain a heightened reality in South Africa, and particularly in Zululand where local-outsider relations are usually highlighted. While each day that the ethnographer spends in the field carries risks that are only possible in armed and dangerous parts of the world, researchers have paid scant attention to this reality, or to the possible causes or outcomes. Reflexive probing of tensions between researchers and "informants", even when they are of the same race, and which could have opened spaces to understanding complex and vested interests, are often left unexplored. Scholarly lack of understandings of diverse actor perspectives to the commons means that the character of wetlands is not well understood.

**The Politics of the Commons: Conflicting Affects and Rationalities**

As mentioned in the previous section, the broken mutualistic relations between the dwellers of Dukuduku Forest and the wetland's hippos, the latter now subject to enclosure by iSimangaliso Wetland Park, are not lost to the newly constructed Khula Village. The outcomes of separation of the people from the forest are various: beyond that hippos used to police young men and

older men that tended to be 'wayward' by making them to repair home before dusk, there's the reality of infrequent droughts that have come to exacerbate food shortages and induce hunger. These create tensions between monkeys and subsistence gardeners. While everyday processes of windblown sand (resulting from deforestation), were initially a source of irritation to the residents of the newly constructed village, most have grown to accept the phenomenon as a part of reality. Another reality is having to put up with either muddy or dusty dirt roads hewn out of the wetlands by logging concessions. All the above, including the angsts of being evicted from ones 'natural' habitat, and being forced with one's family into a shack in a former pine tree wetland plantation, brings into play questions of how space and political economy are affectively embodied.

Otherwise, 'alien' and 'invasive' plants and birds too have taken hold of and flourished in the wetland. While these were embraced at one era or the other as exotic, now state agencies, non-governmental organizations and conservationists are in a chorus that singles them as alien and having no place in the wetlandscape. The ramifications of the introduction of new species is not lost to the human community where black South Africans have come to suspect white South Africans of deliberately introducing bio-invasive species to harm the natural systems and to harm blacks.

While many of the affected dwellers in the estuary had their backs turned against Conservation, and against exploitative, individualizing and profit-maximizing aspects of market capitalism, and while they would often threaten anyone that supported Conservation, the founding members of the Manukelana Project felt otherwise. They preferred engaging white South Africans and Conservation experts (1) to prove to these that blacks too could do "Nature Conservation," and more so, a more humane and successful Conservation that would be broadly acceptable and community-oriented; (2) to prove to both whites and amaZulu people that as young people they could do collectively do business and sustain it into the long term without allowing profit to destroy their almost kin relations; and (3) to reassert their identity in terms of what it means to be African. However, as they sought to exploit openings in neoliberal conservation and Thabo Mbeki's drive for an "African Renaissance" to achieve the above goals, their goals seem to be also supplanted by the non-human entities and the biophysical landscape. Not only do they fall in love with laboring for conservation, they also become advocates for specific non-human life forms and environmental approaches. Inevitably, complex questions emerge over ecological and social justice and over the nature-

culture/society-nature divides inherent in much of the modernist ideologies that have wrecked St Lucia estuary and created a persistent material-symbolic and ideological drought.

**Hypothesis**

Central to this project is understanding (1) the dynamic relations that foster the emergence of alternative projects of environmental care and (2) the relations that different human groups have with plants, animals, and the natural environment, and (3) how these reflect predominant or changing ideas about human social and species relations. This project underlines that human social and non-human relationships are best considered in dynamic terms and through interdisciplinary exchanges, while equally revising the long-held practice that sees sociocultural research on human-animal relationships as being more about humans (Mullin 1999).

The above brings us to three main theoretical frameworks, which in combination could throw light on assemblages in the area of conservation development. Actor-Network methods could unveil from a technical perspective what it takes for a heterogeneous set of actor-networks - involving human associations, non-human allies, such as plants, butterflies, as well as objects such as machines, symbols, signs, technology, artwork, logos - to be enrolled into assemblages that are durable enough able to carry action and effect particular desirable outcomes. But a technical perspective that makes visible the underlying role of bricolage and actor-networks is not enough as it stops short of underlining the critical significance of affective politics and creativity.

**Indigenous Nurseries as Breeding Grounds for Multiplicity & the Unexpected**

One of the first things that struck me upon listening to the first narratives of the project was firstly, the role of coincidences, secondly, the multiple dimensions of ‘objects’ or ‘things’, and the reality of unexpected outcomes. For, example, in planting indigenous plants, the nurserymen inadvertently attracted butterflies from outside the former pine plantation to lay their eggs onto plants in the nursery. They weren’t aware of the particular relationship between butterflies and specific host plants though they knew of caterpillars effectively stripping the greenery off trees during the breeding season, just as older people talked fondly of harvesting *amacimbi (*or *mopane* worms*)* from *amarula* trees for a delicious dish. Nicolas in a write-up

following years of biological and ecological research in northern Zululand and after planting the Manukelana Project, castigates rural people for eating the caterpillars of butterflies and thus endangering butterfly populations. Without ample ethnographic research, he confuses the caterpillars of the emperor moth - locally known as *amacimbi*, which constitutes a highly sought after delicacy and income provider in the northern provinces of South Africa and Zimbabwe - with butterfly caterpillars.

The prevalence of this ecological phenomenon in Dukuduku Forest, St Lucia Estuary and iSimangaliso Wetland Park as evidenced by tourist reports on processional caterpillars. However, in initiating the indigenous nursery to enhance the ecological restoration of Dukuduku Forest, the nurserymen assisted the butterflies to reclaim their place in the locality. In reclaiming their place, the butterflies through Nicolas, the scientists, complicated the original plans of the nurserymen in a positive way, by enrolling them into gardening (or turning them into gardeners) as well as butterfly protection and ecotourism. My understandings of the nurserymen as such became intertwined with that of butterflies, host plants and Dukuduku Forest not only in terms of butterfly reproduction but also in terms of the reproduction of the forms taken by human social life. If the Manukelana Project became a multi-faceted green undertaking that could not be described, it was the result of various intervening modes of human and non-human agency (biological, artistic, scientific, empirical processes) most of which were underwritten by affective politics. Thus though I categorized the project as "a garden for conservation" and the effort as "gardening for conservation" as opposed to other forms of gardening. Emerging practices of *bricolage*, actor-networks and assemblage and the role of emerging affectivities and emotions e.g., affective learning and knowing, affective labor, reciprocity, are theoretically central to understanding the growth, tensions, and glue that holds together the project and its networks.

**Understanding "Third Natures" at the Edges of Protected Area Conservancies**

This project shares much in common thematically with a handful of the themes evoked in Anna L. Tsing's *The Mushroom and the End of the World* (2015). The indeterminacy faced by her characters was very much a part of my fieldwork. Whenever I felt my world or project was falling apart I went for a walk. I took hundreds of walks over the course of a year in the Igwalagwala Forest trails and St Lucia Estuary at large, including Dukuduku Forest as well as in the other butterfly domes and community reserves that I visited. In the process, I fell in love

not only with butterflies, but also dragonflies, estuarine crabs, tree orchids, different species and varieties of mushrooms, different fern species, bird songs, patterns of wind and light, the silences of the forest, cryptozoic fauna of indigenous forests, and the sound of the waves crashing on the distant shore. I spent lots of night up waiting for grazing hippos, collecting bush-baby sounds from nightfall to early down, trying to film them in the canopies, and at various times I found myself in danger, e.g., crept after by a crocodile or accidentally facing a leopard while butterflying. I bred butterflies at work and at home and adopted dwarf chameleons, giant red crabs snails, and attempted to do the same with snails. Because my everyday visitors were vervet monkeys, I began to study them and developed a close relationship with them, which in end became costly as they studied my comings and goings and began to ransack my kitchen for food. The walks in the end threatened to dissociate me from human community.

The spatiotemporal framework in which Anna Tsing's *mastutake* mushroom pickers (2015: viii) operates is very similar to that of non-traditional conservation ecotourism efforts at the peripheries of protected area conservancies in South Africa. Firstly, the context of "third nature", i.e., "what manages to live (or survive) despite capitalist transformation of the environment" is very much alive in the post-apartheid landscape in iSimangaliso Wetland – where people and communities creatively scavenge for resources on a daily basis. First we have an estuary whose ecology has been rendered dysfunctional through modernist landscape splicing and economic exploitation thereby creating long-term material and symbolic drought. Water sourcing becomes a matter of race; even species and people have to be ingenious to obtain water including the breaking open of long distance water pipes. Secondly, we have a formerly imperial, colonial, and now state-managed conservancy that has impoverished, dislocated, and criminalized local communities. The conservancy is now unable to compensate or deploy its own resources to assist, or rehabilitate these communities in every sense of the term. The state sees the conservancy as charge with doing away with the "backlog of underdevelopment" that it has historically created among its black resident communities. There's also the present Manukelana garden space, a wetland that was reclaimed from a monoculture pine plantation. In short processes of capitalist intrusion into Dukuduku Forest, wildlife relocations, serial community evictions and land seizures over the course of the 20$^{th}$ century have created land restitution claims that have turned of recent into a "wicked problems" in terms of their complexity.

Her narrative equally treats *matsutake* mushrooms as companions and objects that are good to think with, while offering a lively picture of what it might look like to live "in our messes" as parts of contaminated and contaminating multispecies worlds and assemblages (Nappi 2015). However, if Tsing calls for renewed attention to the importance of "arts of noticing," of curiosity, of play, of polyphony, of adventure, which is novel in the ethnography, she does not probe affect, or what happens when the above leads to affective understandings and a questioning of state, science, and economic institutions.

Tsing's narrative also focuses on the struggles of various characters to eke out a living from a precarious landscape. The coming together of various (marginal) characters within a liminal landscape for purposes of foraging, and who are united not by their labor but rather by their enactments of "freedom" from different forms of institutionalized oppression (Helmreich 2016) also rhymes with the experience of the Manukelana project founders. The founding members of the project all came to Dukuduku Forest (or were brought by their parents) for different and even contradictory purposes, yet end up becoming gardeners with the goal to save the forest, green the community and restore the chocked watershed. Their project is an assemblage that is constructed through scavenging, bricolage and much of altruistic as well as volunteer labor. The purposes of the project's members aren't really profit making but something much more – to safeguard the tradition of carving, to disprove the lie that blacks couldn't do business, or that they can't do conservation, and to gain autonomy from "Babylonian" enslavement (mean capitalist), and ultimately to care for the environment for its own sake – a notion that I term "affective environmental labor". The theme of precarity enters not only through the capitalist and apartheid dislocation that created the background context and their lives, it is also highlighted by their struggles at every stage, struggles that make huge demands on their emotional resources.

Tsing's work also scrutinizes the interesting notions of "salvage accumulation" which she had already introduced in her work earlier (Tsing 2015) as well as peri-capitalism and "salvage rhythms". The first notion derives from Marx's concept of primitive accumulation in which capitalists violently acquire resources and convert them into commodities. She portrays salvage accumulation as the creation of capitalist value from non-capitalist regimes. Here, she draws on Gibson-Graham's work on the heterogeneity of capitalism, and more precisely, their notion of marginalized, hidden and alternative economic practices, and which they saw as "sites of becoming" (2008, 2006, 2005, 1996) to advance her narrative. Tsing argues that capitalism is

built upon the translation of value created into inventory that can be transported and transposed into a variety of economic contexts. She argues that peripheries, rather than providing possible alternatives or lines-of-flight from Capitalism, are in part constitutive of capitalism itself. She doesn't see the non-capitalist forms produced in these spaces as pure, innocent, free, or as truly different from capitalist practices (as Gibson-Graham do). Capitalism incorporates these forms and it thrives on drawing resources or generating value from them. It doesn't only require these ruins to exist; it cannot exist without them. In other words, both are co-extensive. According to Helmreich (2016) a cynical reader might worry that Tsing's "third nature" is simple fodder for "the *terza natura* gardens of capital", or that it offers "freedom" as "a veneer over vexed ethno-racial politics in the United States' Pacific Northwest". A more open-ended reading of her work, he suggests, attends to anarchic social and organic forms as phenomena that might ever elude finished…"

The theme of precarity and bricolage, though the latter is not explicitly examined.

> *"Precarity means not being able to plan. But it also stimulates noticing as one works with what is available. To live well with others, we need to use all our senses, even if it means feeling around in the duff." (p.278)*

In terms of understanding assemblage processes and participatory design for social innovation, this project is inspired by Tsing's examples of assemblages of scientists, communities and scholars working together to learn and relearn ways of intervening and tending forests for the benefit on human and non-human inhabitants. This notion of learning and relearning brings into focus the notion of knowledge co-production over plants as well as butterflies and how these two categories are known. Intervening and tending forests for the benefit of human and non-human inhabitants equally brings into focus anthropocentric, utilitarian and bio-centric altruistic perspectives to non-human entities.

**Significance of this Project**

Everyday discourses among the Manukelana Project founders or tour guides underline how ruining of present conditions (natural, systemic and/or political) affect us and force us, whether by necessity or creativity, to deal with new conditions of living and being human. However, the thrust of the present analysis focuses on how contested social-natural landscapes emerge

within structures of political economy and post-colonial formations; how various people live with, negotiate and argue over change through strategies of restoration, policies for mitigation, or alternative practices of co-habitation; how we co-habit (or not) with other kinds of species in times of loss and restoration (see Tsing 2013). The empirical grounds of the Manukelana Project point to the possibility of recovery following wreckage. In connecting with struggles towards recovery in a landscape characterized by ruin, this project explores (1) bricolage as a mode of creativity that undergirds the production of assemblages of collective action or of alternative spaces and (2) the dynamic and expansive nature of kinship and biosociality. In cognizing the role of hope that gave birth to the Manukelana Project and how it courses with notions of affect through the life of the project, this dissertation enjoins scholars whose works have sought to reclaim or articulate hope in terms of substance e.g., considerations of assemblages beyond the wreckage of modernity (Tsing 2013), of alternative economies (Gibson-Graham 2006, Roelvink et al, 2015, Errington and Gewertz. 1995) and value orientations (Crampanzano 2015) or as a method of approach e.g., Miyazaki 2010, 2006, 2004; Errington and Gewertz 1995; de Souza Santos 2015). To a greater or lesser extent, this project variously reflects hope as a stance toward the future in terms of forms of agency, concepts of the subject, modes of collective action, institutional orders, and political legitimacy (see Keanne 2015). Perhaps it is the complex and unpredictable nature of reality that gives rise to hope, as Berlant (2011: 24) echoes, "when you discover that the dreams you are attached to are either "*im*possible, sheer fantasy, or *too* possible, and toxic."

**Chapter Outlines**

**Chapter 1. Research Methods and Conceptual Approaches** introduces the methods and conceptual frameworks that guided the field research and now writing process. That is, how I came about the research and research questions, emergent and affective approaches, likewise scrutinizing conservation as a space where struggles between *what is* and what *might be*. Among the concepts of relevance here is that alternative economies, decolonization, the practice of bricolage and improvisation in assemblages of collective action, bio-politics and multi-specie relations. Most critical is the multidimensional role of affect (affective labor, affective learning and knowing) and the politics of recognition.

**Chapter 2: 'Gardening for Conservation': The Emergence of Manukelana Art and Indigenous Nursery Project as an Affective and a Productive Space** accounts for the

emergence of the Manukelana Project as a conservation, ecotourism and landscape restoration project. It examines the contradictory conditions and contexts of its emergence and how its main actors came to forge working connections between disparate agencies. *How were four unemployed young men coming from communities that were dispossessed of land by successive colonial and apartheid systems, able to procure and transform a piece of land already leached for decades by eucalyptus and pine mono-cropping into a flourishing green project comprising an indigenous plant nursery, a butterfly dome, a tea garden, a community permaculture training center and shade house, a community craft store while carrying out outreach projects under the sponsorship of various corporate entities, including state agencies and the United Nations Development Program?* In outlining the above, this chapter foregrounds the role of *bricolage*, improvisation, chanced meetings but above all of unstinted affective and collective labor as critical to the founding of alternative economic projects among highly marginalized or precarious communities. Of critical significance is the fact that affective labor not only drives such projects of environmental care but also constitutes newer environmental subjectivities. Among these newer subjectivities I construct and elabotate the notion of *affective environmental labor* (laboring for the environment) which is distinct from Hardt and Negri's notion of affective labor (i.e., labor intended to produce affects).

**Chapter 3: Ontologies of Human-Plant Connectivity: Articulating Plant Names, Agency and Landscapes**

How do plant names, agencies, and landscapes come to matter in the Manukelana Project? As discourses of climate change, neoliberal conservation, decolonization and black empowerment came to characterize everyday life at the Manukelana plant nursery and garden, questions soon emerged over representations of local plants, trees and landscapes, the exclusion of the deeper denotative indigenous meanings and the often-derogatory names emerging from European colonial classificatory systems and nomenclatures. In foregrounding scientific as opposed to indigenous names and perspectives and utilitarian versus symbolic uses of plants as well as perceptions of landscapes, the Manukelana Project managers forcefully present alternative understandings of empowerment. Equally, highlighting the above issues are notions of affective politics, embodiment of self-other, and a politics of recognition.

**Chapter 4: The Affective and Cultural Landscape of South African Butterfly Names**

One of the perennial problems in butterfly ecotourism in Africa is the status and uses of

Latinate-scientific nomenclature by local tour guides. This enables them to communicate with tourists, most of who tend to be from Europe. In opposition to the tourists, however, are local tourists who have no knowledge of the language. This chapter firstly examines the difficulties that butterfly tour guides face while training. This relates to identifying butterflies as well as memorizing and articulating individual butterfly and host plant names. I elucidate how these difficulties factor in tour guide presentations and might easily lead to tensions. Secondly, I outline a slow simmering generational conflict between the approaches of the project managers and tour guides to eco-tourism. While the tour guides who are younger tend to be more apolitical and technically-oriented in their work approach, the older generation see in their approach a lack of identity consciousness. More so, in overcoming these challenges posed by Greco-Latinate scientific nomenclature, the tour guides position themselves in terms of professionals in that able to substantially impress a multiracial audience and to receive corresponding tips. This instance of affective labor also runs through the other three existing community butterfly domes that I visited.

This chapter also examines MAIN's founding members' call that one should scrutinize the ways in which butterflies are known, named and appropriated in South Africa. The chapter highlights contentions over butterfly names in terms of memory, articulation, and identity. Moving from the Greek/Latinate or English and Afrikaans "common" or vernacular butterfly names in community butterfly garden signage to textbooks, one finds that a fraction of the six hundred and eighty names of known butterflies in South Africa are largely descriptive. This means that they are derived from color, behavior, or indirectly from bird names. The rest are non-descriptive. Among these, some point to places (which enhances the conservation status of implicated butterflies where the name is positive). A significant proportion, however, are patronyms. Here we find the racialization of butterfly names; with an overwhelming tendency to name butterflies considered beautiful after European royalty as well as butterfly hunters and kin relations, while relegating isiXhosa and isiZulu leaders that were hostile to the advance of the English colonists and Voortrekkers to butterflies or moths that were considered drab. A fraction of the names also have barbaric or savage overtones e.g., *Hottentot, kaffir, caffra* in line with naming processes that were encouraged in the 19$^{th}$ century. I examine the effect of these names on the MAIN's founding members. Finally, this chapter scrutinizes a push by Baba Phungula to create indigenous isiZulu names for butterflies since butterflies remain undifferentiated in most non-Western cultures. His efforts at bio- cultural knowledge production meet with resistance by the butterfly scientist in the project. Virtual (systemic)

challenges add up with other conflicts to complicate race relations and management of the Manukelana Project.

The above two chapters highlight the role of affective politics, otherwise, how issues around representation or enactment influence subjectivity, perceptions of selfhood, fairness, knowledge production, organizational dynamics and sustainability goals.

**Conclusion: Gardens, Affective Assemblages, and Biosocial Becomings** draws from the above chapters to outline the dilemmas of assemblages of collective action that are subject to interventions by science and technology, the market, and state politics. It highlights the role of affective politics and place identity (politics of recognition) and sees ecological and cultural restoration as intertwined. It proposes fluidity rather than blockages as critical to the growth of projects of collective action be it over common pool resources in ecologically sensitive ecosystems. Collective action and empowerment engages not only a change in the material circumstances of actors involved, but also knowledge production and who can claim to be in the know (see Swyngedouw 2013). This project advances that it also includes empowering the non-human agencies and biophysical landscapes with which human actors are entangled. The next chapter will examine my research methods, conceptual approaches and project outline.

# Chapter One
# Research Methods and Conceptual Approaches

## Field Negotiations, Open-ended Adjustments

I turned up in the "field" with a honed field project, i.e., a topic, field methods and tentative theoretical approaches, ready to go. I also had a research authorization with the iSimangaliso Wetland Park to carry out my proposed project within their jurisdiction and with their help. They'd promised to put me in touch with their scientists, an event that placed me in a strong position to complete an in-depth project and in good time. But when I reached the Isimangaliso Wetland Park office to formalize my authorization and begin research, the on-the-ground conditions that made possible my original research had shifted. A World Bank loan to the park to make good the catastrophic separation of the Mfolozi River from Lake St Lucia or to refund unused segments of the loan in the case if the park couldn't deliver on its promises now complicated my project. Now, the park, which was apprehensive of my research on freshwater management while their project went on, felt obliged to rescind its agreement with me. Then as if to impress on me the critical nature of their request, 'they' made it clear to me that it was "dangerous" for me to come and go on estuary mouth at will since it was patrolled by the notorious Kwa-Zulu Natal wildlife. In effect, I was effectively left in search of a new research topic, a new site, and different actors for my research.

## Researching a Butterfly Conservancy: Adaptation, Bricolage and Improvisation as Salvage Methods

"Four weeks on-site is admittedly a short time to try to get an ethnographic research project up and running, all from scratch," Menzies (2011) states. The switch towards a subject that I originally intended as a pastime – butterfly watching and conservation – meant that I didn't have the luxury of reading about the problem before hand. I had hardly read any literature on

butterfly biology, entomology and ethno-entomology, or micro-fauna conservation. I knew little to nothing on indigenous nurseries or host plants. The change of topic without the luxury of pre-fieldwork called for emotional adjustment, new enquiries and new research questions. This required weeks of immersion and exploration. It left me groping like a caterpillar on a host plant that was pruned of leaves. Already, obtaining a new passport and visas had cost me more than twelve months of delay in going to the field. Efforts towards obtaining funding for fieldwork turned up dry. I was primed up with fear. What good use I would make of the few months I had in the field depended on how I could hold myself together and navigate the challenges that would come my way.

The change obliged me to restort to bricolage and improvisation to salvage my fieldwork and rescue my already drowning program. The changing seasons and delicate nature of relations in the eatuary meant that most of my methods or approaches were tentative and riddled with uncertainty. I had to quickly learn and accept these features as part and parcel of the character of everyday life in the estuary and on a project site where the founding members didn't own the land. I quickly learned during this early phase of my research that a researcher is like a hungry caterpillar. If a caterpillar finds the host plant on which it's attached is stripped of all leaves, it has to go in search of another plant rather quickly. And if it doesn't find it's host primary host food, it has to make do with any fresh leaves that taste similar. If there was one thing I was certain about at this phase, it was about being calm, honest and firm in my commitment to the cause of conservation/development and human dignity. It was this affirmation that enabled me to establish affective even if vulnerable relations with the founding members of the project, the butterfly scientist, African Conservation Trust, and residents of Dukuduku Forest, Monzi, Khula Village and St Lucia, who contributed to my research objectives.

**Vulnerability and the Co-Production of Knowledge**

In the absence of prefieldwork I had to follow a non-preconceived, exploratory, and emergent approach while revising and refocusing the research questions in line with emerging experiences. This approach as I was to later learn has its benefits. For example, it makes possible understandings of assemblage processes. It rejects preconceived understandings of the setting and collaborators and method, all of which which impede knowledge construction. In anthropological terms, it pushed me to strike down one of the pitfalls of the participant

observerver – that of the "all-knowing, expert outsider whose description of a finite reality called culture (only/partially) reproduces himself" (DeLind 1999). In a nutshell, the lack of preparation left me very aware of my vulnerabilities (Behar 1996). Firstly, I knew nothing on the biology of butterflies or butterfly host plant relationships. Ever since high school and that was decades ago, I hadn't taken any courses in biology. And so when I responded to people that I was doing research on butterfly and indigenous tree conservation, they immediately thought of me as an expert in biology. On the contrary, I had spent countless hours closely reading and mastering many texts on freshwater conflicts and freshwater governance, where I could hold my own. The idea of examining meaning in freshwater uses in an estuary where different actors vied for extraction and control, made lots of sense. More critically, I had thought a lot about theoretical approaches to my previous subject and had a few ideas on how to proceed in my work in a way that I could break new ground in terms of approaches, no matter how modest. Very often, my interlocutors required me to answer - like an expert - some of the thorny questions they've been pondering about – and about which I had no answers. The outcome disappointed them. How did I get to the doctorate level without authoritative knowledge on butterflies or environmental issues?

Unlike previous researchers, NGO technologists, state extension workers and journalists that usually had answers to collaborators' questions or could afford to be authoritative, I outlined to my collaborarors that I knew nothing on indigenous plants and butterflies. I stressed to them that as far as my status in the project was concerned, they were my teachers. My research project would be just as good as how they would help guide me to reach particular conclusions. If my collaborators didn't show emotion at my response, it left them quietly delighted and appreciative. My honesty was not a structured response at evading probing questions as local Afrikaans always spurned isiZulu speakers. On several occasions I heard Afrikaans property or business owners in St Lucia show exasperation at their isiZulu workers whenever they responded to questions that elicited critical information. The stock response I was made to know was "Angazi' meaning, "I know nothing". As I would learn latter, the academics they'd met were hardly self-reflexive to cognize some of the entrenched professional legitimacies wrought by the apartheid system. It seemed to be a general problem in South Africa - to be able to meet a professional or a politician who 'knew nothing' on a particular subject and that was willing to go through the rudiments of being taught by someone else that was not high in the social hierarchy.

However, the lack of clarity on my field area called for endless bush whacking as I sought to come to grips with my topic and to streamline it so I don't tireout out my interlocutors and turning off their generosity in giving me space for my research. In this regard, it was my video and photographic skills and my readiness to be of use that sustained my relations with the founding managers of the project.

**Putting Theory on a Backburner**

Paul Willis and Matts Trondham (2002) see ethnographic methods as offering a perfect platform "to identify, record and analyze 'ordinary' human practice". They underline the openness and unpredictability of the approach and of the potentials of the method to produce 'surprise' (also Willis, 1980). In other words, they value the potential of the approach to produce knowledge that is not pre-figured in, and which can be deployed as a basis for refinement and reformulation of, starting out theoretical positions. They see 'theoretically informed' ethnographic writing as having "a crucial role to play in reshaping 'theory' and in finding accommodations between, as well as forging new lines and directions from, social theorists". However, because this particular project began without any pre-field preparation due to a change of research topic, I couldn't pay sufficient attention to its framing in theoretical terms as I would have under 'normal circumstances'. Even if I wanted to, I had no relevant textsbooks to turn to. As such, I decided to allow theory emerge from the empirical material.

This situation was helped by the managers' proposition that I help them with videoing aspects of their project as well as their activities, and placing the clips online as it would foster marketing and their proposals for funding. This meant accompanying them to schools, to meetings in the community or with tourism bodies, where I could present their project and its significance. I decided to focus on the emergence of the project Manukelana Project itself, its life history, challenges, and how the founding members could move forward. In do doing, I planned to gather enough material to craft my research project. However, as soon as I began work, I gathered from all indications that doing research with the managers was going to be a huge challenge. The project was in a state of free fall and there was a tense and troubling atmosphere of recrimination over them. Working with them, meant being implicated in their conflicts, which was something I wasn't prepared for. To use a metaphor from South African mining, I realized that I was going to be like a hare working in an underground mine that was littered with burning shoals of coal. *Why did they ask me to assist them in recording and*

*marketing their project if they harbored deep disagreements? Why would they invite someone into their project when they were in conflict?*

Following the departure of the African Conservation Trust and the passing away of Mduduzi, a power struggle over control developed among the three surviving founding members. Differences, fears, and envies that had been simmering between them while the African Conservation Trust co-managed the project came into the open. The four founding managers were split into two contending camps: one that sought to manage the project claiming it had professional training in the "conservation business" (which I will call Camp A), the other that that had little training in conservation (which I call Camp B), The latter sought to passively resist control as they saw the claims of the former as a slap in their face. Unfortunately, it was Camp A that I had first contacted when I first came to the estuary and which was headed by Rasta Mlambo. Rasta had been appointed by his colleagues years ago as the publicity secretary of the project. But Mlambo had used his position to make himself known outside the project as the manager and proprietor of the project, misrepresenting his colleagues and co-project owners as employees. The latter became apprehensive that it was a matter of time for Mlambo to find ways to push them out of the project and dispossess them. Camp B were observant, waiting to see how I will wiggle myself out of my dilemmas.

Firstly, came material demands or expectations from me as an outsider from Camp A, which I succumbed to and then fought to resist before finding out that I couldn't allow that carry on. It never seemed it would stop. It also led me to discover the spending habits of a cross section of the population. The "manager" confessed to me that most people in South Africa aren't used to managing finances: for over a century, blacks had been nurtured by the colonial and apartheid wage labor system. Most had fallen into the system of borrowing and spending the and therefore into a debt cycle. I enquired from a few acquaintances to know if it was a problem of the poor and they pointed to the South African president and to a cross section of the African National Congress and the state bureaucracy. While anthropologists those working in developing countries usually face a crisis of expectations and solicitations during fieldwork, the situation in South Africa, particularly in impoverished communities is quite critical. It's an issue not only for fieldworkers but also for immigrants and expatriates. Critics have signaled that the culture of expectation – directed towards the state, non South Africans and whites South Africans - has come to be embedded in social life in the country. And where these expectations are not fulfilled, the outcome could be violence and loss of life and property as

seen in the repeatedly episodes of xenophobic attacks on foreigners. Without evidence that I was contributing materially or intellectually to the welfare of their project, the "manager" (in Camp A) underlined that they wouldn't make space for me on their premises. In fact, interacting with, or following the four project owners managers meant that for the first six months of my research, I was entrapped in a long lasting and fifficult to describe power struggle between two camps. I had to learn how to navigate suspicion and rejection from one group or the other. At one time, when one camp pushed me to enact its agenda, I resisted. When I felt rooted enough, I had to tell all of them earnestly that my fieldwork called on me to be impartial and to stay focused on my work and on the welfare of their project. If my wqork had to be of any benefit to them then I had to be impartial. From the beginning to the end I stressed the collective over the individual, in line with the spirit that guided the founding of the project. I underlined my interest in the survival and flourishing of their project. Only by so doing, and understanding each of the founding members as an individual, and their needs as a collective, was I able to gain their confidence, empathy and a space to advance my project. Largely-speaking, I spent more time negotiating conflict between them, and trying to bring them together rather than gather data for my work. In this sense, I came to embody much of my work. It troubled me that I became too close to each of them to see them objectively, a fact which I think will emerge in this project. However, I managed to gain the trust and confidence of each and all of them with time until they found my simple presence on the often very tense premises to be calming.

In tracing the emergence of the project for the first three months, I was guided by research questions that cropped up at different phases of events and experience. For example, once the managers of the project and other employees (former and present) acquainted me with the various interventions that rendered the Manuklelana Project a multi-faceted work of *bricolage,* questions over how its various components came together and the motivations of various actors emerged. In terms of the founding managers' motivations, or that of other partners or actors with which they interacted, I realized that these motivations weren't stable from the beginning of the project. These kept shifting in line with the gains of the project and the gains of the project's drivers. For example, as the project managers' consciousness of environmental phenomena increased and how these were variously enacted by the African Conserrbation Trust, they began to resist some of the propositions or enactments, to ask questions, to insist on dialogue and changing structural features of the project to reflect diversity or locality. In other words, their understandings of empowerment shifted themselves with increased

consciousness and contemplation about who was "in the know" in regards to the everyday plethora of environmental and governance problems that confronted them. In taking central stage in the Manukelana garden, these questions transformed the garden and the notion of capacity building into a veritable parliament. At times, when I asked the younger tour guides who were trained in Manukelana and were now working in other domes in other parts of the province what the atmosphere was like when they had their training at Manukelana, they talked of the hard work and energy that went on, the deep sense of camaraderie among the project founders, but also the occasionally shouting contests between the experts of the African Conservation Trust and the project founders. It was these contests of identity that Rasta Mlambo delighted telling me about. For example, seeing Euro-Africans fighting among themselves, while waiting for their turn to come to challenge them as founders or owners of the prject. As time went on, various concepts became apparent in my research processes e.g., emergence, assemblage, social drama, dis-assemblage, affect and dis-affect, recognition and mis-recognition. Only towards the last three months of my project did I begin to contemplate possible scholars, theories and frameworks. e.g., Raymond Williams' notion of "structures of feeling," (1976) Ingold's concept of "dwelling" (2000), Actor-Network approaches, the postulations of Deleuze and Guattari (1987) as revised and rendered more operational by Bonta (2009) and DeLanda (2006).

Among some of the overriding questions that drove this research on then were:
(1) *What were the acts or events that brought the Manukelana Project into being and how can these be understood?*
(2) *In terms of the continuity of the project, how were the expectations of the founding managers managed by various interventions e.g., capital and marketing, science and technology, as well as territorial governance?*
(3) *How do the changing motivations of the founding members, interventions, and outcomes speak to bottom-up projects of collective action within spaces of nature conservation?*

**Following Actors and Actants: Watching Nature Emerge**

Much of my project was then about analyzing how nature emerges (Tsing 2014) prior to as well as during fieldwork. To put it better, it is about watching diverse natures emerge among various actors and understanding the outcomes in terms of conflicts, opportunities, and alliances, and how these are managed. This meant following the focal actors and their networks

in real time or virtually. Among these actors were: (a) the founding members of the Manukelana Project, originally about six to seven technically unemployed young men who become nurserymen and gardeners and who came to see themselves as conservationists in their engagements with environmental and cultural restoration; (b) a 'community' conservation scientist whose intervention alters a nursery project through opening nature's black box and multiplying the uses of plants and possibilities of new human-environmental relations; (c) a regional Non-governmental Organization, the African Conservation Trust that sought to give the original project capacity; (d) funding organizations e.g., the South African National Lottery; the United Nations Development Small Loans Program, and state agencies, all of which influenced the project; (e) the Afrikaans ecotourism community of St Lucia; the English-speaking community of Monzi, and some in St Lucia Town who contributed to the emergence and continuity of the project; (f) the Khula community that live close to the project and who became implicated through the permaculture garden; likewise the Dukuduku Community who have a hold on the forest section outside the confines of Isimangaliso Wetland Park; and actants such as (g) indigenous nursery plants that mobilize the above actors and within this category, butterfly host plants that attract (h) butterflies from the vicinity of Dukuduku Forest to attach themselves to plants in the garden undergoing restoration. *Thus, I followed the main actors in their daily projects at the project site in terms of physical displacement, activities, and also stories and narratives of unfolding place relations.* My focus was to investigate emerging narratives, themes and affects that and how these spoke to contemporary contentions over conservation and development encounters.

Of critical importance were the processes of emergence and the stabilization of the indigenous plant nursery and butterfly and other projects, and the ways in which these affected the relations of the founding members with one another and with other interacting actors and with the landscape. The aspect of continuity wouldn't have emerged had there not been a problematization of various aspects of the project in terms of material and symbolic design, execution as well as knowledge production. By living with the founding managers, tour guides, seasonal employees as well as tenants on the site, and tracing their various interactive agencies, those of host plants and butterflies, and of interventions that sought to provide scientific or technical knowledge, capital, a market, and policy support, I found questions of expectations, reciprocity and recognition inevitably pressing to the fore.

For example, learning about processes of plant propagation through observing the seed harvesting processes as Baba Phungula and Zikhali go collecting butterflies in Dukuduku Forest; or while walking and checking things out on the project site. In following them to the forest, I observed how their eyes were trained now to the shrubs at eye level as they walked, next to the open blue skies, then to the treetops and to the grass and flowering shrubs where there were openings. As they collected seeds, they taught me what to look out for and how to peel the seeds to prepare then for storage. Taking away the peelings saved them from the effects of microorganisms. Most critical however was the affective attention in the ways they went about it which showed how they valued the seed. This had more to do with their love of "nature" and conservation and little to do with capitalist preoccupations. They would notice seedpods on shrubs that are ready for harvesting, pick them up, break them open to see if they were viable, and if so, then they'd store them in jars they often carried. To be able to know when diverse seeds in a profuse are ready for harvesting is a science take lots of attention and practice to master. To know how difficult it might be to grow indigenous plants from seeds, you may have to try growing common plant seeds indoors or in outdoor gardens to see. I learned about seed preparation and storage, planting seasons and processes, water and humidity, temperature requirements, and taking care of the nursery through the different seasons. This enabled me to gather knowledge of various seeds and the demands of successful propagation, which included not only knowledge of the seeds but also affective relations.

Following the two to the the forest and back also led me to see how they took note of the changing vegetation on the floor of the wetland we crossed as well as of thumbnail size brownies (butterflies) that flitted about the grass.

**Arguments between Empirical Knowledge and Abstract Scientific Knowledge**

Sometimes *the politics of recognition* became so acute or loomed so large that the emotional ramifications threatened the project's edifice. In a sense, over time various episodes and mismanaged events at the base of which was a quest for "symbolic" recognition led to sedimented feelings among the projects' founding members. It was difficult to untangle all these events. Left behind was a deep-seated hurt (i.e., on the part of the aggrieved) and often confounding feelings (i.e., on the part of the accused). These emotions became detrimental to rational planning and were counterproctive particularly as the income to the project fell until what each manager or employee took home at the end of the month became too meager.

Struggles over meaning, anthropologists have stated of recent, are equally as important as struggles over material resources. In other words, struggles over particular knowledge formations often become entangled with, or even more critical than struggles over resources. I also found that the failure to openly debate these struggles ("anti-politics" see Tania Li 2007) and resolve them brought a cloud over the continuity of various facets of the project. The failure also opened up understandings of the limitations of both the founding members in effecting their emerging expectations, and those of intervening actors in co-opting them into mainstream institutions. These included scientific and technical knowledge practices, capital, market, and state politics (i.e., partaking in how state resources are distributed or allocated) at the margins of society. Thus, the initial positive affects and "structures of feelings" that drove the project become gradually superseded by dis-affect and disenchantment, and with consequences too on non-human actors e.g., butterflies, the nursery, and the garden landscape.

**Learning to Listen to Collaborators in Research**

The practice of gardening, poetry writing, unanticipated illuminating discussions on the premises had nudged Baba Phungula to begin keeping a notebook several years ago. Here, he took note of particular concepts and words he picked up from interlocutors, matters of concern and philosophical turns in conversations. Either the habit pushed Baba Phungula to be a keen listener or in practicing it he became a keen listener, always picking up his interlocutor's particular statements to make sure that he heard and followed him or her closely. The event in turn pushed Baba Phungula to always ascertain that interlocutors paid attention to his words. The practice turned him into a formidable listener especially when visitors approached them for one purpose or the other. Having worked as an accountant with the mines and a bookkeeper in his military unit, Baba Phungula became acquainted with the significance of the written word. His presence in project meetings became a cause of some trepidation particularly when his colleagues had to introduce projects that did not benefit the collective. More so, he would often repeat statements from his interlocutors to make sure he got them right and that they were certain of their thought processes. Whether, this resulted from him having to deal with soldiers with whom he didn't share a similar culture or with traumatized residents in Dukuduku Forest, I couldn't tell. The notebooks however also often revealed memories that pained Phungula at times.

In any case, the words of a birder while training future students in conservation and ecotourism one morning came to me clearly.

> When you go out into the communities training our parents, you must be patient with them. You must listen to them. You must learn to empathize with them. When you go round Dukukuduku Forest and many of the village and towns in the region, you realize that a lot of people look shabby and disoriented. Most have suffered evictions and most lack basic amenities like water, electricity and public transport to go anywhere. They have undergone a lot in life due to past conservation and apartheid policies. So, please, endeavor to understand when you meet them - even if they become hostile or reactionary to the idea of Conservation. You must first show patience and understanding before anything else.

In a sense, Themba Mthembu could also have been talking to me. In making an emotive call for a 'listening sociology' Back (2007) urges social science researchers to "reassess the appropriateness of our tools" in order to turn towards 'vital life' (165, citing Behar, 2003: 37):

> "We must never stop wanting to listen to each other's stories. If we ever stopped, it would all be over". In other words, both speakers call for approaches that are affective.

**Emerging Affects and the Politics of Space and Place**

Central to my project and methods is tracing and understanding affects and affective relations as they spring from, and are mediated by the environment and various institutions, i.e., the market, science and technology and politics, and the outcomes of these relations. In other words, how processes of subjectivity were influenced by changes in the political economic contexts prior to as well as during fieldwork and even post. Mazarella (2011) underlines that to be effective interventions ought to be affective. In other words, following the outcomes of specific interventions, one could evaluate if the outcomes were affective. It is in this sense that I broached the multiplicity of affective relations in the project and and their outcomes, e.g., affective landscapes, affective labor, and affective learning and knowing of plants, trees, butterflies and people.

**Affective Landscapes**

When I first visited Charter's Creek sanctuary of the formerly Greater St Lucia Wetland Park, the landscape imprinted itself on my sensibilities in a way that I could not readily describe. The atmosphere, sights, sounds and textures brought to my mind childhood experiences living and growing up in a still to be urbanized rural world and held me spellbound. It was like a rediscovery of self and the ideal landscapes of childhood. Having felt the alienating character of the urban environment down south, the calming solitude that the park offered seemed to want nothing to be complete. It was extraordinary in its ordinariness. There was nothing out of place. Not not only did it look untrammeled by human occupation or industrial labor - which in a way was a deceptive perception due to the oppressive decades of labor that went into its realization as a pristine space - it invited one's senses to step in, to explore, and let the spirits find rebirth. Years later, visiting St Lucia Estuary and following Dukuduku and Futululu Forest only heightened my previous impressions. I met other visitors who spent time in the area or had experienced the very healing textures of the wild subtropical sea and the forest of coastal Zululand with their dunes and seasalt winds and it confirmed to me that my experiences were not unique. This was despite that the mechanisms through which these places were constituted, and those that suffered the brunt of this constitution, which were equally causes for profound guilt or apprehension. Nevertheless, few that visit the above areas have failed to appreciate conservationist efforts to keep away the visible and polluting effects industry while enabling place to "co-presencing" itself to visitors or dwellers whether in inndeliberately affective ways.

After several weeks in the field thinking of my new project and words to describe what I encountered, I had a feeling not only of a project coming together in a away I could not define and which the project founders only described as due to hard work, and dedication, happy coincidences and the benevolence of others. In terms of the magnitude of the project, they repeatedly used the word "a jig-saw puzzle", a term that the press picked up and made sure that it stuck to and defined the project. What even intrigued me more were the outcomes of this process of assemblage long years after when management relations came under stress - the more I watched the project founders' involvement in their weekly activities in Manukelana just as I had listened to them narrate their feelings, thoughts, and energies on how they reclaimed the site from industrial waste and invested their youth in it, I found a heightened attachment between them and the project.

One afternoon, following months of tension between two of the founding members who felt that one of them was trying to evict them from the project, the accused came up with an idea:

he would propose to them that he'd dig six a grave that's six feet deep for each of the projects' owners, including himself, place slabs of concrete embossed with the names of each of them in the graves, and then cover the graves up. He wanted to imprint in their minds that as co-owners they would always own the project inspite of their managerial differences. The event highlighted to me the recognition and depth of affective intertwining of their lives with that of the project.

The Manukelana project's founding members suggested to me in words and in their everyday activities and relations to the project site that they considered it a second home. This was a contradiction with the reality. They spent their entire day (from 7.30 am till 5 pm) on the site. They did not live with their wives (though one lived with his three kids, and the other several of his kids that were above thirteen years of age). Besides, except for Saturdays and Sundays, the founding members have worked continuously on the site since 2007 and some since 2001. Brother Musa, who started out his life as a wood carver close to the R618 was already habituated to coming back to the premises after work. During this time, he would take a walk through the site checking out plants, aspects of technology, and security. In case of a storm, he would check out electricity and the water pump and cart away fallen tree branches. Often he would come at night when the moon was shining, to touch, interact, or speak with the plants. In so doing, the benevolent premises and coastal landscape eventually saw him become a lunar gardener before he learned of the process from an avid Euro-African horticulturalist. He hardly shared these marginal aspects of his everyday life which begun with his late companion and eccentric figure, Mduduzi with whom he shared a strong affinity. His familiarity with the nursery and individual plants needs brought him to learn "to speak with plants".

As for Rasta Mlambo, he'd often come to spend a weekend day or two in the lit caravan on the Western end of the premises; and would spend his time crisscrossing the wide yard repairing stuff and then going to sleep all alone in the caravan. Baba Phungula, faithful to his training as a soldier, hardly ever came to the site after work at 5.30 pm or on Saturdays, which he observed as a sacred day, or on Sundays, which he spent reading.

Besides human actors, there were the broods of colorful chicken, birds like the turtle dove, and the gregarious ikwezi and Indian Mynah birds that often spent their daytime hours on the conservatory. A turtle and a leguana would stealthily visit the wetland at the center of the site after working hours to feed and drink. Various species of snakes made use of different sites on

the premises. One could also include seasonal grasshoppers, cow-dung beetles and non-captive dragonflies of the wetland as well as free flying butterflies. While for some, the premises constituted a second home, for others, like the diverse species of plants and trees, all found the premises a first home.

How does one describe the existence of all these entities on the same landscape? How does one describe the relations between these entities and the founding members, managers, tour guides, extension workers, craft vendors, the tourists that trooped into the site daily, the land claimants who came there for meetings, Khula women who came there to attend permaculture workshops as well as volunteers and researchers? How does one describe the feelings, thoughts, and energies the founding members put into restoring the land?

The first concept that came to mind and which took me weeks to define was "assemblage" as a verb and as a noun. As a verb assemblage spoke to how places come to be in particular configurations. The second feeling that came to my mind was "affective landscapes" though not of the term. There was no doubt in my mind that the labor put into reclaiming the site by the founding members constituted "affective labor".

**Growing Plants as Affective Labor**

The growing of plants as I observed, beginning from collecting the seeds during the season of fruiting, the transplantation of mature trees, e.g., relocating the tall Mozambican date palms in the yard, or even so of the small *mimosa pudica* from the wilds into the butterfly dome, all attested to acts of affective labor. How the expression "affective labor" leapt into my mind, I could not tell. But when I checked out the meaning of the term, it meant everything else but the altruistic feelings and deep love that cultivators often have towards their object of cultivation. For months, Negri and Hardt's definition of affective labor largely in relation to capitalism, which I found restrictive, left me wrought. Hardt (1999, 2007) Hardt and Negri (2000) and Singh (2013) all see "affective labor," as an endeavor in which mind and body, reason and passion, intellect and feeling are collectively deployed. According to Singh, "this labor works on affects, builds community, and produces sociality and subjectivity". The above scholars see affective labor as work that is carried out that is intended to produce or modify emotional experiences in people. If "affective labor" underlines the above, then the term

"affective landscapes" is contradictory as is centralizes s possibility that's excluded in the above definitions – that of the landscape as having agency or as capable of producing affects.

**Affect, Actor-Networks and Assemblage**

Muller (2015, 2012) proposes that, "affect and emotion are the *tertium quid* of the social and the material, making the social and material world to hold together or fall apart". He further underlines that "Affects are what pulses through assemblages and actor networks and what constitutes their power (puissance)". While actor network theorists are still to stress the significance of affect in such networks, the ways in which affects "pulse" through assemblages and more particularly assemblages in the field of environment, conservation, and most particularly development are still to emerge. The questions that emerge are what are these affects and emotions that are so significant? And what do they do in the instance of networks and assemblages of collective action in environmental care processes?

**Affect: Conventional and Philosophical Understandings**

While conventional understandings see "affect" as synonymous with feelings, Massumi (1987: xvi) dispels this view of affect. He perceives feelings as a "personal" sensation premised on one's history while emotions are the outward display of feelings. "Affect" on the other hand constitute a pre-personal intensity corresponding to… an augmentation or diminution in the body's capacity to act…" and which follows "an encounter between the affected body, and a second, affecting body". Anderson (2006: 735) agrees when he underlines that affect is a ''transpersonal capacity, which a body has to be affected (…) and to affect''. Lorimer (2008) sees affects as the intensities that individuals produce and experience through their bodies and in relation to the world around them. They are more than emotions, which are articulable through speech. Lorimer's definition, however, limits affects to human bodies.

**Affective Encounters**

Affective encounters, following Duff (2010: 885 via Deleuze 1988), involve ''the transfer of power from the affecting body to the affected body and so invest that body with joy and an increase in its power of acting''. Deleuze (1988: 127) specifies that a body in this case "can be anything; it can be an animal, a body of sounds, a mind or an idea; it can be a linguistic corpus,

a social body, a collectivity''. While, there is no guarantee of affect leading to a positive result (negative outcomes are also possible) the main idea is that the more power we have to be affected, the more power we have to act, and transpersonal capacity arises from body-to-body relations, where the bodies concerned could include human and nonhuman actors, objects, and processes (Thrift 2004; Seigworth and Gregg 2010: 2). According to Seigworth and Gregg (2010:2), affect arises from encounters, simultaneously as intimate and impersonal and accumulates across both relatedness and interruptions in relatedness (Seigworth and Gregg 2010: 2).

**Affective Politics**

"Affective politics" has been opposed to economic and political rationalities in efforts to explain human action and behavior (Singh 2013). The latter are seen as promoting static, narrow and reductionist frameworks of socio-cultural realities and thus unable to analyze contemporary change processes. In other words, economic and political rationalities fall short of coming to terms with notions of affect, the tertium quid of the socio-material.

Affective politics engages the politics of individual and collective subjectivities and the complex ways in which "difference" is perceived and approached. As such it tags along with the politics of expectations and recognition, learning and knowing, as well as adaptation or resistance (in both material and discursive senses), just as it gives leeway to possibilities for re-assembling. Muller's proposition (and those outlined above) opens spaces for the examination of various dimensions of "affect" e.g., affective interactions, affective leaning knowing and affective pedagogies, affective environments, affective labor, affective networks and affective assemblages.

**Bricolage, Improvisation, Affective Knowing and Learning**

Conservation assemblages bring about encounters that generate affective modes of learning and knowing (Nygren and Jokinen 2013). If bricolage and improvisation were critical to the emergence of the Manukelana Project so too were processes of affective learning and knowing.

**Affect and Agency**

Because the capacity to affect and be affected is transpersonal, affects evoke a relational view of agency, which is a prerequisite to action. This potential is not limited to humans alone, but also to non-human entities. Contemporary post-human literature e.g., Actor-Network "Theory" see "agency" as both relational and distributed (Latour 2005), i.e., not lodged within particular individuals, or within human groups as traditionally conceived, but across many relations, including human and non-human entities (see Erntston 2012). In this project the agency to affect is open to human and non-human biotic and abiotic life forms including soils, wind, rain, and landscapes. In restoring the piece of land that becomes foundational to their project, the Manukelana project managers infuse what was otherwise a piece of land rendered derelict by pine tree monoculture plantations) with a more ecologically benign and productive agency. The restored land in turn comes to activate freshwater flows, pioneer trees, as well as vegetation and as such animates a diversity of wildlife forms and human activities. The site also becomes a space for affective knowing and learning about plants, butterflies, and ecosystems.

"Affective pedagogies" (Semetsky 2004, 2010; Hickey-Moody 2007; Probyn 2004; Zembylas 2007; cited in Duff 2014) conceives of education and learning as intensive processes of affective and material production in which forces, sensations and intensities are transmitted between bodies in ways that transform their distinctive capacities. In this light, the above studies underline learning as less cognitive than affective - bodies learn as their capacities for affecting and being affected are transformed by the array of entities they encounter (see Duff 2014: 29).

**Collective Action and Empowerment**

"Collective action" engages (or has the potential to engage) both physical and material change processes and goes hand in hand with the co-construction of new modalities of agency and knowledge (Erntson 2012). Collective action in in some instances seeks not only to redistribute exiting or future resources, or the power of decision-making over material-symbolic resources (including non-human actors in some instances), but also a redistribution of power in producing knowledges over place and the non-human world. "Empowerment" as such becomes "the ability to act and to change the order of things in terms of the material order i.e., the distribution of material resources as well as the symbolic order i.e., the way reality is conceived (see Ernstson 2012).

**Redistributing the Sensible**

In this project, I view restoring landscapes as akin to redistributing the sensible both in material and symbolic terms. According to Ranciere (2004: 57-58)

> The distribution of the sensible reveals who can have a share in what is common to the community based on what they do and on the time and space in which this activity is performed… it defines what is visible or not in a common space, endowed with a common language, etc (…). Politics revolves around what is seen and what can be said about it, around who has the ability to see and the talent to speak, around the properties of spaces and the possibilities of time.

In a sense the conflicts around knowledge co-production and the struggles over recognition and institutional legitimacies all imply different and conflicting ways of understanding the sensible.

**Filming Butterflies**

Filming butterflies and their habitats enabled me to track and observe embodied relations of affect between Baba Phungula and Bro' Musa (as butterfly collectors), otherwise the act of collecting butterflies, how they related to these and to the dome, and their relations with the landscapes they traversed. It also enabled me to collect data on the butterfly trails and the changing ecosystems we traversed and on Baba Phungula and Brother Musa's perspectives to change processes.

Using the camera enabled me to study the Manukelana premises in a little more detail in terms of the changing ecology and of various human-and non-human agencies in the course of four seasons; tourist reception and feedback processes; on-going activities on different activity sites. Once I got acquainted with the premises and its landscape and ecosystems across two summers, I realized that tracking and monitoring change processes on this brief space itself could be a highly productive and illuminating long-term project.

Otherwise, this gave me a window to understanding processes of *bricolage* and assemblage and probing the nature of relations between various human groups and non-human entities. Observing ecosystem from pin-head butterfly eggs, which tour guides usually collected for

breeding, following butterfly metamorphosis to observing macro (wet) landscapes changes e.g., gradual freshwater flow decreases in associated or disconnected pans or huge water bodies in open sections of Dukuduku Forest, also led me to understand that the forest might have been once largely a wetland – a possibility raised by Rasta. Mlambo.

**Insect Macro Photography as a Study and a Research Aid**

I found macro insect photography useful in experiencing and co-constructing various phenomena (e.g., with butterflies) and collecting raw data in many instances. Studying butterfly identification and life-cycle changes (which are critical to tourist expectations), butterfly relations to particular habitats and host-plant relations, and human-butterfly-host plant-indigenous forestry relations in St Lucia Estuary. The use of a camera forced upon me the attention to detail e.g., in capturing butterflies, which is necessary in differentiating butterflies in terms of gender and seasonal dimorphism as well as age and regional variations. For example, one of the vivid distinctions between a male and female African monarch is a tiny black spot on the hind wing, which constitutes an organ for producing pheromones that are useful for initiating mating. The more details I picked up, e.g., of embodied experience, which Csodas (1993) insightfully points out as "the starting point for analyzing human participation in a cultural world" the more I understood how much my human interlocutors or collaborators knew and appreciated about much more than butterflies. I was also able to appreciate host plants, trees, and their ecosystems, and how this knowledge transformed their identities and thinking about inter-specie relations, conservation and bio-politics and how these knowledges and their cultural positioning and vested legitimacies became a source of often perennial conflict.

My use of the camera resulted out of the pressure for detail, given that I came into the field without any prior knowledge of biology, entomology, flora and micro-fauna identification, habitat relations and status. In other words, the ecological aspect of my research called for critical research intervention. Initially I thought I'd learn about these biological and ecological aspects from my collaborators but that proved difficult in the beginning. Conflicts over control of the project called for political understandings, until in the end misunderstandings of the non-human world itself irrupted into these power struggles.

**Past Photographs as a Prod to Memory and Sources of Data**

Bro' Musa reviewed photos with me that I opted to scan for safe keeping particularly those in the office were scattered that showed their achievements. Part of my suggestion and desire to scan the photos was to study them and pick out detained data of their past identities and the emergence of the project which they wouldn't otherwise recall and to use these details to generate conservation.

Days after I scanned the initial batch of photos from him, Baba Phungula and Mr. Mlambo, Brother Musa brought to me his valued personal folders which contained his certificates, workshops attended, press clippings on his work and talks he gave on permaculture and wommery in the district. There were clippings too of his favorite cartoons from the national press. I was surprised at the overriding belief that Zikhali could not read or write. How come he showed me each of his certificates and pointed out all the aspects of training he underwent? I realized how the politics of power easily lead to misrepresentation for particular social effects and purposes.

**Analysis of Manukelana Working Documents**

Following access to the office, I found saved hand written and decade-old notes and mails that preceded the establishment of the Manukelana Project. These enabled me to relive the "structures of feelings" that went with the growth of the project. In most of the mails, Rasta Mlambo introduced the project to potential donors and requested for various forms of assistance. From Siyaqubeka Saw Mill down the road (it's since been transferred), he requested for timber and building materials to enable them construct a shed, to fence the premises and to add to other structures. In another he requested members of the St Lucia and Mtubatuba communities to visit the project, apprize them selves of what they are doing, and how they were going about their work, and assist them with funding or other material, or if not then simple words of encouragement. There was also a hand note that was also pasted on an Isimangaliso Notice Board soliciting visitors to come watch butterflies in the first butterfly house as well as to buy indigenous plants from the nursery.

Finding the CVs of the various project managers in a folder in the office also helped me to establish their life trajectory, their struggles, successes, frustrations, and which in turn enabled me to inquire on particular details to elucidate any gaps that I had.

As time went on, I visited a packing-shed at the end of the project with Sabelo. I couldn't access it earlier due to wild vegetation and Sphe's warning to me that black mambas and cobras were breeding in the fallows in that region of the premises. In rummaging and salvaging useful equipment that had been lying in disuse for years, as well as computer printers and hardware to see if they still worked, we found a lot of important documentation on the past management of the project that preceded the arrival of the African Conservation Trust. They were various folders in several plastic containers that were already subject to mold and fungi. I was stunned that such a rich trove of documents could be allowed to waste in a near-abandoned shed when they held important historical and research material on Manukelana.

Months later, while Rasta Mlambo and I found ourselves in another shed on the side of the yard facing Khula Village, I found a stack of about 200 very neat and unused project flyers strewn in between junk objects and some buried in the dune floor. As Baba Mlambo lit and puffed at his pipe and talked about the politics of the project, I gathered the minty-looking flyers, exclaimed at their predicament and took them to the office. I place a handful with tour agencies in St Lucia and a double dozen with backpackers in Kengsington Park near the Oliver Tambo Airport where I usually lodge when in Johannesburg. The documents and flyers showed me a loss of affect for place that I found shocking. I couldn't hold myself from expressing my deep disappointment to the project managers and tour guides about their handling of valuable resources that they could no longer afford given their meager incomes. Could it be that the fall in income from tourists had also led to a fall in the value of the project in the eyes of the founding members and managers? Or had the conflicts over control between them sapped their affective relations to the project and project site such that they no longer cared? Contradictorily, the other projects on site e.g., the permaculture garden and the craft store were doing well even though they were being ran by tenants of the Manukelana Project. Already simmering tensions were taking place between these tenants and their landlords or Rasta Mlambo, Baba Phungula, Bro' Musa and Sabelo. According to some of the landlords they were suffering financially because the tenants weren't paying their fair share in terms of rent.

**Authoritative Knowledge and South African Publications on Indigenous Botany**

The textbooks that Baba Phungula used to contest the presentation of South African plants and butterflies became central to my analysis. Alongside the few titles that the office had on its shelves and other titles he had at home, I procured about a dozen others, among which more 'field guides' (Eve Palmer 1977; Boon 2010 [1993]), 'how to identify' texts, 'green guides', 'pocket guides,' photographic guide (Wyk, Wyk, and Wyk 2000) and 'photographic guides' (Wyk Wyk and Wyk (2014 [2011]). I also picked up some titles in the Sappi "tree-spotting" series e.g., Val and Grant 2004. Baba Phungula pointed out that of all the texts that we assembled, none was from a Black African author, or covered aspects of indigenous perspective in-depth. None were co-authored by black and white South Africans. There was only one text that was written in isiZulu and published by a publishing house in Durban that was private and no longer in existent. The author too had long passed away. For over nine months, Baba Phungula had been busy translating the text in English, while trying to contact the author's family. He wasn't too sure of what he was going to do with the translation. At the same time, he was fending off mockery from some of his co-managers at the Manukelana Project for posturing as a scholar and writer when all he did was copy what others wrote and claim authorship. The accusation left Baba Phungula deeply hurt. It made him wonder whether he should even confide his scholarly projects, goals and ideas with those around him. Baba had hit the constraints to creativity and the imagination that often result from vicious struggles over scarce resources, and which is known in South Africa among the poor as as the "put him down" (or PhD) syndrome.

When I went online, I found an overlapping typology of publications that included "generas" or descriptive catalogues of plant species that began to be produced in the 19$^{th}$ century and continued until the late seventies, e.g., Dyer (1975, Volume 1 and 11); Percy (1951); checklists e.g., Germishuizen and Meyer (2003, 2006); botanical surveys and explorations e.g., Gunn and Codd (1981); conspetuses, e.g., Goldblatt and Manning (2000) as well as bibliographies, manuals, memoires and of recent red data lists e.g., Golding (2002). For the above lists, also see Crouch, Smith and Figueiredo 2013). More specialized texts are now emerging e.g., on closely related classes of plants such as succulents, ferns, and aloes.

The paucity of black contribution in academic production in the area of plants, trees, or the environmental knowledge (outside of healers that provide knowledge as "research informants")

reflects the traumatic history and relations of blacks with the environment in which they live on the one hand, and with formal education in the country on the other.

Firstly, in terms of the problematic relation between blacks and their environment, Rasta Mlambo and Bro' Musa pointed to the 1913 Native Land Act and the battery of acts that pulled the carpet from underneath the feet of Africans and turned their energies away from self, social development and nation construction towards a basic struggle to regain dignity and their land. Secondly, just as successive imperial, colonial, apartheid regimes appropriated the land from the country's black majority, these regimes denial of education to this majority, or the provision of sub-standard education made it difficult for blacks to participate in the time and energy consuming process of formal knowledge production. The situation didn't automatically change with the official end of the apartheid system, as Baba Phungula and Bro' Musa underline.

Taking the instance of black and white students graduating from university a decade and a half after the end of the apartheid system, Phungula and Musa point to the unequal distribution of capital between the two through an anecdote that's become popular among the poor in the country. By the time a "black" student on the one hand and a "white" student on the other graduate from high school or university, the white South African already has sufficient capital in the bank to launch a full-blown business venture, or joins or succeeds the father in the family business, meanwhile his black colleague only has a CV (or curriculum vitae) and perhaps little to no access to the internet where he/she could search for job openings. In this case one could not talk about equal opportunity in the system. There is little doubt then that access to literacy and scholarship has seen European South Africans as the interpreters of the environment, while the crushing of Blacks through Bantu education and their preoccupation with various multifaceted struggles has left them unable to come through as equal thinkers and producers of environmental or other knowledges. For the above reasons, Baba Phungula is particularly vexed at the positioning of black intellectuals, particularly those who were able to attain a good formal education, in spite of the restrictions and strife in the country, and who instead of producing knowledge that could take the masses out of the crushing ignorance fostered by the apartheid system, have been seduced by the allure of power and social positions, state largess and consumerism to turn their eyes away from the masses. How can one's essence as a person be reduced to ownership of ill-gotten property, or of goods that are produced by the same nations or peoples that have and continue to oppress one? He asks. Sometimes he wonders how

the black middle class see themselves enamored as they are with European entrapments when white South Africans see through the emptiness and charade.

Thus, in pulling my attention to plant nurseries and their enactments in the literature, Baba Phungula nudged me to begin scrutinizing South African botanic texts and how these foster identity considerations among white or Euro-African as well as or constrains indigenous knowledge acquisition among black Souther Africans. Far from being destined for the entire reading population in South Africa, he feels that the texts were largely directed to Euro-Africans and even so to the Northern countries. Baba talks of intellectual alienation which blacks will only discover when they begin to take an interest in South African indigenous botanic knowledge production.

**Archival Research**

Archival research instigated further searches in Dukuduku Forest to ascertain the attachment of South African lepidopterists to Dukuduku Forest. An example of previous discoveries by a few lepidopterists that had visited the area (following travel writers in the 19th century) is a striking passage I found in Migdoll (1997:166-167) following a trip he made to the Dukuduku vicinity three years after the end of the apartheid system:

> I recall a collecting trip to the *Dukuduku* Forest in Zululand a few years ago. Just before I reached the forest, brown tree nymphs were swarming in countless numbers on both sides of the road. These myriads represent the greatest number of butterflies I have ever seen in one place at one time. Every leaf on every branch was covered with butterflies as were the tree-trunks and the grass. They had obviously just hatched as each specimen was in perfect condition. When I drove off, the windscreen of my car became almost opaque with the body fluids of dozens of butterflies, which were struck by the car as they flew over the road. When I returned to the same area a few hours later, not one could be seen; the whole swarm had disappeared. Perhaps all had flown off together in a mass migration to an unknown destination.

Were brown tree nymphs still alive in or outside the Dukuduku Forest? Baba Phungula and Bro Musa or Mr. Mlambo didfn't remember seeing any in their foot walks about Khula Village, Khayelisha, Ezwenelisha and the other new settlements, or Dukuduku. However, the event of processional caterpillars is still very common in St Lucia estuary. Most tourists have reported

coming across them crossing footpaths, dirt or tarred roads as they search for Mkhulu (forest Natal Mahogany) host trees during early spring. Had the tensions in Manukelana allowed me, I would have observed the caterpillars turn into months and followed their lifecycle as they breed abundantly on a lone Mkhulu tree outside the permaculture tunnel. Unfortunately, these processionary caterpillars and moths were still to make it into the tourist circuit as the tour guides hadn't thought of it yet). While Migdoll must have seen the nymphs on the R618 just before one enters the forest, i.e., about eight miles from Manukelana, what I found most striking about the area was the abundance of robust citrus swallowtails and African charaxes crossing the highway from the right hand side (where the forest is subject to use) to the fenced portion on the left hand side (which the forest constitutes a part of the Isimangaliso Wetland Park and thus is out of bounds and relatively intact) in what one could see as a good example of "hilltopping".

Archival research also pointed out that Dukuduku Forest at one point in South African butterfly natural history appeared to be a coveted site among lepidopterists for endemic specie and specie richness. This spears to have occurred between the 1970s and late 1990s – an event that contributed to the uproar among the South African environmental lobby over the "destruction" of the indigenous forest. Up till now a list of butterflies in the area (including Futululu Forest) is yet to be established. The restrictions imposed by local conflicts as well as the paramilitary Natal Park Board on butterfly collection in Dukuduku and Futululu Forest ever since the 1960s have both placed a shroud of knowledge over both environments. This shroud has rather led to leading to subterranean visits by lepidopterists working hand in hand with local acquaintances, or with renegade game wardens in the Greater St Lucia Wetland Park, to reconnoiter the area and "poach" butterflies that are endemic for private sanctuaries in the south, or for the export market.

**At the Butterfly Project: Writing Memos and Keeping a "Nature" Diary**

Following the failure of my first field project, my mind became wide open like the sensibilities of a hungry caterpillar. I took notes on what I perceived to be happening around me, exploring possibilities, reaching dead ends and starting afresh on new topics, hoping that at the end of a few weeks, something interesting and substantive would emerge that could enable sustained analysis. The conceptual guideposts I had were on water, a medium radically different from

land, forestry, and butterflies. My challenge therefore was to pick out from these guideposts a few that would help me problematize and explore my new research focus.

Writing down emerging ideas was a critical part of the research process. I also kept a "nature" diary that tracked the character of various species on the landscape and landscape changes weekly, monthly, and seasonally. Often this coincided with my ethnographic notes when my observations of the landscape involved interlocutors or actors that responded to the research questions or other. I used memos and "nature diaries" for coding and categorization. I included verbatim material and actors' feelings as much as I could, and these enabled me to keep emerging concepts fully grounded in the data sets (Gross and Nicola 2007). When I wasn't using a camera and depended only on audio recordings, I used memos to situate and characterize the recordings e.g., through describing the setting, bodily dispositions, expressions and interaction. Memo writing also helped me to use other modes of data visualization e.g., making rough notes and drawing Venn diagrams, flow charts, maps and other graphics linking different themes, actors, and objects in the landscape or in narratives and ideas, in a bid to render the abstract more concrete and the complex or situation legible.

**Walking: Following Actors, Actants, and Narratives**

Tim Ingold's *Ways of Walking* sees the practice as profoundly social. It "walking "not just as an act of mobility but also one of education, a practice of enskillment, a way of knowing, a process of storytelling, and a ritual of communion between the human and the more-than-human world". As a focus of study, walking thus opens itself up for more than just its empirical value as a kinetic practice to embrace processes of "observing, monitoring, remembering, listening, touching, crouching, climbing" (Ingold and Vergunst 2008:5), in general making "one's way through a world in formation, in a movement that is both rhythmically resonant with the movements of others around us—whose journeys we share or whose paths we cross—and open ended, having neither a point of origin nor any final destination" (2008:2).

**Studying Butterflies Alone in the Wild**

Going out to study butterflies along the Igwalagwala Trail, or along the forested road down to the seashore, or on the green spaces within St Lucia Town involved lots of walking, observing, smelling, touching, listening, tasting, or in short attuning the body to the world of butterflies. Always textures, sounds, daily rhythms and movements in the environment that one never

observes, spring into life. Waking, in St Lucia, always means taking note of the path before you, the shrubbery or the outskirts of the wood beside you, the trails of insects and wildlife, the freshly raised ridge that hides the tunnel of a furrowing animal, the flowering white orchid on the branch of a dark green and wet Natal Mahogany. Here on a branch of paths, you halt when you notice a butterfly or two on freshly minted hippo droppings; you recall seeing about thirty of them sipping the salts in a puddle down the hill a moment ago. You take note their host plants, so you can wait for the butterfly to come back if your approach scared it off, or so you could always come back to check for eggs later. You learn how to approach butterflies from their reaction, the average distance that each species will tolerate. You learn that the males fly high and are easily put off, while the females are often restless looking for appropriate leaves on which to lay their eggs. A realm of knowledge about a world in motion opens up to you and which gradually becomes part and parcel of your enskillment.

**Learning with Tour Guides**

A learning window opened itself with newly recruited tour guides who like me knew little about butterflies. But it was also advantageous in the sense that through learning with the tour guides, we could challenge each other's knowledge through question-answer sessions and in so doing learn about butterflies incrementally and evaluate how our knowledge was growing. Learning to ide identify butterflies - the females often have swollen abdomens, the males more colorful, practice hill-toping to look for females.

You when they awake and begin their day, their food plants and host plants, hill-topping behavior and defense mechanisms; butterfly behavior against larger predators e.g., birds and humans and the restless behavior of egg-laying butterflies. You learn about butterflies that feed/reproduce on a single host plant, those that feed/reproduce on multiple host plantsm, how various species interact with one another on the same host plant or in a heterogeneous and flourishing thicket to where they spend the night and storms.

I began by identifying the simplest and commonest butterflies: the blue pansy, yellow pansy, "swallowtail, citrus swallowtail, green-banded swallowtail, African monarch, the mocker swallowtail and a host of others. Since butterflies species occur in different seasons, I had to keep updating my knowledge and taking note of their particularities and how the managers

were dealing with these change processes. To learn about butterflies, I read snippets of material online and borrowed the guidebooks from the office.

Critical aspects in identification include such phenomena as pheromones, sexual dimorphism i.e., occurring where males and females of the same species have a strikingly different appearance form, color or pattern due to genetics; and seasonal dimorphism where we find two distinct color and/or size forms in a species occurring in any season, and intermediate forms occurring between the two seasonal extremes (also see Steve Woodhall and Lindsay Gray 2015).

**Locating Butterfly Host Plant and Identifying Species**

Since it was getting to the southern winter, there were still common butterflies around the gardens and forest trails in St Lucia where I lived. I thus spent my time following them with my camera, making out the patches where they hung about, taking note of their host plants, and what they fed on. Establishing the various species available from the most common was the first activity. Thus, I came to know the blue, brown, yellow pansies, the common diadem, natal acrea, African monarch, layman, novice, dusky acraea, common sailer, common joker, and my list kept increasing weekly. Spending lots of time, learning all alone was a disadvantage in terms of the time I had to expend picking up the basics about butterflies, inter-species relations, conservation, and policies before affording to adopt a critical perspective on relations and policies.

I took many tours with guides: there were footwalks along special trails; daytime drive tours and night time drives inside the park and estuary. I also helped with tour guidance at the butterfly dome and in St Lucia Estuary but not iSimangaliso Wetland Park as I wasn't licensed. The above involvement helped me to be able to locate the nature of affect between between tour guides and tourists. I could outline the role of language, affect, and the outcomes of learning to know, relate to butterflies, and to guide tourists, or understanding the challenges of the project founders.

**The Role of Ecology in Political Ecology**

My encounter with butterfly biology, habitat, and ecosystems led me to understand conflicts over dome management. Some of the conflicts at the dome were rendered acute due to the lack of specific and actionanable knowledge on butterflies, and the fact that namagement wasn't aware that they lacked such knowledge. The outcome was that while they feuded with one another, butterflies began dying in the dome. The outcome drew my attention to questions raised by a number of scholars over whether the field of political ecology has become characterized by 'politics without ecology' (Bassett and Zimmerer, 2004: 103; Vadya and Walters 1999). Otherwise 'Where is the ecology in political ecology?' (Walker 2005). As my fieldwork demonstrated, the above question is one that faces many butterfly tour guides who get recruited for being generalist tour guides rather than for their particular knowledge of micro-fauna. Sooner, when their training begins, most come to realize that butterflies and their biology and ecology is a central concern in butterfly sanctuaries and ecotourism. This underlines Walker's assertion (2005) that as political ecology continues to expand in new directions, the degree to which it is likely to enhance its engagement with ecology does become increasingly significant. This relationship enabled me to discover how butterflies relate to or adapt to captive environments as opposed to those in the wild, and how the knowledge of sanctuary managers in facilitating the process could inadvertently conflict, leading to disaster in the management of sanctuaries. Such lines of enquiry led me to discover a number of behavioral traits that speak to inter-specie relations e.g., that captive butterflies that are reared in more benign domes tend to settle on visitors' faces and arms during hot days in search of salts than those caught in the wild and brought to domes, or that are reared in less friendly domes.

I was always amazed at the fact that this attraction between two different species (butterflies landing on humans for salts) often creates misrecognition among humans who read the butterfly's approach in terms of affection. I also came to learn about species of butterflies' that would scout out intruders into their territory and attempt to chase them away. These would defend their territory against intruders by flying towards them in a fast and threatening way, whether the latter are insects or non-insects, humans or other larger animals.

**From Methods to Theory: Understanding the Manukelana Project as a Complex and Unfolding "Assemblage"**

The question of *how* people, groups, and communities come to commit and to apply their subjective talents, imagination and initiatives to steward some aspects of their "natural" environment has been a salient one in environmental politics since the turn of the century. "How do humans come to care for their environment and what turns them into conservationists?" In other words, how do they become "environmental subjects"? What brings them to participate in projects of environmental care? On the other hand, what accounts for the collapse of collective projects in the area of the environment or development? How do conflicts e.g., wicked environmental conflicts come about? What is the role of affect in constructing human relations with place? In posing and responding to these questions scholars have drawn attention to the politics of interests and rational choice theory.

To respond to the above questions, this project proceeds by way of:

(1) elucidating processes of colonization and deterritorialization in an estuary,

(2) examining the emergence of a project of environmental care and the role of nature's agency in fostering, connecting and anchoring the project,

(3) how such projects become the locus not only of collective material transformation but also of symbolic transformation of humans and landscapes,

(4) and how issues of representation and vested legitimacies and,

(5) anti-politics might pose dilemmas.

Agrawal (2006) and Singh (2013) have drawn attention to the centrality of subjectivity to communal action in environmental politics since the turn of the century. Both have provided us with experiences emerging from particular contexts in forestry governance. Effective conservation, Freya St John et al (2013) underline, depends upon understanding human behavior, or better, human-place or environmental relations. Taking conservation as a space where struggles between *what is* and what *might be*, even among those who pioneer or advocate for change (Krithika Srinivasan 2014), the South African case provides us with a particular instance of complexity where centuries of imperial, colonial, apartheid and post-apartheid environmental management have spawned complex and intractable human relations to place

and ecosystems. Climate change, vanishing of natural resources and processes of neoliberalism and decolonization have brought to the fore newer and ever pressing contingencies. The implication of various actors and communities from diverse racial, ethnic, class, education, gender, organizational backgrounds hardly provide easy understandings of environmental subjectivities.

The above question poses salient problems around protected area conservancies, which constitute 5% of the global territory, and other spaces that are rich in naturally occurring resources yet where modes of colonial and post-colonial governance have complicated governance processes and leaving issues of belonging and care largely unsettled. The situation is of so where indigenous, settler and immigrant populations as well as conservation and state institutions are faced with issues arising from prior "eviction-for-conservation" (Brockington 2010) or development projects. The unsettling instance of questions over land tenure and ownership likewise the material-symbolic ontological relations that people hold with landscapes that formerly sustained their everyday livelihoods and spiritual relations have been existentially compromised.

In regards to care, various schools of thought have emerged in the literature on forestry conservation. Two schools however have been influential: Foucauldian-derived "environmentality" approaches and of recent, Spinozan-Deleuzian derived affective approaches to governance issues. While Actor-Network approaches have contributed to understandings of science and technology, it hasn't sufficiently informed scholarship on conservation and development or environmental contentions, and more so, in elucidating the role and politics of history, emotions and affect. This project takes a hybrid approach and appropriates concepts from these approaches, depending on the issues under consideration. For example, in order to construct the emergence of the Manukelana Indigenous Nursery and Art Project from a technical perspective, this project would borrow from actor-networks. In terms of subjectivity and emergent processes of decolonization, it would appeal to Foucaudian and affective approaches.

While recent work in political and cultural geography has foregrounded the role of affect in the performative enactment of space and spacing (Carter and MacComarck 2006), an equal trend still has to take place in the anthropology of conservation (and ecotourism) particularly in regards to assemblages. Could emerging notions of "assemblage-thinking" (Marcus & Saka,

2006) within which is embedded understandings of affect assist with this goal? One way afforded by assemblage approaches is that it does away with the notion of notion of distal and proximate actors altogether and rescinds the ontological separation of behaviors from their social contexts and revokes the idea of discrete actors and forces mediating each other's behavior (Duff 2016). Gomart and Hennion (1999) suggest that the goal is not to look at 'who acts' but 'what occurs'. Deleuze and Guattari (1987) precise that the forces by which sociality is enacted may be said to include the asubjective *desires* which conjoin bodies (human and nonhuman) in social interaction; the *affects* generated in such interactions, along with the modulations in the power of acting of the bodies so assembled; the *beliefs* that galvanize practical action in social contexts, such as the beliefs that lead bodies to assemble in pursuit of political, economic and/or social goals; as well as the *power relations* involved in efforts to regulate the conduct of the varied bodies assembled in a social mass (see also DeLanda 2006). Each of these forces combines in the assembling of any social entity, encounter or social context.

**Going Butterfly Catching: Affective Activities**

Going butterfly catching revealed to me the contradictions of space in the estuary. While most residents of Khula Village would have felt that Manukelana was an island of peace, Baba Phungula and Bro Musa found a strong need to leave the premises three to five days a week to go catching butterflies in Dukuduku Forest. In spite of various efforts and excuses from Rasta to stop them, he couldn't succeed. For the two it was a way to get away from from an oppressive management style and to avoid direct conflict with Rasta. It was also a creative enterprise, a way of growing their knowledge of the seasons and the settlement in the forest, and a way of communing with the forest and the wetlands around it. If Manekulana is an oppressive environment for its co-managers for the most part, and regarded as an island of industry and sanctuary by the village and others, the forest at day is also seen by the co-managers-butterfly catchers as an island of peace and quiet, of bio-diverse bounty, albeit, on the decline, and zone of mediation. These contradictions were important in grasping the dynamic and affective-dis- or affective relations between individuals, groups, and space.

**The Function of Assemblages**

The analysis of affective politics and assemblages enables understanding socio-material collectivities. Deleuze and Parnet (1987:69 [1977]) define an assemblage as, "a multiplicity

which is made up of many heterogeneous terms and which establishes liaisons, relations between them across ages, sexes and reigns – different natures. Thus, the assemblage' s only unity is that of co-functioning: it is a symbiosis, a 'sympathy'…"

**Two Perspectives or Approaches to Assemblages**

There are two perspectives here that are of interest to this project. The first is the focus of assemblages in creating something new, possible, or anticipated. Deleuze and Gauttari (1987) precise: "The assemblage is a complex constellation of objects, bodies, expressions, and territories that come together in a productive and/or innovative manner and operate for varying periods of time to create new functions, a new means of expression, or a new territorial/spatial organisation, a new institution, a new behavior, a new realisation, etc. The assemblage is destined to produce a 'new reality', by making numerous, often unexpected, connections. The agencing properties of assemblages depend on the ability of a given assemblage to be productive."

As such assemblages like life, an individual, a subject, an idea, a concept, are composed in and of relations, and the events, affects and sensations that relations draw together. As a noun, assemblages refer to bodies, systems, matter or life (see Duff 2014:14). Deleuze and Guattari 1987:313) see assemblages as capable of ensnaring all of life in a web of relations, linking living beings with one another and with the nonhuman entities that populate the territorial "milieus" of this life.

Livesey (2011) echoes Deleuze and Guattari, when he sees "an assemblage as uniting a wide range of factors, players and spatialities into a changing set of intensities". He goes further to state, "The concept could apply to all structures, from the behavioral patterns of an individual, the organization of institutions to the functioning of ecologies". "Can the idea of citizen as gardener, and city as garden, developed during the early twentieth century (UK), provide a model for a regeneration of urban environments and ecologies?" Livesey ponders over Modernist open space or green space systems that are largely devoid of purpose, and goes forth to examine the past legacy of gardening, and the ways in which gardens are assemblages that are constituted and constituting: "Assemblages, like machines, are productive. What they produce depends on the set of forces and factors that come into play. A garden as an assemblage involves spaces, the agency of the gardener and many unpredictable variables. A garden

produces a wide range of effects, affects, expressions, territorial changes and produce. The garden and the act of gardening, provide potential answers to the challenges of contemporary human settlement." If Livesey's normative approach goes without politics, which is the approach this project would have subscribed to entirely, the second approach takes into task the political dimension of assemblages, which creates conditions for the problematization of existing discourses in socio-political situations that are far from equilibrium. This is because Deleuze and Guattari's ontology (or conception of reality) enables understandings of complexity by embracing the actual realm, which consists of stable, identifiable systems and individuals that tend to cover over (2) the intensive process of individuation which produced them, consisting of 'far-from-equilibrium' processes that are 'metastable' and that embody (3) the virtual structure of potentialities that are immanent to (or embedded in) a situation (Srnicek, undated).

In interpreting Deleuze and Guattari's rather abstruse project, Massumi (2002: 224) sees affects, relations and events as ensuring the "openness" of the assemblage to the irruption of new associations that "qualitatively" transform that assemblage's "dynamic nature". It is in this light that Tania Li (2007) focuses on historically marginalized and underserved communities and projects in community forestry and development in Sulawesi, Indonesia in the 1980s. Her generic case study delineates the fault-lines implicated in bringing together an array of elements, which include things (trees, logs, non-timber forest products, tools, documents); socially situated subjects (villagers, laborers, entrepreneurs, officials, activists, scientists, aid donors, scientists) and objectives (profit, pay, livelihoods, control, property, efficiency, sustainability, conservation). In other words, an array of things, subjects, and objectives that is virtually impossible to govern within the context of a political dictatorship without giving rise to a highly contested assemblage.

In seeking to examine the above propositions, and inspiring myself with the examples presented, I situate this project within "post-development conservation" (Martinez-Reyes 2014), which is characterized by a questioning of modernist approaches to development-conservation, the language of "resourcism", state-managed protected area hegemonies and a call for community participation in environmental governance, environmental justice, alternative and bio-cultural economies, among other demands. Deploying Foucault's analytics of "governmentality", anthropologist Tania Li (2007) underlines several "regimes of practices" that are implicit in the operation of any assemblage, and with particular reference to the

development sector – especially schemes that are designed to improve sustainable forestry uses in rural communities. She précises: (1) the forging of alignments, or the objectives of various parties to the assemblage; (2) engaging processes that seek to "render technical", or formulate blueprints to enable interventions that would bring about beneficial results; (3) authorizing knowledge, or specifying the requisite body of knowledge and enabling assumptions that are necessary for operations; 4) managing failures and contradictions; 5) anti-politics: managing dialogues to contain politics; 6) reassembling, thus bringing in new elements and reworking old ones and transposing the meanings of key terms. While the approach renders visible the practices that make governance processes highly conflictual, it does not delve into the forces that could equally enable such assemblages to flourish. While taking cognizance of her work, this research project seeks to explore the opposite direction.

My unit of analysis in this project is much bigger than Livesey's garden yet much smaller than Tania Li's forest management scheme in terms of size, actors, time depth, funding, etc. This project adopts Livesey's perspectives since the site in question is characterized by everyday practices of environmental care and discourses on urban greening, indigenous plant nursery, horticultural gardening, and butterfly ecotourism. It also adopts Tania Li's notion of "problematization" to account for contextual historical and environmental factors that led to its emergence, that enable tracing its narrative of coming into being and the generous contribution of diverse actors and agencies in terms of material resources, technical and scientific knowledge as well as motivation, and a scrutiny as well of the limitations that have checkered the project from flourishing to meet its full potential. As a conservation ecotourism assemblage, the Manukelana Art and Indigenous Nursery, Isiphaphalazi Butterfly House and Nkanyamba Development Trust which are all interconnected are composed of various sub-assemblages, among which one finds (1) things, e.g., the environment, thus land, a highly contested "resource" in the wetland, soils, water; living entitles such as worms, hosts plants, trees, butterflies, wildlife and community forest (in need of rehabilitation); and elements such as wind, rain, sun; (2) various social groupings: thus entrepreneurs (the founding members of Manukelana) and trust members; scientists and ENGO technical advisers; aid donors (both local and international); state officials in various state agencies; local community members, workers, and authorities; tourists, tour operators and local business circles. There is also (3) technology i.e., for communication; (4) objectives to be met e.g., infrastructure, livelihoods, pay, profit, efficiency, knowledge transfer or production, competency, sustainable uses of the environment, conservation; (5) protocols to be followed e.g., statements, plans, and laws that

govern various levels of production and management; and (6) affects to be achieved e.g., butterfly recreation, environmental education, plant sales, craft marketing, a space for relaxation.

**The Notion of Community**

Because this project deals with collectives and how they enunciate themselves around the environment and their openness to be being affected, the notion of "community" alongside biodiversity protection and development emerges forcefully. From the wishes of the two carvers to protect and rehabilitate the forest, to the seeds they gather, the recruitment for their project, the project legalization processes, thus obtaining land, reclaiming and nurturing it, inviting volunteers and requesting for resources from all and sundry, enrolling the host plants and butterflies, tour operators and tourists and obtaining funding and NGO technical training, we see an intense rapprochement of various networks. A new sense of togetherness is forged in the vicinity of the formerly tense forest, even if in a part of it, and however contingent this appears. Understanding the emergence of the project underlines how changing ecological situations and ideologies (climate change), and ideologies (e.g., decolonization) draw diverse communities together is critical to understanding how the non-human draws people, ideas, and technologies together.

However, the term "community" is a slippery and problematic concept in South Africa. Though it implies inclusiveness, it has been historically used to denote black Africans as well as non-white categories. One rarely hears or reads the expression "white communities" (Richard and Marcus 2015). By extension, the term "community" is also used to designate neighborhoods where non-whites live. (Sigoga and Tso Modipa 2004). In Kwa-Zulu Natal, where whites live is usually referred to in isiZulu as "the Place of the White Man" which is similar to references to where blacks live "Kwa-Ndapa" (Ndapa's place"). Following the above premises when one talks of "community development" in English, it is hardly understood as embracing various black and white "communities" that might live within a radius of 3 kilometers or even less from one another as in St Lucia Estuary. Though they might interact daily on a circumscribed basis, and some might even live within the community considered as "other" like whites (said to be poo) that have taken residence in Dukuduku Forest and Khula Village, these would still be seen as exclusive communities. The term "community" in South Africa is therefore racialized to denote those that are non-white (Sigoga and Tso Modipa 2004; Squire 2007: 60),

e.g., “the Colored Community”, “farm communities”, the “black community”, etc. Exceptions however exist, e.g., “gated communities” which is an imported term.

A critique of the uses suggested by the term is that “communities” are heterogeneous and in flux, particularly in areas where urbanization has been rapid and recent. According to Squire (2007: 60), to call such neighborhoods “communities” may overestimate their commonalities. Squires underlines that even if the term “community” is broadly used today to connote ideas and histories held in common within neighborhood-based social networks, it might assume too much similarity. Also, Squire sees community used to refer to other forms of social organizing that are ‘elective’ (Weeks 1985) commonalities. Community as such is a complex concept in the South African context given that speakers could use it to mean different things depending on their viewpoint. It’s a marker of a very wide range of social associations, and of productive actions, and at times, of constraints and homogeneisation (Squire 2007: 60). In this project as such, I will refrain as much as possible from using the term and rather pay attention to the ways in which senses of being in common are constructed around the environment. This would include the categories of plant and animals, and wildlife, whether micro or mega fauna. In this light, this ethnography intersects with work under the realm of “multi-species ethnography” or “more-than-human” (participatory) research.

**Constructing Social Action**

Following understandings of “community” is that of affect; how it influences and constraints action. In the field of development, empirical research on the efforts of marginalized communities across the globe – as they strive to reclaim politics from the state, economy from the market, and knowledge from science are still to emerge in terms of the abundant experiences. *How do these efforts speak to science, the economy, and the state as regulatory institutions? How do they speak to change processes given the present dilemmas of state institutions in terms of constitutional democratic governance, economic production and climate change? How is social action constructed and socio-natural relations experienced and envisaged across different levels?*

Departing from a Foucauldian notion of power that sees ‘empowerment’ as ‘the ability to act and change the order of things’ including changes in material and symbolic order, i.e., when collective action changes the distribution of material resources and the way reality is conceived,

including the shifting or shuffling who can claim to be in the know (cf. Swyngedouw 2009), this project sets out to examine individual and collective subjectivities in the course of change processes and the agnostic ways in which different legitimacies are acted out. While Orlove and Canton (2010) see a crisis of various legitimacies at stake in project design and execution when various agencies come together, it is also evident that underlying these legitimacies is a politics of expectations and of recognition. How are these expectations constructed? And how are they managed?

This project finds that the politics of expectation, legitimacy, and recognition passes through "affect". Singh (2013) seea affect as describing the ways in which "mind and body, reason and passion, intellect and feeling" are deployed not only between groups, communities, and the non-human environment, but also with intervening institutions. Examples will include environmental non-governmental organizations (ENGOs), affiliated state agencies, specialist scientists and professionals, corporate groups and donor organizations that support community development concerns. In relation to the latter, Mazarella (2010: 299) finds that "any social project that is not imposed through force alone must be affective in order to be effective" and goes on to precise that an "effective" social movement must draw our "desire:" "a movement across the gap between affect and articulation". Thus, centralized are the subjective, embodied and affective dimensions of collective action and inter-action in projects that envisage transformation of the material and symbolic order that constrains such communities are still to unfold.

In setting out to examine the dynamics of collection action in the emergence and continuity, this project also aims to attempt a partial response to a few anthropologists and ethnographers (e.g., Navaro-Yashin, Diane Nelson, Allen Gray, Napolitano, see Rubin 2012) that have contemplated how to study the seemingly ephemeral and slippery category of affect.

In relation to studies of naturally-occurring resources, studies of "environmentality", otherwise the technologies of self and power at work in the creation of new subjects elaborated by Agrawal (2006) has opened pathways for elaborating environmental subjectivities in other natural resource-based communities around the globe. It aims to examine various facets of "affect" in the emergence and survival of projects as actors seek to reclaim politics from the state, economy from the market, and knowledge from science. In a second move, it also aims to explore the above in the context of collective processes of ethical negotiation that implicate

humans and myriad living others (Gibson and Miller 2015). To engage the above premises, this project focuses on a less examined space in post-development politics – that of the littoral wetlands occupied by communities and within the interstices or peripheries of state-managed protected area conservancies.

**Liminality, Affect, and Social Action**

Khula Village (where Manukelana Project) is situated is a liminal site. It is situated between two urban areas: Mtubatuba, a colonial trading center and St Lucia Town, an Afrikaans eco-tourism-owned and managed resort. It is also situated between iSimangaliso Wetland Park and World Heritage Site and Dukuduku Indigenous Forest. Though Khula is called a village, it is not a village in its proper sense as much as a collection of buildings

**Understanding Collective Empowerment**

The forest dwellers had learned many lessons over the deceptive, shifting and "totalizing logic of the centre". And that racial and class distinctions matter in terms of the politics of space. This logic led groups in the forest to develop various strategies and a repertoire to deal with outsiders. Given their paucity with the English language, they would insist on employing translators; they would insist on meeting within or close to the forest, where they felt strong and safe, and where they can call off the meeting and 'see their visitors out of the forest'. They had the power to call off meetings, tell the visitor that the meeting has outlived its usefulness and that he better leave the forest - subtle threats that indicate their control of the forest.

It was in St Lucia that I first heard about "noise" as a political or social phenomenon i.e., when a between antagonists over land meeting degenerated into irreconcilable demands, misunderstandings, or had little substance.

> "There was too much noise at that meeting and the representative of the park ran away. The forest people could not understand why the manager of the Wetland Park sent a black representative rather than come in person. He knew what he had done and what they (i.e., the white management and state officials) were doing and didn't want to be questioned".

“Noise” became a stock expression in the forest to underline the rage against the lack of state and other accountability and the cessation of any proceedings with the state, a donor, an NGO or a corporation. I learned from different collaborators who would tell with a bit of excitement that meetings with the protected area were ever characterized by too much noise and little substance, and that the conservancy management never met the the demands of the forest dwellers, e.g., by sending the actual CEO or managers that mattered to address their issues of concern. We see as such a reversal of positions of dominance and weakness. Talking of material and symbolic power and knowledge production, Swyngedouw (2009) sees empowerment as political:

> “The political arises when the given order of things is questioned; when those whose voice is only recognized **as noise** by the police order claim the right to speak, acquire speech. As such, it disrupts the order of being, exposes the constituent antagonisms and voids that constitute the police order and tests the principle of equality”.

“Noise” then characterizes a situation of incomprehension that is inimical to one’s interests. It underlines the local awareness of their interests and the unwillingness of the state or protected area and other actors to resolve a conflict in a mutually beneficial way, or efforts of the above to silence the “other”. Above all the “noise” also signals an unwillingness to listen and a reclamation of one’s own *modus operadi.*

**Bricolage at the Margins of Plenty: Learning, Thinking, and Assembling Discarded Relations**

Claude Lévi-Strauss (1962: 32) defines bricolage as such as a "science of the concrete" and above all an attitude to the material world. He sees the bricoleur as “speaking” not only with things ... but also through things." *Bricolage* reflects a practical, inventive human subject who is resourceful with the affordances of the material and social environment and uses them either for some immediate purpose or to survive in the world (Real 2008). Though Deleuze and Guattari (1972: 7 -8) were aware of processes of *bricolage*, which they defined as the characteristic mode of production of the schizophrenic producer, they did not elaborate on this at length or more so, establish the conceptual relationship between *bricolage* and assemblage. *As an outcome of their lack of the means to engage with the world in terms of the prescripts of the state, science and technology or the mainstream economic system, what role does bricolage*

*play in emerging assemblages at the peripheries of mainstream society, and how do such projects hold? What happens when such projects become supported or coopted by mediatory or mainstream institutions?*

*Bricolage* as a skill and a way of thinking typically characterizes environments, communities, or populations that are lacking in particular material resources. Or as in the case of those that live close to protected area conservancies, suffer limitations in terms of access. These environments are largely considered to be at the margins of the state, the economy, and science and technological processes. The lack of access to financial institutions, donors, whether national or international corporations as well as to technology and expert knowledge, or in short, to pre-packaged resources that travel from the above institutions obliges the dwellers of such spaces to make do with kinship relations for labor and salvaged material resources to forge modern economies e.g., ecotouristic, if they so desire. Other modes of practice e.g., institutional bricolage have also been outlined in the case of forestry institutions, architecture and urban planning as well as land uses.

Bricolage as a skill and way of thinking practice is strongly evident in squatter camps, township communities, and sprawling underserved landless settlements. This could be in South Africa, Brazil, and the Philippines or in most parts of the developing South where huge communities live at the peripheries of mega urban areas.

The notion first occurred to me while I did fieldwork for my Master's dissertation at a shelter for youth without homes in Pretoria in 2004. Each time I followed the young residents at the welfare home into the streets or city, I was always amazed at the keenness of their sensibility to the environment, the ways in which they navigated the streets, gathered information and found uses which one could not have imagined for objects or litter that they came across. For example, they would use phone booths to tell the time, and seek for cardboard boxes to use as umbrellas when the rains threatened. They showed me how they used to appropriate garbage bins and bales of plastic paper from the commercial district to use as sleeping bags at night. Any object they picked up on the way had an improvised function or could be used as a learning apparatus as they were pupils attending regular school. Iron rods became poking sticks and a defense mechanism against dogs in white-owned yards and even son, against vindictive shop security guards that oftem kept them at bay. During trips to visit transit sites inhabited by "homeless" people, or to the homes of parents or relations, the cobbled nature of the shacks,

yards, home gardens, the recycling of everyday objectd, use of dramatic colors or the ways in which the dwellers pieced their lives together, always caught my attention. Some scholars have centralized *bricolage* as a critical skill or survival phenomenon in much of black South Africa: the panoply of adverts that litter the township neighborhood streets from standardized Coca Cola billboards to a multiplicity of others of all shapes and sizes.

Bricoleurs are active and mindful producers who refuse to be reconstituted as mindlessly following prescribed measures or as blind followers of dogma. As a mode of engagement with the world, the practice calls for a reflexive and theoretical engagement with materials, objects and tools that are at hand and to take or make of these what suits or works with one's purposes.

**Bricolage as an Everyday Practice and Way of Thought at Manukelana**

The benefit of the practice to the project founders in Manukelana is that it forged in them a disposition towards questioning the logic of the centers. The question is what happens when a conservation NGO comes along and offers them "capacity building" skills and avenues to corporate and international funding? What happens when it puts at their disposal a natural natural scientist and non-indigenous expertise in forestry conservation and peri-urban greening? What emerges are conflicts between bricolage as a mode of production, friction with expert ways of knowing and a rediscovery of "the indigenous".

*Whose voice becomes legitimate, whose knowledge? How does the assemblage fare in such instances?* The above questions bring into focus Foucault's notion of knowledge power and empowerment. Foucault sees powerful groups maintaining the legitimacy of their knowledge constructs by continuously undermining alternative knowledges. The effect or outcomes on assemblage processes is to block flows and the transference of what Deleuze and Guattari term as positive affects. Affects in the instance of gardening flows in various guises: as affective learning and knowledge where it involves the transmission of knowledge between bodies; as affective labor, and affective bonding. However, before moving on to examine the assemblage it is necessary to examine the less scrutinized links between *bricolage* and affective labor.

If resources that travel from the center should be about gaining voice—about empowerment beyond the material—the resources that travel need to be put into work in such a way that they somehow avoid the totalizing logic of the center from which resources originated (the state, a donor, an NGO, a corporation), and instead be put into use to stabilize a material semiotic that

embodies and strengthens an alternative way of knowing and being, while securing a certain autonomy. Rather than give a fish, or teach someone how to fish, collaborate and figure out how fishing…

How then does this understanding of villagers and peri-urban gardeners and nurserymen as *bricoleurs* make sense today when they are governed by a variety of regulatory mechanisms that are designed to limit their professionalism and creativity? Or when they are subject to materials that outline conservation as a series of technical steps that can be followed in a linear fashion in order to reach some perceived desirable outcome? Understanding gardeners, nurserymen and rural or per-urban conservationists as *bricoleurs* negates as such the value and worth of such packages – which does not mean that such packages could not be useful. In what ways could they be tailored to be of use?

Bricolage could also refer to a learner's actions as in Vusi's case.

It doesn't take long for the critical visitor or tourist to discover that b*ricolage* is a hallmark of practical everyday activities and diverse "assemblages" in Manukelana. The organization of the courtyard facing the street, the courtyatd behind the office buildings, the ACT offices and its garden, the tea kitchen and garden, the indigenous nursery, old and new butterfly houses, screening hut, permaculture garden, shade buildings and the various packing sheds that dot the premises wre all outcomes of improvisation.

**Learning about Plants**

In learning about plants Vusi makes use of *bricolage* methods though he's unaware of that. He volunteers to work with plants at the indigenous nursery where he becomes acquainted with the touch, smell, taste, and growth of plants, and more particularly their names and how they related to one another. In so doing, he was able not only to identify them through their various taxonomic names but also to group them in terms of butterfly host plants. By the time he went back to the butterfly dome, he knew the entire assemblages of selected plants, trees, shrubs and grasses in the dome. In short, he was so confident that he volunteered to teach me.

Baba Phugula calls the Manukelana Project a jigsaw puzzle that came together without streamlined planning since resources were not available. Because they wanted intensive labor

and couldn't afford it, they recruited volunteers and helpers through diverse means. Firstly, they used their kin relations to restore the degraded site, Secondly, they opened up their group to any that was willing to join and be a partner (some of members that joined at the beginning ran off after weeks or months before the project was registered, unable to stand the hunger, sun, and lack of promise). Thirdly, when they got hired by the African Conservation Trust, they also learned that they could request for volunteers from abroad (US, UK and Netherlands) who were moved by Mandela's spirit and longed not only to know about but also to contribute to uplifting South African society). Once these came, they developed the idea of organizing weekly nternational soccer matches between tourists, volunteers and locals where they also appealed for all forms of expertise and labor in fostering the Manukelana Project.

**The Craft Store**

The entire stock of the craft store is composed largely of found objects that are artistically reconstructed. A miniature multi-colorful windmill here, a miniature barrow there, a mini-bicycle here, hand drawn and colored butterflies, wire-woven and painted butterflies. Women from the Khula community who didn't want to work in the service trade in St Lucia and be subject to racist insults brought manyof their hand-made crafts with very exotic designs for sale in the craft store.

**Butterfly Dome**

The entrance of the butterfly dome is made up of two parallel lines of Natal mahogany trees, about three meters in height by April 2015. Beyond the trees is a first green screen door where you step into a tunnel where green light flickers through the roof on the heads and falls on your shoulders. A second green screen door, metal framed, opens to the dome, and before you is a huge spherical enclosure – like a Zulu mboma or royal hut - with butterflies flying at the top as if searching for a way out into the skies. To access the various corners of the dome is a footpath that follows a circular grove of evergreen shrubs at the center of the dome. Critical among these shrubs is my favorite liana, the *adenia gommifera,* known in isiZulu as *uphinda umushaya* and popularly among butterfly tour guides as "the green stem". The adenia constitutes an essential feature of all butterfly domes in Kwa-Zulu Natal and Zululand. This is due to its host plant, magical, medicinal, aesthetic and symbolic qualities. To the left of the entrance, after a patch of evergreen leafy shrubs, is a watchtower made of planks from

Siyaqubeka that are cobbled together. There are posters of butterflies and other educational posters on butterfly life cycle and one on sexual and seasonal dimorphism.

To the opposite end of the entrance of the dome is a little water pond cobbled with stones and with some water lilies and fish inside. The water not only caters for the temperature, it enables the butterflies and other insects in the dome ecosystem to have sip or a bath. At the center of the dome is also a tap with a long hose for watering the plants and the dune soil in the dome so as to control its temperature and keep it evergreen and productive.

**Material *Bricolage***

Material *bricolage* involves innovative ways of re-using things derived for example from industrial waste. This technique is of value in permaculture gardening where used tires become containers to biodegrade compost as well as to grow vegetables, potatoes and other crops, in spaces where land is in short supply.

In Manukelana car tires have many innovative uses: they are used in worm farming, growing potatoes in the outdoor section of the permaculture garden, growing grasses and the ensemble is then used as checks to the shifting dune soils, or as effective substitutes for sand bags to hold dune embankments from crumbling. In other words, tires are used as effective agents of erosion control. In the projected children's garden, the nurserymen also expected to use tractor swings for children and adults. Other materials have found other uses in the project: a ship or boat towrope from St Lucia beach becomes useful as yard or lawn marker and a hardy decorative object. Building the office and other structures: indigenous and modern industrial material, not only in Manukelana but also in newer community butterfly structures.

Having constructed the Manukelana building structures with available waste material from the area, the nurseryme were hired this time to construct with corporate funding, the Tembe Butterfly Dome. The outcome was more ecologically friendly, aesthetically pleasing than the Manukelana structures. The Manukelana founding members and other local recruits found the abundant traditional material in the area too inviting to look over. This traditional architectural bricolage is in full display as all the buildings are effectively constructed using local indigenous materials: reeds from the lake banks for constructing he walls, *incema* grass for the thatched roofs, twines and lianas for holders and nails. Only the indoor plant breeding room has a blue

tarp paper to sheath it from the hot summer sun. By the time the Tembe dome was over, Rasta Mlambo and the others, without using the term bricolage, came to recognize the value of local resources, both indigenous as well as found i.e. if these derived from modern technological artifacts.

### Critical Analysis of *Bricolage*

"This tinkering is a high-level cognitive process involving construction and reconstruction, contextual diagnosis, negotiation, and readjustment". While it worked at the beginning, when affect was largely positive, the vanishing of this glue that holds together organizations and networks also meant the failure of the process. It is here that we find Rasta Mlambo increasingly involved in technically tinkering with the material infrastructure of the project while his friends looked on. They knew his reasons, and they saw the futility behind the reasons. Affect wasn't only absent between them, it was absent between him and the objects with which he tinkered. So long as the relationship was negatively charged or lacked any viable attachment, his colleagues believed, there wasn't any growth possible. However, the death of affect was also multidimensional for it also led to recalcitrant butterflies in the dome. They either rebelled against reproducing or died out.

### Affect, *Bricolage* and Assemblage

It was the affective disposition of the founding members, and the positive role of bricolage that disposed them to assembling their multidimensional green Project.

## Chapter Two

## ‘Gardening for Conservation’: The Emergence of Manukelana Art and Indigenous Nursery Project as an Affective and a Productive Space

While anthropologists have examined discourses and practices in conservation and development, the ways in which grassroots projects emerge, or are assembled, particularly in areas peripheral to state-managed nature conservancies, are still to be adequately scrutinized. In this chapter, I examine the contexts and assemblage processes that led to the founding of Manukelana Indigenous Art and Nursery as an ecological rehabilitation project. This means the origin of “the concept”, processes of group formation, obtaining land, establishing official documents, investing labor in the project while creating a new sense of community and finally accessing expertise, capital, and capacity building – all these being prerequisites for project founding and stabilization. In the process of tracing out the above, I highlight how nature is re-“translated” in a post-apartheid landscape. This includes the role of political economy and marginality in spurring creativity (i.e., through bricolage and improvisation) as well as “structures of feeling”. I draw from three broad areas of anthropological literature: (1) the notion of assemblages (Actor-Network Theory and perspectives from Deleuze-Guattari 1997 and DeLanda 2006); (2) affect and ‘structures of feeling’ (Williams 1977) in how they enable the emergence of Manukelana Project as an alternative project in conservation development and (3) the literature on marginality and forms of material-symbolic labor e.g., Levi-Strauss’ concept of bricolage and improvisation (Levi-Strauss 1966), followed by custodial labor (Guillet 1980) and economies of affection (Hayden 2004; 1983).

Finally, I argue that the labor engaged in regenerating the environment e.g., indigenous forestry, gardening and most green projects is necessarily affective. In other words, it goes beyond economic and political rationalities and engages mind and body, reason and passion, intellect and feelings (Singh 2013) all in a non-dualistic way. It is akin to affective laboring

practices that "essentially" produce collective subjectivities, sociality and ultimately produce society itself (Singh 2013). However, it differs from the above in that the labor is directed primarily towards caring for, or restoring the environment not necessarily for utilitarian ends. Ingold (2000:85) makes this instance explicit when he says "To grasp this idea, all that is required is a simple switch of perspective: instead of thinking about plants as part of the natural environment for human beings, we have to think of humans and their activities as part of the environment for plants". In this sense, the concept is closer to eco-altruism (as echoed in the work of Thoreau, see Jordan and Lubick 2011: 34). Thus, I differentiate it from "affective labor" as used by Hardt and Negri (2000; 2004), Hardt (1999; 2007) to denote changing forms of labor in Post Fordist economic production. Here the two scholars emphasize the centrality of affect in new forms of production in the Northern countries and they stipulate such labor as engaging at once with rational intelligence and with passionate feelings. It is also different from kin work and custodial labor that is directed to producing affects in terms of kin work (or economies of affection) or custodial labor, though these forms are both present in the assemblage of the Manukelana Project. To give this notion the identity it deserves, I bring up the term "affective environmental labor", adding "environment" to highlight a sense of direction in impetus to improve. Finally, in paying attention to emergent cultural forms, assemblage processes or how a grassroots organization at the margins of state/capitalist economy comes into being, I demonstrate as such how the project founders draw upon "the potentialities intrinsic to the ambiguous landscape" or harness the power of the "liminal landscape" (Wittekind 2016 for their own particular ideological ends.


*Map 5 St Lucia "island", Lake St Lucia, the R618 highway that goes through Manukelana, Dukuduku and Khula Settlement. Notice the stable vegetation in St Lucia island Town and the sparse patches of Dukuduku Forest to the left. The forested and open spaces in the map are very rich with butterflies- lots of bukills on the highway from spring to summer due to migrant habits. Tthe St Lucia Bridge is busy at dawn and dusk with commutters from Khula and Dukuduku Forest and for the rest of the day with tourists. The Manukelana Project enabled its members to avoid "servitude" in St Lucia.*

*Picture 8 The project site looked in 1998. Take note of the dried out wetland or the green patch to the center right where I found a water pan when I arrived in 2014; the remains of burnt pine plants to the left; patches of the receding Dukuduku Forest are across the R618 highway surrounding Ndonyana Primary School- the two blue buildings close to the forest. This picture is from the Manukelana Art and Indigenous Nursery Archives.*


*Picture 9 Elevated frontage of the project, where Mduduzi and Zikhali used to sit by the R618 up till 2001 practicing woodcarving. The building below stands where they had a hole in which they hid craft and tools when their workday was over.*


*Picture 10 Building shared by Manukelana Indigenous Nursery and Craft and Wetland Creations. Take Note of processes of bricolage and improvisation and the first signage to the left.*

*Picture 11 Side view of the Manukelana office building showing the reception room with traditional mat blinds pulled down. Take note of the practices of bricolage: recycled tires, artistic representation or enactment and the use of indigenous grass for the blinds and the porch.*


*Picture 12 Medium-sized sculptures made from indigenous wood in front of a lodge on Mackenzie St, St Lucia. Other indigenous materials include the reed mat and reed roof both made of local incema wetland grass.*

**"Rollout Neoliberalism" and the Challenge to State-Managed Conservancies: Awkward Alliances for Environmental Change**

In the late 90s, a resolution issued by Mandela's government placed a moratorium in titanium prospecting on the coastal dunes of St Lucia Estuary, an integral part of the Greater St Lucia Wetland Park on the northeastern coastline of South Africa. The decision came on the wake of a countrywide struggle spearheaded by a largely white environmental lobby to save the dunes from Tinto de Rio, a global mining consortium with a nebulous history. The decision was backed by the findings of the most expensive environmental impact assessment ever carried out in South African history (Dominy 1994; Bainbridge 1993/94). More critically, it requested the conservancy and neighboring ecotourism practitioners to fast track investments that would create employment opportunities to absorb the thousands of young people living in underserved and deliberately resource-deprived communities in the wetland. These were populations that could have benefitted from coastal mining exploitation. Failure to do so, the state declared, would oblige St Lucia to face the prospect of sharing the estuary with mining processes (Kruger 1997; CSIR 1993a, 1993b, 1993c). Thus, while the resolution saved St Lucia from the threat of ecological disaster, it also placed other conditions that would leave the conservancy feverish.

More broadly, the conservancy was facing other major challenges as well. Worldwide pressures behind them included that of "rollout neoliberalism" (Peck and Tickell 2002: 37) in the 1980s and 1990s. Neoliberalism here is defined as the "purposeful construction and consolidation of neoliberal state forms, modes of governance, and regulatory relations", namely the creation of markets that encourage private entities to take control over issues once managed by the state or other traditional forms of governance (see Longo, Clausen and Clark 2015). But the above wasn't the end. The affiliation of the conservancy to the Ramsar Convention and plans to upgrade the conservancy and region into the World Heritage body also meant that while pushing against "development" and receiving the support of the above bodies, the conservancy was obliged to enforce the requirements of biodiversity protection put into place by the above bodies, including the IUCN, World Bank, and others, in order to maintain international recognition and accreditation.

Confronted with the arduous task of employment creation, privatization, encouraging community participation and managing bio-diversity resources, the Greater St Lucia Wetland Park and its operational partner, the Natal Parks Board, were fraught for want of ways and means. Firstly, the state had divested itself from funding the organization due to the lack of funding. Where to get the resources for investing in projects that would create jobs was as such a problem. Secondly, how to approach the very people or communities within or at the peripheries of the conservancy that it had subjected to more than a century of practices characterized by brute force and spite (e.g., summary eviction and appropriation of their homes and gardens, fines and imprisonment or purposeful underdevelopment)? Otherwise, how could the environmental be made to matter after such a history? How to convince them that the conservancy had well-meaning intensions and that wise or sustainable use of the indigenous trees of the forest was a win-win proposition for all in the long term? The dilemmas were evident to me from day to day as I lived within the jurisdiction of the conservancy from where I paid attention to people's embodied everyday relations with the environment and listened to narratives about the conservancy from various actors: residents of the broader region, residents that had worked with the park, present park labor, bureaucrats working with the conservancy, as well as researcher colleagues doing research inside of the park proper. I found few that didn't have strong moral opinions about conservation policies and practices while reserving doubts about the way forward.

**Unlikely Partnerships: Assemblages for Conservation**

Following a change of name and status in 1999, the Greater St Lucia Wetland Park (now the iSimangaliso Wetland Park) and its operational partner, the KwaZulu Natal Board (now Ezemvelo KwaZulu Natal Wildlife) set out to organize for the very first time, conservation workshops that were open to and were meant to encourage local communities to use indigenous forest resources sustainably in the wetland. The workshops often took place in luxury hotels where members of these communities could only have accessed formerly if they were employed there as labor, that is, underpaid gardeners, maintenance workers, housemaids or cooks. It was a curious update in the status of those that had the luxury to attend. Some liked the sumptuous refreshments that were often offered at the end of such workshops while others spurned them.

In one of these workshops, the park and its operational partner wanted local woodcrafters in Dukuduku Forest to focus on producing and marketing small portable figures that would not threaten the mature trees in the forest. In attendance was Telkom, the national telecommunication corporation. Telkom was concerned about local youth stripping off telephone lines for their fine copper wire to sell to woodcrafters who found these useful as raw material for making chain key holders and other tourist mementoes. The corporation wanted to work with the local crafters to find substitutes so as to save phone lines and infrastructure. Rather than attribute the task to the Natal Parks Board (which was notorious among local communities for its role in levying fines, imprisoning people, burning down homesteads, evicting occupants and slaying poachers), it was given to Bronwyn, an affable Euro-African woman and the public relations face of iSimangaliso Wetland Park and World Heritage Site ever since. Bronwyn, who had to find ways to rope in carvers and wood workers from the community, knew two young men that sat by the R618 two miles to St Lucia Town. She drove past them anytime she commuted to and from work and had always thought of stopping to chat with them. She found their regularity at work and the seriousness with which they took their job a little unusual, even amusing. They seemed to work full time. They never missed a day at their spot by the highway.

One afternoon she stopped by for a chat with the two. In the course of the chat she acquainted them with the new park's policies, the projected workshops, and asked them if they would like to attend. Musa looked at Mduduzi as if the invitation came by design. The two cautiously said they would think of it. It was a good opportunity but they didn't want to contradict the strong current of feelings in Dukuduku Forest and Khula Village that ran against state-managed Conservation. Apart from a few "heady" Rastafarian white hippies that lived in the forest in the early 90s, few whites, ever since English settlers settled in Monzi in the early 20$^{th}$ century and Afrikaans descendants in St Lucia estuary in 1827 have ever ventured into the nearby Dukuduku Forest or taken an interest in what locals were doing. Myths that cast the forest as impenetrable and its dwellers in herms of animality were very hard to get rid off.

**Imagining New Orders: Affective Labor, the Woodcraft Tradition, and Indigenous Forestry**

18 years after that first chat, it would take two weeks to elicit memory of the meeting itself and its outcomes from the actors at Manukelana. The reasons for the difficulty were various. Firstly, is Bronwyn is on partial retirement and only works for the park on a contract basis. As such she only drives past to the park once a month and has little time to stop by the project site. But there's another reason and it's that Mduduzi, the more vocal of the duo, passed away in 2009 leaving Bro' Musa fraught and wanting a voice. This was to be a predicament for the two of us during the course of my research since my isiZulu wasn't excellent. Coincidentally, it was Bronwyn, whom I never met that picked up my first call as I sought to contact the conservancy. Given that I was nervous, she gave me hope that I'd obtain a permit to carry out my desired research - only I should talk with the education officer. She had also offered to help in case I ran into difficulties. Bronwyn and Mduduzi, two of the figures I never met but who had a critical role to play in the unfolding of Manukelana remained like shadows over my project. The two reminded me of the problem of ethnographic absence.

Following my first week at the Manukelana Project, I received varying narratives about the origins of the project and who played what role and how critical each role was. However, the more I listened, the more questions I had. These called for detailed explanations and memory work. What I wasn't aware of was that some of my collaborators, particularly Bro' Musa who wasn't very articulate, were taking note of my dilemmas. He paid attention to the difficulties that I faced in going beyond the strategic responses of his colleagues to my questions about how the project came about.

Two of the founding members kept talking about "the concept" (take note of the technical language) through invoking the contradictions of white conservation as opposed to community or socially-oriented conservation. However, their narratives didn't fill the concrete details that I wanted on the events and persons involved since I set out to "follow the narrative". Because those first interviews and conversations were largely group activities, Mduduzi's name never cropped up except in passing. Initially, I thought that it was out of respect for the dead that his colleagues left out his name. However, as time went on, it began to be clear to me that efforts to drop his name and contribution were much more deliberate. Not only was there a power struggle over control of the project for the past five years, Mduduzi's absence had fueled the struggle, as well as created a situation where some of the managers willingly rewrote the narrative of the emergence of the

project and let the outside world buy this narrative particularly as the project was a successful endeavor in an environment where few of such projects could survive a fee years. Mduduzi, Musa and Bronwyn's contributions had vanished. For a moment, it appeared to me that in probing for details over the establishment of the project, I might be overturning a situation that was already troubling. At the same time, it also occurred to me that Musa was somewhat willing to take of the attention that I paid to detail and justice beginning from our very first video interview.

**Manukelana: From a Squatting Space to a Green Office**

One afternoon in the spring of 2014, during my second week, Bro' Musa was accompanying me to catch taxi home in front of the office building. He had made it a rule to always see me off, and during those moments we shared personal observations and filled up gaps and lapses in previous group conversations. Brother Musa had discovered my penchant towards intimate and affective details over facts and otherwise. We were walking through the tea garden where we had our first interview and discovered our affinity towards affective details. Work in the yard had finished and everyone else had gone home. As our feet rose and fell slowly on the wet dunes soil and we went past the dry tree trunks and the ocean wind ruffled the dense foliage above us, Bro' Musa asked me if I knew where Mduduzi and him used to sit in the late nineties when they carved their artifacts along the highway. When I shook my head, he pointed to the office building that lay about fifty meters ahead of us. "We had a hole right where the office is. In that hole we would hide our tools and carvings before going home".

Truants used to come and steal their sharp knives and tools to use to use in committing crime, while Nat Park Board field rangers often chased them away from the highway, broke up their carvings and tools, threw them inside such holes, covered up the holes with dry grass and then set everything alight. Fire as outlined in the introduction, remained one of the most effective weapons in the estuary.

But it wasn't about the precarity of life then that brother Musa wanted to impress on me. He was more interested in letting me have a sense of how through their agency a modern office came to stand where a hole was, and how a multidimensional project could emerge from affective everyday

conversations. Though Bro' Musa could not articulate it, I realized that he wanted me to see the links between art, nature and development, and how the affect as a social phenomenon was and remains central to these links.

**Indigenous Forestry and the Woodcraft Tradition in Northern Zululand**

Sometime in 1998, before the two met with Bronwyn, Mduduzi and Musa had just sat down to woodcarving after scouring Gawozi (the mid-southern part of Dukuduku Forest. They'd been looking for particular wood textures for their craft. These consisted for the most part of particular indigenous trees that were felled by wood borers, struck down by storm, lightning or age. For the most part they sought for trunks or stumps whose finely grained resins, contours, and lines called forth particular subjects. It rendered the carving process relatively easily. As Bro Musa once told me: "This is because the wood itself suggests what it wants to be in its next life. You must observe the lines (contours) and allow the shape of the block itself to tell you what it wants. Otherwise you will destroy it. To carve wood, you must be able to read it". According to Musa, Mduduzi's focus hardly strayed from the predicament as he they sat carving by the road under the hot coastal sun chatting about politics. For over several years the two immigrants suffered repeated "evictions" from their worksite by the road and the destruction of their property by the Natal Park's Board and Ezemvelo KZN. Their best times was when they were busy, quietly carving and then breaking into a revealing chat. Or alternatively when they were inside the forest searching for hard wood. They'd also learned to follow each other's thoughts, to talk in-depth about art and the environment and to bounce ideas at each other. Musa and Mduduzi had established a cooperative spirit between them, characterized by story telling, cheerfulness and reciprocity and a deep love for the natural environment, and the lines of wood…. If you knew them, the manager of a lodge at St Lucia told me, you'd think the two had no problems in Khula Village.That quiet afternoon, following a moment of silent work Mduduzi took a look and enquired from him as if struck by fear: "*So what happens to our craft, Musa, if these hardy trees disappear someday? What happens to the art of woodcarving which we learned from our grandfathers?"*

The question could have sounded naïve to anyone that wasn't used to the two woodcarvers, or to the significance of woodcarving tradition in Dukuduku Forest and much of northern rural Zululand

or perhaps in Eastern and Southern Africa. In 1958 Elkan drew attention to the expansion of the East African trade in woodcarvings, which has only doubled efforts since, opening new markets along the eastern and southern African coastlines.

> "No one who has visited East Africa has come away without seeing the wood-carvings made and sold by the Kamba (…) Their carvings are spread on the pavement outside hotels and at the most frequented corners of the main streets or they are hawked in baskets from door to door (…) their carvings have an exotic but suspiciously uniform look about them and at the back of everyone's mind there lurks the suspicion that really they are all mass-produced by machines…"

The above description captures the carving market in St Lucia Town and some of the tourist destinations on the northeast coast of Zululand. Like most researchers on the environment and eco-tourism in Dukuduku Forest and Northern Zululand, I had failed to pay attention to the woodcraft market and how it is intertwined with commodity tourism, forestry conservation and not least with traditional aesthetics.

I began to pay attention to the complex linkages between woodcarving and forestry conservation when some Afrikaans-speaking acquaintances accused me of defending the managers of the Manukelana Project as passionate conservationists, while ignoring the fact that before becoming conservationists, they were initially woodcarvers who helped to plunder the forest. Though not many in St Lucia though associated the origins of the Manukelane Project with woodcarving, the association of the founding members with the forest wasn't necessarily negative as we've already seen.

For most of the young living close to tourist resort and wildlife parks in the region who didn't wish to migrate to the cities, petty woodcarving and vending by the highway provided a niche for subsistence employment. Mduduzi and Musa spent most of their day carving and talking about wood and art and everyday issues in the Wetland. When they ran short of wood, they went into the forest to salvage tree trunks – those that were slashed into two by lightening storms and had no hope of regeneration, or those brought down by bore weevils or by natural processes. Most often

they were for those with particular resins or grain or lines that predisposed them to carving particular subjects. My acquaintance with the Igwalagwala Forest which that from the edge of the garden where I lived and with Dukuduku Forest enhanced my understandings of Bro' Musa's narrative*. St Lucia Estuary and the Mfolozi Floodplains are prone to strong summer storms, lightning, and a restless northeaster. The subtropical climate, weather, and soils have given rise to very strong and resilient indigenous trees that are often garbled with climbers, twines, lianas, and tree orchids.

Though climbers took their toll on some trees through strangling them, the clearing and thinning of the forest has exposed most of the trees to storm and wind action leading to unprotected trees frequently breaking into two and leaning on others. The two knew the lay of the forest and details of processes of change along the tracks, around homesteads, at the edge of the forest and inside of it. They were used to the everyday chuck chuck chuck of the axe on standing trees that had taken ages to grow, and to the sharp edge of the machete slashing through lianas that held the forest together. They saw the holes of recently dug out precious red heart tree *Umbambanhlangu* (isiZulu), or *Hymenocardia ulmoides* (scientific name) or South African Tree Number 317), which were sold to middle men who in turn told them to urban gardening as stakes to support climbing plants. Screaming by the white environmental lobby in the country and the Greater St Lucia Wetland Park and policing by the Natal Park's Board couldn't arrest the everyday felling of trees. Mduduzi's "kweshion" ticked Musa's senses and his mind folded over Mfekayi, his home area, where he could still see his late grandfather busy at work, carving while he followed the father's hands and gaze. Mfekayi Forest where Musa and his grandfather used to fetch wood for the grandfather's carvings was gone. Same too with the Hlabisa Forest where Mduduzi grew up and where his grandfather and ever carver in the vicinity use to get wood. Occasionally, Musa and him used to travel there by taxi just to check out particular specie of wood they could not obtain in Dukuduku. The unprotected Hlabisa forest too was near extinction.

What provoked Mduduzi towards "conservation" was the status of Dukuduku Forest that provided the raw material for the carving tradition that they inherited from their grandfathers. Having migrated to Dukuduku Forest with their families from Mfekayi and Hlabasi which were formerly covered in part by indigenous forests that have now been replaced with Australia gum (or

eucalyptus) monocultures and human settlement, Mduduzi and Bro' Musa's attachment to their art rather than to the struggle for "subsistence livelihoods", as outsiders would have thought, brought them to sense the tragedy facing traditional aesthetics and forestry. It was an inversion of conventional logic and scholarly perception. The "what if" question thus set them thinking. And in laying this explanation of the genesis of Manukelana Project, Bro Musa overwrote the more rational and philosophical explanations of Mr. Mlambo, a former park ranger, and a long-time community forest officer with the Natal Park's Board and Ezemvelo KZN Wildlife.

**The First Workshop**

During the first of many workshops that Mduduzi, Musa, and eventually the management of the newly established Manukelana Indigenous Nursery and Craft Project would attend around the country as a result of Bronwyn's intervention, as a question answer rolled on, a thoughtful Mduduzi surmised:

> "*Rather than simply rely on select old and fallen dead trees in the forest as raw material for their craft, could they not propagate and replace these very species with seedlings collected from the forest as they worked? It might seem like an insignificant thing to do but if six woodcarvers keep replanting trees over a year in the spots with open canopies that would change the forest in ten years' time".*

Speaking in isiZulu, Musa seconded Mduduzia, and expounded on their intimate knowledge of Dukuduku, Hlabisa and Mfekayi Forests. The workshop's organizers gave a nod to the idea. Bronwyn was impressed with her initiative. She recognized that her relationship with the two was going to be a win-win one. Apart from a few daring Rastafarian white hippies that lived in the forest in the early 90s, few whites, ever since English settlers settled in Monzi in the early 20$^{th}$ century and Afrikaans descendants in St Lucia estuary in 1827, have ever ventured into the nearby Dukuduku Forest, or taken an interest in what locals were doing. Imperial and colonial mythology cast the forest as impenetrable and its dwellers in terms of lack and animality that were hard to break. The workshop found Mduduzi's idea to be bold and new. The idea of planting trees to substitute those that had been cut down, however, had also emerged in the Cape Forestry in the 19$^{th}$ the century, then fizzled out to commercial planting in the 20$^{th}$ century.

## The Second Workshop

A further invitation by Bronwyn for the two to attend a second workshop at the close-by Greater St Lucia Wetland Park (which sought to involve local communities in projects of biodiversity and sustainable resource uses and with particular reference to Dukuduku Forest) saw further reactions to their proposal. The officials from Greater St Lucia Wetland Park went further this time. These were the kinds of projects they were out for, projects that would enable rehabilitation of the forest, particularly if such initiatives could be extended to other woodcarvers and forest users. The park authorities stressed their need to work with community organizations rather than individuals. If Mduduzi and Musa could come up with a community based or supported organization, they could give them necessary expertise and material and financial support.

It was a remarkable turn about in the behavior of the two organizations from the perspectives of Musa and Mduduzi. Right up to the first multiracial and democratic elections in South Africa in 1994, relations between the Natal Parks Board/Greater St Lucia Park and the Dukuduku communities had been that between two unnatural neighbors. *Few well-meaning youths in the area expected to work with brutish agencies like the wildlife sanctuary and its paramilitary partner that had ran the wetland for decades like a state unto itself.* But how will Khula and Dukuduku communities receive this new proposition? The traumatized Khula resettlement village, particularly the factions fighting for land restitution might not take such a proposition or organization well. But on the other hand, there was Mbeki's call for reconciliation. And many of the young had embraced the call. Mduduzi being a rather pensive and imaginative and deliberate figure was delighted to see Musa take over the relay baton. Musa was a better public speaker and a coach than him. Hardly did they contemplate whether they had been coopted by Conservation.

## The Idea of a Nursery is Born

> *All the same, it was then that Musa and Mduduzi brought forth the idea of an indigenous plant nursery, where they could collect seeds from the forest, propagate them, prepare them for planting, and subsequently fill in the spaces from which trees were felled by various processes as well as the expansive plantation areas left by alien tree deforestation.*

The idea of planting trees to substitute those that had been cut down had emerged in the Cape forestry in the 19th century, then fizzled out to commercial planting.

As a sign of support, the former Natal Parks Board (the operational arm of the former Greater St Lucia Wetland Park) that were very impressed, proposed even "teaching" the wood carvers advanced technical ways of propagating plants and improving the quality of seedlings. *Such a project, they said, would go a long way to restore the forest.* Musa and Mduduzi returned to their work site by the R618 galvanized at the idea of co-producing knowledge with two state agencies. More critically, they had the opportunity to create an environmental organization and positioning themselves in environmental conservation, rehabilitation besides their role as craft-makers.

**Establishing the Project: "Vukuzenzele!" or Collective Action for "Community" Empowerment and Sustainable Development**

The new 1996 national constitution in South Africa declared the simultaneous pursuance of conservation and sustainable development to promote the economic and social development of previously disadvantaged communities. However, of critical significance was Mbeki's call for an "African Renaissance" which resonated a message of hope and possibility across a continent that was long subjected to colonial servitude, hopelessness, and unresolved cultural and political tensions. His assertion in the newly multiracial South African parliament that "I am an African" which led to a euphoria around the country and the sub-continent, called not only on "white" South Africans to consider where they stood in the struggle to liberate the country and continent from the shackles of colonialism, apartheid, and racism. More specifically, his message called on black South African youths and communities to mobilize themselves into community or self-help organizations and business projects that the government could then meet "halfway". Meeting them half-way meant enabling constituted community self-help organizations with financial assistance as well as bringing in and placing at their disposal, the skills and knowledges of non-governmental and multilateral organizations from within and without the country. The message equally urged state organs, private businesses, and state-managed corporations to turn the historical tide suffered by a majority in the country by changing the structure of institutions to reflect contemporary

realities. This meant not only giving space but also support to community-initiated projects of empowerment, so the country could end the backlog of centuries of poverty and oppression.

Bro' Musa and Mdududzi were in their mid-twenties, Mduduzi, with barely a high school education, and Musa, with a checkered elementary schooling. In virtue of their limited education and life experiences, the two conceded that if they had to navigate the thorny intricacies of organizational know-how with Conservation, the state bureaucracy and local politics, they had to find and recruit partners that could read and write, were knowledgeable and resilient enough to sustain their bid for land, already a highly contested and limited resource in the wetland. Meeting these intertwined needs, posed considerable challenges. Few carvers that plied their trade by the R618 had any formal western education beyond elementary level.

**Group Formation: Dukuduku Forest as a Peripheral Zone and a Labor Pool**

Dukuduku Forest since the 19th century had been a frontier wetland and a perfect site of refuge for those running away from Shaka's violent *Mfecane*. Cautious of the intense socio-political crises that beset the world without, the dwellers of the forest enfolded themselves, along with their cattle within the forest and the Mfolozi Floodplains. The affordances of this intractable, inhospitable and "impenetrable thicket" (from the perspective of 19th century English travel writers) and wetlands provided them security, while they adapted to its vagaries. This included living with an unusually high population of wildlife particularly hippos, vervet monkeys, bush babies, mosquitoes, and hundreds of other insect species as well as with hot summer storms, and the flood and ebb of the precarious Mfolozi River. Even with its sandy soils, the interior of the forest and the floodplains afforded them food sufficiency and a knowledge basis for survival. Until the emerging contingencies of colonial, apartheid, and post-apartheid administration beginning with the Commission for the Delimination of Zululand (1905), opened up the former Maputaland to Western appropriation (conservancy, settler agriculture and settlement, plantation monocultures) and set about weaning black communities from their subsistence livelihoods and enfolding them into capitalist system.

The very suite of policies and practices that were invoked for the above purposes also contradictorily denied local communities any form of physical, material, or intellectual development. Because these communities were in frontier zones, far from centralized state rule, they became subject to the vagaries of protected area management, which became a state-auxiliary and a de facto state. Following the state, the protected area management coopted traditional institutions into the ambit of centralized rule. The latter used their newly found powers that had been reduced since the 19th century, to suppress dissent, settle scores with opponents, entrench dogmatism and exact corruption, while riling at community demands for modern material development and infrastructure. Subject to brutish apartheid manipulation, the more repressive these institutions were towards their subjects, the more secure they were and well rewarded by the state. The contingencies of governance thus prized apart the unity that once kept the forest community intact. The effects of state taxation on communities and land evictions to enable the goals of the conservancy saw many forest dwellers indenture themselves into processes of mining and farm or domestic urban labor. While the first two were characterized by circular migration which took the men away from their homes and obliged them to return their homes every six months and re-apply for recruitment, domestic urban labor took away the mothers of children do that maternal care fell to the grandmothers. As time went on, the disastrous effects of mining on the old began to be felt and the young began pushing back from going to the mines. They sought after jobs in ecotourism in lodges in St Lucia, the Mfolozi Floodplains and Hluhluwe-Mfolozi game reserve area. The chaos engendered by the apartheid system since the Soweto Massacres in the 1970s and efforts at spatial control unleashed population movements in Zululand that were destabilizing to the young. Many dependents became subject to endless familial peregrinations, an event that is recounted by all the founding managers of the Manukelana Project who are all immigrants to Dukuduku. The populations that stubbornly remained in the forest after the 1970 evictions became subject to amnesia, disorientation, and the inability to construct viable alternative futures for their children.

Many dependents became subject to endless familial peregrinations. Those that remained in the forest were subject to amnesia, disorientation and the inability to construct viable alternative futures for their children. As immigrants to the forest, Bro Musa and Mduduzi came with other place histories.

One evening I ask Nombuso (38), an acquaintance at the women's fruit market in St Lucia how she learned how to speak in English. Nombuso began by laughing since I always reserved 'strange' questions. "Hold on!" She says, waking up from her chair to attend to a tourist buying fruit. She soon comes back and begins to narrate amidst hilarious laughter from her friends how they attended school in Dukuduku Forest.

That was in the early 90s, just before Mandela came to power. They had a makeshift school with one teacher in Dukuduku, the first school that the community started. There was only one class. Classes held under the dappled shade of a flat crown tree, where they often swatted at mosquitoes or got distracted by the occasional stare of browsing wildlife. It was a community-organized project and the teacher taught everything in isiZulu including English. The teacher appeared untrained and incompetent. He was not only frustrated with teaching, his pupils found him frustrating. The first taught school for two weeks before leaving. Another followed, stayed for two months, before he also quit for another job. Studying under that tree made a month look like a year. The drop out rate was very high. And even so, by the time classes were over for the day, young men were already waiting for the girls by the crossroads. This soared the parents who withdrew their daughters from the school to save them from getting pregnant. One day nobody turned up under the tree except for a few boys. And that was the end of the first school in the forest. Now everyone sitting or standing by us was exclaiming how terrible it was schooling under that tree.

Pupils that were anxious to attend school were mostly the children of migrants in Khula settlement. In this category, most, alongside those that grew up in Dukuduku and were obstinate about going to school had to trek for twenty to thirty kilometers to obtain basic education in more fortunate other communities. Some were too small or tender to walk that far. If your parents really wanted you to school, they had to send you to live with a relation that lived where there was an elementary school. In view of the obstacles involved, most young simply gave up on formal education.

The same situation applied to health. Before the Khula community forcefully established the Sipho-Zungu community clinic in 2013, and which I gratefully attended one feverish morning to

obtain free medical care after a bout of debilitating malaria, the Dukuduku settlement made do with a once-weekly mobile clinic. It consulted the forest dwellers only for basic ailments. Most families had to carry patients on their backs for long distances only to obtain generic pills and then carry the patients back again. The sick that could not wait for the weekly Tuesday consultations or suffered from chronic illnesses were left to the dictates of traditional herbalists. During my fieldwork, the death toll in Khula Village, where a Peace Corps friend worked at the Sipho Zungu clinic, constantly disturbed me especially as I lost a number of younger people that were everyday company. While processes of modernization have burdened the region with disease, most critically HIV-AIDS of which northern Zululand is alleged to be the most affected region in South Africa, the very processes of economic modernization and spatial restructuring haven't equally provided a palliative for the problems they have created. Thus, while incoming migrants to the area found available land to build and farm, they were faced with a community without pipe bourn water, electricity, schools, medical attention or possibilities of modern forms of recreation. Manukelana would end up providing such facilities as a ploy to obtain land and a creative strategy to recruit volunteer labor for its project.

Numbuso reiterated that for all the above, she learned English while working as a maid in a lodge in St Lucia. And that was just before community heads came together and forcefully constructed the first elementary school building in protected area space in 2003 just as they did with the Sipho-Zungu clinic in 2009.

For Mduduzi and Musa, looking for potential members to their projected organization was like searching for pins through a haystack. The two found very few among the largely immigrant and heterogeneous population of Dukuduku Forest and its emerging settlements – these previously categorized as "the surplus people" - that had basic or formal western education beyond high school. Secondly, very few also spoke English or Afrikaans, the working languages of the state bureaucracy and of Conservation. Colonial and apartheid efforts to impose these languages and their cultures on black Africans have rather produced an aversion not only towards these languages, but also towards users that embody them. Thirdly, Musa and Mduduzi knew none (including those that labored for the park) who had adequate community-based organizations, or to deal with the state bureaucracy.

Their major problems at this juncture didn't only relate to finding partners but also obtaining land as a primary resource in establishing a nursery. Land in St Lucia Estuary was already a fiercely and often violently contested entity. And the Greater St Lucia Wetland Park, itself being one of the mobilized contestants, could not help them by dint of the fact that the territory their controlled was under question. The two were faced with a community that was not only steeped in a deep and wide socio-spatial divide, but was also driven by intensely feelings over land. Musa and Mduduzi's venture not only appeared daunting, being a venture that was directed towards conservation, it carried with it heavy risks. Many in the Dukuduku and Khula community either actively or passively loathe protected area management for the social consequences of their environmental imaginaries. However, inspired by the reception of their propositions, the two did a lot of footwork going about Dukuduku Forest and the new resettlement zone of Khula looking for potential partners to strengthen their project.

**Processes of Group Formation/Aggregation: The Search for Organizational Expertise**

How and why orders emerge (out of chaos and disorder) in particular ways, how they hold together and reach across or mould space and how they fall apart has been a subject of assemblage thinking (Deleuze and Guattari 1987, 1980; 2006) and Actor Network Theory (Muller 2015; Moll 2002). In exploring efforts towards recovery at the peripheries of a state managed conservancy, this section begins by laying down the life trajectories of the various actors and how they came together (whether by chance or design), their motivations in coming together, what agreements they reach, and the ways in which their organization is part of a broader effort to address the wreckage left by modernist patterns of landscape zoning and fortress conservation. While the initial actors set out with a few main objectives, it is worth noting that these objectives expand and become modified as they meet other actors (who in some cases become social capital networks) that instigate a change in their their knowledge basis and experiences. While their motivations undergo transformation, they also attest to the openness, creativity, resilience, and affective nature of (alternative or mainstream) assemblages in conservation-development. What new knowledges does the location of these efforts at the peripheries of state-managed conservancies bring? And what are the implications in terms of identity construction, vis-à-vis as state politics and the

influence of scientific and economic interventions?

**Bro' Musa as a Wounded Citizen**

"I'm good with the hands", Brother Musa tells me during our first interview. "Anything that has to do with the hands, with craft, or technology. But I'm not very good with abstract things". Bro' Musa confirms to me the practice of *bricolage* which is self-evident when you look at the recycled materials they used in constructing the project site, and the way the site holds together. Musa's does not draw upon his early relationship with his grandfather and his versatility with crafts. What I understood was that colonial education in South Africa had little room not only for those that are "good with the hands" who tended to be more "technical", it also enticed Africans towards abstract thinking by placing it on a pedestal while at the same time restricting Black Africans from accessing institutions where they could gain such knowledge. Brother Musa tells me that his teachers often mocked at him for being clumsy the way he wrote or for being unable to handle arithmetic or speak English. All of Musa's siblings as I gathered, had completed school and were holding positions in the teaching corps, magistracy, or business. Musa's confession about his limitations with schooling and "abstract thinking" is a humbling event that stuns me. It contradicts all the existing stereotypes about "the traditional Zulu man" that one finds in historical texts or hears in South African popular culture. Whereas I thought that Musa would be an avid supporter of the South Africa president who's been vilified by the South African press for having no formal education, Musa was rather apprehensive. He saw the president more through the lens of the state, which is largely viewed by his colleagues as corrupt and in some cases hardly different from the colonial state. They cite the land restitution case over the forest and how it has become a wicked problem due to due to the lack of will on the part of the state.

Bro' Musa's life challenge sees him go from a confrontation with literacy and schooling to leaving Mfekayi where he grew up to learn welding and metal works in Mtubatuba City which he calls "Babylon". Soon after a life changing fire ravages the workshop where he worked and stored tools that he had used his life's savings to buy, he relocates to Khula Village where he picks up subsistence gardening and woodcarving, while his wife focused on art and bead-making. "I Babylon after the fire. I wanted to be close to nature". The idea of retreating to Dukuduku to be close to "nature" is one echoed by almost every immigrant in the area.

Mlambo, Musa's colleague of which we would hear more a little later, tells me that Musa life dilemmas didn't issue from the fact that he wasn't intelligent. Musa might be a little slow but very shrewd and observant, he tells me. Musa's father was a rich businessman. He partnered a business with a white Afrikaans-speaker and had lots of cows. Musa grew up seeing his father argue with the white man, even yell at him at times – something you'd not see here in northern Zululand or scarcely in South Africa. Given his father's wealth, Musa realized he didn't have to bother himself especially as he was the last son. In any event, Mr. Mlambo let me know, Musa's main problem was that Musa was a mother's child – he doted a lot on his mother and when school turned out to be a bit demanding, and when he couldn't cope with the teachers who were normally high-handed here in Zululand, beating pupils like animals and mocking them, he dropped out and stayed at home with his mum. The reason was also partly because as the mother's last son, all her inheritance belonged to Musa. Musa had few reasons to worry about in life he stressed. Musa's mother handed over to him the piece of land behind the Manukelana Project where Musa was living. That was after his tools got burnt in the fire.

Bro Musa's presumed "lack" of reasoning skills and aptitude with schoolwork would affect him deeply. It created and fueled in him a desire to prove himself particularly as he came from a relatively close neighborhood and a large polygamous family where each wife's children competed with those of the next. "I know how to coach people", Musa tells me with a sort and meek voice. He was gifted in coaching people, even those that were highly literate. All along my stay I realized that Musa would often observe and listen carefully to newcomers for a long while, or to people in conflict, think over the issues at stake, and then advise. As Musa spoke to me during our first interview, a complex story of marginality and a struggle to center one's life emerge. As time will tell, viewing Musa's agency or development through the gaze of literacy occludes his affective, organizing and imaginative skills. As his colleagues would later attest from time to time, without the presence of Musa in Khula Village, the Manukelana Project would never had been a reality. In the next section, I examine how Musa and Nduduzi met the other founding members.

**Political Rallies as Recruting Grounds**

The mid-to-late 90s in South Africa were marked by collective exuberance as blacks, Coloreds, Indians and liberal whites rallied across the country to embrace shifting systemic changes and

participatory politics. The collective imaginings, hopes or "structures of feeling" (Williams 1977) generated by change processes translated into political rallies countrywide. In bringing bodies together, the rallies were able to generate enthusiasm and passion for self and collective discovery. In northern Zululand, where nature conservancies take up much of the territory, these rallies became preoccupying since land restitution was a staple topic over which much rhetoric was dispensed. It was these rallies that brought Mduduzi and Musa to "Rasta" Mapekulile," a resourceful but disaffected wildlife ranger and conservationist working with the much-reviled Natal Park's Board as well as to Phungula Amos Bengkikosi known in short as Baba Phungula. In this sense if Spinoza (2001 [1677]: 141) defines affect as "the modification or variation produced in a body by an interaction with another body which increases or diminishes the body's power of activity", then these rallies were critical instances that helped to carry the Manukelana concept towards its realization.

**"Rasta" Mapekulile Mlambo Ernest**

Rasta Mapekulile didn't take much part in the footwork that founded the nursery or in setting up its initial infrastructure. However, he was a driving force behind the organization by virtue of his education and training in conservation and his influence behind Musa, Mduduzi, and other actors that were to associate with the organization merits a closer examination of his background and ideas towards conservation and race broadly speaking. In 1997, "Rasta" found himself caught up between his work as a state-managed conservation official and his life-long drive towards community conservation in northern Zululand. The threat of dismissal from his job as a game ranger and an official that had helped in the creation r management of several forest reserves in the most volatile part of the country saw him feverishly searching for a way out of a professional predicament. He needed an alternative organization, wither existing, or one to be created, to accommodate him and his ideas. While Rasta attended political rallies where he met up with his former school colleagues and community elders, his job precluded him, at least officially, from taking an active part in political organizations.

As a Natal Park's Board game ranger and community forest manager, Rasta could have arrested locked up Mduduzi and Musa for practicing woodcarving by the R618 and for destroying

Dukuduku Forest. He knew all the woodcarvers that sourced wood from Dukuduku South where his parents' home was and where he grew up. On the contrary, he stopped by the two one day and asked them what they thought of creating a community-based organization that could sustainably manage the forest as well as grow and market indigenous trees? The two heard him speak before of community conservation and the need for blacks to form organizations that could take environmental contracts from whites and iSimagaliso Wetland Park e.g., rehabilitating disused mines, greening urban spaces and restoring degraded forests, but they weren't sure. The two had informed him that they had such a project in the line but knew not how to go about it. He promised to help them if they could partner together but the two weren't sure. How could Rasta be willing to leave one of the most well paying jobs for blacks in much of Zululand to come and work with an organization or with people without funds? Could it be the ganja he was smoking? Rasta was speaking the language of decentralized governance, devolution of power, and community participation in environmental governance projects as a way of regaining the dignity of the isiZulu-speaking communities in northern Zululand. In this light, he found an asset in the two young men who were slightly older than him but less experienced. On the other hand, as Mduduzi and Musa sought to meet him, they also prayed that he should be in a position if not to work with them, then assist them as an adviser.

Rasta's family escaped the ravages of commercial afforestation in Mfekhayi by migrating to the Dukuduku Indigenous Forest settlement in the late 80s. The move came after too frequent familial movements that saw him change schools and made new friends just as he lost them. In Dukuduku Forest, they settled towards the southern area now known as Ndonyana (behind the primary school in picture 1). As a young person, Rasta's father had warned the son never to attend a Christian church, to read the Bible, or speak the English in the homestead. However, Rasta found the tense rapport, which the father had with his mother untenable. It was hardly different than in other homes that were impacted by the politics of spatial engineering by the apartheid regime. A sustained conflict between son and father resulted, which ended up with the father booting the son out of home. The event pushed Rasta to leave Ndonyana and Dukuduku Forest back to Mfekhayi where he took shelter with extended family members and friends so as to complete elementary school. Years later, before he could complete high school, the mother passed away, leaving Rasta and his dad with a lasting schism.

Rasta was stubborn and refractory then (following his own words), yet he was determined to make it at school. His difficulty with Maths notwithstanding, he was driven to master the English Language, an impediment faced by his community, but which he hoped would open him up to avenues of knowledge and power. To cope with the vagaries of life, he took early to smoking marijuana and Rastafarianism. To pay his way through school, he did a lot of odd jobs, working at one time as a cement mixer in a building construction firm and at another as a trained security guard**.** Shortly after high school in 1994, Rasta joined the Natal Park's Board when he found that he could not pay his way to university**.** To secure employment with the organization, he had to coax the local *induna*, a much-respected and shrewd Baba Shikshela, to write a letter of reference on his behalf, asking the board to employ him. Besides tricking the *induna*, he also held back information from the board that he had completed high school education, as this would have militated against his recruitment.

Nevertheless, once employed, he found himself entrapped in ambiguous circumstances: his white superiors felt threatened by his dreadlocks, which he explained as an intrinsic aspect of his Nazareth Christian faith. The irritations of his superiors extended to his everyday views and association with Rastafarianism as well as his adherence to marijuana (*cannabis sativa*) smoking. They suggested that if he could cut off his dreadlocks and rein himself in, he would be assured a stable place in the organization.

Rasta interpreted the meaning of "stability" differently. Rather than give up on his "religious" ideals, he worked harder to prove his worth as a field game ranger. Eventually, his hard work, language skills, deft understanding, acumen at team management and ability to endure and to accomplish difficult physical and psychological tasks e.g., apprehending poachers and smugglers; and above all, his ability to mediate the park's often-tenuous relations with its "refractory" and volatile communities, placed his white superiors in a double bind. They were still to find a field ranger with his courage, resilience and resourcefulness, and above all his unflinching desire to interpret and implement conservation principles in a way that made sense.

While his hard work never completely erased his outspoken views and heady personality, Rasta often found himself at crossroads in attempting to reconcile the park's objectives with local

communities. At the beginning, he would urge local communities to keep pressing for more benefits from protected area management rather than stonewall themselves. In this light, he helped three communities to establish community-managed game reserves in northern Zululand before the Greater St Lucia Wetland Park enclosed these areas. Increasingly, however, he found that Conservation post-apartheid was not willing to work with communities or to shed its "white" fortress and ever-expansive policies to the detriment of local communities.

In the case of Dukuduku Forest, where he grew up, one of the two groups spearheading competing land claims to the forest coopted him to work with them as a chairperson due to his skills, education, and insider knowledge of Conservation politics. Rasta might not have joined the group except for a growing spate of news items in the mainstream media that criminalized the forest dwellers. The writers, who were entirely "white," were not acquainted with the forest dwellers' historical background or perspectives. They had hardly set foot in the forest and their views echoed the agenda of the "white" conservation lobby, protected area conservancy and ecotourism practitioners in St Lucia. Their regularly featured articles not only denigrated and criminalized the dwellers of the forest; they challenged the state and protected area conservation to evict the dwellers from the forest. In an interview with the *Cape Argus* (28 November 2011 issue), Rasta states that the articles and their representations (which most of the forest dwellers never read) overwhelmed him. Until then, he says, he knew little about the complex face of the apartheid system and couldn't understand the deep-seated "hate" and insensitivity that was directed towards him and his largely non-literate and underserved community. Soon after, he and his colleagues decided, "to do something about it".

For him, this implied pushing both for community conservation as well as fighting for the Dukuduku Land Claims Committee, an event that clashed with the Greater St Lucia Wetland Park's position. His support of his community's land claims against conservation not only embarrassed his superiors in Ezemvelo KZN Wildlife (the operational arm of the GSLWP), it left them helpless face to face with his power and influence. What followed, were successive attempts to rehabilitate him: first was a chain of job-transfers to remote places in the province with the aim to distance him from the land claim and to break him down; and secondly accusations of petty theft and other imagined infractions.

In the long run, his job as a game ranger with the Natal Park's Board did not earn him the complete trust of the communities he worked with either. Following various misunderstandings with the Dukuduku Land Claims Committee, the latter dismissed him from his position as chairman. Fearful as well of an impending dismissal from his job as a game ranger, after the punitive transfers he suffered and difficult projects, he decided to foster his education at university - only if Ezemvelo KZN Wildlife could allow him to work part-time.

When he acquainted his superiors about his plans, they were surprised to learn not only that that he was qualified to study at university. They asked him to prove his claim. Once he brought to them his high school matriculation certificate and school transcripts, his superiors wrote to the park administration to support his recruitment and studies at university. The end-result was a three-year fellowship to study Environmental Conservation.

His dilemmas with the conservation board, however, pursued him at university. As a student in his third year in conservation biology at the Mangosotho Buthelezi Technikon, he was elected in the Students' Representative Council and made responsible for religious activities. The position enabled him to challenge the authorities and to legislate various African Christian denominations that were previously not allowed by the apartheid system. However, just as with the Natal Parks Board, he ran into conflict with a few of his "white" lecturers who increasingly found his approach to community conservation and Rastafarian entrapments revolutionary and untenable. Unable to yield to his lecturers' exclusionary and monolithic views around "nature", human development as well as on the practice of community conservation, he dropped out of university with the aim to work with non-governmental organizations. Though he kept his part-time job with the Natal Park's Board, the African Conservation Trust, through the initiative of Andrew Venter, one of its directors at Hluhluwe, sought for him and offered him an appointment due to his education and valuable experiences. At the same time, a colleague of his acquainted him with a project for helping a white environmental organization to establish a community nursery in Dukuduku. "Why not establish the nursery ourselves?" he asked. "Why work for the benefit of "whites"? Why are we blacks always looking up to the whiteman?" His remonstrations did not convince his colleague, who did not want to lose the opportunity to earn some money. It was then that he met Musa and Mduduzi

who appealed to him to join them in creating a community-based organization for conservation and development.

Rasta found himself at crossroads. He was not yet willing to give up his part-time job, or the opportunity that came with a proposal from Venter, a person who was convinced about him and whom he had come to admire. The proposal carried a hefty risk – as a part-time worker with the Natal Park's Board, he earned about R8000 ($800). If he joined the African Conservation Trust on a full-time basis, he would equally earn the same amount or more. What if Musa and Mduduzi's proposal turns out to be unsuccessful? After due reflection, he decided - based his reasoning and emotions - to forego his self-interest and "join and help his oppressed brothers".

Through running a Community-Based organization (CBO) with the three, he would be in a better position to involve his critically underserved and disenfranchised community in non-state managed conservation projects. He advanced a sum of R600 ($62 today) to the indigent Musa and Mduduzi to establish the documents necessary to register an organization for a plant nursery, in which he had adequate theoretical and practical knowledge. Soon after, he relieved himself of his obligations with the Natal Park's Board to devote himself in working full-time with Musa and Mduduzi, and engaging his community.

**"Enactments" of "Home" or Dukuduku Forest in the Media**

For Rasta, the publications of white journalists were nothing but opinions disguised as fact. These sought to propagate the exclusive views of settlers and the apartheid environmental lobby rather than throw light on the historical contentions over land ownership in the region. He showed me a stack of past cuttings and newspapers with articles on the crisis, which he had carefully collected since the early 90s and stored in the office. None of the journalists that wrote about the crisis ever seemed to have set foot in the vicinity of forest. Most appeared to have written their articles on driving through the R618 and observing the environment and then interviewing farmers of English-descent resident in Monzi or alternatively Afrikaans tourism practitioners in St Lucia Town. One white journalist that ventured to do so as part of a team of state officials visiting the forest was

walked out of the forest when the residents deemed that the meeting they were holding had outlived its usefulness.

Beginning from the late eighties the white mainstream and urban media had rendered primitive the dwellers of Dukuduku Forest. It largely presented them more as sub-humans than humans, in terms of lack than rights or positive attributes. Their portrayals as animals and savages burdened and inflicted material and psychological pain on the few readers of the press, including pastors who then relayed the massage to Christians in church on Sundays. More broadly, it justified exploitative and derogatory treatment by white employers in St Lucia, Monzi, Mfolozi and in Isimangaliso Wetland park where residents of the forest and Khula Village offered their services.

Each time Rasta visited home from the community reserves he managed, he would wonder about the treatment of Blacks in the above places. He would wonder why white journalists were spewing forth such hate literature on his community, literature which they collected at a safe and unreliable distance from the forest community? How could they push blindly for the eviction of a community that primarily lived from the earth, and came and went in the forest that sheltered their huts and lives? Why were they being victimized when they had no stakes in the cities where the journalists dwelled? In any event (Rasta tells me) while the writings had served the cause of eviction-for-conservation they had failed to resolve the Conservation problem over the forest and prevailing attitudes towards race.

**Baba Phungula Amos Bhekikosi & The Dilemmas of Collective Action Institutions**

"Call me Phungula," the 52-year old dreadlocked stocky figure who loves checked cotton short-sleeve shirts and always carries a pocket notebook would introduce himself to a new acquaintance. Phungula is shy of giving away his middle Christian name and his *isibongo* or clan name for reason. Events in his life had pushed him above these practices and their ideologies. In questioning dogmatic practices in Rastafarianism, which he adopted as a way of life before scrutinizing it, led him all the way to his earlier Christian beliefs, and their association with colonialism. The outcome was that he ceased using his middle name. On the other hand, growing up without knowing his father and his uneasiness about his isiZulu identity – his people who were subjugated by Shaka

200 years ago have since lost their linguistic and cultural due to forced assimilation – has led him to simply want to be himself without the labor of being traced though his *isibongo* or clan to a people that still have to reclaim their language and identity. Phungula is driven by a need to recover his lost identity in his everyday pre-occupations and to help black Africans to do same.

"Baba Phungula" (as we call him at Manukena out of respect) is a non-violent and thoughtful nurseryman, ex-SADF soldier, often appears to have spent much of his adult life absolving himself of the sins of the past. During the rallies organized by the African National Congress in and around Dukuduku, Rasta met and established acquaintance with an ex-South African Defense Force soldier who spoke fluent English, who was a fierce outspoken, and fearless political militant at the time, and who contributed significantly to installing the ruling African National Congress in a region that was the exclusive and bloody stronghold of the Inkatha Freedom Front (IFP). Rasta remembers having warned Phungula about his fiery public speeches vis-à-vis the staying power of the IFP and more so, its frequent use of assassinations to silence its militants in this part of Zululand. He is grateful that Phungula, being a deep thinker, took his advice to heart and began to nudge his way out of politics and community activism.

Having experienced deep frustration with his schooling as he came of age Phungula opted like many youths in the eighties to join the ANC freedom fighters in exile. However, his interlocutors declared him too young at 14 to cross the border into Mozambique, Botswana, or Zimbabwe. Disappointed by his rejection to participate in national liberation and seeing his dreams to educate himself evaporate, he decided to join the South African Defense Forces. He hoped to be in a position to defend his country, while fostering his education. The question that Phungula never really answered to himself was whom was he defending the country for? Whom was he defending it against? His troubles with the army began soon after he was handed a gun for target practice in the course of training. Besides being asked to always carry the gun, the reality that he might be engaged in combat requiring him to kill his "black brothers", whether South African or non-South African, hit him hard. He agonized over his situation and eventually reached a decision: if it came to shooting any of his black brothers following the orders of his white superiors, he would rather turn the gun on the latter and take the consequences. To avoid this instance from becoming reality, he sought for appointments that would enable him escape the fighting front and to foster his

studies. The opportunities came through training as a stores accountant and ultimately a library bookkeeper.

It was while working in the military library, cataloging books and helping soldiers with book orders that he dreamt of someday being a philosopher and a writer, and contributing to knowledge production and social change in society when change would have come. With the death of the apartheid system in 1994 and the advent of constitutional democracy, Phungula still found the South African military to be largely white-driven. He resigned from his military career and returned home, hoping to pursue other opportunities that were more open. He hoped he could be in control of his time, person, and resources.

However, the liberation of the country in 1994, rather than heal old wounds, unveiled longstanding antagonisms and sedimented feelings over place and identity. Few that held one role or the other in the apartheid system weren't affected. Phungula found himself facing the opprobrium of the black African public for having opted during "the struggle" to side with the white-run apartheid South African Defense Forces rather than with the liberation movement e.g., the militant wing of African National Congress. The stigma brought back memories of his childhood, particularly of the burning down of the elementary school he attended in Zululand, along with his hard-acquired books, during the Soweto Uprising of 1976. Shortly after that, his indigent mother took him to the urban areas where they were forced to put up with a life of endless peregrination. Phungula lost all faith in society at the time. After completing elementary school, he self-educated himself, attempted to join the African National Congress in exile, got rejected, worked in the mines in various supervisory capacities so as to help his mother settle down into a house, before he joined the South African Defense Forces. Baba Phungula, like Bro' Musa, and Rasta, is deeply attached to his mother.

In the middle to late 90s, Phungula left his community at Msinga, a barren, oppressed and resource-challenged wilderness in the Natal Midlands and migrated to the resource-rich and coastal Dukuduku Forest. He projected starting up a charcoal-producing business – a burgeoning venture in the forest and with a rapid turnover. This involved burning patches of the indigenous forest, cutting down hardwood trees and roasting them over several nights to extract charcoal. Charcoal

was a much cheaper fuel than coal and was in high demand in domestic kitchens particularly among the growing populations in the non-electrified black residential areas outside Dukuduku Village, such as Mtubatuba, Kwamsane and Hlabisa. Even in the electrified middle class colored and white areas, or touristic hubs such as the nearby St Lucia, they were and still used for outdoor (and often beachside) barbecues, a very strong tradition among all the peoples of South Africa

According to Rasta, Phungula's fluency in English set him apart from the many faces he met in northern Zululand. His military training more than qualified him to be a member of the team, likewise his questioning nature. However, once Phungula acquainted Rasta about his business plans over the production of charcoal, Rasta, hardly one to mince his words or emotions, was not impressed. He left Phungula referred Phungula to Musa and Mduduzi so the two could sensitize him on the merits of conservation and the need to protect rather than destroy Dukuduku Forest.

Phungula took a long time to reflect on the dilemmas of solidarities for collective action, particularly when this called for personal investment in terms of time and labor, joint project ownership with those whose experience in management or exposure he couldn't evaluate or appreciate a-priori. He's never worked with Rasta or Mduduzi or Bro Musa and several other partners which he met and who were to drop out with time. The implications of working with acquaintances whose personalities or abilities to transcend their egos weren't a given were considerable**.** In the end, he joined, motivated in part by his mates' commitment to change and by Mbeki's call for the integration of a deeply fractured South African society.

However, if Rasta and Phungula brought to Musa and Mduduzi's objectives a sense heft in terms of drive, organization, language and a practical and theoretical background in thorny question of (C)onservation, it was the political rallies of the African National Congress, as the three readily underlined to me, and more particularly Thabo Mbeki's focal message of "Vukuzenzele" or an "African Renaissance", which spoke to their aspirations and provided them with the ideological and emotional glue. The above tags with the critical assertion that "any social project that is not imposed through force ... must be affective in order to be effective" (Mazarella 2009).

**Registering the Org: Activating Diverse Forms of Social Capital**

With the wind of change and collective optimism generated by the state and the public's willingness to be affected, and with protected area conservancy's willingness to move forward, even if timidly, the four met to decide on what kind of organization they wanted. Already they had the minimum required number of candidates they wanted. They were also encouraged by their various capacities. By the time the project would be up and running, they would have exploited the various known forms of 'social capital' (Putnam 1993) as well as discovered their strengths in overcoming bureaucratic challenges. Fukuyama (2002) defines social capital as broadly as any instance in which people cooperate for common ends on the basis of shared informal norms and values and he sees this (like many other scholars) as a key ingredient in both economic development and stable liberal democracy.

The first form of capital that Mduduzi, Bro' Musa and their colleague's exploited was that of "bonding" social capital (see Dale and Sparkes 2010; Woolcock 2001:13). This form of capital is crucial in the pursuit of collective action and as such it is often valuable for oppressed and marginalized members of any society. Here we find like-minded people within a community e.g. friends, family, neighbors, or those sharing particular social norms banding together in groups and networks to support their collective needs. *Bonding* is based on and at the same time cultivates trust, cooperation and collective strength among individuals and groups with a shared history, experience and common purpose. This is especially so, if they are historically oppressed or marginalized, as in the case of women-only groups (Panth 2010). More to that their shared social norms and cooperative spirit readily provide social safety nets to individuals or to the group in times of uncertainty. While Western people in societies have social safety nets like insurance, access to bank loans, capital and technology, people in non-Western societies often turn more to their closest ties to request for labor for e.g., farming; for market loans or other help e.g., in times in times of illness. What makes bonding social capital relevant is that it fills the gap left by the inability of the state to provide basic services as in the case of South Africa since the late 1990s when the neoliberal economy and neoliberal conservation were introduced. Here social capital comes to reside in groups, organizations or a coalition of groups holding and sharing memberships common interests, purposes and visions. By virtue of being able to exploit their understandings of solidarity, reciprocity, and collective strength, they can garner power and resources to forge

collective benefits for themselves (Panth 2010). The cultural norms and social trust that lead to bonding also inhibit individual engagements in risky behaviors. However, Fukuyama (2002) warns that bonding in disfranchised societies can have negative consequences, for example, where factions or corporate groups that are based on ethnic or political lines promote exclusionary practices based on distrust, intolerance and hate. Nevertheless, bonding social capital is a necessary antecedent for the development of a more powerful form of bridging social capital (Ferguson and Dickens 1999; Warren, Thompson, and Saegert 2001).

Bridging social capital on the other hand refers to the 'building of connections between heterogeneous groups'. While these are likely to be more fragile, they are advantageous in that they foster social inclusion (Schuller, Baron and Field, 2000:10). Ties across ethnic groups and race are necessarily bridging. It allows different groups to share and exchange information, ideas and innovation and it builds consensus among the groups representing diverse interests. According to Fukuyama (2002), bridging widens social capital by increasing the 'radius of trust'. It helps to create or foster an inclusive institutional structure that tends to be more democratic in nature and as such has implications for broader political and economic development. While scholars could view processes of globalization as perfect exercises in bridging capital, some could equally underline that the expansion of social capital global-wise has been at the expense of traditional forms of social capital, i.e., bonding, which is based on shared norms, values and cooperation among in-group members for common ends (Panth 2010).

Meantime "Linking social capital refers to connections with people in power, e.g., in financial or politically influential positions (Woolcock, 2001a). (It) connects the civic community to political decision-making and financial resources and relates 'to the capacity to lever resources, ideas and information from formal institutions beyond the community' (Woolcock, 2001b, p. 13)". It directs us as such to linkages across unequal and dissimilar groups or networks at varying hierarchical levels. Typical examples would include connections between resource groups and capacity training NGO's or between resource users and management officials (Grafton 2005; Barnes 2012). Building bridges and consensus across groups that represent diverse interests enhances flows of collective resource and social capital. Where bonding and bridging social capital work in sync, the

state finds it easy to enforce governance e.g. rule of law, social safety, and to enact transparent policies. All of the above in return influences its legitimacy.

While the relationship between these modalities of social capital and affect are yet to be established, this project argues that all three forms are held together by affect as we will see below or threatened by dis-affect or dis-affection as well will see in chapters 3,4, and Conclusion.

**Prerequisites for Registering the Organization**

First of all, to begin the process of registering a community-based organization (CBO), Mduduzi and Musa needed the list of requirements and procedures for legalization. They also needed to know where to go to establish each document. Their limited understanding of community based organizations and of how modern organizations and the state bureaucracy function as well as where the offices they had to go were located, each posed its own challenges.

Since they had heard of community-based organizations, they visited one in Matubatuba and enquired, not from the senior management, but from someone lower, about the requirements to register one. It took several days to a week and a half for their acquaintance to find out the required information and get back to them with a hand scribbled list. Cellphones and airtime at the time were still a luxury which low-income earning or unemployed public could not afford. The office holder wanted to go through different variations of CBOs with them (in terms of their sizes and organizational structure) but they told him not to bother since they were not even acquainted with the subject. They'd learn as they went. Nevertheless, he insisted on going through the list with them since Musa couldn't read. He outlined that they needed (1) an application form from the Department of Trade and Industries where they will fill in their particulars and make their request; (2) a written constitution with by-laws or rules; (3) minutes of a meeting seeking registration and showing elected officials; (3) a constituted board of directors; (5) a list of members, duly signed by name, position, identification number, and signatures; (6) a registration fee of R600 or $60 dollars (current exchange rate) and (7) certified photocopies of their identity cards in order for their CBO to be formally registered and incorporated among CBOs through the Department of Trade and Industries. He underlined that once registered the CBO would be required to submit half

year progress report to the registering authority and allow accessibility to its records. Besides the above, filling the application form in (1) above would require (a) the full name of the CBO; (b) the principal business to be carried on; (c) the postal address and the address of any office e.g., P.O. Box, to which communications may be sent; (d) the full name and identity number of the board members and each other member.

By the time the office holder was done going through the list (which essentially were the articles of incorporation), Bro' Musa and Mduduzi had breathed out deeply a few times. Establishing identity cards and obtaining the registration fee for the CBO would take them several months. Both Bro' Musa and Mduduzi did not have identity cards, which often took months to establish since the end of the apartheid system. The identity cards themselves had a long list of requirements, which included a letter from the local traditional leader in their municipality that he knew each applicant and that the applicant was resident in his community; they required appointments for finger printing; a certified copy of the original birth certificate and the original itself, or in the absence of which one had to take two guardians (direct uncles or aunts) who could give testimony in court about the birth and parentage of the application, before he/she could be issued with a provisional birth certificate. Establishing the birth certificate and the identity card themselves required the payment of a hefty fee. Given their almost hand to mouth existence, this additional proposition left the two sweating. They began to lose hope. Needless to say it took Mduduzi and Bro Musa about six to eight months to establish the identity cards, by which time Rasta's patience with them was wearing thin. He would turn up during visits to his parents or to the Natal Parks Board in St Lucia and stop-by to enquire from the two Musa how far they had gone with the documentation, and he would assist them with money. A few times, in between several months, Rasta found that the two seemed to have dropped the process out of frustration and the loss of dignity. The situation of Musa and Mduduzi hurt him because he was about five years younger than both. In Zulu culture, it fell upon the two to provide for him rather than the opposite. Rasta on his part was equally facing tremendous pressure at his job site. He feared his firing was very close. At the same time, he was facing pressures from his wife, a civil service teacher in an urban area who could not live with him in the wilderness close to the community forest he was managing. If something did not give way, he was going to lose his wife and children.

## Changing the Mode of Organization: From a Community-Based Organization to a Green Business

When Rasta finally turned up for their first board meeting, Musa and Mduduzi has their id cards ready. Using funds that Rasta gave them, they had also secured a post office box in St Lucia for which they paid for a year's rent. However, during the interval in which he was away at his job station, Rasta began to pay attention to workshops and seminars on community-based organizations (CBOs) or Community-Based Natural Resource Management Projects (CBNRM). He also obtained recent textbooks to help update his knowledge since he left university. Unfortunately, Rasta found out that Cooperative arrangements had failed to be a successful mode of empowerment across many developing countries, from South East Asia through India to East Africa. The reasons had to do among other challenges with too many stakeholders which often lead to "endless noise" and the lack of accountability. This reality was already occurring in South Africa with the white farms that Mbeki's government was buying and turning over to black community cooperatives formed for the purpose. It was a line of action that resulted from the policy of black empowerment and which ended with disastrous consequences for the farms, the black communities involved, the state and the white farmers. Perhaps a profit making "business" would be positioned to take contracts from state, park and NGOs to rehabilitate mines and derelict areas and in so doing make profit? Perhaps it could take out investment loans, expand, employ youth in diverse projects and see its success motivate and empower their community?

## Registering the Organization

Rasta decided that they should meet someone that was used to business corporations in the vicinity of the park – someone that could help with designing the articles of incorporation and the shareholder's agreement or "constitution". Mr. Jeff Mcambi is one of the few open, well-educated, and 'straightforward' elite in Dukuduku Village. He constitutes a hybrid between bonding and linking capital, in other words, while he's an isiZulu-speaking neighbor and by implication an *mkhaya* or kinsman (however distant), he is also of the new black South African black middle class, an ANC politician, a constitutional adviser, chairman of the Greater Dukuduku Development Council, whose wife is a Chief Justice in Richards Bay (a formerly "white" city). Jeff also has the

most expensive and beautiful home in the new Khula settlement, a big fenced home with an extensive lawn, with the yard spotting a few of the most expensive SUVs in the country, which were apparently bought brand new. The home alone, as I was to learn from Jeff who would solicit my help in marketing it a year later, cost about one 1,500, 000 dollars. At the time, Jeff was increasingly coming under pressure from political enemies and jealous people in the settlement, which meant that he was fast becoming a target for elimination, in South African terms. Back to the negotiation, if Jeff weren't too proud to step down a little, Rasta thought, he could be a partner in the venture, or at least opt to help them occasionally with advise. That way they would make use of his knowledge and his connections with the state and corporate world. Professionally, Jeff is a wily accountant, working in an office with several other accountants, and he has a lot of knowledge not just about tax issues, but also about constitutional matters whether with engage corporations or the state. Mr. Mcambi is delighted to receive Rasta, Mduduzi, and Bro Musa. He's impresses them with his magnanimity and says he won't charge them for a fee since they are at home, and since they constitute kin. Besides he finds them young and progressive and he wishes to see more people like them to take the lead in developing Dukuduku. "We'd just do it as friends", he says, so they could all join hands and build their community.

The tone and approach above calls forth the notion of "economies of affect" which underline the ways in which affect facilitate economic transactions (Richard and Rudnyckyj 2009). More precisely, Jeff's desire to earn the approval of and to avoid the contempt of his neighbors is a stimulus to action while Rasta's willingness towards approving Jeff goes to the same effect. Marshal (1961: 23) sees this drive as a uniform feature with any class of persons at any given place and time. Ahmed (2004) sees affective economies as a metaphor that describes how the circulation of emotions in any given society involves its own logic, or to be clearer, she sees them as providing symbolic resources to organize social reality. Zizek (see Ahmed 2004) confirms such economies to be necessarily parts of a prevailing social ideology. What makes their understandings critical in the context of neoliberal transformations e.g., at the periphery of state-managed protected areas following the wreckage of the 19$^{th}$ and 20$^{th}$ centuries, is that they become critical vehicles or modes of organizing social and ecological recovery. They constitute part of the glue that enable processes of bricolage and improvisation; are critical to the generation and establishment of bonding and bridging ties or forms of social capital, and hold together assemblages no matter how fragile.

After scrutinizing several possibilities, Jeff informs the four that given their lack of financial resources, a closed corporation would be best for their purposes. (Note that since 2004, South Africa ceased registering closed corporations or ccs in favor of companies e.g., limited liability companies). Fortunately, the four had already established the requirements they needed to apply for a corporation i.e., a verifiable post-office address, their personal identification cards and verifiable addresses (all of which posed enormous difficulties due to the legal testimonies they had to obtain for these documents to be validated). What they needed to do next was to reserve a company name with the Registrar of Companies at Companies and Intellectual Property Registration Office (CIPRO) in the DTI campus in Pretoria. After that they were to begin the actual registration process known as "lodgement of detailed documentation". This included hiring an accounting firm and establishing a business bank account. The internet wasn't widely used as today and so they could not access the forms they needed online, or do most of their documents. They were not aware of such a thing as the internet. Waiting times for document processing were unusually long. Their lack of skills with paperwork meant that a single document could go back and forth between them a state office for weeks due to some minor omission or a correction. The transition in the civil service in South Africa from an entirely white establishment to a multiracial organization saw the recruitment of lots of civil servants that either lacked competence or were too lax about work. This rendered processes that were supposed to take a few days to last weeks including many phone to be made. As with the public when I lived in South Africa during those very years, this was a source a frustration, inertia, and even worse, conspiracy theories. "Who were those in charge of state offices in the nation's capital working for?" people in the distant hinterlands particularly those caught up with land and development conflicts particularly at the peripheries of state managed conservancies would of the civil service right up through the cabinet to the president.

**Establishing 'Manukelana' as a Business Name**

An important requirement of registration process was the name of the business. Though the trio had told me earlier on that 'they' had adopted the name present name "Manukelana" as if it was a collective decision, it was actually Bro' Musa that brought it up. While sorting out old paper mails

in the office, I found that Rasta had been pondering over a few names for the business very early on. Among these was "Eco Care: Community Conservation and Ecotourism Development". When it was time to register the company, the Registrar of Companies at Companies and Intellectual Property Registration Office (CIPRO) asked the four of them to submit four or five names for them to check their availability through the registered corporations data base. This was to avoid seeing one corporation have the same name as another incorporated business in the same country. Rasta proposed "Eco Care". Bother Musa proposed "Manukelana". No one remembers the name Mduduzi submitted. Baba Phungula was not yet a full member of the team just yet. However, following their discussions they had decided that the name should contain indigenous plant nursery and art or craft as two critical dimensions related with the purposes of the project. CIPRO received the list and researched the names on their database and found that no corporate group in South Africa had copyright over the domain name "Manukelana". Besides that, the three said, CIPRO found the name unique. What did Manukelana, which came to be the name of the business and of neighborhood where the business is located, mean?

Cetshwayo kaMpande (1826- 1884), the most consequential Zulu King after Shaka, succeeded his father Mpande as King of the Zulus in 1872. Up till then he'd been effective leader of the kingdom after killing his brother Mbuyazi in a battle over succession in 1856 even while their father was still alive. He greatly expanded and reorganized the Zulu regiments, readopting many methods of Shaka. He also defeated the British at the famous Battle of Isidhwlana in 1879. Thereafter, he banished European missionaries from his land and is said to have encouraged other African peoples to rebel against the Boer Afrikaners in Transvaal. Following Cetshwayo's death, Zulu resistance to colonial rule completely crumbled leading to the entire annexation of northern Zululand as British Crown property in 1895 to 190, including everyone resident on it.

However, while Manukelana as the name of the site is popular with locals in Dukuduku, Khula and Matubatuba, the project site is better known to tourists, nature lovers, and the press as Isiphaphalazi Butterfly House and to Afrikaans-speakers of St Lucia and the English Farmers of Monzi as "St Lucia Butterfly House".

**Drafting the "Constitution": The 'Technicalization' of Governance**

Rasta and Jeff took time to complete the articles of incorporation: the business's purpose and tentative number of shares, and most importantly, a draft of the shareholders' agreement. This was a contract that requires, among other by-laws and stipulations that the shareholders sell their shares back to the company if they want to leave the business. Two were merged together into a single document and taken for typing so it could be ready for discussion and signing. Put together, both called it "the Constitution".

The "constitution" became a critical document that provided Rasta with a new language and expertise that was to become critical in managing the project. Time and again Jeff underlined to Rasta that the business, CBO or NGO constitution was a natural document, like the unwritten rules that governed a family and like the written rules that govern a country. Without strict adherence to these rules there would be confusion and the business as well as its shareholders would pick the prize. He emphasized that in terms of business, the constitution overrode all other normative values e.g., values of kinship deriving from traditional Zulu kinship norms that might lead to bureaucratic corruption.

With the term "the Constitution" also came that of "the concept", an expression which would also emerge to delineate to eventual tourists where the idea of the project came from. The story of the struggle of the four founding members would become a narrative told to tourists about the beginnings of modern development in Khula and Dukuduku Forest. In so doing, the story would lead to an additional feature to the indigenous nursery and woodcraft project, that of cultural tourism. While acquainting themselves with the documentary dimensions of the project, Mduduzi and even Bro Musa would also began acquiring the technical language and terms used in community-based resource conservation and the bureaucracy, in other words, the expressive dimension of assemblages.

**Hiring an Auditing Firm**

One of the requirements they had to fulfill was to show proof of having contracted the services of an auditing firm that will enable compulsory auditing of their estates and establish annual financial

statements, including taxes. The reality, like the other business requirements hit Bro' Musa and Mduduzi again, and all they had to do was to wait for Rasta to turn up so he could talk to Jeff since the two were close. Audit firms ensure financial reporting standards and ensure that the corporation is desirable in the public interest. They scrutinize the economic or social significance of the company through its annual turnover, the size of its workforce and the nature and extent of its activities. They also ensure that the corporation passes the solvency and liquidity test and are there to help close the corporation properly and in line with the law if that's needed. In this instance, Jeff provided them with easy access to his accounting and auditing firm, while at the same time extending his power over the project. While Jeff's influence over the corporation will be decisive, it will also matter in years to come when the assemblage with be financially viable.

**Setting Up a Business Banking Account**

Another critical requirement they had to satisfy was having a business bank account. Because their business was a closed corporation, the bank required them to bring a signed founding statement, a certificate of incorporation, identity documents of each member, two trade references, and a minimum deposit. In the absence of Rasta, Mduduzi and Bro' Musa had no money to set up the account. All what they worked hard daily and tried to save didn't come up to much. Luckily, Bro' Musa's sister learned of their situation and how important the business was going to be. She offered the two R600 ($62, April 2015 exchange rate $1/R11.54) as a sign of her support. It was support that Bro' Musa would never forget since it didn't only foster their cause, it brought him some dignity by indicating to his colleagues that his family was not so improvident. With the R600 they set up the business baking account.

Finally, in November 2000, the Registrar of Companies at Companies and Intellectual Property Registration Office (CIPRO) wrote them back that the name of their corporation had been accepted. They picked out Manukelana Indigenous Nursery from the list. The celebration between the four, who were all present was spontaneous. However, Baba Phungula narrates to me, as the three celebrated, one of them fell downhearted. That was Mduduzi. He could not find the words "Art" or "Craft" on the business title.

"What's the matter Mdu?" Bro' Musa asked him.

“I thought we had chosen the name Manukelana Indigenous Nursery and Art cc. Where is the art? I don’t find the word “Art” on the business title”.

The others beseeched him to drop it and told him that it was all the same. Mduduzi insisted. They will have to take his name out of the business if “art” wasn’t going to be a part of the title. He and Musa had brought up the subject of this organization on the premise that they wanted to save the carving tradition rather than establish a nursery to restore the forest for its own sake. It was one of the first shots around the purposes of the project, and on the role or meaning of aesthetics. that would tension the project. The group decided to send back the name to CIPRO for correction for the sake of Mduduzi. The project registration had to take some further waiting. Rasta, who was not so versed with art, quickly found out how important it was to his two colleagues. He found out that “Conservation” didn’t mean the same thing to all practitioners and that accommodations were necessary.

With all their documentation in place now, they had to make a quick trip in Rasta’s car to the Department of Trade and Industry in Matubatuba to pick up a registration form called a “lodegement”. In 2000, the department didn’t yet have it on the internet. Even if they did, the project founders would still have had to go to Matubatuba and have it printed for a fee. The trips on foot and by car had brought the four of them together so they that they looked like family. They filled and signed the “lodgement” form, attached the name reservation to it, and the letter from their auditors. The auditors were actually certified accounting officers in Jeff’s firm, which was acceptable. They could also have been lawyers, which the four couldn’t hire. The accounting firm took R 450 ($47, April 2015 exchange rate $1/R11.54) while the fee for the application was R150 (that is US $17, April 2015 exchange rate). Rasta opted to pay for it since he was financially viable. Officially, the processing was supposed to take between 1 to 5 days or more, depending on how busy CIPRO was. However, given Jeff’s connections in Pretoria, he decided to take the document, drive there himself, have it signed, and bring it back.

**Overcoming Bureaucratic Challenges: Using Affective Economies, Improvising Solutions to Dilemmas and Social Capital Networks**

Bro Musa recalls to me now and again what establishing the documents for the project meant to them. It opened their eyes to bureaucratic politics, to technical language and big word he's sure he'd never had heard about, and to the distance between the bureaucracy and plants, trees and landscapes as objects of conservation. Firstly, the change in the country's constitution did not mean a change in the "old white guard" that was very adept at racial gatekeeping. Secondly, the transitional process from apartheid to post had created a situation that warranted new and far-reaching policies, rules, and regulations to accommodate the complex needs of a new society. Different state agencies could not envision these needs before they occurred e.g., issuing licenses for plant propagation and diverse biological economies that were still to emerge or enter the neoliberal capitalist market economy. Thus, the four realized that if they had to succeed in their venture, they had to be inventive, and above all, they had to cultivate not only bonding but also bridging as well as linking forms of social capital (see Dale and Sparkes 2010). It is here that "group think" as well as Rasta's experience of the bureaucracy, his resourcefulness, and "ability to write" (Musa says) became critical.

Sometimes all three of them would engage the "white" bureaucracy. Due to his knowledge and exposure, Rasta always believed in direct confrontation, which sometimes troubled his companions as these were scared of the power dynamics. Whenever it appeared that direct confrontation might close the chances of authorizing the organization, Musa would nudge Rasta away and step in. According to Rasta Musa's big physique, genial look and smile as well as soft-spoken nature would calm the heat. The three also discovered gendered differences in state administration. The "white" Afrikaner women were more receptive and empathetic to black Africans than men, and were often willing to help them through backdoor channels. And so the processing of "the application file" involved both direct submission into the offices concerned, "missing" documents and the surreptitious slipping of substitutes with hand-written instructions under the doors of sympathetic female Afrikaaner state employees. In the end, when they had the registration folder complete, endorsed and ready, it had to be sent to Pretoria (the seat of the national government), where they had no representation or contact to handle and fast-process their application.

The four turned once again to the portly, ever lively and resourceful Mr. Jeff Mcambi, who not only used his connections to provide them with a relevant contact in the nation's administrative capital, but also personally too the application file with him and drove to submit it to the relevant authority. With the application off-the ground, Bro' Musa and Mduduzi could finally concentrate on their carving again rather than s spend all their time running around to establish "the business".

**Authorization**

In May 2001, the four project's founding members received their certificate from the CIPRO offices in Pretoria, in hard copies. It was Mr. Jeff Mcambi that brought the document. And so the Manukelana Indigenous Nursery, the first of their kind in the Dukuduku Area, came to life thanks to the energy that Thabo Mbeki had unleashed, countless efforts, fluctuating emotions, fleeting paperwork, sums of money from here and there, chicaneries, negotiations, conduits and networks. One advantage that registration brought was that their business was listed in the business directory, which actually constituted free publicity they weren't aware of. When the New Companies Act of 2008 came into operation on the 1st of May 2011 and replaced the Companies Act of 1973 it didn't concern them. It's not even evident (and it wasn't necessary) that they realized the change in form and content. However, armed with a sheet of paper, a vision and manpower, the company had neither land nor funds to subsist on.

**Land for the Nursery and Woodcraft**

Obtaining land for the nursery posed a dilemma. The struggle for land in St Lucia estuary was at its height between 1998 and 2005. The question of who owns or has rights over land in Khula Village and Dukuduku Forest and has been mired in often-violent controversy since the coming to power of Mandela's post-apartheid government. Tensions over land unleashed by zoning processes since the Commission of Delimitation of Zululand in 1905 which turned over all of northern Zululand to the British and rendered its residents as squatters subject to eviction (Harrison 1977) alongside the Native Lands Act of 1913 have continued right down till present. In do doing, several claims ownership came to exist over the forest: state ownership, which was nominal, protected area ownership, since the protected areas was a de facto state in the area, and communal

tenure that stubbornly persisted. With the pressure for land from evictees from the forest and the threat of fire engulfing the region in the early 2000s, just when Manukelana paper work was being established, a former plantation across the street from Dukuduku Forest was already set aside for resettlement. Bro' Musa had already gained a foothold on this area much earlier. The *induna* Baba Shikeshela was distributing the land as much as he could before the tides changed, to encourage its occupation. At the same time the protected area was also positioning itself to take much of the deforested and vacated land just like the Afrikaans community of St Lucia.

In this on-going struggle or race over land vacated by the commercial plantations, over land restitution by the conservancy and white areas, Musa, ever shrewd and patient, saw an opportunity. He surveyed and found the additional 6-hectare lay of land besides his homestead and had a freshwater wetland at the center and which he coveted for his family, as constituting the most appropriate site for the project. Seeing that it would be big sell to obtain the 6-hectare lay of land which he had long coveted for his family, and given too that he was loathe to lose it, he invited his partners to claim it for the benefit of the project. All they had to do was to convince the charismatic and venerable local and elderly traditional authority, Baba Shikshela Mkwanazi. He was certain that the elderly man would accept their proposal since the goal was to enable conservation and development within the community and since it would foster his desire to take back land from Conservation and exotic forestry.

After meeting with the four young men, Baba Shikshela was convinced about their aspirations and proposal. He found that their diverse experiences in wood-craft carving, gardening, conservation and defense, alongside the many temporal jobs they had held with construction industries, qualified them to use the land if their underlying objective goal was to foster conservation and sustainable development of the community's natural resources. More so they were willing to do so in line with the stipulations of land use by the state, park, and international organizations. Land, as the foundational resource to realize the aims of the Manukelana Project trust, came through more easily than they thought. But Bro' Musa did not stop there. Beyond the six hectare piece of land was still much open land where he decided to establish a makeshift soccer pitch. Here young people in the community would play soccer in the afternoons and on Saturday mornings. The practice sessions soon became popular and sooner or later, competitions, where the *induna* was

invited to participate and issue prizes were being held on the pitch. The pitch began to bring the community together – an event that pleased the *induna* and the other traditional leaders who wanted to unite the community under a single umbrella. Not only did Bro' Musa enhanced his standing in the community he made the Manukelana Four relevant to the process of community building and development. Eventually, when it came to fencing the Manukelana premises, they would also suggest to the induna that fencing the soccer pitch was protecting it. It was as they told me, nothing but a ploy, just like the soccer matches, to claim the land for their own purposes. Several months after the pitch was fenced, the soccer matches died out and Manukelana converted it into a permaculture garden and experimental farm. The land grant left the four elated beyond measure. Though they had no money, their access to sizeable land and the full support of Baba Shikshela provided them with a lifeline. Holding onto their "still paper" company, tangible land and seeds, the four were uncertain about where to start. The dearth of capital, tools, and other resources meant that they could not carry the project forward by way of architectural planning. In examining the above one thus finds spatial processes characterized by improvisation, bricolage and which are all tied up to affective practices.

**Fencing the Project: Bricolage, Improvisation, and Team Work**

One of the critical requirements of occupying the site and securing it from greedy land prospectors was fencing. The Manukelana Project founders had neighbors whose integrity they couldn't trust. On their eastern side, several hundred meters down the R618, was a formidable neighbor known for its graft and callousness - the iSimangaliso Wetland Park and World Heritage Site. Alongside the park were a few white Afrikaans-speakers from the business community of St Lucia where land tenure and ownership was highly fixed and short in supply. They had the courage to leave the island estuary and cross the St Lucia island bridge into the Western shores where they constructed residences, tourist cottages and a dairy farm while hoping to expand gradually towards Dukuduku Forest and Khula Village. It was a precedent that led the residents of the forest and Khula Village to hold their breath. The Manukelana founding managers were also desirous of guarding themselves from the new settlement of Khula as it pushed downwards. To help secure their project, they went for whatever materials that were at hand. They scavenged for eucalyptus and pine poles in the vicinity; sought and carted off unused gauze wire from disused work sites in Mtubatuba and

from within the confines of iSimangaliso Park and the Natal Park's Board. This scavenging for recyclable materials and ideas became part and parcel of the mode in which they assembled the project. However, when they realized that the quantity of wood they needed was huge, they solicited eucalyptus and pine poles as well as rejected timber directly from Siyaqubeka, a sawmill down the street. Rasta and Bro Musa had to let go their feelings against the sawmill since it was part of the industrial complex that had dispossessed the original communities of their tenure over the area. Siyaqubeka, a formerly state sawmill, had indigenized its name after the end of the apartheid regime to look more community friendly. The manager was too happy to assist a productive group of youths emerging from the forest community. They gave them a huge consignment of timber that helped in realizing not only the fence, but also a makeshift shed, packing shed, and the roofing of the future modern office, kitchen building, outdoor toilets, and other structures.

"Without Siyaqubeka", Rasta tells me, "we wouldn't have started this place". While I initially looked at the mill in a very negative light each time I went past their premises close to Mtubatuba, their "generous" gesture towards the Manukelana Project in the early 2000s – which helped the latter to re-territorialize the landscape - modified my outlook towards them somewhat.

**Shifting Dune Soils: Recycling Car Tires and Supplementary Use of Shade Cloth**

While fencing protected the yard from human and wildlife actions, they equally had to stop the constant drift of everyday windblown dune soils created by processes of industrial deforestation. To accommodate the dunes, they undertook a drive to collect hundreds of disused car tires, which they filled with earth, seeded them with grass and lined on the ridge facing the R618. Not only did the tires stop the dunes from drifting, the seeded grass soon grew covered the tires and spread from one tire to the next, vegetating embankments – a process that I have only experienced while traveling extensively in China. However on to drop the dunes outside the yard from pushing in through the fences, they used shade cloth on the windiest sides of the project. Incidentally, the shade cloth encouraged the growth of creepers, even as shade trees grew to cover them, thus creating a favorite rest area for free ranging chicken and garden birds. The founding members of the project also created terraces in the yard using the grass-seeded tires, which gave parts of the project a very esthetic and original appeal. The ability of the tires to effectively hold and protect

grass and plants from wind action turned these into multipurpose objects. The first permaculture garden that they would establish near the soccer pitch would be initially based on lorry tires entirely – a practice that Manukelana would eventually establish in more than 150 home gardens in Khula Village and 37 schools in the region following state funding.

**Restoring the Landscape: Reclaiming Land from Afforestation**

With the authorization of Manukelana and a gift of land three of the four project founders proceeded to meet iSimangaliso Wetland Park and Ezemvelo KZN Wildlife for workshops and training sessions on conservation and business development. At the same time, once outside the workshops, which took three months, they set out to re-territorializing the landscape or reclaiming it from exotic afforestation. The four had to dig up the thousands of chopped and half-burnt pine stumps that littered the premises. It was backbreaking and arduous labor and they had to go through the large six-hectare yard plot by plot. The effort took several months. Some of the stumps still smoldered with fire below the surface of the earth when they took over. They had to mark these out to fill them up with earth and level them otherwise they became sinkholes after the fires died out, and eventually were covered with vegetation and thus constituted risky sites for human to step onto. This, especially as snakes e.g. black mambas and the cape cobra, would find abode in such holes. Leveling the dune soils, planting them with pioneer grass and weeding away clumps of invasive *chromolaena odorata* and *lantana camara* plants which always flourish in opened forest gaps, killing indigenous vegetation and poisoning free ranging cattle. Piece by piece, they reconverted the leached land for an indigenous tree garden and extensive plant nursery.

Free seeds of indigenous trees came from the forest. Bro Musa and Mduduzi handpicked these while collecting wood for carving. They would scrutinize, tweak, clean and store the seeds, or prepare them for seeding if it was their season. Here, knowledge which Mduduzi and Musa garnered from their grandparents who used to collect seeds as well and look after them became handy. As their knowledge of seeds increased so too did their networks for collection, whether consisted of herbaria and traditional healers. Baba Mkhize, a renowned healer who was enthusiastic with their project and anxious to pass onto them knowledge of medicinal plants, provided them with rare seeds. Firstly, they began by planting pioneer species in the coastal

wetland area like the coastal silver oak, the Natal Mahogany, Buffalo Thorn Tree, and aMarula tree, which also acted like excellent windbreaks. In the area in front of the office, they designed an indigenous tree wood or garden, which would eventually become a tea garden and in the wetland at the center of the yard they planted water trees that had existed there before and protected the water resources before the previous owners sought to reclaim the site for commercial planting. The outcome of this patient nurturing of the land between 2001 and 2011 was lush yard with a flourishing wood, and a wetland that was beginning to flow with water, dragonflies, returning water birds, some fish, an iguana and a turtle.

Finally, a wooden shed soon followed to shelter the three when they took work breaks and where they could save their tools, have refreshments, welcome visitors to the project and practice woodcarving when resting. The shed took a week of cobbling together rejected wood and zinc as well as hardening the floor with seeds from the natal palm tree. Following the shed they eventually established an indigenous nursery garden. Again, Rasta provided money for plastic bags into which they nurtured the seeds. The heavy rains of 2001 brought flooding that filled the wetlands in Khula and Dukuduku Forest with water. It pushed Bro' Musa and Mduduzi to construct a boat which they used for navigating the site and ferrying wood from the eastern side to build the new office which lies on the Western side. They also developed a rudimentary water suction system that use pipes and plastic papers to ferry water from the wetland to sprinkle the nursery plants every dusk fall and sometimes early morning before sunrise.

**Sharing Labor, Stories, Lives and Ideologies**

Their hard work and collaboration was accompanied by a sharing of life experiences, scarce food provisions and ideologies of work or notions of investment and solidarity, community, race and ethics, as well as of science, conservation and humanism, and notions of good and evil. Taking a distance from the excesses of materialism meant abstaining from processed food, sexual recklessness or promiscuity, alcoholism, and chauvinism. These ills they said had taken hold of northern Zululand and were fostered by the years of civil strife, broken up families, and processes of modernization and proximity to the large urban centers e.g., Durban and processes of globalization e.g., tourism. As the three to four founding members restored the ecology of the

patch of wetland, so too did their labor and living experiences with the site re-arrange the temporalities that game to shape their lives, as well as their knowledge patterning expression, and notions of the good life. In other words, their individual and collective agencies with those of the landscape shaped one another in interpenetrating ways. It wasn't long before Mduduzi, Musa and Phungula espoused not only Rasta's Rastafarianism but also a heightened sense not only of non-human agency but also of its complexity e.g., the temporality and agency of plants and trees, or of indentured (capitalist) labor as opposed to the self-employed indigenous gardener or nurseryman. Following Rasta, the three let their hair turn into dreadlocks, adopted Rastafarian postures, dressing, and music, and rejected eating meat in favor of vegetarianism.

Khula Village and Dukuduku settlement quickly took notice of the eccentric and hardworking and *dagga* (*cannabis sativa)* smoking four and the company they ever kept. They noticed that tourists were always turning up at the premises, attracted by Rastafarianism. Nevertheless, their cooperation of the four was rare in a village that had lost its former tradition of cooperative endeavor that saw rural families, neighbors, and communities teaming up into self-help cooperatives when agriculture was still the mainstay of life in northern Zululand. More so, the reality of age set groups that were easily established during teenage circumcision rites amongst the Zulu-speaking and Xhosa-speaking people was also lost with modern medical services and the political disarray of the 70s and 80s. Few in the New Settlement of Dukuduku even knew the meaning of "Manukelana" - one of the war regiments that Cetswayo, the last Zulu king before the demise of the Zulu kingdom established. They didn't have to of necessity, since not everyone in "New Dukuduku" was/is of isiZulu descent. Some, like Phungula, harbored a deep antagonism towards Shaka. They blamed him for subjugating this part of the southern African continent, obliterating their languages and cultures, and for admiring Europeans for their knowledge and military technology, as well as ceding the Natal coastline to them for settlement. Nevertheless, Phungula still found the name "Manukelana" useful in motivating them. Critical indigenous knowledge as well Rastafarianism and gardening came to provide the four with a common language that partially supplanted what they saw an undomesticated European traditions and knowledge systems.

**Changing the Established Order: Laboring for Conservation and Community Responses**

Commuters from Dukuduku and Khula communities that passed down the R618 to St Lucia Town where they worked noted the everyday toil of "the four bachelors with dreadlocks" who smoked "dagga". Most wondered about their purposes and states of mind. "Might be they are just another crazed bunch," some mused. For these, the toil of the Manukelana Four was a losing proposition. Some saw the project as an endeavor based on individual interests rather than collective transformation or community development. According to Baba Phungula and Bro' Musa most people dismissed their collective set by underlining that when the project would begin to make big money, the members would be at one another's throats and that would be the end of the endeavor. Yet at various times, when conflicts on the project site between the founding members came to a head, one would pronounce to me the reasons why they began the project.

"We started this project to prove to the black community that black people can work together as a team; that they can collectively manage a business and succeed," Bro' Musa tells me.

"It's been fifteen years today and we are still together," Baba Phungula says at another time. "Things are not that good between us the shareholders as I spea, but we are still together. We've seen worse times in this business, believe me; far worse than what we're experiencing now. If we did survive what we went through, then there's nothing for fear".

"There is a certain belief in South Africa that a black man cannot manage a business," Rasta tells me; "and that when you place a black man at the top of any business, it will fail. We wanted to prove that belief wrong. But most important we began this business to prove to the whites and to iSimangaliso that blacks can do conservation and succeed better".

Baba Phungula remembers taxis stopping on the highway so its occupants could take a better look at them as they dug up stubborn root stumps in the wetland, their backs and faces often drenched with sweat. "Sometimes the taxi men would point at us in the diatance. We knew they were mocking at us. There were lots of beautiful girls then," Baba Phungula muses one evening as Musa carves a black-spotted guinea fowl, a symbolic object that rural isiZulu young men would employ to court a girl of their dream. "The girls would stream down the road going to work for whites in

St Lucia. We never stood any chance to talk to any of them. We never even thought of the possibility of a relationship with any since we were not their kind."

The disaffection that the founding members felt coming from of the community whether it was real or imagined only went to solidify the group or reinforce their sense of togetherness. It was they versus those that mocked them in the community for doing conservation, for believing in hard earthy labor rather than offering themselves to clerical or domestic work in St Lucia or to the plantations around the wetland. In other words, this instance underlines what Latour (2005) terms as the process of "group formation", i.e., the on-going process made up of uncertain, fragile, controversial, and ever-shifting ties … [in which] actors are *made to* fit in a group" (2005: p. 28). Agrawal (2005) and other scholars following him equally see this process as environmental subject-making processes., with the difference that both Actor-Network Theory of methods and Agrawal's analysis are limited by the lack of attention to the complexity of affects engendered as critical factors in the processes of group formation.

Except for Bro Musa, the rest of his colleagues didn't have stable relationships. Rasta went through a painful divorce with his wife and had custody of his children; Baba Phungula's first fiancée passed away in labor; and Mduduzi, a relatively carefree figure had an Austrian girlfriend in the course of the project who often came to visit him.

When I asked what most of these girls, otherwise women who paid little attention to, think of the Manukelana Project today, he says, "Most have since passed away, claimed by the HIV/AIDs virus. Very few are still alive".

The answer broke me. Northern Zululand is described by epidemiologists in South Africa as the epicenter of the HIV-AIDS virus in South Africa due among other factors to the lack of formal education. Insulated by the garden atmosphere at Manukelana, the founding members could only drop in a word or two whenever news comes (as it did once or twice weekly) about a new victim. Such news only enhanced the meanings of the project to them, how the labor of the years between 2000 and 2011 kept their eyes glued to the earth, plants, butterflies, the passing seasons and the tourists and visitors that flowed into their project. In the end, Baba Phungula and Bro'Musa would

give a blistering critique of the alienation induced by processes and practices of modernization and globalization and the alienation of locals from local foods, kinship relations, the attachment to "mother earth" to use his words, and dedication to the hard labor needed to cultivate the earth and the quiet that attends following the rhythms of the seasons. Often in listening to the views of Baba Phungula and Bro' Musa and how they were formed by this period of group formation and getting to know the land and the agency of plants, sun winds, and changing seasons, I had the notion that I was listening to echoes of Heidegger underlining some deep primordial and originary truths about being, space and time, all of which would find its apotheosis in Mduduzi's enchanting aphorism: "It all begins with the seed" - and it is to this seed that the gardener, nurseryman and all that are concerned with life's processes must pay intimate attention to enable this seed to bear life so as to reproduce new worlds. It was an aphorism that would convert many to the essential nature of the nursery beginning from tourists, the business community of St Lucia, much more than iSimangaliso Wetland Park and Ezemvelo Kwa-Zulu Natal Willdlife bopth of which nurtured them earlier on. Mduduzi's influence would lead tourists and the business community of St Lucia to begin seeing the nursery as much more than a site of floristic reproduction but a site where life itself was being produced. Following Rasta, iSimangaliso would be prodded to begin its indigenous plant nursery about three to five miles away under the belief that they had the license and ownership to propagating "nature" – an event that pushed them to begin placing signage along the length of the R619 and little handwritten adds with drawings and solicitations to visitors and tourists of the estuary using all tourism notice boards that they stop by and visit their nursery and if not to buy plants, then to share indigenous food with them, listen to talks about the significance of indigenous plants and landscapes and to support their activities. Gradually, iSimangaliso was to learn that by nurturing the two woodcarvers they had unleashed untapped energies in Dukuduku that might end up being problematic. Or, while some of the management shared this view, Bronwyn was more optimistic.

**Alternative Views of Development: The Leaves of Indigenous Trees**

One of the requirements that attended receiving a piece of land in those years from Baba Shikeshela was to ensure that the land is either occupied with housing or developed in terms of built infrastructure. The *induna* as the titular authority for the Khula community area did not want to

see the iSimangaliso excise any morsel of community land close to its borders on the pretext that the parcel of land wasn't under use and that it needed the land for some purpose. Towards 2007, just before Manukelana teamed up with the African Conservation Trust and received its first loan to construct the rudiments of its first butterfly house. Baba Shikshela stopped by to scrutinize how the land that he had he accorded the four project founders was developed. From a distance, he pointed to the southwestern chunk of that faced St Lucia, i.e. where the soccer pitch used to be and suggested that it looked "underdeveloped". When he asked the four what were they waiting for to occupy the patch, they sensed that Baba Shikeshela was about to excise it and hand it over to some other prospective tenant.

"But the site is flourishing with 'development', Induna" Rasta told him.
"I don't see development there," the *induna* peered through his thick-rimmed eyeglasses. "Come, Baba, let's take you to there so you can see for yourself".

The four walked him to the site. It was a grove of some thirty something wind-stirred and flourishing indigenous trees. On the earth were various running rows of lorry tires with plants undergoing germination. A distance ahead was a grove of fast growing papaya plants, banana suckers, lemon trees and other fruit plants. And at the edge close to the highway was a huge shade cloth green house for growing plants.

"You can see for yourself how developed it is, Baba. These hard-to-grow trees are a more potent form of development over concrete and metal," they reasoned pointing to the indigenous trees. "They will take care of the community more than cement houses: the birds, people, ecosystem, everything".

The understanding was antithetical to most in the community who wanted to have mansions with security walls if it were possible and to see tarred roads crisscrossing the forest as in St Lucia Town.

The grey-haired and genial *induna* lifted up his staff (made from the branch of a red heart tree, Baba Phungula points out) and directed his way out of the premises with a bemused look of

satisfaction on his face. “Clever, clever, this four!” he muttered to the hearing of the four, who went back to work in animated spirits. One day as we sat chatting, I asked Rasta and Musa whom they would dedicate the Manukela Project to if they had to, and Rasta readily said Baba Shikeshela. Without this piece of land and his support that enabled us to keep it, this project would not have been possible. “There’s no other one. Mandela’s name is already used”. Later, he mentioned Musa, but then took back Musa’s name, since he was still living.

The response of the four project owners and managers wasn’t exceptional. At each and every turn, their sense of a collective agency always enabled them to come up with a creative response to arising challenges. And the response was often satisfactory or satisficing – something would not have been possible were it for a single individual.

**Emerging Challenges to Land Tenure**

Before Baba Shikshela’s momentous passing away, there had already been community disputes over the earmarking of the land occupied by Manukelana for “conservation” rather than for farming or housing development. A group of young men of the same age as the founding members accused the four as having been enrolled by iSimangaliso Wetland Park in their longstanding efforts towards claiming the forest. Their reaction was motivated by Rasta’s past as a game ranger and community forest manager with the much-reviled Natal Park’s Board and Ezemvelo Kwa-Zulu Natal Wildlife. His support of community forestry conservation was considered as betraying the cause of land claims by a majority of the community. The group threatened to wreck the project site and if not to eliminate the four founding managers. These were no idle threats. From 1994 until the 2004 in South Africa open assassination had been the modus operandi in resolving intense land or political disputes in KwaZulu Natal particularly during election times. The threats came just at a time when the councilor for Ward 4 (Khula Area) a well-renowned and loved public personality was eliminated for being an African National Congress Militant by Inkatha Freedom Party (IFP) militants (and the very ones that had chased Mandela away when he visited (see Introduction). The threats placed the lives of the four project founders at great physical risk as well as the survival of their project. However, the threats were also directed towards individuals that had training in the use of weapons and self-defense. Rasta’s instincts and skills as a game ranger

already used to tracking and confronting poachers in protected community reserves where he worked in northern Zululand and the Drakensberg set in. So too were the defense instincts of Phungula, an ex-South African Defense Force (SADF) soldier. The four founders patrolled the premises at night, working together or taking turns. Then at day they labored at day to develop the site. The group threatening the project soon learned about Baba Phungula's past as an ex-SADF soldier who might be well armed beside Rasta. Weeks went by and the threats never materialize. However, one thing became certain: the founding members became even more firmly attached the success of the project, caring for the site, to their group and to their business.

**The Temporality of Indigenous Trees and of the Garden Space**

Besides accommodating threats from the community towards their lifeline, the four managers equally had to come to terms with observing the long-term maturation requirement of indigenous trees. That is, before they begin selling the nurseries to earn some income. The plants called for patience, continuous watering, pruning and weeding.

**Subsistence Livelihoods: The Permaculture Garden**

Before long Bro' Musa began watering the plants in the indigenous nursery and the permaculture garden at nightfall and in the very early hours of the morning. Before long, his sleeping patterns changed. He would water the plants at dusk, go home, eat, chat with his family and go to bed. He would wake up at night, and go take a walk in the Manukelana premises in other to guard the premises from potential burglars. In the course of the walk he would take a look at the plants, touch the leaves and feel them, particularly if the moon shone in the skies. In following the plant health at day and at night through the effects of watering and wind on moisture and the physiognomic reaction of plants, Bro' Musa began discovering without knowing it an ancient practice called "gardening by the moon". It would take a scientist with the African Conservation Trust to intuit him about the practice before he would begin talking about the "language of plants" and inquiring after, adopting the tradition and modifying it his own way.

"In order to grow indigenous plants, even in drought time, as it happens here in St Lucia Wetlands, you must know the language of plants. You must learn about the season, the weather, night winds, soil, moisture, when to water the plants, when they have had enough, how they talk back to you and nature, how they communicate with one another. Plants are very sensitive at night when there's no sun and all's quiet. That's when to talk with them. You must learn to know when they are uncomfortable with many things, for example, with other plants that are close to them. You must know the language of plants to be a good gardener or nurseryman".

The nursery not only cultivated hope, it was an act of hope. Years later, when Baba Phungula would ask me, as a visitor to the site, if I intend to plant indigenous trees in my home future home, and I said it might be too late given my age, he and Bro' Musa immediately remonstrated with me.

"We plant indigenous trees not for us but for the earth".

Establishing the project had transformed their perspectives of plants from a utilitarian perspective to a non-utilitarian one that recognized the agency and unique character or existence of plants.

**The Emergence of Multiple Temporalities and Hybrid Landscapes**

While waiting for the nursery to grow, they plowed by hand and hoe a permaculture garden next to another wetland patch tucked away at the back of the site. The crops were staples that were easy to grow. They could subsist on these while waiting for the nursery to be ready for marketing. The most critical of these crops was *amadumbe* (*Xanthosoma sagittifolium*): a starchy and fluffy tuber when cooked, which is rich carbohydrate and grows easily in the warm subtropical wetlands of Maputaland as well as flourishes in the tropics). The crop, like many others, does not feature in South African department or chain stores but could be bought from women selling on the pavements in Matubatuba and much of Maputaland. Incidentally, *amadumbe* is the staple crop in my village in Cameroon, which fostered kinship between us as I readily identified with it and could prepare during break times in an open-air kitchen at the end of the garden where we often took our breaks. Other crops included corn or *mealies* as they are called in South Africa; and also beans,

cabbage, Irish potatoes and carrots. The permaculture garden also became a site of experimentation where Bro' Musa used herbs to drive away pests from the food crops.

Because the seasonal wetland close to which the crops were grown was leached, and suffered from reduction in soil fertility and increased soil acidification from industrial timber growing, the crops often looked skinnier than usual. The meals of the gardeners were frugal, and without salt as in most traditional Zulu homesteads, no beef as they had adopted Rastafarian tenets, and even so, they developed resistance towards processed food just as they had turned their backs towards genetically modified seeds. Their Rastafarian bent fostered both positions. They also refused to use metal or silver forks and spoons when cooking, preferring wooden ladles. They rejected eating with spoons in preference for seashells of which there was a collection. Baba Phungula usually collected these whenever he came back from praying pilgrimages one hour trek further north along the rocky seashore.

To earn some income in the interval, Bro' Musa and Mduduzi turned to carving and selling their woodcraft. Eventually a few backpackers in St Lucia brought around tourists for the managers of Manukelana to share with them ethnic, Rastafarian, and traditional ecological knowledge. Once the tourists were gone, they focused back on the nursery and restoring the site ecologically.

In the end, these exchanges with tourists, which would be formalized with time, would bring about an ethnic and ecological tourism dimension to the Manukelana Project – an instance that demonstrates the openness of the group and their willingness to improvise, as a way of overcoming their marginality. Not only will these sessions help alleviate their financial needs they would also position the four gardeners in terms of knowledge production which would lead them to challenge modern or fixed understandings of ethnicity, race, nature, environment and landscape. As Swyngedouw (2009' also cited in Ernstson 2013) underlines 'the ability to act and change the order of things' subsumes not only changing the material order, i.e., the re-distribution of material resources, but also the symbolic, in other words, how reality is conceived, and most critically, who can claim to be in the know.

However, accompanying the steady space of labor investment they put into the land and plants was a question over marketing which they knew they'd had to answer: *how would they compete with white businessmen from St Lucia, Monzi and Mtubatuba who subcontracted nursery plant growing to families in the community to meet up with the rising demand for rehabilitating discontinued coastal mines in Richard's Bay? How would they approach the market if they didn't receive funding from some organization or the state to rehabilitate Dukuduku Forest?*

The challenges were such that occasionally they lost hope in the project. At such moments, the alternative reality of indenturing themselves to "white" settlers, or to the brutish authorities of Greater St Lucia Wetland Park rankled them. Like with the raillery and insinuations from the village community that they would fail, the above fears pushed them to muster extra ounces of energy.

The story of the unstinted labor given to the Manukelana Project by its four managers is well known to the locals of Khula and Dukuduku. However, it is better told - to a certain degree, and an event, which I find contradictory - by some in the white business community of St Lucia who are knowledgeable about the project. While most of the residents of Khula and Dukuduku seemed to have had a wry and disparaging attitude towards the project, and for good reason, the latter followed it from their passing cars with keen interest, firstly over its evolution (what would become of it) and to know how such precedents come into existence. There were definitely other precedents in Khula settlement: the forceful construction by the local communities of Ndonyana Primary School, Vezobala and and Silethukukhanya high schools in Dukuduku Forest, and of the Sipho Zungu Clinic in Khula all as placeholders meant to discourage the park from seizing the land on which these structures stood. The projects above were seen in terms of their cost to the indigenous forest ecosystem rather than their long-term benefits.

Manukelana was a project that went in the opposite direction, a precedent, where rural black Africans overcame their emotions, frustrations, and a legacy of historical oppression and land dispossession to embrace initiative, hard work, and dignity. More critically, it was a project where four young men had the heart and energy to restore to life an utterly ruined landscape. Will they be able to reclaim and develop the site? Some of the whites in St Lucia, or some of their networks

outside the region, were desirous of contributing to the project and helping promote ecotourism development in Khula. Some wanted to partner with Manukelana in one way or the other, so as to pick up some of the benefits that inhere in supporting the South Africa's "Black Economic Empowerment" policy. These included gaining publicity and obtaining tax breaks. Some desired to invest in the project because it was novel, or to appropriate it outright if it failed to materialize. All the above would subject the founders of the Manukelana Project under one form of pressure or the other and these pressures, taken as a whole would challenge their affective dispositions towards these actors.

Unknown to the managers of Manukelana, Bronwyn had stirred up an interest in their project among the Afrikaans community in St Lucia, within the region, and outside of it through her many extended networks and that interest would bring them critical resources. The question is whether the managers would perceive and use their inventiveness to sustain the interest or be able to hold together these affective assemblages. It's a question to which I will respond in another chapter or article on how Manukelana strove to sustain its network of relationships to stay relevant (see Latour 2005; Moll 2002) and the outcomes of these efforts. In any event, St Lucia Backpacker would show an interest in the ethnic narratives and Rastafiarian performances of the founding managers and other backpackers would in St Lucia and Monzi would follow suit as soon as the butterfly project comes into view.

**Invasive "Pests" Strike the Nursery and Permaculture Garden**

Finally, after a few years of growth, when the four thought the nursery was about ready for the market, and that they could at last reap the first fruits of their labor, "invasive" caterpillars struck the nursery without respite, stripping the plants of all leaves. The four managers looked at the end-result, speechless. About two hundred Natal Mahogany plants and other close species were affected. While the gardeners had been busy taking tourists to show them around Khula Village, exploring the Rasta Trails that led to Dukuduku Forest, they'd not seen the invisible eggs of insects grow into caterpillars under the leaves of the nursery plants.

What to do when they discovered them? Spray them with DDT (Dichlorodiphenyltrichloroethane), which had been banned and then reintroduced in the country? They were strongly against the use of pesticides and anything inorganic wasn't their practice or ideology. The emerging neighboring community of Khula Village, which had been studiously following the dreadlocked four and their experimental project, thought they saw disaster in the wake.

As the four came to work the following morning, pondering how to resolve the problem, a clean-shaven, slightly tall white man walked down the slope and wended his way to the nursery. It was a South American conservation biologist, the first Argentinean they'd ever seen.

**Indigenous Host Plants, Caterpillars, and Butterflies**

Against the advice of his wife, Nicolas de Oliveira flew to South Africa at the turn of the century as a visiting PhD scholar. He was interested in researching on sub-tropical micro-fauna. Enrolling at the University of Natal, he undertook field research in the northeast coast of Zululand on avifauna. Efforts to attach his research with the Greater St Lucia Wetland Park and to carry out his work in the protected area saw him caught up in in the trench factional fights between English and Afrikaner park scientists. Like in Kruger Park these fought over control of material and symbolic resources offered by the protected area (Masuku and Meskell 2009). The event stunned and disturbed Nicolas as an outsider and a newcomer to South African politics and science. Unable to accommodate himself with the politics on either side – or with the less powerful and emerging black bureaucracy - he found himself booted out of the park. Worse, Nicolas also lost his scholarship from the Argentinean government. Now he was forced to become an independent research scientist. He changed his status at the University of Natal as a visiting researcher to a PhD student and engaged community forestry research in the highly resource rich rural vicinities of northern Zululand where few scientists were involved.

**Landscape Changes, Plant Succession, and Insect Migration**

It was then that he met an equally embattled game ranger and community conservationist working with the Natal Park's Board, Ernest Mbonemi Mlambo, better known as Rasta. Due to Rasta's

openness, self-confidence, lack of shyness with outsiders and outspoken attitude which is very rare in a region where generations of the population have been cowered and uneducated by imperial, colonial and apartheid policies, the two instantly developed a respectful relationship. Rasta understood the root and nature of English-Afrikaans community tensions. Not only was Dukuduku Forest where he came from suffering pressure from St Lucia island Town which is basically Afrikaans, but also from Monzi, a village of English-descendants that manage the Mfoloxi Swamps, which is south of the forest. Besides, he's worked with rangers and scientists of both communities since 18, shortly after he completed high school and was recruited by the NPB.

Nicolas had spent several years in community forests on the northeastern coastline, living rough and isolated in the wilds, where his tents and life were exposed to wild animals. I happened to have experienced a little bit of it after spending two weeks in the Tembe Butterfly Dome in the middle of a wild forest all alone, before being accosted by a bout of malaria. He painfully studied plants, birds and butterflies. His attention was attracted by the profusion of the indigenous coastal forests in terms of birdlife and rare and endemic butterflies. He mistook some of these communities for collecting and eating the caterpillars of these butterflies as delicacies, while ignoring the butterflies. The reality was that the caterpillars were of the emperor moth - which were locally called *amacimbi.*

He also noticed that these remote communities, despite their privileged location close to rich bio-diverse areas, still struggled with survival. While mostly women and young men were desirous of engaging in tourism, their options were foreclosed. On the contrary, he found that most of these local communities' commitment to woodcarving was deeply rooted. Woodcarving, however was not only environmentally destructive, it was uncompetitive since the market was already saturated by artworks coming overland from more established northern countries, such as Kenya, Zimbabwe, and Zambia. Local woodcraft making as such made little ecological and financial sense to these communities. Very soon, his anxieties about the relations between these communities and their environments saw his research perspective shift from biological conservation to community butterfly ecotourism.

Soon after his PhD, Nicolas began thinking of community butterfly conservation. But he didn't know where. While scouring the forests that were close to cities to see where he could plant a community butterfly house project, a concatenation of events including a storm, a broken down vehicle, and strangely, a 30-mile lift from a black police officer brought him at night to Dukuduku Forest. Here he expected to pass the night at the home of an acquaintance along the R618 who helped with a bit with his previous research work. He had expected himself to wake up early the following morning, go pick up his vehicle by the side of the road where it was wrecked and then drive back to Pietermarizburg where his home was. When he woke up the following morning, he went outdoors to brush his teeth. He realized how damaging the storm was. He looked down the hill and saw four young people in green work clothes huddled together and looking at plants. He remembered having driven past that project site and seen a signage about plants. It was quite an underdeveloped project but there were signs that some green activity with indigenous plants was taking place there. Unknown to America, he was also following the path of butterflies that had left the forest on the right hand side of the R618 and crossed over into Manukelana attracted by the scent of the leaves of the lush green indigenous nursery. He asked his host about the project and his host informed him that it was an indigenous nursery plant project that had been going on for a while. The he asked him about the project managers and if he could check out on them. Nicolas wasn't aware of the racial history in the area. His host told them that the young men he saw near the wetland were a very stubborn and difficult group to work with and that they were Rastafarians. He could check on them but he had to be careful.

Nicolas crossed a footpath that still exists on the site today, entered the fence and found his way down to the three who were observing an ecological disaster.

Desperate for understandings to their plight, the three nurserymen three turned to the scientist for explanations and possible solutions to the crisis. Nicolas, a bespectacled, genial and rather quiet scientist, who was adept by now at recognizing butterfly host plants in the region, looked at the plant pests and turned to the four Rastafarians. "I'd rather we wait for a few weeks and see what happens."

Unknown to the four, by importing butterfly host or food plants in the area, they had invited butterflies from the remnant Dukuduku Forest across the highway to recolonize the area. Nicolas acquainted them with processes of forest disturbance e.g., of deforestation and secondary plant succession. This succession included not only invasive plants that struggled to occupy gaps and empty spaces, but also butterfly host plants. The four founding members never thought of these detailed processes that occurred within their sight but escaped processing. They felt energized by their newly acquired knowledge. But a problem still remained. If they had to survive, they needed a solution to the dilemmas they were currently facing. Nicolas left them, while promising to be back.

For several weeks, the four held their hearts a-piece, while observing the caterpillars chewing leaf after leaf, leaving behind skeletal leaves with veins hanging from the plant stems. One morning all the leave were gone. The area looked like a winter forest. Then one morning, they found that the caterpillars, which looked like "amacimbi," which the older generation in the forest often ate as a delicacy, only that these ones looked reather small, began turning out into beautiful butterflies that fleeted about the leaf-bare host plants, and even further. The managers of the project were confused. The caterpillars were isiphaphalazi, these insects that fleet without sense of purpose of direction!

Then Nicolas turned up and they received him.
"So what's the news?" he asked.
"They were butterflies!" they exclaimed. "What to do with 'isiphaphalazi'?" the four founders of the nursery project asked him.

The scientist saw an opportunity to enroll the four into community butterfly conservation and ecotourism and to engineer a turning point that would spell more for them and the vibrant environment than ruinous craftwork and indigenous tree propagation.

"But you can propagate butterflies for eco-tourists," he said.

“How could butterflies compete with big wildlife?” They asked, wondering if this was just another crazy scientist. “Who would be interested in seeing ‘isiphaphalazi?’”

These experience-questions were not limited to the Manukelana Four alone. Faunal surveys by the Energy and Resources Institute in India revealed that the bird and butterfly rich South Garo Hills of the Meghalaya district featured 300 of the 1500 of butterfly species in the Indian subcontinent, the question was if butterfly tourism with the participation of local human communities could provide economic incentives to be an economically viable initiative (see Sanjay Sondhi 2011: 64-65). The question perhaps should have turned on local management capability and available tourism networks.

Nicolas left them and returned back to his studies pondering where he could get resources to construct a first butterfly house that they could collectively manage.

**Enter Urban Greening: The African Conservation Trust and Manukelana**

Established in 2000, the African Conservation Trust also desired to make inroads into conservation, community and heritage development in northern KwaZulu Natal. The region remains one of the most impoverished regions in South Africa in terms of social amenities and yet the most endowed with natural resources due to its subtropical location It’s not very different from another pioneer post-apartheid NGO, Wildlands Trust managed by Andrew Venter, who had earlier invited Rasta as a founding member, when both worked with Ezemvelo KZN Wildlife. Rasta had turned down the favor in preference of beginning his own CBO. Like the Wildland’s Trust, both of which work in Khula Village and Dukuduku Forest, the ACT’s target was areas of high sensitive conservation value whose communities were historically marginalized and acutely impoverished.

In 2001, the ACT secured a project to green the emergent black township of Kwamsane, which is located between the mostly “white” industrial city of Richards Bay and the largely “black” African city of Mtubamtuba. Looking for local partners to work with, Bronwyn’s partner hinted them to

approach the co-managing team of Manukelana Art and Indigenous Nursery. Not only had he had heard of the project from Bronwyn, he had visited the project and chatted with the managers.

The African Conservation Trust proposed hiring the three available Manukelana partners out of their knowledge and experiences in growing local indigenous plants to establish a nursery in Kwansane, which lay about 30 miles away. Having established the nursery in Kwamsane, they will then grow the plants that would be used for greening the treeless and dust-ridden township. To green these landscapes, the managers of Manukelana would train about 100 "tree-preneurs" or planters.

The co-managers caucused, as they often did when approached outsiders. It was a measure to check against duplicity whether from "white" agencies or the ANC government following the experiences of the Dukuduku struggle to regain their lost land. They reached an understanding, delegated Rasta as a bold and individuate spokesperson, who suggested to the ACT that rather than for them to establish a nursery and train "tree-preneurs" in Kwansane, it might make more sense for ACT to increase the capacity of Manukelana Project for indigenous plant growing. That way they could grow the plants on the Manukelana premises and then transport them to Kwamsane for planting. It would by all purposes be a cost-saving measure, they explained.

Whether the measure also cut away opportunities for training and employment of young people in Kwamsane was out of question. The Manukelana founding managers wanted to bring the ACT closer to their project and to maximize all the resources they could get from them. The ACT gradually realized they were dealing with a group of savvy young black people. Thus, began a collaborative relationship that would profoundly transform the Manukelana Project in many ways.

With the in-coming project on greening peri-urban spaces, the four founders of the Manukelana Project were excited. They could see their dream of greening derelict and abandoned coastal mines, rejuvenating Dukuduku Forest once the conflict over it was settled, as well as taking care of Lake St Lucia and why not the Mfolozi River coming true. For the very first time, they began earning decent salaries, which equaled those of state-recruited secondary school teachers. The three began to build homes for themselves and their families. Except for Baba Phungula, they also projected

buying vehicles to facilitate their work and movement rather than always depending on lifts or hiring *bakkies.*

Following the completing of the Kwamsane project from which they gained sufficient knowledge and experience of landscaping, the African Conservation Trust sought to give the three founding members except for Rasta who wasn't present, broad capacity in various green ventures. This was to enable them to be competent in undertaking diverse projects in Khula Village and the surrounding region.

However, given Manukelana's structural difficulty in applying for funding from outside agencies to undertake possible community conservation or development projects, the African Conservation Trust came up with the idea of the creation of a non-profit community-based organization that would be managed by Manukelana members jointly with some members of their community. This would enable the non-profit to access funding and then hire the Manukelana Indigenous Nursery and Art as a for-profit close corporation to execute the green projects. Thus the two organizations went to work and the Inkhanyamba Development Trust, an Independent Development Trust (IDT) was born. It took on additional board members from the community including Mr. Jeff Mlambi. Now, the Manukelana Project managers weren't only running a business venture where they were shareholders and employees, they were also the board members of a CBO that had offices on their business premises.

Through the offices of the ACT, the Ikhanymba Development Trust applied for funding from the South African National Lottery Program to develop a butterfly house and from the UNDP Global Environmental Facility Small Business Loans Program to develop and give capacity to an indigenous for rare plants and a craft center and market for local craft makers in Dukuduku Forest and the newly emerging communities in the resettlement zone. While the ACT had initiated a permaculture garden, worm farm, a rabbit pen and a tea garden with the Manukelana, various state departments came in with funding or equipment for an experimental farm. Still over the years they kept contemplating applying for funding to start a bee-keeping project, an orchard, a children's playground, a bike lane and walking trail from St Lucia to the center of Khula settlement, which would have helped with recreation and provided safety given the high vehicle speed on the R618

and the high accident rate during festive seasons. While these projects were being contemplated, the idea of the butterfly house became worrying. The ACT knew no butterfly experts that they could hire to come and establish a dome.

**Assemblages and Chanced Events: Nicolas de Oliveira Turns Back**

Weeks went by, until one evening Nicolas was sitting at home in Pietermaritzburg, 4 hours' drive away, perusing a local newspaper on environmental news when he came across a curious ad. The entry stipulated that the African Conservation Trust and Manukelana Indigenous Nursery and Art Project were in search of a butterfly specialist who could consult with them and help in establishing a butterfly house in northern Zululand. The house was a prelude to a modern dome that would work in preserving the Dukuduku indigenous dune forest. The project came from a generous loan by the South African National Lottery Board. There were few butterfly specialists in South Africa that were attracted to community conservation or had worked in northern Zululand. Nicolas knew that the Manukelana founding members had probably tried to contact him but couldn't and so they were making a blind call.

Nicolas packed a little case, got into his car in Pietermaritzburg and headed through the leafy limits of the sub-tropical Natal for the warm and lush northeastern coastline. He could see his dream of doing something tangible for butterflies and for communities in the region unfolding.

Dukuduku Forest had long been a rich subtropical butterfly sanctuary coveted by private butterfly breeders and researchers in South Africa. But the forest in itself like the impenetrable stands of trees, thickets, and unbroken cathedral canopy that sheathed its value, dwellers, and wildlife for miles along the R618, was shrouded in a mist. Few 19$^{th}$ century or 20$^{th}$ century colonial, apartheid or post-apartheid administrators, travel writers, or contemporary journalists with the mainstream press (up till the 1990s) had set foot inside the forest. The little snippets of information about its dwellers, which characteristically changed with the contentions of each age, marked the dwellers out as runaways and refugees from Shaka's violent *Defecane* (in the early 19$^{th}$ century); as rebels and feared mercenaries for hire (in the mid-to-late 19$^{th}$ century); as illegal forest dwellers (following the British Commission of Land Delimitation in 1905); as "out of the way natives"; as

Mozambican immigrants for white plantation labor (in the early twentieth century); and as illegal squatters on Crown Land (following the Native Land Act of 1913). Following a battery of dehumanizing representations after the "1985 invasion", breeders were not only scared of entering the forest - which came to take the allure of a no-go zone for any white person or researcher - they were also worried that by the time the intractable conflicts over the status of the forest would be resolved, its value as "conservation space" or its global ecological wealth would be gone. As a journalist with the South African Mail & Guardian (Sept 22, 2002) nicely put it, "time was running out for Dukuduku Forest".

On arriving the site, Nicolas found a beehive of activity. The ACT, Nicolas and Bro' Musa through his building skills would construct the first butterfly house in 2007, which would be followed in 2011 by an ultra-modern geodesic dome. The ACT and Nicolas would unleash the potentials of the four nurserymen and of the site, as well as train about fourteen butterfly tour guides that would move on to man four successive community butterfly domes in Kwa-Zulu Natal, the first of their kind in South Africa. The ACT would bring in specialists in various fields as well as put the Manukelana founding members in touch with other businesses and projects that specialized with indigenous plants, landscaping and funding. Finally, a significant World Bank Global Environmental Facility Loan would put at their disposal enough funding to expand the nursery and the permaculture garden and to build three modern office blocks. One of these will house the ACT office and the Dukuduku Land Claims office which are still there as a write. Another would house a kitchen, which would constitute part of a tea garden, a medium height coastal grove that showcases some of the valuable indigenous trees they planted in 2001.

**Manukelana and the Legacy of Forest Restoration and Urban Greening in Khula and Dukuduku**

At the turn of the 21st century, landscape greening projects were gaining a foothold in the "New Dukuduku" - a term for the various settlements that were emerging from the old forest. The names of the settlements themselves speak of change processes: Ezwenelisha meaning "we have found a home"; Kayelisha meaning "the new place", Ndonyana and Khula whose meaning no one remembers; White City, a neighborhood lit with electricity; Dark City, a neighborhood without

electricity lines and plunged in darkness and crime where people still used paraffin for lighting; Califorgwe (derogatively named after the state of California), a new neighborhood composed of shacks emerging around a crumbling graveyard that was formerly a retreat for owls. Like Manukelana the residents of the new settlements had found bare sand and pine tree trunks. It was a wilderness without wildlife, and without the dense and almost impenetrable stands of indigenous trees held together by lianas, palms and Natal wild banana (or *strelitzia nicolai*). These had provided Dukuduku dwellers with a buffer of security from Shaka 's *Defecane*, and subsequently from British imperialism and colonialism, and finally Dutch-Afrikaner apartheid. Now the former dwellers of the forest found themselves outside the of the forest, and exposed to the sang-froid and confused wheeling and dealing of the post-apartheid African National Congress. Through struggling with piecemeal jobs or stints, the resettled populations were able to cobble homes along often muddy or dusty vehicle tracks and to send their children to school. They were open to Western goods and services but with little resources for investment or job-creation. It was a Dukuduku without the forest resources and with highly porous dune soils that were leached clean by exotic afforestation. Unemployment, hunger, and disorientation were rife in these new lands. Unlike their parents, most of the young knew each other by virtue of growing up in the new settlement, supporting each other through hardship, and attending the same forest school.

In 2004, Siphiwe Mjadu, Sizakele Mngomezulu, Balindile Ndlovu, Bongumusa Dube and Sibusiso Bukhosini, a group of five struggling young men and women in Khula Village, aged between 22 and 28 had just finished school and found themselves without jobs. They were the first generation to complete the first ever high school close to the conservancy and to come of age in the region following Mandela's accession to power 10 years earlier. They had little chance of finding work in St Lucia Town, or even the nearby Mtubatuba. They didn't want to leave their neighborhood and the park with all that it promised. They knew their rather bare environment had great economic value. They initiated a small business to plant trees, recycle refuse, and clear alien vegetation and their client list soon grew to include landscaping contracts. Speaking of the group and their efforts in 2005, Charmaine Velman, the project manager of the Wildlands Conservation Trust, an organization that promotes conservation-based community development in KwaZulu-Natal says, "Someone, somewhere made an impression on them that the environment is important. Entirely of

their own volition they started an environmental group. With little knowledge of conservation but much enthusiasm, they approached me and offered their services."

The group wrote a constitution and formalized their setup. "We taught them about alien plants and the damage they do to the ecology, and they began removing the aliens and replanting indigenous vegetation. The remarkable thing about this group is that they are not only doing this to make money. They are really passionate about the environment. Everything they have achieved has been from their own efforts."

The Green Team's work so impressed DaimlerChrysler South Africa that the company awarded them R100, 000. "They're a great example for unemployed youngsters who want to make money while also contributing to their surroundings," says Tina Buys, the company's head of corporate social responsibility. The news of the award went through the new settlement, and overnight, the value of new trees displaced those of eucalyptus woodlots. However, the question of value engaged new trees, not existing stands of trees.

Just like the names of new settlements, the venture also brought with it a new vocabulary into "New Dukuduku" and South African conservation circles: "urban greening", "green team", "tree-preneurs", and into Khula the concept of "trusts", "NDI"s, "IDI"s, "IDTs", the notion of "conservation business" as well as "Bikes for Trees". The Manukelana Butterfly Dome was the latest novel addition.

When I found out from some members of the group how their project came about, they pointed to Manukelana. They talked of of how the name, which derives from a regimen in Cetswayo's forces, actually fit the four founding members. They point to Rasta's resilience and bubling energy, Phungula's fearlessness and no nonsense attitude, Musa's skills at uniting people and galvazining action, and Mduduzi's honesty, humility, and wisdom. "They were our elders in this business. They set out to show that we blacks could do conservation and business at the same time and we picked up from them". In affirming the inspiration, they pulled together various threads that had brought together the founding Manukelana.

The following article published on *Sunday Tribune*, 2 Dec. 2007, p. 23 outlines the achievements and challenges of the founding managers of Manukelana who come to be known among others names as “The MacGyvers of Dukuduku":

> Musa Zikhali, one of the much-maligned residents of the Dukuduku Forest near Mtubatuba in KwaZulu-Natal, dreamed of being much more than a humble welder and wood-carver.
>
> Fearing his limited education might clip his entrepreneurial wings, he turned to three other former forest dwellers - Rastafarians Ernest Mlambo, Mduduzi Mhlongo and Bhekinkosi Phungula - for help. Now their Manukelana Art and Indigenous Nursery at Khula Village (where some Dukuduku residents were relocated) bubbles with activity as the men constantly devise new ideas to improve their lot.
>
> Greening the environment, alien plant eradication, an indigenous nursery, a butterfly house, bee-keeping - the list was endless, their energy tireless. Also on the list was soccer games to unite foreigners and locals; growing fresh vegetables on school premises; providing jobs for others; arts and crafts; and cultural and reggae tours.
>
> With limited finances, they have had to rely on themselves - and winning over organisations with access to funding. At Ndlovu village near Kwa-Msane, outside Mtubatuba, an African Conservation Trust project, funded by Lotto, is greening the area - and the men from Manukelana are supplying the seedlings. Mlambo, a public officer and conservationist by trade, un- rolled "before" and "after" maps of the project. One shows it with many homes, but few trees.
>
> The other has many.
>
> "Workers are almost finished planting 3 600 trees throughout the area," said Mlambo.
>
> Vegetables are also being grown in shade-cloth tunnels at Hillside School and Engweni Primary School, which will supply the schools and the local community. Again the Rastas are involved, working alongside horticulturalist Zizile Mbhambali and two

agricultural students from Mangosuthu Technikon. Hillside principal T C Maseko said, "This garden will have fresh vegetables for our kids. We appreciate this so much and we wish it (the project) would go to other schools, so people can see the value of working with people in a community project."

Each of the Rastas has his own responsibility. Zikhali is manager, responsible for building the many structures at-tached to the Manukelana centre. Mhlongo is the sales and nursery officer and Phungula handles admin and tourism.

At the centre we found a hive of activity.

Butterflies

The small butterfly house shows green-banded, swallowtail, mother-of-pearl and common wanderer butterflies being hatched. While the delicate creatures hovered overhead, Mhlongo showed us eggs on leaves, which will hatch out pupae - some of which could be sold. "We tell people that by destroying certain plants which play host to the butterflies, they might be killing them," said Mlambo. "Destruction is changing land use, so we need an EIA (environmental impact assessment) for everything."

A few beehives are scattered among the trees. "If we get funding we'll send people for training on how to look after bees and how to harvest the crop," said Mlambo (Rasta).

The men are hopeful that they might persuade the Isimangaliso Wetland Authority to let them place more hives in a nearby reserve. They paid tribute to the man who made the centre possible: Shikishela Mkwanazi, who has since passed away. He donated the land for the centre. "It's like a jigsaw puzzle," Phungula said of the centre.

"Everyone has to put a piece into it to make the picture brighter."

Zikhali has built a much larger butterfly house which will be reached by a boardwalk - built with funds donated by a UK resident, who also helped with the building.This boardwalk is not yet complete as lack of funds is holding things up. Zikhali is happy to labor day and night, but needs money to buy the material. The butterfly house, for

instance, needs a water feature. Many trees and shrubs had already been planted and would eventually provide a perfect habitat for butterflies. The men employ two residents of the Dukuduku forest in their vegetable tunnels. When they have funds, they also take on casual labour.

Options

They said they do not attempt to lecture unemployed people about not cutting down trees for carvings. Rather, they hope those who work at the centre will learn other options and take this message home. Phungula said they planted for both medicinal and cultural purposes and their cultural tour taught people about the relationship between people and indigenous plants. "We must learn to understand the language of the plants," he said.

Visitors learn, for instance, how a buffalo thorn tree is used to "fetch" the spirit of a departed person. "We show them how we burn herbs and ask the spirit to come with us," said Phungula, mentioning that they employed a traditional healer.

Unusually, their cultural talk encourages visitors to research their own cultures. "If you lose your culture, you lose your background," said Phungula.

With time, they propose breeding fish to sell to locals. When they could not persuade locals to many locals now use. "We can then identify those who might be suitable to work for us when we have money," said Mlambo.

Out of this has grown another novel concept: international backpackers get an opportunity to play soccer with the locals. After such games they talk to the locals about issues such as climate change.

**Thinking Alternatively: Manukelana As a Limimal and Affective Landscape**

Geographers have long seen space as "lived" (Lefebvre 1991), "embodied" (Richardson 1982), "narrated" (Basso and Feld 1996) and as "stories so far" (Massey 2005: 98). The experiences in this chapter underline the above. Scrutinizing social and spatial forms of liminality allows one to account for the ways in which individuals navigate their worlds in their efforts to leverage power deriving from their "in-between-ness". Equally paying attention to emergent cultural forms, assemblage processes, or how a grassroots organization at the margins of state/capitalist economy comes into being, this chapter demonstrates how the project founders draw upon "the potentialities intrinsic to the ambiguous landscape" (Wittkind 2016) or harness the power of the local and "liminal landscape". In terms of self-identity, rather than give up their nurturing environment and seeking for indentured and often oppressive capitalist labor forms or opportunities e.g., working with the service trade in St Lucia, or in the numerous pine, eucalyptus or sugar cane plantations around Dukuduku, or with the brutish iSimangaliso Wetand Park and Ezemvelo KZN Wilife, the founding members of Manukelana sought - taking advantage of neoliberal spaces, decentralized environmental governance and black empowerment policies - to establish an indigenous nursery and eventually a butterfly project where there were none. The potentialities of these landscapes embrace diverse forms of social capital, thus individual and group abilities, openness to embracing and making use of emerging opportunities, the ability to sink differences and to forge a common cause, and the disposition to forage or scavenge for resources in the environment and to improvise as well as harness other modes of bridging and linking capital. These potentialities also include those of the environment itself: indigenous trees, butterflies and living entities that are not yet recognized. While the founding members come to recognize these, their recognition doesn't give way to to processes of commodication and profit-making, which they very wary about. The above potentialities are all given life through processes of bricolage, improvisation and other affective investments (as seen in the tapping into forms of labor, including reciprocal, affective economies and custodial labor.

The narratives in this chapter thus take us as such through everyday practices, mobilizations and contests through which a) natural objects emerge within "world-making projects" (b) how groups of persons or communities reconstitute themselves and c) experience shifts in their knowledge basis and d) how they relate to the environment. In examining community forestry restoration in

India, Singh (2013) finds that "affective labor" mobilizes and transforms local subjectivities. People's senses of self and subjectivity are intertwined with the biophysical environment. This gives rise to forms of human cooperation that emerge in response to environmental changes. In so doing she broaches a very critical finding - that human acts of "commoning" and the 'doing' process changes how they perceive themselves, their relations to others and their connections to the environment.

However, while Singh (2013) identifies this mode of relating to the environment, she confounds it with Hardt and Negri's notion of "affective labor" (Hardt 1999; Hardt 2007; Hardt and Negri 2004). The latter has little to do with the environmental flourishing and more with processes that are intended to influence human emotions or cognition processes as in processes of capitalist commodification e.g., advertising and selling. Hardt and Negri's perspectives to "affective labor" tie up with the operations of capitalism. Both see the concept as standing for work that is intended to modify emotions towards some object or a state of affairs in the world. Hardt and Negri's persectives do explain some of the motivations that drive the founding members of the Manulenana Project. Foc example, in founding the project "they" (meaning Rasta and Baba Phungula as opposed to Mduduzi and Bro Musa) wanted to prove that (a) black South Africans could so business and that (b) black South Africans could also do conservation. Seen in this light, their labors were directed towards producting particular emotions and ideological effects. Mduduzi and Musa's drive to save the forest to save the carving tradition could be said to be a form of affective labor in so much as they wanted to send the message across their society. However, as time passes, we find that besides the co-production of environmental knowledge, not all their efforts towards conserving non-human entities and the environment are intended for public consumption or for the mobilization of affects. The lives of the founding members of Manukela in the end become intertwined, just like Nicolas's, with those of the "objects" they set out to rescue. It's a case akin to eco-altruism which we find in Baba Phungula and Bro' Musa's ultimate concerns about the communicability and fate of butterflies and plants.

More so, as proponents of the Actor-Network Theory like Callon (1986); Latour (2005), Law (2009), Marie Moll (2002, 1999), Robert Oppenheim (2008) as well as non-essentialist ontologies such as Bennett (2010), Stengers (1997), Bakker (2004); Whatmore (2002), Bingham (2006),

Hinchliffe (2008) and others might argue, Singh's approach appears too anthropocentric and doesn't help to fully exhaust how nature matters. It underplays the complex affective human-environmental relations that often lead to a strong desire to restore degraded ecosystems or foster biodiversity for their own sake. Normally, "affective labor" should be about improving the welfare of entities that are fragile through labor that does not enter the commodity market. This includes improving the welfare of the natural environmental and its biotic life forms on which humans and other life forms and the entire ecosystem's functioning depends. However, conventional usage of the term has been largely twisted so that it refers to labor that is destined to change emotions. To avoid the above confusion, this project adopts the term "affective environmental labor". AEL it is firstly about producing biophysical effects be it restoring or improving the welfare of the natural environmental and its biotic life forms for their own functioning and for the functioning of entire ecosystems. Secondly, it is also about how the change process transforms the one initiating it, in other words, it also about the nature of agency in the vicinity of things. Thirdly, it is also about how that particular intervention transforms the socios. Affective environmental labor thus engages with the natural environment in other to produce (1) biophysical effects and (2) personal effects and (3) social effects. It is a mode of in of caring for the environment, transforming self, as well as all that are a part of that environment. Affective environmental labor is a mode of attuning to the abiotic environment, to the elements of the biophysical landscape and to life forms that gather in specific places. It is multi-specie by orientation. It subsumes all the modes of attention to environmental processes whether abstract or somatic, aesthetic or religious, whether ethno-scientific or mainstream scientific. It pays attention to landscape processes and considers the human as a part of the whole (Ingold 2000). It is different from custodial labor and closer to eco-altruism. More so, it is not only about the change process, it is also about the character of the actor or agency (i.e., subjectivity) in that process of transformation. While the endeavor might at first be initially directed towards achieving utilitarian purposes, it often happens that as the efforts and processes carry on and awareness of self-other emerges between humans and the non-human living environment, the basically utilitarian perspectives recede. And what is left is a greater significance towards cultivating the agency of the environment for its own sake. How this ties up with liminal persons or groups, who end up identifying with their objects of attention, is still to be investigated.

That the founding members of the Makelana Project are partially driven by social liminality as

well as continue to experience it as nurserymen is evident from their self-presentation and their engagements with others. Social liminality aside, they are also subject to experiences of spatial liminality, in other words, transitions or in-between positions in one's relationship to place (Thomassen 2014: 11). Liminality has mostly been examined in terms of modes of progression, transition, and in-betweeness through space (Gennep 1960; Wittkind 2016). Tomas (1993: 61; cited by Wittkind 2016) linked notions of social liminality to the material and perceptual means by which the human body operates "amidst the debris of its own spatial culture and spatial practice". Andrews and Roberts (2012) go forth to explore the ways in which a variety of spaces might emerge as "liminal landscapes". In terms of spatial conceptualizations of passage, "liminal landscapes" are processual and in a constant state of becoming. In other words, they are "in-between" or they exist as in-transition (Andrews and Roberts 2012). Because such spaces are shaped and interpreted by human agents, they are always being made and remade. What is often missing in the unmaking and remaking of these spaces is the implication of affective-subjective processes and how these are given expression in different forms of labor. In their efforts to restore the derelict landscape that they found as a leached pine plantation, and in bringing back local flora, birds, butterflies, tourists, and researchers - all of whom come to populate and animate the landscape - the Manukelana Project makes these implications evident.

Exploring liminality through a social and spatial lens thus enables understanding ambiguously positioned population groups that inhabit spaces of uncertainty, such as protected area peripheries, state peripheries, and other border zones. One outcome of the above process is that it also enables understandings of alternative economies as well as processes of bricolage and improvisation, which have not been adequately explored in the literature on assemblage or in how conservation projects come to exist or are sustained. The central theme that holds this chapter however is the twin notions of affect and labor. Both concepts are like rhizomes because they embrace differently interrelated phenomena. These involve affective labor, or better yet, "affective environmental labor", affective learning and knowing and affective spaces and landscapes. Affective environmental labor delineates the nature of the impetus to improve on the environment and how in the process it equally reproduces human emotions and intellect.

## Chapter Three

## Ontologies of Human-Plant Connectivity: Articulating Plant Names, Agency and Landscapes

*Summary:*

How do plant names, agencies, and landscapes come to matter in the Manukelana Project? How do they participate in giving voice to a group that has been marginalized for over a century at the peripheries of a state-managed sanctuary and Euro-African settlements? As discourses of climate change, neoliberal conservation, decolonization and black empowerment came to characterize everyday life at the Manukelana plant nursery and garden, questions soon emerged over representations or enactments of local plants, trees and landscapes, the exclusion of their deeper denotative local meanings, and worse, the often-derogatory names emerging from European colonial classificatory systems and nomenclatures. In outlining global science's opposition to local names, or utilitarian versus symbolic uses of plants as well as perceptions of landscapes, the Manukelana Project managers forcefully present alternative understandings of empowerment, identity, and knowledge production at the margins of state-managed protected areas. In exploring the above, this chapter highlights the critical uses of affect, affective landscapes, embodiment of self-other, and a politics of recognition. Due to questions of space, this chapter does not delve into:

a) the politics of indigenous and exotic plants;

b) discourses of indigenous South Africans "aliens" in South African, and the problem of xenophobia that has added to racism in South Africa;

c) indigenous plants and affective learning, and

d) the garden as an assemblage as well as an ontological, conceptual or generative space. These topics are reserved for future articles.

## Introduction

Regardless of origin, the ontologies of plant/ecological knowledge, which stretch from indigenous origin myths to Linnaean taxonomic designations, structure relationships between plants and humans. Yet, how the processes of structuration take place, particularly the effects on communities of practitioners, have been less examined in the literature. A typical example would be Western scientific approaches e.g., Linnaean taxonomy, on local or non-Western societies, among which state agencies, non-governmental organizations, extension workers, communities of scientists and researchers, and above all, local communities that are targets of state or other interventions. While the construction of knowledge systems is of increasing interest across the social sciences, biological sciences and humanities, the effects in terms of affect on local communities have also been less examined. Protected areas and their peripheries, like quasi states, make a fruitful setting to apprehend the effects of science on local communities.

On the outset, when I approached Manukelana, my original intentions were to observe human-butterfly relations and butterfly gardening. I wasn't aware that I would be drawn into the plant world, in other words, what different actors made of plants or the agency of plants. This was until the butterfly-host plant connection that led to the establishment of the butterfly project, came along. From this connection, the theme itself began to spread like a rhizome, engendering sub-themes and flourishing on.

## Alien Kinships

The first narrative that brought my attention to the conflictual relations between humans and plants in the post-apartheid Kwa-Zulu Natal landscape came from Rasta. By the 1970s, nurseries that grew various species of the Australian eucalyptus as well as scientific knowledge on how to generate them to enable fast growing plantations was pretty advanced in South Africa. The coming into being of climate change discourses and the significance of indigenous trees in the 1990s also saw the establishment of horticultural NGOs run mostly by Euro-Africans or white South Africans. These sought to take advantage of the changing political landscape to reap contracts from the state, corporate bodies, and international funding organizations to restore harshly degraded ecosystems.

Beyond growing commercial and imported species like the Australian eucalyptus and the northern pine, both of which flourished in St Lucia Estuary, most of these companies and non-governmental organizations had little knowledge of indigenous plants, trees, and their landscapes. They weren't aware that although indigenously-occuring trees are resilient in their natural habitats, they also tend to be slow growing and demanding far more attention than introduced trees. These organizations also lacked knowledged of pioneer indigenous trees that are critical in initiating processes that restore harshly degraded landscapes.

The event took place in 2005, shortly after the African Conservation Trust (ACT) hired Manukelana Art and Indigenous Nursery cc to green the rusty and dusty township of Ndlovu near Kwamsame. A competing conservation NGO had been equally awarded a project to green a hillside close to Mtubatuba, which they often drove past on their way to Ndlovu. So there was a case of two competing projects. While ACT project succeeded the AHT project failed to pick up. When I asked the Manukelana nurserymen why the plants withered on the hillside shortly after planting, they informed me that there were no affective relations between the planters, the plants, and the project soil. These three aspects were alienated from one another. They explained that the planters didn't know that the soil wasn't appropriate for the plants they chose to plant. They weren't piooner indigenous plants. The four nurserymen had gone up to African Heritage Trust – which was white managed – and requested them to consult with Manukelana since the nurserymen lived nearby and understood local plants and the local ecosystem. But the NGO politely rebuffed them.

Not only were they planting a wrong plant in the wrong place, they also failed to appeal to the plants for understanding. They didn't solicit the plants' permission or participation because they felt that plants don't think or feel, Brother Musa said. When I asked Brother Musa whether plants felt or thought, he said yes, but not like humans. "I talk to the plants all the time. I touch and talk to them every early morning and again in the late afternoon while watering them. They won't do well here well if I didn't. There are some specialist plants like cicads that you can't grow from seeds if you don't know then very well."

“You can’t plant what you don’t know,” Rasta dismisses the efforts of the NGO. “Each time we drove past that hillside, we’d stop, go up and observe the plants they transplanted. We wanted to see how the project would fare. We saw the amount of money that was wasted on that hillside and we were shocked.”

“You don’t just transplant plants,” Brother Musa responded. “You have to know the soil and the plants. And if the soil is not appropriate you have to talk to the plants and to the soil. You have to ask permission from the plants to plant them there and from the soil to accept the plants. You must tell them the need.”

“The company came with a technical approach,” Rasta, the former community forest manager concluded. “It was a share waste of resources. We (at Manukalena) could have greened that hillside for nothing.”

The nurserymen had even learned how to transplant fully-grown or matured trees. I followed with keen interest at the recovery and flourishing of several tall trees including Mozambican palms that they transpanted in the yard. I had initially feared that the trees would wither and die off but the nurserymen seemed to know what they were doing. Their views of the AHT project and the success of their own project in Ndlovu convinced the African Conservation Trust about their intimacy with growing indigenous and specialist plants as well as their knowledge stock of needs of the regional biophysical landscape.

Following the above accounts (from the Manukelana nurserymen and the ACT technicians), I began to accompany the former wherever they went, whether on foot or driving. I paid attention to how they related with the biophysical landscape and always followed their gaze, pauses, comments, and hands reaching out to shrubs or items in the landacape. The affective undertones in their landscape relations were too strong for me to stay unaffected. In a way the narratives and their emerging capacities saw me undergo “a new education of the senses” (Rancière 2012: 6). It was difficult for the theme of affect and affective landscapes not to emerge as central to my exploration. Following, the nurserymen underlined to me that the misrecognition between the African Heritage Trust and the landscape didn’t end with planting trees where they did not belong.

It extended to violence in human-landscape relations as seen in vehicular mobility on the R619 and the highways that linked the region to the wider world.

**Landscapes of Trauma**

My collaborators, i.e., Bro' Musa, Baba Phungula and Rasta, influenced my perception of the landscapes shortly after I began work at Manukelana. Their narratives kept me thinking of the earth in terms of the environment, users, and intertwining energy fields. At its most vibrant the environment teamed with life forms like butterflies, bees, beetles, the restless sea wind, fast flowing and sometimes-sluggish rivers, estuarine storms and the rising and setting coastal sun. There were the plants, trees, and vegetation that made up the biophysical landscape in which all living things came and went. Unlike Europeans thought, my collaborators stated, the environment and biophysical landscapes weren't inert. They saw these as having affective beneficial or negative relations with humans. Colonialism and apartheid, they felt, has suffused the environment with negative energy fields affecting diverse life forms, e.g., the act of planting entire hillsides or valleys with water guzzling commercial trees, or worse, planting such trees close to human habitats or wildlife communities, and without consideration of the communities that will live with and interact with these trees. The nurserymen saw the colonial and apartheid landscape as violently constituted. As a result, one was witnessing today, the outcomes of this ideology and its relationships. Baba Phungula focuses on the phenomenon of speed and motion. He doesn't mention that besides his job as a stores accountant while in the South Africa Defense Force, he used to drive a truck as well. He doesn't mention that he was twice sanctioned for speed or that had refused owning or driving a car ever since, unless under an emergency situation. He sees most drivers in Kwa-Zulu Natal in particular as overwhelmed by social obligations and driven to overcome space at snap speed. The outcomes were often mechanical errors resulting from the inability to work harmoniously with technology and space. The caretakers of the Manukelana nursery project cite that Kwa-Zulu Natal has the highest yield of traffic accidents on inter-city highways in South Africa and the highest ratio casualties. It is not so much the road as much as its users who seek to transgress the landscape and time itself in ways that endanger humans, wildlife, and the environment.

One particular event touched me close. It concerned the iSimangaliso park operations director who was due to travel to Australia to present the state's view of the land conflict in Dukuduku Forest. The story went that the invitation had actually been made to the land claimants to come and present their claim. Instead, Conservation got wind of it, manipulated the invitation and decided to send one of theirs. Without funding for a ticket, the land contestants gave up the fight. The park operations director was billed to fly out with *induna* Philipp Mkwanazi, the traditional leader of Khula Village, whom many found to have been coopted by Conservation in the matter of the Dukuduku land claim. Two days before his flight, he had a head-on collision with a timber bearing truck. His care had been negotiating one of the deadliest highway stretches in northern Zululand. The truck mauled his car and he died on the spot alongside the female research administrator for iSimangaliso. Land claimants that visited Manukelana premises the following morning to discuss the event, concluded that his death was an act of karmic justice. The park operations director was one of the few blacks in the hierarchy that had grown up through the ranks as a junior officer to one of the highest positions in the organization. Though residents of Khula Village felt that he was one of the more approachable of park's admiminstration, the fact that he worked with an organization that was known for its violence and abuses to the lives of those living within its confnes or pushed to its peripheries meant that he was just as guilty of oppression as the entire organization.

The case touched me close because I had intended meeting with him even before I knew his family. He lived close to the lodge that hosted me. It was a very modest house where various animals would come to graze, recreate or spend the night. These included a troop of about 40 vervet monkeys, several springboks, a brood of about 25 guinea fowls, about five bush babies that only came out on the treetops at night. There was also a leopard from Cape Vidal sanctuary that often came into the neighborhood and slept in a tree in his garden in the late afternoon. Few people ever saw it, and you wouldn't until you followed the shrieking cries of the monkeys and cackling of guinea fowls whenever something was amiss. More importantly, I attended Sunday services in St Lucia's only Catholic Church with his two sons and little daughter (the only blacks that came regularly to that service). Through the children I got to meet the mother. I didn't know she equally was an executive in iSimangaliso Wetland Park. Unknown to me, she had seen me filming several

times around St Lucia and learned from her children about my interest in conservation. It was definitely a little odd to see a black that was attentive to conservation and filming wildlife.

The story of the project managers didn't end with the park's operation officer. The topic of human disconnectedness from the environment and of blindness, speed, and highway violence was one of the yearlong discussions on the prenises. A constant stream of accidents on the short 29-mile St Lucia-Mtubatuba R618 rout fed this topic. Most of ther accidents were due to sheer speed, driver disorientation including drunkness, oersonal familial stressors, including being caught up in political corruption. In other words, the origins were very much social.

A few hundred meters down the road from Manukelana there is a speed bump. The bump is at the entrance into Ndoyana Primary School. The Dukuduku forest community forcibly constructed the school as a placeholder for the land, which was in the sights of the then Greater St Lucia Wetland Park. Before the speed bump was constructed, about a dozen school children had died crossing that little stretch of road about about six meters altogether to enter their school premises. Tourists, delivery trucks, and local taxi drivers often hit them. It was only after the local community carried out strikes and began to block the road in anger, threatening to burn down vehicles before the state stepped in with road bumps.

Two miles south of Manukelana, along the banks of Lake St Lucia Bridge is an ancient trail that hippo follow at night when grazing, often returning at dawn to lounge with their pods at their favorite spots in the lake. When the highway came cutting across the landscape and onto the lake, no wildlife crossings were built to accommodate the nightly grazing hippos. Nobody knows why iSimangaliso wouldn't build a wildlife crossing above or under the R618 where hippos crossed the highway. Ever since the park became a world heritage site, an event that quadrupled traffic, there have been recurrent collisions between speeding vehicles and hippos at the crossing and often at night. Not only did the hippos turn out to be far more damaging "speed bumps" as they often wrecked vehicles far more than cows, most found their life-spans shortened. Moving beyond car-hippo collisions, the CEO of iSimangaliso Wetland Park, Andreas Zaloumis, was hit just after the bridge by a speeding car as he cycled along the R618 with another cyclist. This was barely two months before I began field research in the estuary (i.e. in February 2014). The second cyclist died,

and the driver ran away as it's always the case. With the introduction of the "Bike for Indigenous Trees" Program by the African Heritage Trust, which is jointly sponmsored ny international institutions and the South African state, hudreds of biles have been brought into the estuary to play the only highway that moves in and out, the R618. Without the construction of accompanying biking lanes or trails the outcomes see speeding vehicles often knocking fown cyclists going to or cycling back home from work. Here we see how conservation programs merges with poor spatial planning practices leading to harmful social effects.

Still from the spot where the vehicle-hippo collisions often occur and walking about twenty-minutes on the R618 along the low lacustrine area of the wetland towards the Dukuduku Forest incline, I found out countless butterfly bodies lying still on the wides of the highway. They were casualties of collisions with vehicles as they sought to cross the highway from one side of the wetland to the other in search for the abundant yet interspersed milkweed host plants. On several occasions, I collected about twenty-four dead butterflies from the tarmac that collided with vehicles. These events went on from the beginning of spring and lasting through summer.

Perhaps, one of the most graphic accidents that I witnessed a mile away from Manukelana involved an Afrikaans-speaker of about 28 who got divorced a year ago. Hiw wife took custody of their two children and moved away with them to Bloemfontein close to Johannesburg. According to those that knew him, he suffered a breakdown after the custody battle. That spring afternoon he was speeding home on the R618 to St Lucia after work, when he took a bend and a black cow surged into the road before him. The collision sent the car spinning over into a wetland. The force of the impact threw him out of the vehicle and dismembered him into pieces. Parts of his body, clothes and shoes were scattered in front of the wrecked vehicle. As for the cow, it was rendered into four and left on the grass near the curb. What followed was even more stunning. Local elderly men appeared from Dukuduku Forest on the other side of the highway with their knives, which they often carried with them at dusk (whether as decorative aspects of regalia or tools for subsistence foraging, or even both). They bent over the carcass of the cow and began quartering and dismembering it. Women rushed forward from the forest settlement, bringing buckets to receive rations. Vehicles stopped by on the highway and white residents of St Lucia came out and rushed forwards too to attend to the accident. The town sheriff too soon arrived.

“What a shame!” St Lucia residents exclaimed.
“I’m happy he died instantly,” the white sheriff, who was a good friend, mourned.
Two expatriate female friends, one from Kenya and the other from Ethiopia, stood beside me in rapt silence hands clasped over their heads as they watched the still unfolding drama. There were few scenes I was to witness in Kwa-Zulu Natal (and there would be many) that would go to the heart of human-environmental and race relations.

Later on, acquaintances in Khula Village would pour more light on the reaction of the older and despondent residents of Dukuduku. For a long time since the highway cut through the wetland and their lands were stolen, killings of cows on the highway by speeding cars had been regular. This had given rise to cows along the eastern coastline being termed by Afrikaans speakers as “speed bumps”. Given the expensive nature of beef and the cost of rearing a cow in rural South Africa, a carcass is too expensive to let go. The only condition was that necessary to eat it, is that it should spill blood in the course of an accident. Once blood was spilled to the ancestors, the community could partake in the dismembering and sharing of the carcass. If there was no blood spilt, not a human soul would touch the cow, because it was taboo for consumption. That way, it would rot and fester by the roadside for weeks until cleaned off by insects. *Did the fate of the white victim not stir remorse in the hearts of the old men?* I asked. My interlocutors shrugged their shoulders. It was a terrifying response. When I shared my experience of the accident with the nurserymen or gardeners, they starred at me for long. I couldn’t tell whether they were searching for words, for comprehension, or both. They’d spent almost fifteen years of their everyday lives in the calm space offered by Manukelana. It was a variable space that ran appeared smaller in winter when the profusion of greenery covered it up, and which appeared larger in winter, when the leaves greenery was gone leaving it as an open space. It was not unusual for the gardeners not to comment on particular events shortly after they occurred. They would take time, digest the event and then give an explanation months later, when they must have found the proper answer or words.

From the Tea Garden at Manukelana, one learnt of many bureaucrats that were commiting suicide through crashing their cars, an occurrence that is very rare in black Africa. Rasta stated that these were usually under investigation by the state for corruption charges. The problem is that they often

learned of their situation while listening to the radio or by being informed by phone as they drive. A good example is an invidiviaul that used to live up the road in one of the most expensive and colorful mansions in Ezwenelisha.

When a group of French, English and Belgian Rastafarians visit Manukelana, Rasta asks everyone to hold hands in a circle while he intones a prayer at the end of the visit. Following the prayer, he reminds all of the tragedy of modernity and highway driving: "When some drive, it's hard for on-coming vehicles to believe that their minds travel. You see drivers and you think their minds are with their hands on the steering wheel, but their minds aren't there. They are elsewhere. The vehicle is only partially driven. That's why you hear about so many accidents and car crashes in Zululand and Kwa-Zulu Natal."

As such, I found myself in perfect company as the founding managers relished any chance to give voice to how other actors related to or with plants, trees and landscapes. These observations eventually pushed them to reflect even more on their own relations with the garden project: the soil, seeds, plants, trees, crops, the natural elements and biophysical landscapes and seasonal rhythms which they saw as living life forms, along with birds, butterflies and other wildlife. As nurserymen and gardeners of plants and ideas, growing and living together, their observations soon saw them develop insights that made them to begin to hunger for professional recognition. Conflicts over approaches towards plants and how these are known would emerge during training of the gardeners, firstly, by Isimangaliso Wetland Park, and secondly by the African Comservation Trust. In this instance strong biographical elements would intersect with the claims of the nurserymen over the ways in which plants were *supposed* to be enacted or named. The theme of recognition would increasingly come to the fore particularly as Baba Phungula would insist on the need for isiZulu plant names and meanings to compete with English or Afrikaans names, or the Latinate scienitific. Mlambo did not so much take part in these conflicts or controversies, but he fostered them by underlining their legitimacy. He often buttressed this support with his professional life experiences. Of all the Manukelana nurserymen, he was the only one that grew up in Dukuduku Forest under a father that was a herbalist. He had a keen knowledge of the forest which when he combined with his academic and professional knowledge made him very procient.

But unlike Baba Punghul, he hardly gave expression to thesese, preferring to use this kwowledge in carrying out on-going tasks.

**Resisting "Deterritorialization"**

At the beginning of field research, Rasta reports to me his life-altering troubles as a conservation practitioner with the Natal Park's Board. Following, he talks of his undergraduate studies at the Mangosutho Buthelezi Technikon, a tertiary institution in Durban, which is about three hours' drive today from his home area in Dukuduku. Both institutions were critical to his training and unknowingly pushed him towards community conservation.

The Natal Parks Board recruited him after high school, unaware that he had a high school certificate. They wouldn't have, had they been aware of it, he states. The reason being that a Black with knowledge of how to read and write would be unruly, disrespectful and hard to manipulate. Rasta argued every now and again that his colleagues' understandings of Africans and how Africans related to the environment were offensively stereotypical. It was a reaction that surprised his superiors. They'd never heard an African criticize them in the face, an event that they considered an affront or if not an insult. His white superiors became worried about Rasta's relationship with other black workers who were not so educated as he was. They felt that if they didn't act against him, Rasta would corrupt the rest of workers and make the organization unmanageneable. According to Rasta, his immediate superiors began to devise schemes to either shut him up or have him dismissed. He narrated various events where he would have been fired had it not been for intervention of Andrew Venter, the CEO today of the African Heritage Trust, a competitor of the African Conservation Trust in Zululand. His superiors got his African colleagues to conspire against him for things never said say; they carted away stuff from the offices and then accused him of stealing them. They refused to give him a vehicle to facilitate his fieldwork. They gave him housing without electricity in the community parks that he was running. His worst fears were that with park rangers one could be easily be shot by one's colleagues, anywhere, whether at home or in the wilds, and the blame be laid on poachers. And no investigations would ever be carried out by the police at the time. With an increasing frequency of accusations against him,

Rasta's closesest colleagues began to warm him. He knew it was time to move before they turned against or killed him.

What led to his ejection from university were equally systemic perceptions of the African environment and of black rural communities by his white lecturers. These perceptions rankled him in every single class. The former Natal Parks Board wildlife ranger and community forest reserve manager became a hold back to his university lectures. His responses in his courses soon activated black students in his program and he became a subject of disciplinary concerns. Rasta was equally an elected university-wide student union official responsible for religion and worship. Since the establishment's white authorities took decisions and authorized which Black African church could operate on-campus, Rasta had to learn how to redefine "radical" churches to make them look tame and palatable to the authorities. In so doing he enabled the authorization of various 'radical' black African churches that were unknown to the authorities to operate on-campus. These inckuded the Nazareth Christian Church (the "Shembes") to which he formerly belonged. Because Rastafarianism, to which he adhered, could not operate on-campus due to its foreign origins, it's revolutionary ideology and Pan Africanist inclination, he had to urge Rastafarians to worship with Shembes since both systems shared closely similar ideologies. Rasta came to feel that since Conservation and religion both dealt with community identities, it was possible to merge them together for the benefit of Conservation and a life-style characterized by emancipation, recovery of the black identity and empowerment. He realized that as much as white South Africans prided themselves on their technological knowledge and pretended to be "modern", they had an attitude towards the natural environment and Black people that failed to serve the interests of Conservation, of African comnunities, and in the long term, of their own interests as settlers. To resist settlers and the apartheid ideology, blacks, he felt, needed to merge together traditional environmental knowledge with scientific practices as well as their understandings of nature, community and religion.

Rasta could have gone ahead to enumerate all the instances of disagreement that always threatened to lead to open conflict in his lectures. In the end, when political tensions reached the peak in Kwa-Zulu Natal just before the 1994 elections and disrupted tertiary education, he welcomed his dismissal from his university. He returned to the Natal Parks' Board from which he had resigned

and began to think of saving money and setting up a community-based conservation project. However, while Rasta's experience had directed him towards organizational power struggles, Phungula's was towards competing knowledges i.e., scientific and the local.

For Phungula and Musa Rasta's narratives didn't make much sense. They'd thought that blacks had more leverage and could afford some measure of respect or equality within white institutions e.g., at the official level of Natal Parks' Board or the university. Until the African Conservation Trust came in, the nursery and garden project had insulated them from the outside world and from indenturing themselves to "white capital", an expression that is very popular in South Africa. Their experience of the everyday commuter train that left Khula Village to St Lucia Town and flowed back again at sundown fixed in their minds a story that a liberal white South African once told them about slavery and its aftermath in the US.

> An American white slave owner and farmer once motioned his son as they worked. "See, son, these negroes don't know what good we are doing for them – taking them out of Africa, bringing them here, making them Christians and giving them the opportunity to live a productive and better life. While we may coerce them to stay in the plantations, it will not be the case in many years to come. The north can deceive and claim to liberate them; but it won't be long when our grand children will not coerce them to stay in the plantations or to work for them. They will take their own feet and come and ask us, out of their own will, to enslave them. Yes, slavery would be voluntary".

The man had warned them and asked them to safeguard the Manukelana Project as a lifeline and to never let it go. The gardeners saw the project as a space that gave them a sense of equality and freedom from everyday stresses, which the rest of the community in Khula Village or Dukuduku couldn't afford. Phungula felt that the slave owners' projection was already happening in South Africa where one found black people indenturing themselves to the mines for over a century. It was a train he too once joined. He talked about blacks indenturing themselves as sugarcane planters to poor Indians and others to pine and gum plantations in northern Zululand. He talked about the several hundred of Khula residents trooping to St Lucia every dawn to offer their labors in exchange for below-minimum wage and everyday petty racism. The scale of indenturization was

never like this before when many isiZulu-speaking men stayed at home in the riral areas, took care of a few cattle, and refused to work for "the white man". When they established the Manukelana Project, Phungula underlines, it was to escape these kinds of abuses and injuries. To give a good example of the transition from coerced enslavement to self-servitude, he states, you have to follow the news and see endless crises involving young Africans drowning in their hundreds in Mediterranean waters as they strive to reach Europe for menial jobs. Or, you take a look at the images in the papers of young African women who end up being raped, beaten and often killed by their masters in the Arab Middle Eastern oil producing countries. If anything, the entry into the scene of the African Conservation Trust with capacity building skills, material technology and access to sources of funding. This was very productive in terms of technical skills, personal growth, and project expansion. However the changes also came a sense of hierarchy, urgency, and a slight aversion to critical questions and thinking which troubled the nurserymen. It reminded them of a past they'd been trying to get away from.

**Knowledge Claims**

Reading a slew of nationally produced "authoritative" South African books on indigenous plants led Phungula to feel that knowledge claims in-between social groupings, or white and black South Africans tended to be preposterous and shortsighted. He underlined that such assumptions constituted the premises that paved way to the enslavement or exploitation of the other. That was what they experienced with the African Conservation Trust when it came to talking about plants. The Trust's technicians often confounded technical knowledge of plants to (cultural) knowledge of plant meanings. They sought to strip or divest plants of their local cultural meanings. Even so they assumed the symbolic value of these plants didn't really matter. Worse than claiming total knowledge of someone or some culture, Phungula found, was belittling or denigrating the person or culture. Here, he held a grudge with the contemporary mainstream South African media, which he saw as the mouthpiece of environmental apartheid.

**From Popular Media to Publications: Ignoring Indigenous African Plant Names and Knowledges**

Since the 1990s, more and more garden publications - from glossy magazines to hard cover gardening books featuring landscapes with indigenous plants – began to appear in South Africa. The goal was to aid plant nurseries, gardeners and the broader public in designing urban habitats. The revolution was shaped by increased global interest in the value of indigenous flora and landscapes. The turn to indigenous designing and planning was however superficial. Most of the texts, particularly the magazines failed to feature the vernacular African names of the plants that they featured in preference for their English or Afrikaans vernacular names. Garden publications also followed the trend. This appears out of place in a country where some 40 million people or non-settlers had or still have local African languages as their mother tongue. One morning, I collected stacks of recent South African gardening magazines from the lodge where I lived and brought them to Manukelana. I thought the project owners and employees alongside me could forage within them for strategies to innovate the garden project. Now Baba Phungula and Brother Musa perused through them and handed them to the younger the eager tour guides. Their response pushed me to pull back and watch a generational reaction to the magazines

"It's all white", Baba Phungula spat out. "I stopped reading them a long time ago."

Baba Phungula had informed me early in my research that he used to read a lot. He would read every newspaper and magazine that he came across and archive those that he found to be of value. He read lots of books on African history and the human life and life sciences until there came a time when he began finding books more and more difficult. Then gradually, frustration built up in him and he stopped reading anymore. "Why do some scholars enjoy making their books so difficult to access?" he asked me. The question invited me to tell him a bit of my graduate experience with course readings and especially a few that would take me not less than ten, fifteen or more readings to have an inkling of what the scholar was talking about. These efforts included reading a lot of other texts bearing on the scholar. I talked about my frustration pushing me to want to write to some of the authors of these texts and asking them to explain to me (as a buyer) some of their work as they would to their family. I suggested to him not to give up on reading as a practice. You either have to find other ways of understanding particular authors or you gravitate towards others that are more approachable. And there are lots of scholars or authors under the sun. Baba Phungula was happy to find that even PhD students get enormously frustrated reading scholarly texts.

Gradually, Baba picked up reading again and he preferred Africanists for the most part. His problem with cosmopolitan magazines was however different. He found these to be often produced with a particular racial bent or culture that had little to offer him. Bro' Musa, who had perused some of the magazines agreed.

"You even see some of these magazines will ruin our children. Look at all the ads in there and the half-naked women. These magazines are not for black people. But our children won't tell. They'd make our daughters to begin wanting things that their families cannot provide."

I hadn't been that sensitive when I opted to bring them those magazines. I regretted it, somewhat. But then Vusi and Nguardiavula and the office managers (Manukelana and the craft store next door) were busy selecting issues that they wanted to use. They were asking if I had more of some titles. Sabelo, the youngest of the project owners, who was very outgoing in terms of developing the Manukelana Project, was busy pointing out innovations in the magazines that could be appropriated. Baba Phungula and Bro' Musa waved the magazine readers away and called me to accompany them butterfly collecting. For the two, the readers were of a different generation, less politically conscious about racism. One of the things I had overlooked with virtually all the articles in the magazines is that while most sought to promote indigenous gardening in the cities, they used English common names rather than the local names of plants. All the gardeners and writers too were of European descent. Only one article that I found was on urban vegetable gardening in Soweto (a well-known historical and now touristic township outside Johannesburg).

**Indigenous Plants without Local Names**

Among some of the popular texts that present indigenous Southern African plants for garden design but exclude their vernacular African names, one finds Kristo Pinaar's G*ardening with Indigenous Plants: Easy-to-Grow Southern African Plants for Your Garden*, 1999 (dedicated to his grandchildren) and Kristo Pinaar and Gideon Smith's *The Southern African What Flower is That? An Essential Guide to Garden Plants,* 2011 (Fully Revised and Updated Version). These

texts hardly differ from Kew Gardens digital presentations on the World Wide Web[1] that do away with vernacular plant names and significance of plants in lieu of a stripped down "scientifically objective" universal description.

Beyond magazines that ignore indigenous plant and tree names alongside users, there are textbooks that continue a unique botanic tradition nurtured by cultural anthropologists that has held sway over a hundred years in South Africa. This sees botanical works that feature the vernacular African names of plants, though only for referential purposes. Often some would feature the names of these plants in some of the major languages used in South Africa e.g., isiZulu, isiXhosa, SeTswana and Sesotho that is, alongside the English, Afrikaans, and Latin scientific names. Some publications sought to present plant names in all the major languages, which is a feat in terms of research and space. Deploying the names of plants in the major languages in South Africa alongside English, Afrikaans, and scientific Latin poses great challenges due in part to the complex issues arising when standardizing a single language or when translating data from a primarily oral language into a written form. Standardizing plants names when the uses are largely oral and variable across a vast swathe of territory leads to lots of criticisms, calls for revision and high costs in book production. As Koopman (2015) underlines, such work, though commendable, is far from being perfect in its present state.

**From Multiple Vernacular Plant Names to Indigenous Meanings**

Firstly, very few texts if at all, go beyond presenting the referential vernacular meanings of plants and the underlying connotative meanings with which vernacular users identify. In other words, very rarely does an author append a note on the meaning underlying the plant name. So long as the vernacular names could aid in identifying particular plants, the story ended there. Only one publication in the span of a century bucks the trend and i.e., Ngwenya et al's *Ulwazi LwamaZulu Ngezimila: Isingeniso/Zulu Botanical Knowledge: An Introduction (2003*). This outcome was due to the intense interdisciplinary and collaborative initiative between Mkhipheni Ngwenya, Adrian Koopman and Rosemary Williams who worked together as part of a pilot project that was

[1] http://www.kew.org/science-conservation/plants-fungi/strelitzia-reginae-bird-paradise-flower

sponsored by the Natal Herbarium section of the Durban Botanical Garden. Note that Nicolas (founder of the butterfly project) is currently completing a new butterfly dome modeled on Manukelana at the Durban Botanic Garden. The above authors aren't only fluent in isiZulu, Adrian Koopman is an Afrikaans-speaker who until 2003 had about twenty years of intensive research and publications in iSiZulu linguistics.

As knowledgeable black gardeners procure unrepresentative texts or magazines and open them up to deepen knowledge of their trade, it doesn't take long before their senses of loss, alienation, and indignation manifest. Seven years ago, Baba Phungula ceased hoping to glean anything of significance in often-expensive garden texts and glossy magazines. The realization would not have happened until his encounter with the African Conservation Trust that was supposed to 'mentor' them and build their capacities so they could execute various environmental and community projects. So what accounts for the paucity in efforts in representing and disseminating indigenous plant names and knowledges given their promotion by The *International Union for Conservation of Nature* (IUCN) as a pathway towards more sensitive local conservation measures?

The disregard for indigenous languages, Koopman (2015) states could be either due to lack of knowledge, the resources, will or ability to proceed with isiZulu or other African languages. Lipman (2003), an architect, sees a strong element of inferiority complex in identifying with things African and a strong pull to appeal to Western motifs to ensure domination and cultural purity. However, what Koopman fails to realize is that most or all of the above botanic texts except for Ngwenya et al (2003) were not designed for isiZulu or black African speakers. The readership was intended to be white South African scholars or the public, and beyond, the rest of the English-speaking world with which it identifies. In this regard, black African readers are accidental. The two instances above, point to what Bonaventura de Souza dos Santos (2004) has referred to as a 'sociology of absence' in his critique of colonization, modernization, and neoliberal globalization. The analysis here doesn't only refer to representations or enactments in isiZulu but also other South African languages, viz: Xhosa, Sotho, Tswana, Venda, Shangaan, Swazi and Khoikhoi languages. These are languages spoken altogether by a total of about forty million citizens. Lipman (2003) echoes that reading the South African landscape in terms of design leaves one oblivious of one's environment due to the predominance of the foreign motif.

## Creating Listeners: Ethno-botany and Indigenous Landscapes

One of the tests Baba Phungula administered to me for over six months without me being conscious was to ascertain the direction and seriousness of my research, my listening ability and fairness in representing my findings. Had I not passed the test or shown them the seriousness of my concerns for their project and their welfare he would have seen me out of the Manukelana premises - or that what I learned from his colleagues long after. The test was an effect of testy relations they had with the media especially as the latter sometimes misrepresented or took their points of view for granted. Showing me one press article after the other, Phungula tells me how he tried to articulate to journalists of the mainstream press the active agency of indigenous plants and flora and the need for deeper understandings of human-plant connectivity which he saw as part and parcel processes of environmental and ecological restoration. His seriousness, however, always got lost to the interviewing journalists for reasons unknown to him. The outcomes in the press articles were always cryptic descriptions, often a few sentences about what he said of plants and the narural habitat. While he seems to stress the significance of plant life, it appears that his views were often cast and dismissed as belonging to the realm of fantasy, myth and puerile or irrational African thought. Baba felt a sense betrayal by the post-apartheid press of their young and well-meaning program. He felt and still feels deep dissatisfaction at the truncated representations of the meanings of plant life, the taking out context of the knowledge he presented, and the ways his explanations were often presented. They foreclosed any possibilities of exploration or further reflection, which is what he was calling for.

I happened to ask Kay the manager of the Eshowe butterfly dome, who came to Manukelana to repair the roof or netting of the dome if there was a lot of press visits at Manukelana years ago while he was receiving training there from Nicolas. Kay expressed that the media coverage was quite extensive and Baba Phungula became obsessed at one time with message control.

## Indigenous Plants and their Names: Curiosities or Outdated Folklore?

Baba Phungula saw local plant, tree, or resinous names as more than mere curiosities or outdated folklore— a notion underlined too by Bonta and Osborne (2007) as they examine the vernacular

names of cycads across the globe. According to the latter, these should be rather seen as "portals of entry into worlds of meaning that complement Western scientific insight". In the case of the Manukelana Project, it is the above assumption by the media that vernacular names are mere curiosities and outdated folklore that incenses Baba Phunguna. And especially when he sees this attitude emerging from black journalists. Baba Phungula feels that the lure for money and other forms of recognition have sidetracked the search for deeper knowledge about human environmental relations among blacks. He finds journalists and the younger generation of black Africans, particularly university students, as having been derailed from the quest to understand their own cultural backgrounds. He sees them as active and ignorant participants in the process of derailment. He also sees the rejection of the complementarity of local plant knowledge with Western scientific knowledge by South African botanic scholars and NGO technocrats as a continuity of colonial and apartheid ideologies of exclusion and domination.

***Umbambahlangu* (Red Heart Tree or *Hymenocardia ulmoides*)**

Take for example his explanation of the significance of the branches of the *umbambahlangu* or red heart tree (*Hymenocardia ulmoides*) (one of the most aesthetically beautiful trees in the estuarine forest-scape) to the *Cape Argus* in November 28 2011[2]. The staff reporter (Neo Maditla) explains: "Phungula said the branches of the *umbambahlangu* (red heart tree or *Hymenocardia ulmoides*) were used by the Zulus as fighting sticks and to reinforce their shields". And the journalist ceases to pursue or question the explanation oblivious that knowledge is often co-constructed. She gives little detail about why this particular plant was used for making fighting sticks or undertakes little effort to clarify the meaning and role of "fighting" (an art form) in past iSiZulu traditional life. She also gives little about the uses of the tree in the present and its conservation status. Yet a few minutes down the R618, one finds a roadside market where young men sold about fifty dug up and skin-stripped "upside down trees" which were widely used in middle class urban gardens in KwaZulu Natal and Mpumalamga Provinces. The lack of attention, interest, experience, or ability to communicate this beautiful indigenous tree that sets the Dukuduku forest a-glow at sunset (like Nordic woods or the landscape of Vermont hillsides in Autumn) not only slowly killed Baba Phungula but also the anxiousness of the questing reader. I had to argue in defence of journalists,

[2] Title of Article "Giving Mother Nature a Helping Hand"

citing the lack of space for environmental news and the power relations in newpaper production. But Baba readily dismissed my feeble arguments stressing that if the will was there space would be created.

***Amarula***

Talking of another consequential tree, the *marula*, she says, "the *marula*, was especially important because it symbolized women. In our culture women are stronger than men, which is why we relate the *marula* tree to women because it is liked by the elephant, which is the strongest animal in the forest. The tree plays an important role in reconciling conflicting parties." In another presentation, the write-up of a tour of the site by the United Nations Development Program that eventually funds the project, Baba Phungla states, "With the *marula*, a woman who is breastfeeding and sad takes the bark and chews it, then digs a hole and s(p)its out the bark and everything that worries her into it. It's like a cleansing." The ontological connections between the tree and the biosocial events that it's agency gives rise to are often left unexplored.

The *amarula* tree is one of the most consequential trees in Southern Africa to both man, animal and ecosystem. It produces hundreds of fruits that constitute a cherished fruit for African elephants (*Loxodonta Africana*), duiker, squirrels and flocks of birds. Locals recount how elephants voluntarily go drunk and engage themselves into play before tumbling onto the earth and often, affectionately on one another, after consuming huge quantities of *amarula*, which has a high alcoholic or ethanol content. Of recent the *amarula* fruit is not pressed into fine smoothie wine, which you would find in supermarkets across South Africa as well as abroad. It is also a favorite fruit for the rare *mother-of-pearl* butterfly and as such it is a fix in every nursery in Kwa-Zulu Natal, including Isiphaphalazi Butterfly Dome as a critical life-giving plant. A thick description of human-*amarula* relations in Southern Africa would uncover a lot for a gardener as my enquiries over a long time with the gardeners indicated.

Shangaan diviners employ the *marula* seed as dice, while women that have conceived also seek the aid of the tree in determining the sex of a baby. An infusion of the male or female trees' bark is believed to help determine the sex of an unborn child: an infusion from the bark of the male tree

giving rise to a boy and from the female tree giving rise to a girl.

The sacred quality of the *marula* tree makes it the only genus standing in a cleared or ploughed field. It is known to restrain bad spirits and to enable communion between the living and spirit ancestors through the “Feast of First Fruits” which is celebrated throughout much of rural Southern Africa. While the ripening of its fruits in the summer months announce the feast, they also signal the beginning of crop planting. Another celebration of the tree is seen in the less general *Xikuha Marula* festival which reinforces a sense of communalism, and whose preparation enables women to scrutinize the appearance of worms that are often associated with the fully-ripened ground laden fruit. Not only do the worms signal the readiness of the earth for planting, their presence also presents a threat to field crops, which calls for the "*ngelengele*” ritual or “a banishing of the worms”.

*Picture 13 The Amarula Tree*

*Picture 14 The Amarula Tree un-ripened fruits*

*Picture 15 The Amarula Tree: carpet of fruits in mid-summer. Courtesy: http://www.plantzafrica.com/plantqrs/sclerobirr.htm*

Rather than being a single 'monoecious' tree (i.e., with either male or female reproductive flowers), the *marula* tree is peculiar in that it produces both. Along with the timeliness, abundant nature, and deliciousness of its fruits, a complex of beliefs and value systems have evolved around it which has seen it respectively named as "the sacred", "marriage", and "childbirth" tree. As a boundary-crossing entity, the *marula* questions its very nature or what a tree is. *It* acts as a psychological confidant to humans, enables cleansing and regeneration for humans, animals and ecosystems (it's a pioneer tree), and blessings from the spirit world to the living. It provides therapy in gendered psychological conflicts and fosters rites of reproduction in terms of a child's gender, human and agricultural fertility as well as marriage rites. The ecological relations, social practices and myths associated with the *amarula* appear inexhaustible, and while most rural people do not contemplate its status analytically, plant lexicons in Southern Africa have made short shrift of its material and symbolic values and meanings to humans and non-humans.

Absent of the above, the media throws back Phungula's cryptic explanations at him as the residues of a bye-gone age. There is no doubt then that much of the plant-loving public, including rural students who are immersed in the everyday exchanges with these trees, have no deeper knowledge about indigenous trees that people the landscape. The outcomes of the lack of interest or communication is that the deeper ontologies of human-plant relations are lost not only in the

seeming inability of the interlocutor to understand the speaker's worldview, context and to adequately represent them but also the inarticulacy of the speaker. This inarticulacy was a constant struggle on both my part and that of Baba Phungula during the course of my fieldwork. It only got better as we understood each other and explored more deeply each of the aspects of my research that were a daily preoccupation at the garden site.

Thus, Baba ohungula's own frustrations on reading back the media articles, and his inability to get the writer to fill up apparent gaps in subsequent publication became a source of tension that only vanished with time. Phungula is particularly unhappy with presentations he made to a British television channel. Efforts on his part to get back to the channel for corrections reached a dead end. Most of the interviews were on-the spot events without prior planning. These seemed to be carried out by journalists that were either on other assignments, on holidays, or fishing for fillers for their daily or weekend editions. Baba Phungula is therefore careful about giving further interviews. He is unaware that any such interview has to be preceded by a binding contract on ethical conduct about information use and representation. Since then (about 2004), he carries a notebook where he notes on a daily basis striking details of the landscape. He also jots down thoughts and ideas worth retaining and that emerge in his communications with others in the garden. In other words, I discovered that rather than being a ready-made repository for ethno-botanical knowledge, the garden was more of a site where such knowledge was generated, contemplated, and contested. I came to find the garden as a landscape of contradictions and rather than see these contradictions throw me off my feet, I made understanding them a component of my research focus.

**The Spiritual Value of Plants and Trees**

Turn after turn, journalists appeared on the project site to find out what makes it tick. Baba Phungula tried to articulate the agency and deeper meanings that the isiZulu held of plants to no avail. The outcomes frustrated him. He cited various interviews he held with the media where he was often misrepresented. He kept echoing to me what he actually said and what was written, which did not tally with his words. It wasn't just about misrepresentation or reductionist views of people-plant relations. As an avid reader, a self-educated and former archivist with the South African Defense Force, he was also angry that each journalist always promised to send him a copy

of the article upon publication, which never happened. In the end, copies of articles usually came to him through acquaintances working in the iSimangaliso Wetland Park offices with whom he was acquainted[3]. Most painful for him was the attitude of black South African journalists who showed little concern in probing matters of concern to their own cultural identity. Baba Phungula began to see a generational divide between the old who cared about these concerns and the young whom he found to have embraced what he termed as shallow "colonial" identities, or who gave up their "identities" for white acceptance and material rewards. He didn't see how the lack of an identity deeply rooted in self-knowledge could reward them in the long run, or turn the tides of colonialism and racism that had made the black a laughing stock in the world. However, it wasn't only the way the press attended to the indigenous nursery project and the status of blacks and science in South Africa, it was also the way that the African Conservation Trust as an NGO approached the plant world. Conflicts over what plant knowledge mattered and to whom, and how plants were labeled and represented on the project site, beset their relationship. Baba Phungula asks me whether I think he could right the situation given his limited capacities and his inability to engage university scholars on indigenous plant names and their deeper connotative meanings. I suggest that he complete his comprehensive listing and inventory of the meanings of plants and publish them without the authorization of the provincial botanic board. If the book could stand on its own merits, it would gain acceptance or be useful to many.

**Articulating Human-Plant Relationships: On the Agency of Plants**

One winter morning shortly after I arrived at Manukelana, I greeted my colleagues in the office and met Baba Phungula down at the nursery. It was a misty August morning, and we were under the evergreen *umLahlankosi tree* where Baba was working. He had a question for me that morning as he always did since we became used to each other.

"So what happens to the spirit when a person dies far away from home, when his or her people can't give him or her a proper burial?"

[3] It took a while for Baba Phungula to open up his archives to me, picking out and showing me the original copies of these articles, and hoping that I would scan them and return them to him for safe keeping.

The question took me by surprise. I knew some event must have overtaken Baba Phungula the previous night, and now preoccupied as he came to work under the mist. While growing up, I had learned that the spirit of the dead often lingers about the body and place of death for days before the aura dissipates into the atmosphere. My dad had informed me when I was a kid that even as the kin mourn the dead that lies in state, the spirit of the dead usually hovers about the body and is aware of the rupture and of the presence and emotions of mourners. He asked that when he passed away, let the atmosphere be a merry one. But what happens to someone's spirit when he or she dies far away from home, say in an accident in the mines, an industrial site, or the highways?

"In Zulu tradition, they believe that the spirit finds itself ostracized from its familiar landscape, its ancestors and kin remains anguished until it is brought home". Baba then pointed out to the *umLahlankosi* or "that which puts the chief to sleep" (isiZulu), also known as *umLahlabantu* tree or "that which puts Bantu people to sleep" next to the *amarula*, another sacred tree. But he moves to state that he doesn't know if the assertion is true, as he didn't believe in the existence of heaven or ancestors, or life after death, an issue he had thought about deeply and which hasn't left his mind. Few tour guides in iSimangaliso Wetland Park and the Tembe Elephant Park would fail to point out to tourists the buffalo thorn tree, the signature zigzag pattern of its young branches and commonly known among Conservation folk as the 'buffalo thorn' tree.

The story of the buffalo thorn tree and funerary rites has also been a subject of a film on how tradition has responded to the severance of African communities from their roots by the forces of capitalism and spatial disruption in South Africa.

"I don't know if it is true, I do not believe in heaven, or life after death, but we do have a tradition that when a person dies far away from home, if his relations cannot recover the body and take it home, they take a twig of the buffalo thorn".

The introduction pointed out to me the well-established ethno-botanic significance of the buffalo thorn tree to scientists and tour guides to the northeastern coastline of South Africa. The significance of the tree only came to light through the plight suffered by mineworkers in their oscillatory migration to the mines and back to their home regions. In orchestrating the bodily and

spiritual estrangement of hundreds of thousands of isiZulu speaking men both in life and death for over a century, the mines and the highways centralized the *umlanhlakhosi* in isiZulu rural life.

Yet, our discussion also underlines to me that Baba Phungula is at odds with himself. He does not believe in the power of the *umlanhlakhosi* in bringing back the spirit of the dead to its familial childhood spaces, where its ancestors lie. Yet, he finds the tradition or ritual one a potent one for isiZulu speakers one that reconciles the various landscapes that implicate fractured self.

This use of the buffalo thorn has overshadowed other more pressing seasonal uses mentioned by writers i.e., its use for protection against lightning. Roberts (1990:32) says that *Ziziphus mucronata* (Buffalo Thorn, Z. *umphafa, umlahlanko*si) should be grown near the house as it will ward off evil spirits and lightning. Thus it constitutes part of a category of trees or plants associated with lightning, and which Zikhali grew on the roadside curb outside his yard as a garden plant, a boundary marker or as a fence and protection from lightning. He cuts the leaf of the plant, and shows me the white sap bleeding from it. "You see this sap?" he asks. "It's what absorbs the lightning and sends it down the roots". Then I remember that while scouring the forest for butterflies, he also showed me the path of lightning spiraling down a tree trunk to the earth.

Looking at the English common name "Buffalo Thorn Tree", the Afrikaans common name, and the isiZulu vernacular name tell us different things.

While the Buffalo Thorn appears to have variegated leaves at any time of the year, especially green, yellow, and brown, said to symbolize youth, adulthood, and old age, it is the thorns that concentrate all focus and attention. Oral tradition notes the significance of the placement of the thorns along the length of each branch, their paired apposite positioning and the double row.

**Power and Potentiality in Zulu Plant Names: Personhood, Kinship and Biosociality**

Gardeners, Nadel-Klein (2010: 165) says, must be receptive to the senses. She finds the senses of sight, smell, touch, sound and taste to echo and repeat when narrators magically evoke their childhood histories with gardens. Their experiences indicate that their memories of plants and

places are highly sensual. However, with the nurserymen and gardeners of Manukelana, the experience goes much more, and in a different way. For these, the plants they deal with can't be said to be unconscious, inanimate, or lacking awareness or agency. For the nurserymen, if there was anything that made the biophysical environment in the wetland alive besides water, it was plant life. Plant life was critical to ecological restoration. As Baba Phungula and Bro' Musa were to learn, nothing brings plants to the mind as much as the names through which they are known. In relation to humans, they underlined that names influenced persons and only through self-consciousness could a person break with these influences. To give an example, they cited a former colleague whose ill-fated first name possessed him. What thus began to emerge as I followed them in the nursery and garden was a consciousness of the configurations within which human and non-human agents e.g., the project founders, NGO experts, plants and butterflies and their names and knowledges interacted, (re)constituted themselves, (re)established mutual relations or new formations. And among these configurations was the view that plants were persons with whom one could communicate and which was evident through Bro Musa's discovery and practice for the past 16 years of "moon-gardening".

Thus I experienced not only new biosocial relations in the ways that the gardeners or nursery men sensed and related to the world of plants, but also efforts to make these relations visible. The above suggests what scholars e.g., Ingold and Palsson (2013), Pitrou (2015) and Fowler (2015: 3) have termed as an anthropology beyond the nature-culture division, one characterized by attempts to understand "biosocial becomings" or as Ingold states (2013: 20) in a less grand evolutionary perspective, "the unfolding of the (…) matrix of relations within which forms of life (human and non-human) emerge and are held in place." The question was: how did names come into the picture within this unfolding?

As Baba Phungula and Bro' Musa went about creating placards for the various species of plants in the nursery, they began to reflect on the names of the indigenous plants they grew up learning and those that they found to be new. As we worked during the day, they would often muse at the names of plants that came into view, asking me if I knew the meaning. What plant names had done was to open up before them a window to the ways in which the names spoke back to their community's relations with the 'natural' environment. They found the differences between the

Latin scientific names alongside the English and Afrikaans vis-à-vis Zulu plant names to be stark. From then on musing about the names and talking about them became a recurrent preoccupation.

The fact that they had to initially struggle with the experts of the African Conservation Trust for the inclusion of Zulu plant names in the labels in the nursery struck them. They found the attitude of the NGO somewhat unsettling. Besides, the more they enquired on the constitution of the botanic scientific names with the English and Afrikaans names which they could figure out to an extent, they found the general absence of vitality and power in plant names in these languages and cultures as compared to Zulu plant names. In fact, so vital and powerful are plants and trees that at the limits some would rather not be humanized with a name.

An example emerged one day I was taking a walk with Baba Phungula and enquired from him about a particular tree in an Afrikaans-speaking businessman's garden that I often passed on my work to work. He confessed that he didn't know "the" name and that the tree may not even have a name. He went on to explain the rule of respectful avoidance known as "ukuhlonipha" which constitutes an intrinsic aspect of the kinship idiom among Nguni and non-Nguni-speaking peoples of South Africa. Further investigations of the name of the tree revealed that it was mostly associated with use by *izangoma*, or healer-diviners who lodge their powers in the tree and thus turn it into an alter ego. If such trees survive the healer without being purged of the spirit and powers of the healer diviner, they become vindictive to any that pitches a home within its vicinity. Further enquiries in St Lucia were not helpful in clarifying whether it was the *isifithi* (*Baphia racemosa*) or the *intovane* (*Smodingium argutum*), two local plant species trees with terrible reputations that must be avoided at all cost. My collaborators, being mostly urban, could not afford to know the name. Beyond the reality that most urban Zulu lack a comprehensive knowledge of indigenous plants and trees – whether cultivated trees grown by humans or those that grow of God's will (see Mangiameli 2013: 155 on the Kasena in Ghana) - the notion of plants, trees or living entities that cannot be named out of the respect with which they are held is not uncommon in Southern Africa. Among this is the *mutiusinazita* tree (*umuti* = tree, *usina* =without, and *zita* = name) found in the Buhera district of Zimbabwe which has for Latin scientific name *Cleistanthus schlechteri* (see Koopman 2015: xvii; also Palgrave 1977: 755). The instance of "respectful avoidance" in plant names, which parallels the use of prepositions to avoid calling out personal

names in human social relations underlines the biosocial nature of Zulu-plant relations. The above highlights the power of the sacred and processes of sacralization of "nature" as evident in name-giving or name avoidance among the Zulu. While scientific botanic names may be derived from the names of Greco-Roman gods and other deities, it appears that the invocation of these gods or deities is more of a mnemonic device than any intention to respect the plant or tree.

As seen above, Zulu plant names personify, or to say the least, they underline critical traits of specific plants from a humanistic and a cultural perspective. This differs from corresponding botanic scientific nomenclature, or even so, vernacular English or Afrikaans names. The above reality questions the divide between humanity and the environment, the biological and the cultural, or nature and culture that is inherent in modernist nomenclatural patterning.

The names of plants make evident those with traits that endanger the human body and mind and corresponding others whose properties provide medicines for treating these dangers too. We find plant names that highlight properties that treat the individual human body and mind of physical or mental illness, the body social of social disharmony, and the spiritual of illness. We also find names which point to plant properties that provide antidotes for protection where there's none, love where it's not given, and luck where it's run out, among many instances. What we see in these names is an intertwining of human and plant bodies and agencies rather than separation or division.

For names that describe the plants by pointing to an aspect of their biology, we have for example, *inkalamasane* or "that which weeps milky tears," which has for scientific name *Euphorbia natalensis*. To parse out the scientific name, 'euphorbia' is the specie, and '*natalensis*' the place of occurrence, the former English colony of Natal now known as Kwa-Zulu Natal province. While the scientific name enables differentiation of the plant from other look-alike species or sub-species, the term 'euphorbia' tends to be abstract and rather meaningless to iSiZulu speakers, and even so to many that are not specialists in the English language. In comparison, the isiZulu name is simple and offers a concrete and potent mnemonic-poetic device which imprints both plant and name in the memory.

Among the many names of plants that refer to their medicinal agency, e.g., against snake bites, we have *umanqanda,* scientific name *Ascleias gibba,* and English name 'humped turret-flower'. The isiZulu name means "that which turns away, checks, or prevents," referring to the plant's properties that are deployed in treating snakebites (also see Koopman 2015: 166 and Hutchings 1998: 170). Otherwise, the plant name *undiyaza* is derived from the verb *indiza* which means "to be stunned, confused, giddy"). The plant is a specie of a forest climber that induces madness and which had for botanic scientific name *Dioscorea dregeana* (Doke and Vilakazi 1958: 539; Koopman 2015: 163). The plant *isiniyandiya* whose name is derived from the same verb as above, *ndiya,* however does the opposite. It constitutes a powerful utterance: "Stun, confuse, make giddy!" The plant is frequently taken a charm to render one's opponents confused in court (Vilakazi (1958-539; Koopman 2015: 163). In the context of a society suffering from profound social unravelling, one can see the critical potency of this plant within the legal domain. The botanic scientific name is *Bersama lucens.* However. without a dictionary, how can a high school graduate or a tour guide tell what this means?

There is also *udakwa* (You get drunk; you get intoxicated) two species of the same wild yam plant along with *undiyaza* (see above), the tubers of which are employed in treating hysterical fits and insanity. South African scholars Pooley (1998: 514), Hutching (1996: 57), Doke and Vilakazi (1958: 460) as well as Koopman (2015:162-163) are not settled on whether *Dioscorea dragenea* or *Discorea diversifolia* represents *udakwa* as opposed to *isidakwa,* or even *uliyadakwa,* a third form of the name! In line with the above are the names of plants that heal, reverse infertility, or act as aphrodisiacs, and where the names are used in their verbal forms. Examples include *isimiselo* ("cause to stand/remain firm), botanic name *Gloriosa superba*; *ubangalala* ("cause to sleep/have sex"), a species of *Rynchosia.* Other plants have more suggestive names. This is the case with the category of "bull names" (Hutchings 1996: 244) or metaphors of youthful sexual virility that is confounded by impotence or infertility. Examples include *umhlabankunzi* (*umhlaba* = to prick and *nkunzi* = the bull) which has for botanic scientific name *Eriosema cordatum* and English vernacular name Heart-Leaved Eriosema. There are also plants in this category with more suggestive names like *intwalabombo* which translates as "that which crosses the ridge" (Latinate scientific name *Rubia cordifolia*) – a plant that is used to enable men attain erections (Berglund

1976: 354). What about *uphondongozi* which means "horns of danger" used to treat impotence… and to stimulate bulls in spring" (Pooley 1998:62)?

A wide category of forest plants, climbers, and lianas are also used as charms and the names often reflect their power or uses as well. A typical example found in all four community butterfly domes that Nicolas established and in the private domes in Kwa-Zulu Natal is the *Umpinda umshaya* (*Adenia gummifera*) a robust, semi-woody climber or liane whose stem is striped bluish-green, with the older stems often featuring white powderish lines running along. It was my favorite plant in all of Zululand due to its biophysical look. The South African English vernacular name is "Green Stem". The *umphinda* = do it again, *umshaya* = strike, means "that which strikes back". According to Vusi, the interpreter at Isiphaphalazi, it is often used in winning the affection of a girl that is resisting an amorous proposal. Sabelo Mthembu in the Tembe, informs me that the *isangoma* or healer-diviner often uses the stem to make a ritual for any who is threatened with supernatural attack. The function of the stem is to lash back at the effects or at the person that wished one ill or attempt to hurt one in the first place.

*Picture 16 Isishwashwa before sprouting. Its seeds produce reddish arils which insects and humans find very delicious*

*Picture 17 Isishwashwa in bloom.*

Peace plants are generally plants that often cools tempers and conflicts. Talking of one of the clumps of *isishwashwa* (or African Dog Rose) behind the teagarden, Baba Phungula says: "Where it is planted, it chases away violence. If you have (many) people in a yard, there would be no conflict between them; even if they conflict, they won't fight, they won't physically abuse one another." And he tells me that the botanic name is *xylotheca kraussiana* which doesn't sound like a peace plant at all!

It is not uncommon to perceive the smell of the common boundary plant *imphepho*, vernacular English name "Everlasting Flower" as it's being burnt (most often in a potsherd) during or shortly after a drizzle in Northern Zululand. The smoke is said to attract and appease the *amadlozi* (or shades). The soft sounding or fluid name *imphepho* conveys a sense of respect and honor to the shades. It induces communication with them as conveys material requests e.g., a wish for particular employment. So strongly associated with the shades is this plant that an informant-diviner once informed the South African-Swedish anthropologist Berglund (1976: 113; cited by Koopman: 105) that the plants are similar to the shades in that neither withers away – in which sense they have a kin relationship. There's some confusion over the scientific name whether it's H. *Natalitium Helichrysum miconiaefolimu* or *H. odoatissimum* or *H. cymosum* (see Koopman 2015: 105).

## Power of and in Plant Names

In the above instances, we have seen the power of and in Zulu plant names in the way the name affirms the robustness and resilience of the plant (*umphinda umshaya*) or as an utterance, order, or a ritual incantation in curing or healing (*umanqanda*), in finding potency or fertility (*ubangalala*), in casting spells or sowing disorder (*isiniyandiya*) or in appeasing (*imphepho*). Due to limitations in terms of space, I have deliberately given just a few examples above as well as left out a rich corpus of names referring to the use of plants as charms, the names of branches of shrubs and leaves that are used in warfare, and various other use categories.

From all the above examples, we see that the requirements of environmental conservation and the re-introduction of indigenous species alongside the notion of community conservation inevitably gives rise to a need not just to inventory plants, but also to pay attention to their cultural specificities and the knowledge worlds to which their names act as windows. Only in so doing can we evaluate the significance of the non-human (plants, animals, ecosystems) in shaping not just human social relations but life itself.

## "Exclusive Inclusion", Bio-power, and the Marginal

Manukelana is thus a landscape tensioned on the premises of potentiality characterized by a disposition towards "exclusive inclusion": if Baba Phungula could let go his critique of Nicolas and African Conservation Trust as well as of South African Conservation science's understanding of indigeneity, then he, his colleagues, and their project could be included in sharing the benefits to which they were disposed. According to Rasta, it was the same crisis that Phungula engineered when he was undergoing training to be a tour guide and a business manager at iSimangaliso Wetland Park. He was too critical during the training and that embarrassed the instructor. Evetually Phungula had to drop out of the program. That Phungula's critical disposition ran counter to Zikhali and Mduduzi's acceptance of whatever propositions they were offered became a bane to their project's networks, particularly those networks that were white or a part of the state bureaucracy.

For Phungula and his colleagues, the problem was cultural and ideological. Phungula would open the eyes of his gardening collagues towards understanding the cultural basis of everyday practices, how things could go wrong, or how a group could participate in its own very cultural subjection. Rasta admired and supported Phungula's stringency, but saw Phungula as a competitor in managing the project. Bro' Musa and Mduduzi were often fearful, worried that Phungula might push too hard against their external networks of support and oblige the project to lose whatever benefits they obtained. Among these networks were iSimangaliso Wetland Park, the African Conservation Trust, as well as various state and other agencies. I found useful the notion of "exclusive inclusion" to analyze the ACT approach to Manukalena and as a form of bio-power. On the other hand, I also found Agamben's notion of "fearful citizens" as useful in outlining Bro' Musa and Mduduzi's approach to Phungula, an attitude that will shift with time when Rasta will make a drive to run the project single-handedly.

**Derogatory Botanic Nomenclature and Affective Landscapes**

Moving from the non-indigenous origins of "modern" Southern African plant names, and by this we mean those deriving from Latinate nomenclature and colonial expansion, we delve into the event of 'offensive' plant names. Whether "white", "black" and "colored" South African botanists are aware of the existence of names that are considered derogatory in the national botanic lexicons they use is an open question. Various events led Phungula to realize that the world of conservation and of botanic knowledge was problematic. Firstly there was Rasta's account of his troubles studying Conservation Biology and Community Forestry at university; there were his own experiences undergoing training to be a tour guide and ecotourism project management at iSimangaliso Wetland Park; and finally there was his introduction to botanic and horticultural texts and the practice of labeling, and finally, talking about plants to Euro-Africans academics and technocrats.

If Phungula was troubled by the lack of depth in Linnaean system of presenting plants or of modern botanical practice, the reality of derogatory names, which he had to deal with daily, rankled him. A few South African scholars have raised the problem of derogatory English, Afrikaans vernacular names inherent in South African flora, fauna, and food as well as Latinate scientific names.

However, most scientists have been largely silent. Others, and Euro-Africans for the most part, including a minority of "coloreds" and "blacks" (to use the local emic categories), have continued to use such terms in their publications without highlighting the linguistic status of such terms. A supreme court ruling in April 1976 at the height of the apartheid regime found that the word "kaffir" to be an insult that warranted punitive damages to offenders. Today, usage of the term falls under the country's legal category of *crimen injuria* or is seen as insulting behavior, linguistic and other, or in some cases a deliberate affront to a person's dignity (See Hughs 2006: 208-209).

The most particular for Phungula and his colleagues were English and Afrikaans "common" names - though not so common given that only a fraction of South Africa's 40 million blacks speak English or Afrikaans - associated with "kaffir", "Hottentot", "Boesjesman" or with violence and humiliation. A Rastafarian academic, conservation biologist, and a colleague to the gardeners at Manukelana expressed that for South African scholars to use these terms (that are nationally considered insulting and which have been officially banned) in their scholarly publications reveals a disservice to academia and a lack of sensitivity to those that stand to benefit the most from science. He found it an insult to the broader population of readers and those in the affected category. He went on to express that it left conscious scholars to be mired in confusion about the role and value of ethics in scientific practice.

While such names might be considered passive in the pages of books, they come to life when used in practical conservation work, i.e., when they become part of guide books for horticulturalists, or when they have to be used as labels in indigenous plant nurseries and butterfly host plant nurseries. The black gardener that is not so literate in the western sense of the term – and most private gardend in South Africa are managed by many – might not recognize these terms, since most use only the names of plants in local African languages. However, the gardener with elementary knowledge of education would bristle at English or Afrikaans vernacular names where they find these encoding derogatory terms.

**"Hottentots" and "Boesjemans": Stutterers and Degraded Plant Forms**

Like the "Hottentots" that Europeans of Dutch-descent first encountered, they associated the plants they came across with these first inhabitants. In so doing whatever identities were attributed to the first came to affect the latter. Following Hughes (2006) in *An Encyclopedia of Swearing: The Social History of Oaths, Profanity, Foul Language and Ethnic Slurs in the English-Speaking World,* "Hottentot" issues from the Dutch word "Huttentut" which implies "stammer" or "stutterer" and is possibly related to the German word "Hotteren-totteren," meaning to "stutter". Using reports by Jesuit missionaries and other Dutch explorers, Dutch exploration writer, Olfert Dapper (1670) found the term to be applied to the aboriginal people of South Africa, the Khoikhoi by the Dutch pioneers, on account of the formers' stuttering speech patterns. Europeans at the time generally held the Khoikhoi to be literary sub-human. In an oft-quoted assessment, the learned traveler Dr. Lichtenstein postulated that,

> There is not perhaps any class of savages upon the earth that lead lives so near those of the brutes as the Bosjesmans;—none perhaps who are sunk so low, who are so unimportant in the scale of existence;—whose wants, whose cares, and whose joys, are so low in their nature;—and who are consequently so little capable of cultivation (Lichtenstein 1928: 244).

To represent the plants and fix them in the imagination they drew comparisons between these plants and those that they knew as they existed in Europe. In most cases, these plants were seen as copies or variations of those in Europe, and like the Hottentots, they were perceived as degraded copies of the original forms. To these various plants, animals, and bird names, the first Europeans associated them with the descriptive term "Hottentots". Among these plant names we have the few below.

**"Hottentot" Sugar Bush** (scientific name *Protea lacticolor),* a protea species with exquisite light-reflecting flower heads, *and which grows* densely in the in the *fynbos* mountains of the Western Cape (*fynbos*: fine bush or evergreen, fire-prone shrubs that live in nutrient poor soil);


*Picture 18 Protea lacticolor*

**Crassula "hottentota":** one of various species of cactus originating from South Africa; used as an indoor trailing pot plant with succulent leaves and commonly known as a money plant, Jade Plant or Rosary plant, and used nowadays in Feng Shui.

**"Hottentot" Sea Fig** (also known as Hottentot, Cape or Kaffir Fig) is a coastal flowering plant that is native to the Cape flora Kingdom in South Africa. Other common names outside South Africa include Fig Marigold, (highway) ice plant, pigface, marigold ice garden plant, and in South Africa, sour fig (suurvy; earlier: hotnotsvy), on account of its edible fruit. While the scientific name is *Carpobrotus edulis*, it was formerly classified under the genus *Mesembryanthemum edulis* or Ice Plant family (*Aizoaceae*).

*Picture 19 Cape Sea Fig or Coastal Ice Plant (Photo: Courtesy of Wikipedia)*

***"Hottentot"*** **Bread Vine or Elephant's Foot** (scientific name *Dioscorea elephantipes*, and synonym. *Testudinaria elephantipes; genus: Dioscorea, family:* Dioscoreaceae family) is a flowering deciduous climber that is native to the dry interior of South Africa. Its common names above derive from the appearance of its large, partially buried, starch-rich tuber stem. This stem, which is sheathed on the outside by thick, hard, and corky plates requires significant processing to remove its toxic compounds for it to be palatable.

**"Hottentot Tea"** has for scientific names *Helichrysum petiolare*, Syn: *Helichrysum minus*, *Helichrysum petiolare* minus, *Plecostachys serpyllifolia*. It is probably one of the most consequential and widely researched plants in South Africa in terms of its intricate medicinal and ritual uses and thus its high market value. It also goes by various names: silver mist, silver-bush everlasting flower; licorice-plant; liquor ice plant, trailing licorice, dwarf licorice plant, trailing dusty miller, and *kooigoed*.

Traditional rituals and ceremonies see this flowering plant species of the *Asteraceae* family commonly called *imphepho* in isiZulu burnt indoors as incense in sizeable quantities until the outcome resembles fumigation. iSiZulu and isiXhosa-speakers believe that *imphepho* invokes and placates the ancestors to respond to diverse human needs e.g., drive away malicious spirits that are the source of common illness in society; dispel negativity in particular environments, to initiate engage meditation; to invoke the ancestors in course of divination or to honor and placate them for other more private or personal everyday needs.

**Bushman Tea (**English common name) or *Boesmantee* (Afrikaans) and scientific name *Catha edulis* is one of the plants of the Cape or Southern African region that escaped the "Hottentot" epithet. While it's universally known as khat (Arabic) and largely grown, traded, and consumed in the Horn of Africa, its local South African names constitute: *umHlwazi* (isiZulu); *iQgwaka* (isiXhosa), and South Africa Tree No 404 (Dlamini 2004; Pooley 1993). The leaves and twigs of the plant constitute one of a vast coterie of plants that are employed as stimulants in Southern Africa and which have their origin in "Khoi-San" knowledge and practices of the environment. "Khoi-San" used the leaves and twigs to make a simulating beverage; they also chew the leaves as

a refreshing hunger-staying stimulant that enabled them to survive in semi-arid environments such as the Kalahari.

In employing people of "Khoi-San" early pioneers were able to gather from them extensive knowledge of the Southern African environment and their utilitarian value e.g., in terms of physical health benefits (Smith 1966).

The term "Bushman" however, has remained controversial in Southern Africa just like the term "San" due to their origin and modes of usage. While scholars have argued that both terms are derogatory, the communities in question have not resolved these arguments either. Some find nothing wrong with these etic categories so long as they aren't the users (Barnard 1974). Whether the "Khoi-San" people themselves care less whether the terms are descriptive or derogatory is also open to debate. However, the affect on the gardeners is that of embarrassment. They see the "Khoi-San" - most of whom have intermarried with the iSiZulu and speak isiZulu - as isiZulu or simply fellow South Africans. The epithets "Hottentot" and "Bushmen" that are attached to plants provoke feelings of unease and irritability among the gardeners. So long as these names are sustained, they remain potent reminders of racism and the country's troubled history.

**"Kaffir"**

Synonyms: *caffer, caffra, caffrum, and caffrorum, kafara, kaffrarian, kafir, kufar*

The term "*caffra"* (Arabic) which has the same root as "*kafara*" as used in older botanic works indicates that the aspect of flora, fauna, or food was found well to the south of the range of Arab traders, that is, along the southeastern seaboard of Africa. Trade between Arab traders and that part of Africa dates long. In this light, settlers used *Kaffraria* to designate the region presently known as the Eastern Cape Province and which still constitutes the traditional home of the amaXhosa (Fanie and Julie-Ann Venter 2009: 16).

The notion of "*Caffra*" and "South Africa" as a name deriving from location rather than place would come up later in Baba Phungula's argument for replacing the colonial name with an endogenous African name. So long as South Africans persisted in held onto the name, the fate of the nation would always be at stake, he underlines. Among the various plants that bear the noun

"*caffra*" one finds more than three quarters of a hundred, most of which are still used by scientists, and some of which have been relegated to synonyms rather then being declared inappropriate and dropped out of lexicons. In the analysis below, I will underline those are still actively used, those that have been relegated to synonyms.

In scrutinizing the *Talimun Caffrum* as a succulent from the Kalahari Desert, Bruce Hargreaves (1979) pauses to highlight the unusual character of the plant name and to proffer an apology for its use and why he chose to use it, even at a time that the apartheid system still waxed strong. "I apologize for using a racist term `caffer,' or `kaffir,' a term derived from the Arabic for unbeliever, is the South African equivalent of `Nigger' -- but I didn't name this plant."

It is a rare confession in a scientific analysis, one that would put to shame botanic lexicons published in South Africa, post-apartheid, that failed to call attention to their own blind acceptance of this term. Examples of such texts would include *Shackleton et al (2002).* Hargreaves's dilemma stemmed from the *Talimum*'s appellation being the scientific rather than popular botanical name. In other words, being no linguist, his framing left him with little choice other than to use the term. Hargreave response raises the question of how much leverage botanists, nurserymen, and gardeners have in their choice of plant names, and how conscious are they of the racially derogatory implications of referring to various plant names that are indigenous to Africa? In the US one finds many scholars in botany as well as gardeners that are unaware of the epithet in plant names for example:

- *Erythina caffra*: "Kaffirboom" (Afrikaans) and Coastal Coral Tree (English);
- *Harpephyllum caffra: "*Kaffir Plums" (South African English);
-*Adenostemma caffrum* DC (a tall, coarse-growing plant considered as a weed and occurring in Southern Africa and as far as in the US; on the IUCN Red List of threatened species), also known as *Adenostemma caffrum var caffrum, Adenostemma caffrum var asperum Brenan*; *Adenostemma caffrum var longigolium* Chiov), *Adenostemma schimperi* and *Adenostemma lavenia*. It has no recorded vernacular names (See Harvey 1894: 44);

- *Pseudagrion caffrum:* springwater sprite (English), a damselfly species in the family *Coenagrionidae* and which occurs in South Africa, Lesotho and Swaziland along montane strems with grassy banks (See Samways 2008, Tarboton 2005);

- "Kaffir potato" (Latinate scientific name *Coleus langouassiensis* A. Chev 1905; Synonyms *Coleus dazo,* A. Chev. 1905; *Plectranthus floribundus,* Nicholas Edward Brown and *esculentus*, G. Taylor 1931[4]);

- *Harpephyllum caffrum* Bernh or African Wildplum. Synonyms: *Portulaca caffra,* Thunberg 1800; *Claytonia caffra*, Kunze 1891; *Talinum esculentum*, Moritz Kurt Dinter & Gustav Ludwig David Schellenberg 112;
- Or to take a popular vernacular name of a plant widely used in the US "Kaffir-lilies" which has for scientific name *Clivia minata* or synonym *Schizostylis coccinea*.

Take note that in the examples demonstrated above, while the Latinate science names are subject to revision, it is not the case with vernacular nomenclatures. This disposition to revision and consensus in Latinate nomenclature shows that while the system is conservative it is also more flexible to adaptation than vernacular patterns.

**Differential Stress Patterns and Meaning Production**

There are contrasting variations in stress patterns in regards to Latinate science and English as well as Afrikaans vernacular South African indigenous plant names that are considered derogatory. Firstly, Latinate naming processes place less emphasis on the species of the plant. In this way, the outcome could be said to be more "objective" and less derogatory. *Acacia caffra* says much more about acacia than *caffra*, *caffra*, being only a specifying term. On the other hand, the Afrikaans and English vernacular places emphasis on the origin of the species and less on the family: e.g., *kafferboom* (*erythrina caffra*), or *kaffir* corn.

[4] http://www.bihrmann.com/caudiciforms/subs/ple-esc-sub.asp

Glenhill (2008: 82) sees the term as used in South Africa, meaning pertaining to unbelievers, with the origin being from the Arabic term “kaffir” or “kafir”. “Kafir” with a single “f” is largely used in terms of “disbelievers” in Afghanistan, or in reference to an ethnic group of African descent in Sri Lanka. While some critics have argued that the original meaning of the term prior to the introduction of segregation and the apartheid system in South Africa was more descriptive than derogatory, it appears to be a matter of degree. The original Arabic sense of the term tends to have been both descriptive and pejorative in that in discriminating those that aren’t Muslim. This practice is still rife in in Muslim countries of the Middle East where non-Muslims are made fun of (e.g., Hamid 2016); mocked as unbelievers or outsiders; or in extreme cases, cast as polluting, and subject to harsh penalties. Speaking in the South African context, and particularly in relation to plant nomenclature, Smith underlines, "Kaffir is not infrequently used in a derogatory sense to indicate some alleged inferiority..." Observations of various usages point to ”kaffir” as meaning “pertaining to Africans”, “inferior in terms of quality”; “wild (as opposed to domesticated). It outlines humans in terms of lack: of status, culture, and intellect; they are often seen as comical, uncouth, primitive, dispensable and disposable. The term “kaffir” is opposed to “nigger” which implies inferior, but largely as a result or its essential dark or brown quality. However, the affects they produce in those that feel targeted for ridicule are not disimilar. Although many name changes have been made in South Africa since the end of the apartheid regime, a host of place names that are obviously offensive have somehow been overlooked. Added to this fact is that Conservative sentiment tends to be slow in particularly rural areas. The list of places and objects appears to pertain mainly to white farming settlements and farms. These are areas of the country that are predominantly dominated by Euro-Africans, sparsely inhabited by Blacks (most often indentured farm workers) and where settlements are far flung from one another rendering null any efforts to mobilize for change. Some critics might say that they are mainly “insignificant” rural settlements or small “white” towns far away from the major metropolitan areas where progressive blacks are concentrated. It will not be farfetched to suggest that they are Black farm worker residential areas, attached to Euro-African farms. Among these, one finds:

*Kaffirspruit:* farm located in Dr. Ruth Segomotsi Mompati District Munic., North-West
Kaffir Spruit: a place with a small population located in Mpumalanga;
(A similar name pertaining to the Khoi-Khoi) is Boesmanspruit, a small stream originating south of Secunda, Mpumalanga);

Kaffirs Kraal: a farm located near eMzinoni, Mpumalanga;

Kaffirskraal: a farm located in Grassdale, Chris Hani District Municip. Eastern Cape;

*Kaffirs Dam:* a farm located near Hopetown, Northern Cape;

*Kaffirskloof:* a valley farm in Pixley ka Seme District Municipality, Northern Cape;

Kaffirskraalleegte: located in the Western Cape;

Kafferskraalshoek: a farm located in Central Karoo District Municipality, Western Cape;

Kaffir Pan or Kafir Pan: a farm located in the North West Province;

Kaffirs Kolk: a town in the Northern Cape;

Kaffirs Hoek: a farm in the Eastern Cape Province;

Kaffirsdraai: a farm in Waterberg District Municipality, Limpopo Province;

Kaffirs Dam (also Kaffersdam, Kafirs Dam, Kaffirs Dam, Kaffersdam, Kafirs Dam): a farm in Pixley ka Seme District Munic. near Plooysburg, Northern Cape;

Kaffirs Berg: a hill farm located in Cacadu District Municipality, Eastern Cape;

Kaffersfontein: is a farm and is located in Central Karoo District Municipality, Western Cape, South Africa; also refers to another farm located in the Limpopo.

Kafir Krants: a farm 3,496 ha located in Northern Cape;

Kaffirpoort: is a farm located in Capricorn District Municipality, Limpopo;

Kafirsleegte: a farm and is located in Chris Hani District Municipality, Eastern Cape;

Kaffir Zwart: a farm located in Khara Hais, Siyanda District Municip., Northern Cape;

KaffirZwart: another farm located near Karos, Northern Cape;

Kaffirskop/Kafir Kop: a hill in the Western Cape;

Kaffirkop: also a farmstead on a knoll in Free State;

Kaffirstad: a ‘native’ village, railroad siding in the Orange Free State;

Kaffirstad: farm in Bethel, Mpumalanga.

Looking at the above list, it is surprising that they mostly pertain to farms or farming settlements which raises the question: is there something about agrarian cultures that encourages thinking about or resisting identity change? However, if the desire for change in these farming settlements are not strong enough, what about the survival of these terms within botanical scholarship?

**Botanic Scholarship and the K-Term**

In one of the rare critical botanic science texts published in South Africa during the apartheid era, Christo A. Smith (1966) of the Department of Agriculture Technical Services, Pretoria, while outlining the use of "common names" for South African plants, highlights the anomalous usage of particular lexical items, most importantly, the compound vernacular terms "Hottentot" and "kaffir". What is important is that he addresses the problem during apartheid-era South Africa. Beyond the apartheid period, few scientists have taken it upon them to point out the unethical usage of these terms, or how they demean other peoples and cultures and do a disservice to the promotion of science that is purified of stigma and of sustainability practices in conservation. That Smith's text, when seen from the spectrum of botanic lexicons published in South Africa for over the past 100 years, is singular in treating a problem that has only been anecdotally raised by non-South African scholars indicates the insensitivity of botanic scientists writing/publishing in South Africa who have uncritically and continue to uncritically use these plant or other names in their works.

However, the "common names" presented by Smith curiously turn out to be primarily Afrikaans names and to a lesser extent, English South African "common names" which seem to be largely derived from Afrikaans. In his presentation of 469 pages of entries of plant names, Smith does not consider the names of plants in vernacular African languages except as sources of Afrikaans or English common plant names. It is clear that the unstated readership of the work is Afrikaans, Dutch and English-speakers to the exclusion of non-white South Africans, Africans, or otherwise. Smith lists 75 common South African plant names that use the term "kaffir" or its derivative "caffra".

**Dutch-Afrikaans Vernacular Names of South African Indigenous Plants**

| | | |
|---|---|---|
| *kafferaalwee (-aalwyn)* | *kafferboerboon(tjie)* | *kafferbruid* |
| *kafferartappel (-ertappel)* | *kafferboom* | *kafferdagga* |
| *kafferalmanak* | *kafferboontjie* | *kafferdissel* |
| *kafferbesembossie* | *kafferbrandne(u)kel* | *kafferdoring* |
| *kafferbessie* | *kafferbrood(boom)* | *kafferdruiwe* |

*kafferertjie*
*kaffirfinch*
*kaffergifboom*
*kaffergras*
*kaffergrondboontjie*
*kafferkalmoes*
*kafferkambroo*
*kafferkamo*
*kafferkastaiing*
*kafferkers(ie)(boom)*
*kafferklapper*
*kafferkoffie*
*kafferkoring*
*kafferkrale*
*kafferkweek*
*kafferlelie*
*kafferlemoen*
*kaffermanna(gras)*
*kaffermanna(koring)*
*kafferpatat*
*kafferpruim*
*kafferrosyntjie*
*kaffersering*
*kafferskuil*
*kafferslangwortel*
*kaffersuring*
*kaffertee*
*kaffertjie*
*kaffertulp (-tou)*
*kafferwaatlemoen*
*kaffer-wag-'n-bietjie*
*kafferwortel*
*kafferysterhout*

**South African English Vernacular Names of South African Indigenous Plant**

kaffir almanac (flower)
kaffir bean
kaffir bean tree
kaffir beer
kaffir boom
kaffir bread tree
kaffir bride
kaffir cabbage
kaffir cherry
kaffir chestnut

kaffir coffee
kaffir corn
kaffir daisy
kaffir date
kaffir groundnut
kaffir honeysuckle
kaffir hut
kaffir ironwood
kaffir lily
kaffir lime
kaffir melon
kaffir millet
kaffir orange
kaffir plum
kaffir potato
kaffir rope wood
kaffir sorrel
kaffir tea
kaffir thorn
kaffir tree

kaffir watermelon.

**Kaffraria/Kaffrarian:**

While the name "Kaffraria" (for the Eastern Cape Region and by extension the land beyond it known as "Zulu country") is historically obsolete, its adjective "kaffrarian" is still in use, at least in terms of textual representation. Examples are seen in "kaffrarian pea" used to refer to the seeds of the *erythrina caffra (or* in Afrikaans the *kaffirboom* or *Kafferboom*).
Scientificcally, scholars continue to use Latinate scientific names such as:

*Acacia nigresens*
*Dovyalis caffra*
*Acacia caffra*
*Ruavoltra Caffra*
*Ximenia caffra va caffra.*

Not all plants do necessarily have to take the epithet *caffra* though.

**Plants with Other Epithets that Reference Africa**

Take for example the epithet *aethiopicus* in *Siphonochilus aethiopicus* (Schweinf.) B. L. Burtt, also known as the African ginger, or "Natal ginger" (English); known as *wildegemmer* (in Afrikaans), and *indungulo, isiphephetho* (in isiZulu);

Another example is the epithet *africanus* in *Eriocephalus africanus*, the scientific term for "Wild rosemary" (English vernacular South African name); also "marsh rosemary", "cape snowbush" (English); or "moorwort", "pokbos" (Afrikaans).

**Well-known Plants with the Epithet Caffra (Contemporary 'Orphan Plants')**

***Sclerocarya caffra*** (amarula)
The *amarula* is the most consequential tree in Southern Africa in terms of sustaining vast human, primate, and mammal animal communities. It is an ecologically multi-purpose pioneer tree and as a result exerts a deep spiritual and existential significance to the peoples of South

Africa. The popular medium size tree, *amarula*, scientifically known as *Sclerocarya birrea* (Synonyms: *Sclerocarya caffra* Sond; Saturnia caffra) has a translucent white sweet-sour flavored pulp covered by a yellow skin. The tree produces thousands of fruit each season, which often cover the ground like a carpet and the fruit is highly esteemed. Elephants in particular are known to gorge themselves with the fruit "until drunk". While isiZulu speakers are acquainted with the event, tourists have often been stunned unable to explain elephants lumbering drowsily or sleeping crouched on one another on the earth for hours at day. The fruit pulp is made into a popular alcoholic drink known as *maroela mampoer* or *amarula*, which is currently exported in China, Australia, Europe, North and South America from South Africa. Though formerly known as *Saturnia caffra* (Boisd. Delagorgue) and following as *Sclerocarya caffra* (Sond), these last two names have fallen on the wayside due in part to the epithet "*caffra*". How do scientists represent the plant as such? It's evident that users are in dilemma and would use the Latinate scientific name while hoping that no one protests.

The ***Harpephyllum caffrum*** (English common name "Kaffir Plum" and also "Wild Plum" as opposed to the cultured or domesticated (English? Mediterranean or European plum?) is a low-care ornamental plant in both subtropical and tropical regions. The common names are both curious with "kaffir" now considered derogatory and "wild" being an earlier reference when the plant was not domesticated. The plant has a red fruit, oval shaped and a little smaller than a plum with a red pulp that is tasty though fairly sour to the tongue and has multiple edible applications.

***Erythrina caffra*** (*Erythrina lysistemon*) when in flower is the most striking tree in Zululand, often falsely considered as exotic due to its lush reddish blooming flower petals that render the tree easily visible miles away. The isiZulu name for this tree is *Unsinsi* and the isiXhosa name, *Umsintsi*. It is called *Nsisimbane* (isiTsonga), *Muvale* (isiTswana). However, it has a host of other vernacular names: The Kaffir Coral tree (English), Kaffirboom (Afrikaans), the Cape Kaffirboom (English/Afrikaans), the Coastal coral tree (English) and Gewone koraalboom and Kuskoraalboom (Afrikaans).

***Ximenia caffra*** (scientific name) has for South African English vernacular names "Sour Plum," "hairy large sourplum," "kaffir plum," "large sour plum," "monkey plum," or "Natal sour plum". The prefixes are added to differentiate the plant from *Ximenia americana* (Orwa et al., 2009). It is known by various vernacular names in different geographical regions. Prefixes such

as which is often referred to as “blue sour plum”, “hog plum”, “small sour plum” or “wild plum” (Hutchings et al., 1996; Setshogo and Venter, 2003; Orwa et al., 2009; Nkwanyana, 2013; Hyde et al., 2015). A survey of literature showed no fewer than 105 vernacular names for X. caffra with Tanzania, South Africa, and Botswana (in descending order of importance) appearing to have the highest number of vernacular names for *Ximenia caffra.*

**Common Names With ‘Kaffir”**

**Kaffir Lily:** The *Schizostylis coccinea* (Latinate scientific name) is a unique clump forming rhizomatous perennial plant that grows nearly 3’ tall and 2’ wide. Native to South Africa, it is known for its late summer display of red, salmon or pink flowers that offer interest in the garden when other perennials have long lost their bloom. The leaves are erect, narrow, keeled and sword-shaped. Gladiolus-like flowers appear on spikes of 4-14 pink, cup-shaped blooms that are approximately an inch wide. Flowers can be deep red to light pink in color and appear in August and September. In the wild, it is found in wet areas and beside streams; tolerates poorly drained soils and makes an excellent, unusual and long lasting cut flower. It is largely deployed for sheltered sunny, moist but well-drained border for which it grows perfectly. Thus, while the Latinate or scientific name for this garden plant is not derogatory, its English common name carries much of the baggage of historical perception. More critically, the above problematic description is culled from a Washington State University web page[5]. Could it be that the institution is unaware of the harm it might bring to students, lecturers and other readers that are affiliated with it in one way or the other? While North American users of the term might be unaware of the baggage associated with the name, they might unwittingly hurt those that are potentially affected.

**The “Kaffir Lime”**

“Kaffir Lime” (*Citrus hystrix Rustaceae*) the name of “a bumpy green citrus fruit” (Anderson 2014) remains the most highlighted that is tagged with the maligned epithet. There has been extensive criticism and campaign in the West (the United States and Canada) against the use of the term (Anderson 2014, Vinje 2014, Katzer 2002, Vann 2012, Monniaux 2005), most of

[5] http://www.pnwplants.wsu.edu/PlantDisplay.aspx?PlantID=72

it directed towards restaurant chains, the mainstream media, and users of the lime. Continuing use of the term is due to the extensive use of the properties of the plant, particularly the fruit and the leaves in Southeast Asia, and a lack of cultural awareness of the status of the epithet. *Citrus hystrix Rustaceae*, to use the scientific name, occurs mainly in tropical Southeast Asia though it is also grown throughout Southeast Asia, Central America, the Mascarene and Hawaiian Islands.

*Picture 20 The "Kaffir Lime"*

Other common names include leech lime, Bergamot, Mauritius Papeda, among a long list. The journey of the lime makes for interesting tracing. Davidson and Jaine (2014) suggest that plant and fruit appear to have been introduced to South Africa by the Cape Malays who were indentured as laborers and slaves by the Dutch East India Company and shipped off to Cape Town. These authors suggest that the term must have had its origin in Southern Africa and reached Malaysia and Indonesia through the Cape Malays, before traveling Westwards to Thailand. Davidson and Jaine find that in the languages of each of these countries, the fruit has its own name, and until very recently, there has been little reason for it to have an English name. The epicenter.com lists the vernacular names of the plant and fruit in the region: In *Burmese*: *shauk-nu*; *Indonesian: jerk purut, jeruk sambal*; *Malay: duan limau purut*; *Philippino: swangi;* and in *Thai: makrut, som makrut.* While this perspective outlines a trail characterized by processes of linguistic de-territorialization and English colonialisation, another perspective holds that the name of the plant fruit derived from the *Kafir*, an ethnic group in Sri Lanka that are partially-descended from 16$^{th}$ century Portuguese traders and enslaved Africans who were taken to the subcontinent to work as laborers and soldiers, and who do not consider the term as offensive.

Davidson and Jaine in the *Oxford Companion to Food* (2014) see "Kaffir Lime" as a member of the citrus family responsible for the distinctive lime-lemon aroma and flavor that are an indispensable part of Thai and Indonesian cooking. In their fresh and dried forms, the leaves

are used in flavoring soups, curries, sauces, and gravies (Renfrew and Sanderson 105). They are often torn and added to the cooking and then taken out once the dish is ready. The dried or candied peels and the fruit's juice also serve for flavoring food. Makrut lime is sold fresh where they are grown, while dried whole and powdered leaves are found in western supermarkets. Outside of cooking, the leaves and the fruit peels yield essential oils, which are incorporated into various ointments and the rind is used for medical tonics that cleanse the blood system. Also, the cosmetics industry extracts the citrus juice as a basic component for making shampoos – in fact, it's popularly claimed that "Kaffir lime" shampoo leaves the hair squeaky clean and invigorates the scalp, while it also acts a natural bleach on tough stains. Like lemon grass and galangal, the rind is also considered to be to aid the digestive system. Equally, the juice of kaffir lime not only promotes gum health, following common knowledge, it is also recommended for use in brushing teeth and gums. More broadly, common knowledge holds that it's refreshing and cleansing properties freshen one's mental outlook and ward off potential evil spirits.

After discovering the shrub's abundant bearing of fruit and alerted the gardeners of my find, I thought they would be elated. Rather they responded with mild indifference. I realized that the lime colony didn't mean much to them except as a decorative plant. I became interested in the status of the plant among the traditional and rural isiZulu. Enquiries on my part to the caretakers of the garden into the uses of the lime met with little response. Nothing about its culinary or health uses. The gardeners weren't interested in discussing the plant. It seemed to have little use for them.

Davidson and Jaine in he *Oxford Companion to Food* (2014) have recommended users to replace the term "Kaffir Lime" (transliterated "kieffer lime") with "makrut lime" (magrood lime). Given the offensive status of the term in some cultures, the term is still in use with the broader Asian and American public. Contradicting the campaign on the worldwide web, a handful of academics in Asia, and natural scientists for the most part, continue to use the term in their publications all of which are featured in online journals. A slew of recent articles in applied science journals (Nateelak, Ludthawun, Methinee et al (2016); Tunjung, Anindito Sri; Cinatl Jr. et al (2015); Tasirin, Puspasari, Lun et al (2014); Wongpornchai (2012); Lertworasirikul, and Saetan (2010); Tongnuanchan, Benjakul, Prodpran et al (2012), indicates that either the researchers remain unaware of the pejorative status of the term or find themselves in a tight corner. The question however is why don't they use the scientific equivalent *Citrus hystrix Rustaceae* or the alternative vernacular Asian term 'makrut lime'? It is hard to imagine

that a scholar would carry out an online literature search on the lime without finding out its problematic status in terms of its "common" English appellation or without coming across the many complains from online users about its common name.

A casual examination of the shrubs and fruits to which the epithet "kaffir" is attached reveals a perception firstly that the overall quality of these objects is degraded. Secondly, they are presented as being copies, meaning "inauthentic" versions of an original.

As a whole, an analogical perception of the natural world and the human social world could be drawn from 19th century English society. While natural historians and exhibitors influenced the European public to perceive the Khoi-Khoi as the evolutionary link between primates and humans, it was the appearance of the isiZulu in England and particularly their looks, alongside their ability to learn and to speak English aas well as their ability to be "gentle" that made them appear as a replication of the human race. In other words, they were seen as an inauthentic version. The European and what pertained to Europe otherwise "the Hellenic" was seen as authentic, the black African or "Kaffir" as inauthentic; and the Khoi-Khoi or "Hottentot" as devoid of humanity altogether. These perceptions were to precede and lay the head bridges for the proliferation of the epithet "kaffir" to characterize many plants and biological life forms in Southern Africa.

Davidson and Jaime (2014), Saunt (1990), and Smith (1966) found out that the epithet *kaffir* has been widely used in Southern Africa (by colonists) in naming a diverse body of plant foods and trees. While the term was abolished in 1976, its role as a qualifier has persisted in these scientific fields. While Davidson and Jaime (2014) suggest that it would be preferable to use names less likely to cause offence, the question is how to create consensus and to have new names created when South Africa is undergoing an economic crunch to be able to afford spending on matters that could wait? Already Kooper (2015) has signaled the inability of the state to foot research on indigenous plant names in South Africa – an area in which Baba Phungula and his colleagues would be too willing to help as assistants, collaborators, or citizen scientists.

Back to the lemon stands in the fallow garden (in Manukelana) blooming with fruit, ripening before winter and dropping all the fruit to the earth, it might not be anytime soon that the

gardeners or caretakers would have use for this fruit that 'has no name'. Yet, I found them being sold in the biggest supermarket in St Lucia Town, SPAR three fruit for R15 or 1 dollar. And for over two weeks I gathered about 30 of those that had dropped to the earth and lain there for days as no bird or insect would eat them because of their tart taste. Why not harvest them for the market, I asked the gardeners? Baba Phungula's fiancée sold fruit and craft in the women's fruit market in St Lucia. The nurserymen were hard up for money. Bro' Musa's children who were all in their teens were always expecting money from him. How could they live with considerable material resources at hand, and be facing financial predicaments from one month to the next or be unable unable to meet their children's needs? I had to be careful about probing these issues too deeply for fear of hurting their feelings.

No one knows the purposes for which the African Conservation Trust had planted the colony of limes. I would suggest that they were meant as butterfly host plants though they were in an area that seemed like an orchard. Close to the patch, about a hundred feet away, is a patch of elephant grass stocks that Bro' Musa had dug and ploughed singlehandedly for months. Each time he finished a patch, it wasn't long before it was overrun again by the stock's rhizomatic like roots. When I ask him how those stocks came about, he points at the CEO of the African Conservation Trust.

"He planted them for windbreaks. We informed him that it was an alien invasive that would be hard to eradicate once it took root, and he would not listen. Look at the situation now". For someone who hardly complains, he was he was not pleased with the CEO.

Sometimes, the locals underline that these plant and animal species introductions are tantamount to calculated invasions: from transparent wall lizards that shared the home and could unmake a man's masculinity when he was about "to know" his wife, to colorful elegant grasshoppers that wrecked havoc on the meadows; or alien plants like *chromolina odorata* or *lantana camara* that suffocated grazing cows, all these could hardly mean any good to Blacks.

National efforts have since been made to eliminate the use of epithets likely to incense or emotionally injure Black South Africans as a whole. Among these efforts is when use of the word "kaffir" was introduced as calling for action in South African courts under the offense of *crimen injuria*, i.e. "the unlawful, intentional and serious violation of the dignity of another" in 1976 and in 2000 when the South African Parliament enacted *Act No. 4 of 2000: Promotion of Equality and Prevention of Unfair Discrimination Act*).

However, in spite of the legal measures put into place during and after apartheid, these terms have persisted in the botanic literature, posing a dilemma to black scholars and gardeners that love reading. More tangible public efforts have occurred elsewhere. Veronica Vinje, a master's student in Intercultural and International Communications at Royal Roads University in Victoria, began a social media campaign to change the name of the Southeast Asian fruit "Kaffir Lime" to "makrut lime"[6]. Dr. Lawrence Kirton in *A Naturalist's Guide to the Butterflies of Malaysia*, Singapore & Thailand (2014) as well as in talks to the Malaysian butterfly public[7], has initiated changes in the English common names of various butterfly species in Southeast Asia that are considered as derogatory, offensive and which constiutute ethnic slurs for the most part. Among these are "Nigger", "Darkie" and "Brownie". However, since these efforts have been outside of South Africa or Africa as a whole, they have been less recognized and applied, at least by academics and plant specialists within the continent.


*Picture 21 A pair of n-gg-rs mating*

[6] http://www.vancouversun.com/life/Kaffir+lime+tainted+with+sour+taste+racism/9964313/story.html

[7] http://butterflycircle.blogspot.com/2014/05/revision-to-common-names-of-butterflies.html


*Picture 22 The Lesser darkie (Malaysia)*

Baba Phungula is somewhat apprehensive about the phenomenon of local plants that might be well known to local Black African residents, yet are being "discovered" and named after European descendants. He says he stopped reading much this literature about discoveries a few years ago, preferring local literature on plants that literate Black Africans (herbalists for the most part) compiled for medicinal education and which he often found unpublished or extant. The next day he brings to work one such document in isiZulu that was privately published, and whose author had long passed away, without an address. He also brings an issue of *Veld and Flora* journal, which had previously published a beautiful write-up on the Manukalena founding members and their project. The article was a first such in the journal's history. Could it be that things were on the cusp of changing in South Africa after all? I asked myself. The *Veld and Flora* carried an article on a recently "discovered" plant, now known to botanists as *Delosperma Abbottii*.

*Picture 23 Delosperma abbotti (Pondoland cliff-delosperma in Eng. or Pondokransvygie in Afrikaans): a cliff-hanging species found on the sandstone cliffs and river gorges in the southeastern coastal parts of South Africa. Pictures 2 and 3 are wild; 4 is potted/domesticated.*

In 2015, Ernst Jacobus *Van Jaarsveld* named the above cliff hanging plant, *Delosperma abbottii* after the farmer, botanical explorer and founder of *PlantLife* magazine, Tony Abbott (1936–2013). Abbott brought this plant to his attention a number of years before then. The name added to a list of names of endemic plants that Abbott discovered in Pondoland and that have been named in his honor. Among these: *Apodytes abbottii*, *Lydenburgia abbottii*, *Maytenus abbottii* and *Psoralea abbottii* (Gunn & Codd 1981). The question of naming plants or butterflies uniquely after individuals of European-descent, except for derogatory cases, is taken up in greater detail in Chapter 4.

**Plant Names and Affect in Gardening and Conservation**

There's no doubt that the use of the word "kaffir" has immense power or potential to humiliate, shock, hurt, or offend - following its prior historiacal employment by Afrikaaners and English settlers in South Africa up till the end of the apartheid system. For innovative post-apartheid black gardeners who may seek to benefit from natural history and scientific texts on local plants, these derogatory epithets or word roots bring about an upwelling of emotions that appear to encourage revolt against European languages cultures. At the same time, these encourage an insular view of the world (among black South Africans) characterized by a defensive retreat into one's own vernacular language and culture. This defensive retreat could also lead to occasional hostility against things and concepts that appear foreign and that fail to "other" local perspectives and values. Baba Phungula stresses that derogatory plant names hurt not only people but might also push them to eradicate the plant in question. Such names should be uprooted from the literature, he says. But where to begin, he doesn't know as he's not an academic. The best he could do is to continue his project of exploring the deeper ontological relations between isiZulu speaking people, plants, trees and the landscape.

While, there might be some sense in Baba Phungula's assertion, it is hard to totalize the influence on different populations of derogatory or other plant names. One thing that is certain, and which emerges from the study at Manukelana, is that the derogatory names could devalue useful plants in the eyes of users or managers with implications to landscapes. This was the case that I experienced with a handful of plants in Manukelana, introduced by the ACT. Of course, there were also other local plants that were important to other cultural groups, e.g., to Indians, that the gardeners had no interest in promoting. Coming from non-locals, derogatory names may also offend locals and transform tgeir kinship with particular plants and forms of wildlife. Some might seek to marginalize or eradicate such plants = or forms of wildlife for the negative memories that their scientific or vernacular European names imprint on them. We've already seen in the 'Introduction' how radical factions in Dukuduku Forest continued cutting down the primary forest whith the hope that if they were done with all the trees within then the outside world may leave them alone with their land; and then they can replant a secondary forest as in St Lucia. Derogatory plant names do not serve the cause of conservation or knowledge production. In fact, they do the opposite.

**Articulating the Ontology of Human-Plant Relationships in Post-Apartheid South Africa**

Writing about ten years after the end of the apartheid system, Murray (2006) underlined that in spite of the country's vast and only-partially recorded wealth of knowledge over the medicinal cultural use of indigenous species, this interest in indigenous plants wasn't an expressly homegrown phenomenon. This conclusion is a troubling one when viewed against the context of nation-construction and belonging. Alan Lipman (2003) reinforces this view when he talks of white South African's reliance on or adoption of foreign ideologies, when often these do not match with local realities and cultures. Refusing to seize on and promote the richness of the local not only results from but also leads leads to an acute lack of cultural diversity and creativity.

McDermott Hughes (2011) equally outlines nature-loving white southern Africans' identification with the land and environment to the detriment of local Africans whom they subjected – historically - to eviction and exclusion. Now with the liberations movements in power – corrupt as they are - formerly white settlers find themselves in an ambivalent position. They have a tenuous relationship with blacks, and with the land, which they now hold onto for meaning. But even this identification with the environment, as in the case of urban gardening, isn't without its own contradictions. Talking of changes in gardening styles in the 1990s, lifeisagarden.com states that the 1990s gardening scene in South Africa was full of contradictions. On the one hand, newly arrived satellite television enabled gardeners to access other gardening programs or cultures worldwide. "Theme gardens – tropical, Japanese, Provençal – were popular and hundreds of architectural developments in the so-called Tuscan style were built. The result was a return to formal gardens, straight paths and flagstone paving, evergreen hedging and topiary plants". Opposing this was an indigenous movement that was projected into the social by emerging trends, which promoted not only ecologically-friendly gardening but also a rediscovery of the hitherto neglected "South Africa's beautiful floral kingdom". Coming into vogue were calls for "gardening for wildlife" meaning rendering as a part of domestic life what was hitherto considered as 'wildlife'. A flip side of this was the expansion of private parks in South Africa and the reproduction of "canned lions" for hunting. According to Munro, "The greatest happening ever in South Africa is the 1990s' awareness and use of indigenous plant material in gardens and large landscape projects. This was vital for the preservation of our plant species, and became a forerunner of the biodiversity movement of the late 2000s". According to Ballard and Jones (2011), "the inclusion of wild nature in domestic life is something of a rupture with past styles of gardening. For descendants of

European immigrants, it demonstrates a strong commitment to the local, and a rejection of the practice of reproducing generic landscapes or landscapes explicitly from elsewhere". Unfolding environmental realities also called into questions landscape aesthetics and the use of exotic plants. The incidence of droughts also added to the change process – these ensured the emergence and coming to age of water wise gardening in the mid 1990s.

In practical terms hedges were replaced by boundary fencing and walls; patio furniture and exotic containers arrived from the East, and easy-to-install water features launched a water gardening boom. Garden centers became venues for family outings, with tea gardens, children's play areas and mini zoos. The largest also had a host of satellite shops offering pool services, irrigation equipment, silk flowers, florist equipment, pet shops and outdoor furniture. They also held annual shows where landscapers created mini gardens in a variety of styles to which the gardening public flocked in their thousands. In most of these shows, blacks were either not involved ot excluded.

**Indigeneity, Decolonization, and Cultural Revival**

Indigenous naming and cultures has thus come to be a bone of contention. Ives (2014) examines Afrikaners and "Coloreds" in early post-apartheid South Africa who didn't fit easily into the category of culturally indigenous; she finds that they were deeply embroiled in discussions of indigeneity through their claims of belonging with an indigenous plant: the rooibos or "red bush". A similar case was occurring in Khula Village with the African Conservation Trust, the African Heritage Trust as white-run NGOs working with black rural youths. Known as "green fingers" or as in the case of Manukelana, "the Macgyvers of Dukuduku", the conflict pitched two equally alienated groups.

Tania Li (2000) draws attention to the above by pointing out the risks that underlie assertions that when certain groups adopt indigenous identities they could be labeled as opportunistic or artificial. There's nothing natural when a group self-identifies itself as indigenous. Li sees these identities as neither simply invented, adopted nor imposed. According to her, they emerge from acts of positioning that draw from historically sedimented practices, landscapes, and repertoires of meaning and through particular patterns of engagement and struggle. No matter how "indigenous" they became, it was only a matter of serving some end as questions of local languages and cultures never made their way into understandings of indigeneity.

## Plant Lexicons, Dictionaries, and African Vernacular Names

Various problems arise with the nomenclature of indigenous flora in South Africa. The African Conservation Trust found the issues that Phungula raised beyond their purview. Their concerns were making the plants available to the public and helping with restoring the environment, and not with knowledge production. Those concerns, they found, related more to universities. In the end, Phungula began to make efforts, less towards changing existing names that denigrated South Africans, but more towards exploring the significance of the plants "holistically". To take his effort beyond personal concerns, he began to contact through e-mail various academics that carried out research on plants as Mlambo did when he solicited for resources to construct the Manukelana Project. Some individuals replied and gave him further contacts, spelling that they were too busy with other projects to be of help. Others failed to reply at all. There was only one person that I knew who might share his concerns deeply, and that was Professor Adrian Koopan. I had used and admired his publication on the isiZulu language and culture. Koopman takes a more cultural perspective to language learning. I knew he had another title and a more recent one on Zulu plant names. I mentioned his name to Phungula and he showed me a mail he has sent to Koopman. He had received no reply. Perhaps Koopman, whom I guessed was close to retirement, was no longer at the university where he'd taught for many years. "What about making a trip yourself to Durban, going to the departments of botany and of languages and making direct contacts and presenting your concerns and project?" I asked him. It was a hard question to ask someone that's spent the past 16 years in the very same environment, working with the earth and with plants.

## Conclusion

Murray (2006) describes "indigenous" gardening within the ambit of post-colonialism as among the erratically "'sub'-versive, sub-terranean, and sub-cultural practices of colonialism outside of settler cultures." I have in this chapter examined some aspects of the ontology of human plant relationships from my collaborators' perspectives and the question of Latinate scientific as well as common English plant names in how they affect the gardeners as isiZulu speakers. The purpose of this chapter was not to examine the question of meaning but more of affect, how these names enter into practice or are articulated in practice. In "Cultural Botany: Towards a Model of Trans-disciplinary, Embodied, and Poetic Research into Plants," Ryan

(2011) calls attention to efforts in cultural botany to reconnect with the diverse knowledge systems of plants that have for ages been subordinated to a universalized model of plant life, an assertion that could also be extended to knowledge of landscapes and wetlands. In this chapter, we find that the experiences of the founding members of the Manukelana Project lead them to the basic ontologies, representations and enactments of plants, agencies, and landscapes that have been handed down to them by imperial, colonial, and post apartheid South Africa. These have largely been of a fragmentary nature, increasing economic productivity for the global market no doubt, but engendering disconnections, disaffections, and alienations between humans and sometimes wildlife and the landscapes that they inhabit.

## Chapter Four

## The Affective and Cultural Landscape of South African Butterfly Names

In this chapter, we approach the emerging encounter between tour guides and the founding managers of Manukelana Indigenous Nursery and Art Project with butterflies, butterfly nomenclature, and the frames through which colonial collectors and taxonomists named South African butterflies. The question is: how do butterflies, fragile, beautiful, and fleeting as they are, participate in giving voice to a group that has been marginalized for over a century at the peripheries of a state-managed sanctuary and Euro-African settlements? Thus, we examine the encounter between the founding managers' quest for room to maneuver these frames as they seek to co-produce or invent vernacular butterfly names so as to position the significance of locality vis-à-vis global "Western" science in terms of how butterflies are known, represented or enacted. I exploit the concepts of affective learning and knowing, collective action and empowerment and of cultural landscapes that influenced South African butterfly nomenclature. I conclude that the potential for butterfly conservation and ecotourism projects to generate tensions in formerly marginalized communities with a stake in "indigenous" forest management is high. This is largely due to the affective nature of butterflies themselves and the novelty they bring as charismatic insects that were previously conserved to the margins of developing societies. Among these tensions are longstanding issues over names, which in this project, lead to a strong local desire for the co-production of knowledge that could serve the interests of science and the concerns of local communities. Unfortunately, the contingencies of project execution within a limited time frame following funding stipulations exclude extraneous processes of knowledge production. Thus, rather than spend time connecting, establishing and consolidating relationships (affective planning), NGO experts saw capacity building less more in terms of executing the project speedily. The outcome is the unconscious deployment of anti-politics, which leads to inter-group misunderstandings, a foregrounding of differential power relations and racial recrimination.

Without group understandings of society as necessarily constituted by affect and power dynamics, neoliberal participatory governance tends to reproduce rather than diminish prior social-cultural rifts. This is highly the case in South Africa given the country's racial history.

## Introduction

In the encounter between Europeans and the New World, Stuart Hall notes, "Europe brought its own cultural categories, languages, images, and ideas to… describe and represent it. It fit the New World into existing conceptual frameworks, classifying it according to its own norms, and absorbing it into Western traditions of representation" (1992: 294). However, while Hall talks of "representations", Deleuze and Guattari (2007) reject this notion in preference for "enactment" just as they reject conventional understandings and uses of "ideology" in preference for "intervention". The two argue that the function of language is not to *represent* or *refer*, but to performatively enact "incorporeal transformations". These are transformations (as elucidated in speech-act theory) that change nothing in the *bodies* upon which they alight, but everything in the social position and situation of these bodies. In this light, Deleuze and Guattari project language as composed of *order-words.* They are not interested in how language *represents*, but in what language *does*. Examples of incorporeal transformations from Deleuze and Guattari include the effects of a judge's verdict on a person: When a judge passes down the verdict of "guilty" the person upon whom this verdict falls undergoes an incorporeal transformation. While the verdict doesn't *represent* the person or has changed the person's body, it utterly *transforms* him or her in terms of his/her status or social relations. In other words, the verdict has criminalized the person. Another example that Deleuze and Guattari use is a little more extreme: when terrorists take over a jet plane, there comes a point at which the passengers of the plane undergo an incorporeal transformation where they pass from ordinary people into *hostages*. Equally, when Zizek analyzes political transformation (see Bryant 2011) he often focuses on the discourse of the master, while arguing that the "master" provides that new signifier that reorganizes the symbolic field. In incorporeal transformations everything changes at the level of "expression" but not at the level of bodies or of the machinic assemblage. In regards to community butterfly conservation and ecotourism as introduced by Nicolas de Oliveira in Zululand, one readily traces the affective relations between project owners and butterfly tour guides about domes, butterflies, and the need to conserve forests and butterfly habitats. The conservation process is necessarily performative,

invokes power relations, knowledge or world-making processes (Tsing 2013; cited in Kirskey 2012: 205; Haraway 2013) and the meanings of citizenship.

While the performative approach to the world has not been amply theorized in conservation (see Walley 2004: 11-18) it helps to explicate Baba Phungula's understandings, or the effects of imperial/colonial butterfly names on his thinking. Deleuze apart, this chapter continues to exploit Ingold's space/landscape distinction in "Temporality of Landscape". This implies that we travel to 19th century imperial South Africa to scrutinize butterfly nomenclature, the imperial "structures of feelings" (Williams 1978:131) and world-making processes. In other words, grasping the cultural landscapes that animated collectors and lepidopterists and which they sought to enact in turn. "Temporalizing the landscape" implies approaching it as a living process, how it is dwelled, rather than as text to be interpreted. It also means envisioning how actors relate to place, time and particular objects (butterflies, indigenous plants) through memory, including when these memories are of other places and other times (Bender 2002). Finally, we outline the instance where the founding members' efforts to name butterflies in isiZulu rather than lead to excitement and the co-production of new knowledges in an era of neoliberal openings, black empowerment and decentralization, instead leads to a blockage - a dovetailing of the ordering of *nature* through knowledge and technology in the past (i.e. naming butterflies) by the ordering of *society* through power and culture (i.e., the refusal of scientists not only to co-produce knowledge with locals but also the difficulty of citizen scientists to propose and have new indigenous names for butterflies validated by academic and scientific establishments.

The neo-liberalization of the environment and the introduction of ecotourism in "remote" places like Christine Walley's Mafia Island (2005) as well as iSimangaliso Wetland Park and World Heritage Site sees the emergence of conflicting categories of nature as well as of the concept of "nature" itself. It leads, among other things, to a problematization of participation (e.g., in the co-production of environmental knowledge) in top-down conservation development projects. While the Manukelana Project is a grassroots project, we nevertheless experience several factors that block democratic co-production of knowledge. Among these is the quest for institutional legitimacy seen when an actor blocks change processes because it might question the legitimacy of his or her institutional background and therefore render his or her services irrelevant; or on the other hand when an actor strives to stay relevant by remaining inflexible to the demands of funding

institutions and timelines. The implication is that grassroots projects do not automatically offer a panacea to participatory development.

**Learning to Be Tour Guides: Butterfly Nomenclature and Affective Politics**

One evening I followed a short conversation on my Facebook page about butterflies. The conversation was between Steve Woodhall, one of the knowledgeable lepidopterists in South Africa and president of the South African Lepidopterist Society (founded in 1947).

> **Steve Woodhall**: Just had a break from writing the butterfly app, and had a walk around the garden. Butterflies are starting to emerge now, lots of *Papilio nireus lyaeus*, *Acraea horta*, the odd *Acraea petraea*, *Protogoniomorpha parhassus* and *Junonia oenone.* Bodes well for the planned 'Greenwings' Tour to Zululand!
>
> **Derek Boy:** Common names for us beginners?
>
> **Steve Woodhall**: Green Banded Swallowtail, Garden and Blood Red Acraeas, Common Mother-of-Pearl and Blue Pansy.
>
> **Derek Boy:** Cool. Thanks for the update.
>
> Facebook Entry, March 2016.

Take a trip to Dukuduku Forest or St Lucia Estuary in Zululand in the middle of spring or summer. If you step out of the car where there's a wood and an open or fallow field with flowering plants, you'd soon find all the above butterflies with the exception of the Common Mother-of-Pearl which is seasonal and a little bit rare. The four others are of the 'matrix species' (Pollard and Yates 1993) meaning they are relative mobile butterflies found almost everywhere in the countryside and are also virtually present all year round. Their vernacular English names are easy to learn, to repeat in terms of phonemics and to consign to the consciousness. On the other hand, the Greco-Latinate scientific names tend to be abstruse, difficult to pronounce, and to memorize except with much effort, time, and motivation. The situation would probably be worse if one's cultural background sees European colonial languages as historically oppressive. The outcome is that most tour guides, in spite of repeated calls from their trainers to familiarize themselves with the Greco-Latinate scientific names and use them, would rather not. They see learning another colonial language

beyond English as a waste of time, that is, if they could as well use South African vernacular or 'common' English names. For a black African, part of becoming a tour butterfly tour guide includes learning about the disagreements or conflicts over butterfly names, i.e., official Latinate nomenclature and vernacular names which has been a perennial problem among natural historians or lepidopterists and also between factions in the above groups and the rest of the butterfly public. Most of these debates have been in the countries of the north or in postcolonial countries with large populations of people of European descent. Beyond the above, part of becoming a butterfly tour guide or gardener or conservationist is also learning about the contradictions that "butterflying" or butterfly ecotourism brings in terms of race, class, and nomenclature.

Writing about "the butterfly people" William Leach (2014: 82) states that "as natural history spread throughout Europe and America, it offered nearly unconditional communion with the beauty and power of nature". This unconditional communion and power of nature continues till present. In the past, it could be seen in the zeal of butterfly collectors, one only broken by advances in audiovisual technology, global travel and the socialization of education. While the art of collection is long gone, it's been replaced by other practices e.g., professional tour guides, censuses, and claims of "who's in the know". In the place of museums that house dead specimens, butterfly domes and open-air sanctuaries have taken their place. The same dramatic changes could be said about butterfly conservation and ecotourism in the private, public and community sanctuaries in the South. Questions over naming and meaning practices and the diverse ontological relations and possibilities emerging in the south constitute some of the forthcoming pressures. But these changes wouldn't come without misunderstandings, resistance out of institutional legitimacies and other vested interests. While illuminating the drive that underscored processes of collection and classification and naming, Leach (2008) fails to underline that the "unconditional communion" was exclusively limited to Europeans and Americans and that it was largely a middle class and white intervention. The implications of this encounter were to shape the science of butterfly and moth studies, i.e., Lepidopterology, up till the 21st century. Until then it would remain largely unaffected by the contribution of non-Europeans in terms of classification and naming.

The opening of the field by the contingencies of conservation, climate change, and decolonization all of which would necessitate the participation of non-Europeans in conservation and ecotourism management, would bring issues of naming, learning and as such knowledge production in

butterfly science. These issues, particularly around naming have remained largely limited to natural scientists and entomologists or lepidopterists. Few that are deeply concerned with conservation have turned these “matters of fact” into “matters of concern” (Latour 2008; Bonta and Osborne 2009). Among these questions over nomenclature are those that relate to Latinate scientific nomenclature on the one hand and to (English or European) common names on the other as well the status of local African languages in enacting and communicating knowledge of butterflies.

Going further, interest in indigenous or local knowledge has grown rapidly over the past few decades. Policy makers, researchers and practitioners across many disciplines have come to recognize the affective significance – to say the least - of local people's knowledge, perceptions and cosmologies in planning social and economic change programs and in managing and monitoring ecosystem processes and functions around the globe (see Lauer and Aswani 2009). This increased appreciation of local knowledge has paid dividends particularly in the fields of international development and environmental management (see Lauer and Aswani 2009). However, not in every field of conservation endeavor have these knowledge practices taken hold or is their need seen as relevant to project management. One of the most striking is that of butterfly watching, breeding and conservation.

With the emergence of micro-faunal ecotourism in butterfly farming, ranching, or housing, or with the practice of “butterflying”, local breeders and guides have found themselves faced with various problems. While 4000 species of butterflies occur in the Afro-tropical region, an area that encompasses sub-Saharan Africa, Arabia and Madagascar and of these 4000, their local or specific indigenous names are rarely known. Local knowledge relations on butterflies or closely related species such as dragonflies, and even flowers plants in sub-Saharan Africa are rare to find in the academic or everyday literature. In formerly colonized countries with large European settler populations, the imposition of butterfly names deriving from European colonial languages also poses another problem as these languages come to compete with the local within different spheres of life. In terms of learning and communicating about butterflies while expert efforts to enforce Greco-Latinate scientific nomenclature leaves non-expert Europeans ambivalent, it throws non-Europeans off their feet for the most part. The latter see theses nomenclatures as articulating understandings and ontologies that make the perceivers look alien in the world of butterflies -

visitor experiences that I found to be quite common in butterfly domes, gardens or sanctuaries. These feelings of alienation aren't new to English speakers or speakers of other languages. For over two centuries, Euro-American butterfly collectors and lepidopterists have grappled with the question of nomenclature in butterfly collecting cultures, exhibitions, tourism as well as biological and conservation science. The basic question in mainland Europe and the US has been whether to abandon Greco-Latinate scientific names in favor of vernacular names. Outside of Europe, the problem is more complicated given firstly, the place and status of European colonial languages and of indigenous African languages in butterfly conservation- ecotourism; secondly, the composition of Greco-Latinate scientific names. How does the existence of 'other' languages and cultures challenge processes of knowing butterflies and managing conservancies and sanctuaries? The marginalization of indigenous African languages brings into focus processes of naming and categories of relevance, challenges in regards to learning, knowledge production and how all these affect users' identity, enable de-colonization and empowering of the historically disenfranchised.

Our focus here is with the use of Greco-Latinate-scientific and English/Afrikaans nomenclature to communicate with a lively butterfly public, most of who have no inkling of the language. It starts by examining difficulties faced in training butterfly guides to identify butterflies in the wild or in domes and to memorize and articulate host plant and butterfly nomenclature. In scrutinizing this event, as well as an incidental effort to create isiZulu names for butterflies and how it meets with systemic challenges, this chapter highlights the role of affective politics, otherwise, how issues around representation or enactment e.g., of butterfly nomenclature, influence subjectivity, perceptions of fairness, knowledge production, organizational dynamics and as such sustainability goals.

**Butterfly Guidebooks and Organizations in South Africa**

While there's been a growing body of guidebooks in South Africa since the 1970s that inventory various species, their habitats and behavior for researchers or hobbyists, these have been mainly in European languages, particularly English. More so, they are designed to cater to the interests of Euro-Africans (i.e. South African whites) and the European "butterflyers" (i.e. often butterfly/birding enthusiasts) flying to Africa. The above classes, whose interests are conservative or limited to natural history, populate butterfly organizations in South Africa. Examples of these

include the Lepidopterist Society of Southern Africa (LEPSOC, established in 1983 by Mark Williams and previously known as South African Butterfly Conservation Assessment (SABCA)' and the less established Conservation of Butterflies in South Africa (CBISA), established by Earle Whiteley in 1993. Besides the above, there are also butterfly and indigenous plant breeding organizations, and various informal Facebook groups with interests on the butterflies and host plants of the southern African region. Few South African blacks feature in these organizations.

Private and public gardens offer weekend talks and specialized natural history courses, and visitors are encouraged to make use of the opportunities that are provided to learn more about biological diversity present in and outside of national botanic gardens. Most of these gardens however are patronized and managed by Euro-Africans. The ownership and management is not a problem as much as how the gardens are spatially constructed. As Rasta responded to my early critique of the 'disorderliness' of the Tea Garden in Manukelana:

> When we set out to restore this site from the damage of plantation forestry, we wanted to reproduce Dukuduku Indigenous Forest as we know it, not a white man's garden as in Kirstenbosch. We wanted a *place* with free growing trees that were in competition, woven by lianas and climbers, naturally occurring orchids, weeds, falling branches, birds that come and go at will, all that. What we wanted was an indigenous dune forest close to our nursery. We never thought of a garden. We knew *it* would take time, but we were ready to grow it.

Nestled at the eastern foot of Table Mountain in Cape Town, Kirstenbosch National Botanic Garden (2.039 mi²), established in 1913, is a World Heritage Site. It is the most extensive garden in South Africa and one of the most beautiful in the world due to its unique biome. While Rasta's description challenges the overriding nature of universal categories in terms of plant and butterfly names are of more relevance than the local and the particular. The latter tends to be overlooked, with consequences on broader environmental sustainability and governance goals.

**Enacting Euro-Centric Ideologies: Public Gardens and Biodiversity Protection in South Africa**

Thus, each time, when I ask the managers of Manuakela, what about visiting some butterfly sanctuaries and gardens in KwaZulu Natal, there was hardly any enthusiasm. My thinking was that nurserymen and gardeners would love to visit and experience other gardens. When I bring them a stack of about 150 old gardening and landscape magazines that the management of the lodge in which I lived wanted to get rid off, only the tour guides are interested in having them. The project managers complained about mainstream European culture being splashed from page to page as if to mock non-middle class non-Europeans in South Africa. I'd thought that we could pick out some ideas on gardening from the magazines to help with designing the project. What was evident to me was that deliberate exclusionary policies and practices over space that were pursued by state and settlers during the colonial and apartheid periods created and fueled an impetus among Black South Africans to reflexively self-exclude themselves from particular spaces as a form of protest or resistance. This has continued past the official end of the apartheid regime.

Together with biodiversity partners and volunteers from universities, museums, natural history societies and other research institutions, the South African National Biodiversity Institute (SANBI) has been inventorying biodiversity in its botanic gardens for the past several years, and currently has faunal species lists for birds, mammals, reptiles, amphibians, fishes, butterflies, dragonflies and damselflies, mollusks, spiders and scorpions. It has however done very little in terms of local or "indigenous" cultural knowledge or relations with most of the above or even names.

Part of the reason and the outcomes as well is that few black African families visit these spaces in terms of the total population. Scholars have as such pointed out to the disproportionate interest in botanic gardens and wildlife parks between black and white South Africans. While their ideologies of space might have be different, fragmented historical relations with the environment, deficiencies in formal education especially at high school level and the and the privileging of middle classes especially white in terms of natural history heritage have been consequential.

Most of the butterfly tour guides I interviewed, observed and lived with for varying periods of time and in different domes and sanctuaries, told me that they had little knowledge or practice of biology before they graduated from high school. Most remember learning a bit about butterflies when it came to studying processes of insect metamorphosis, which is a critical subject in biology courses across English or second first languages speaking countries. Beyond that most learned little about

insects to be able to identify them.

**From Butterfly Consciousness to Butterfly Names**

Natural historians and insightful lepidopterists have commented on the lack of human consciousness over the presence of butterflies in the environment. “It is astounding,” Nabokov underlines in *Speak Memory*, “how little the ordinary person notices butterflies.” “Taking notice,” he said, is the first step towards knowing, and knowing can lead to love”. However, after tacking notice of butterflies in their variety within a particular habitat, what often follows is how to differentiate different species. Valynda Mayes (2012) right states that, “knowing the identification of a plant, animal, or other living thing is the first step in caring about that species and its environment”.

After spending countless weeks talking with policy-makers, bureaucrats, politicians and teachers in Zululand, Nicolas discovered that most knew little or ever paid attention to butterflies or insects beyond childhood. He attributed the problem to how they were brought up. In view of the lack of interest and the difficulties that adult learners (and amateur naturalists) face in learning Latinate butterfly and host plant names, he encouraged domes to interest kids and young people from their neighboring communities in butterflies early. His idea was that kids tend to have fresh minds and to be *naturally more* curious than adults; easily notice butterflies and learn far more easily. By collecting butterflies for domes and taking part in butterfly censuses, they would be more disposed to identifying, knowing and appreciating different insect species, plants, and animals very early in life. For the above reasons, he encouraged the community butterfly projects he helped to establish to introduce local children into collecting butterflies for their domes and to take an active part in butterfly censuses. That way they could grow up to be “natural” scientists and to constitute a pool from which butterfly domes could draw for tour guides. Alternatively, they could also be effective and passionate advocates for conservation in their respective environments, or informed citizens that could foster sound conservation policies. Nicolas had a sound vision which implemented across Zululand could help raise awareness on the environment in a critically socio-ecologically fractured country. When he informed me of the proposition, I didn’t challenge its practicality on the grounds that the history and struggles of black Africans, especially over land, rendered their participation in conservation ideals to be rather tenuous. Going further, ever since Nicolas began

working with community butterfly ecotourism, he has been personally devoted to exploring the kinds of creative projects and designs that local municipal gardens e.g., the Durban Municipal Garden, could put in place to stimulate the consciousness of kids in butterflies, insects and host plants as soon as they are about the ages of four. These projects and designs are playful, cognitive and bodily oriented, and give a sharpened dimension to the senses of smell, taste and touch primarily, as well as hearing and vision. An example he showed me were reinforced laboratory plant simulations that enable kids to differentiate plant smells as butterflies would differentiate host plants. Outside of designing such projects and community butterfly domes, Nicolas has trained three different groups of butterfly tour guides since 2007. The first were the four founders of the Manukelana Project who were in their late twenties to early thirties at the time of their training in 2007. The second are about two-dozen tour guides that Nicolas equally trained in Manukelana 2009 and 2012, all in their teenage years and who helped to establish the iSiphaphalazi butterfly nursery and dome. And finally, there is Vusi and Nomvula whose training lasted just two weeks, and in which I participated.

Of these three generations of tour guides, I found the middle group to be the most proficient and attentive to the precepts that Nicolas always encouraged. He picked up all in the group soon after they completed high school. All of them hung around their respective communities with little to do in terms of formal employment. Being introduced to butterflies opened their eyes to an entirely new world and to a mode of learning that was at variance with the harshly impoverished scholastic environment that they had experienced. With the exception of the founding managers of the Manukela Project, all the above groups were strongly appreciative of Nicolas's knowledge and teaching. Not only were the Manukelans project founders' learning complicated by age (an instance that also affected me), they were also worried that Nicolas and the African Conservative Trust wanted to own the butterfly project after helping them to obtain funding and to design and build it. The power dynamics between the project owners, Nicolas and the ACT thus critically influenced their perception of one another. I found the tour guides in middle group whom I visited at the Tembe Butterfly Dome (northern Zululand), MacBanana Butterfly Dome (South Coast, Kwa-Zulu Natal), and Eshowe Butterfly Dome (Mid-Zululand) to be very differential, devoted to tourists and attentive to the children that visited the domes or sanctuaries where they worked. For some reason, this wasn't the case in Manukelana, which was the pioneer project from which all the other butterfly projects emerged.

In the past, the founding members of Manukelana would give talks to pupils and students in the various high schools in the areas where they established school permaculture gardens. However, I was saddened each time I found Rasta asking Vusi, the young tour guide, to chase off local children that came to play in the Manukelana premises on the weekends. It was contradictory, given the large and underutilized size of the yard, the garden space, and artistic stage where the kids often longed to stage their own artistic performances. While the community was supposed to have a stake in the "business", or at least children, but that wasn't the case entirely. Most of the kids took to me early in my fieldwork and requested that I teach them English or film their performances in which they wanted to speak in English. But the project managers would chase them away for being a nuisance in the premises or for being shabbily dressed and unkempt. They didn't make for good marketing where tourists were concerned. Thus, while the project articulated particular official and theoretical discourses which funders and schange agents found promising, on-the-ground everyday realities dictated otherwise. These dictates foreclosed possibilities of affective growth in the neighborhood. In effect, generational differences meant that the project managers had often-tense relations with their tour guide employees as with younger generations in the community. Among other things, they tended to see themselves as more politically conscious and therefore more responsible than the younger generation. If not, they also saw the younger generation

These tensions created a situation where the butterfly dome experienced an unusually high rate of tour guide departures months following their training. In reality most were often recruited by mega-wildlife tour agencies that could not train tour guides in the area of micro-faunal wildlife and forestry conservation.

Most of these tour guides who I talked with never understood the tensions between Nicolas, whom they were affectively attached to, and the Manukelana Project managers with whom they had little communication.

"They are too political, those managers", most of the former tour guides at Manukela said of the managers of the Manukelana project.

The rest of this chapter will examine two responses to the problem of butterfly nomenclature and the ontological relations with butterflies. In the first part I would examine the significance of affect in learning to identity butterfly species and their names. I do this by following Vusi and Nomvula,

two high school graduates who are recruited for a tour guide and a secretary position respectively, and undergo self-training with some guidance from Nicolas. In the second part I follow Baba Phungula and Bro' Musa who underwent training for tour guidance in 2007 and since then, have struggled to come to terms not only with Latinate scientific nomenclature but also with the absence of isiZulu names for butterflies.

**The Need for Latinate Scientific Nomenclature**

What are the arguments for scientific or Latinate nomenclature and names in European colonial languages?

> If you had the task of finding common names for all the butterflies and moths, all the beetles and insects, all the living things in earth, air and sea, all the plants, of everything which now bears a Latin name in the scientific world, and if you were to be paid $100 per name upon the completion of your job, you would never receive a dollar, for you could not perform the task in a lifetime. Scientists estimate the number of insects in the world at ten million. But supposing a large number of English-speaking scientists succeeded in accomplishing this undertaking, would the learned men of Germany, Russia, Japan and other foreign countries adopt your English names? Would not the people of each country demand common names of their own particular language? Would not this result in a veritable Babel of confused tongues? Were not the scientists wise to select a dead language, the Latin, to supply the form of scientific nomenclature? All nations have accepted this nomenclature, for the learned men of all nations are familiar with Latin. Don't you think you had better give up the idea of substituting "common" names? Don't you think it would be easier to learn the few Latin names which you will require in your business?
>
> "The Reason for Latin Forms", *The Butterfly Farmer*, Sept. 1913; Vol 1. No 1

While few butterfly enthusiasts could pursue their interest without learning vernacular or scientific butterfly names, most lepidopterists or butterfly experts underline that knowing butterflies begins with differentiating them. Without attaching labels to various species, the learning process can become cumbersome or challenging. In fact, without names that enable intra-language and cross-language sharing of information about butterflies and their particular behaviors and habitats, it is

hard to communicate at length in an informed way about the genus. More so, within contemporary contexts of environmental conservation and ecotourism development (with the former characterized by climate change contingencies), only through effective and broad-based descriptive name systems can there be communication between variously concerned or involved actors.

The naturalist Carolus Linnaeus (1707-1778) brought about the binomial system of nomenclature during a period when new biotic and abiotic life forms from across the world were all coming to the attention of European scientists. There was much confusion at stake in naming these life forms and this wasn't helped by the lack of a common language across Europe. There was a critical crisis in the area of butterflies where an interesting body of scholarship was still emerging. Linnaeus and some of his contemporaries found that most well-known butterflies had more than a single common name depending on the regions of the country in which they occurred. This posed a problem of duplication to the "discovery," inventory, and classification of butterflies, which was evident when one takes a look at authors of popular guides on butterflies, and equally in communicating knowledge production about butterflies across the board. Linguistic and regional diversity meant that, butterfly collectors in the 18$^{th}$ century found it difficult to agree on which names to use. The problem is still alive today when it comes to the use of "common" or "vernacular" names of butterflies. How to cross-communicate when a people (sharing a same language) or various peoples however interrelated e.g., First Nations Peoples of the Mid-West shares different languages, have different names for the same butterfly?

While the problem might have been mild in the case of Europe and the US, the linguistic complexity in some countries, for example, in Africa, has rendered this situation daunting. This is very much so in the area of plant life. An example would be South Africa with seven languages (and the Khoikhoi language still having to be recognized) or Cameroon, which features more than 270 languages excluding English, French, and Arabic. How do locals from across the country get to communicate about a single plant that has say different names in 250 dialects?

Linnaeus thus found a critical need to standardize the names of these through a binomial (two-word) system designated in Latin, which was still the language of scholarship across the medieval and Renaissance Europe. This system underlined firstly the genus of the specimen and secondly

the species itself by virtue of its special characteristics or locality of origin. Secondly, these were effected through linguistic conventions appropriate to Latin, which also made room for appending the name of the person who first discovered the species, the one who described and named it, the date of description and naming, or by the name of any scientist that revised the specie name and the date of revision. The system enabled cross-communication between experts across a variety of languages and cultures. As tour guides in Manukelana or elsewhere in South Africa, Vusi and Nomvula, as Nicolas explained, would be able to share knowledge of butterflies with tourists and visitors whether they are German, Swedish, French, Spanish, Portuguese, Italian, Czech, or of other origin. Most of the weekly visitors to the wetland actually come from mainland Europe.

**Latinate Scientific Nomenclature and Non-Scientists**

In resolving the problem over the proliferation of common names for the same butterfly species across Europe, Africa, and Asia and South America through the Latinate binomen, the process however also created other problems. Butterfly beginners, learners, and amateur naturalists or tour guides during training often lament that they feel intimidated memorizing and pronouncing the rather long and complex Latinized names of butterflies. For example, the lack of correspondence between English word spellings and their sounds renders pronunciation a challenge for both speakers of English and those of other languages e.g., charaxes /khar'-axis/ (k) rather than /tʃaraxis/ (ch). Or how does one pronounce names like *acraea, Pyrrhiades anchises achises, Kedestes barberae barbae, or Elchochrysopsmessapus mahallakoamena, or Lolaus mimosa rhodosense?* The difficulties have led to questions over how the lay public should approach butterflies in terms of names – should they use common/vernacular names or should they forcibly assimilate and employ Latinate scientific nomenclature? The problem seems akin to that of high culture and low culture that roiled Great Britain and Western Europe in much of the 1920s to 40s. Paul Smart (1984: 104) suggests, why not stick to vernacular names, which are popular in use and often helpfully descriptive of a species, rather than to often long-winded Latinized scientific names of species that are difficult to remember? Smart and supporters of common or vernacular names have a point. For non-native English speakers e.g., second language speakers, many vernacular English butterfly names that are derived from universal colors or bird names (Glassberg 2006) are easy and fun to memorize or pronounce. Examples include,

**Colors and butterfly genera**

**Pansies**: Blue Pansy, Brown Pansy, Yellow Pansy;

**Tips**: Red tip, Lemon tip, Orange tip, Small orange tip, Sulphur tip;

**Swallowtails**: Citrus swallowtail, Green-banded swallowtail

**Swordtails:** Cream- stripped swordtail.

On the attached list of South African butterflies that follows this chapter (pages 3 – 7), we find no less than 103 butterfly species that partially derive their vernacular English name from the color 'blue'; no less than 77 that do same from the color 'copper' (pages 8-13) and no less than 48 from the color browns (pages 18-20) and 30 from opal (page 13).

**Birds Names and butterfly genera**

**Swallowtail** (1741; having a tail similar to a swallow)

**Orangetip** (1747; having an orange wingtip)

**Skipper** (1766; referring to the flight pattern)

**Swift** (in South Africa we find e.g., Olive haired swift, Rusty swift, False swift, Long-horned swift, Ferrous swift (derived from a color and bird name), Twin swift, Variable swift, Lesser-horned swift, Marsh swift, white banded swift, black banded swift)

**Hopper:**

The simplicity of names might actually deceive you into not checking out the meaning of the name. I didn't for the 'pansy' until this writing process compelled me. I guess it's only when the spelling of a name or a word is difficult and when the word or name cannot be easily consigned to memory that questions of its meaning crop up. You can also readily follow the various groupings and sexual and seasonal variations as you come across diverse species. There are lots of other common or vernacular names that aid understanding. For example, butterfly names that derive from bird names. Among the South African we have the swifts (15), hairtails (15), rocksitters (12),

swallowtails (11), hoppers (9), swordtails (7), skippers (7), sailers (7) and gliders (6), among others. While not sufficiently descriptive, the above adjectival epithets constitute descriptive terms that are sufficient to depict some of the character, behavior, or look of the species in question. For those of us that do not speak English as a native tongue or a second language, it is much easier memorizing and pronouncing these two-syllable names than Latin scientific names.

**'Pronunciation Doesn't Matter'**

Rather than promote substantive ways of overcoming the problem of memory and pronunciation and meaning acquisition, a handful of popular lepidopterists, authors or natural historians from native English-speaking countries have promoted the view that pronunciation does not matter. One website states, "there is as little point about worrying over the 'correct' pronunciation of scientific names as there is in worrying over which is the correct pronunciation of English words". The experiences of non-native English speaking tour guides in iSimangaliso Wetland Park and in the other three community butterfly houses in Kwa-Zulu Natal underline that articulation does matter when you're non-European presenting butterflies and conservation science to national or international tourists and other groups. A slightly less than standard native English pronunciation from a black tour guide is easily interpreted in terms of the guide's inferior mental attributes, as if color or race naturally comes with its own essential attributes. An average or more than standard performance from a black tour guide is seen as an exception. Tour guides acquainted with questions being asked them such as "Where did you learn your English?" Excellent enunciation of the Latinate scientific names of butterflies draws in even more wonderment and praise. In all the community butterfly domes, this is considered as an essential attribute of the butterfly tour guiding process. To dazzle tourists, you have go Latinate besides showing a great mastery of the biology, ecology and behavior of butterflies. Thus, while tourists or visitors increasingly place a high premium on the knowledge and language abilities of local guides in iSimangaliso and reward those that excel, often tipping them above the entrance fee, this also drives any trainee towards achieving excellence in performing his role. The opposite instance where a tour guide is humiliated either openly or in the feedback ledger or notebook about his or her language could also be a catastrophic event as we will see below. On the other hand, while achieving excellence is a worthy dream, the road towards that dream could be rather challenging.

## Cultural Contexts and Tour Guide Training in Zululand

Adopting the scientific nomenclature taxonomy of butterflies and to a lesser extent of common English or Afrikaans names constitutes one of the difficulties experienced by non-native English speakers that train to be butterfly guides in South Africa. Complicating the situation is the subjugation and control of black Africans by the English and the Dutch through language, which became a site of contestation during the imperial, colonial and apartheid as well as post-apartheid regimes. The linguistic challenge begins with guides having to confront and overcome inherited attitudes towards English and Afrikaans. If the question of language appears somewhat neutral for younger tour guides who grew up during the Mandela years, it is heavily marked for the older generation that lived through the violent and compromised educational system of the 1960s and 70s that led to the Soweto Uprising (1976). Yet, even for these young in their mid-to-late teens, they find speaking English challenging due to having followed all their elementary and high school education in a mishmash of isiZulu and sporadic instruction in English, a language towards which their communities had a disdainful if not ambivalent attitude. In Northern Zululand, locals are averse to speaking English, widely seen as a colonial language, reserved for speaking with tourists, Africans, and other English-speaking migrants.

## Tour Guidance and Nomenclatural Articulation

Sabelo, the older guide, who was more knowledgeable, had to drill himself as a butterfly tour guide after receiving his BA degree in accounting at university. His co-option as a co-owner and co-manager of the Manukelana Project to replace his late uncle, Mduduzi, saw him as the youngest among the four. Sabelo, like most of the former tour guides that were trained by Nicolas trained at Manukelana, has a high school education. To enhance his training, he pursued very closely the last two tour guides that Nicolas trained and both of whom left Manukelana for Heritage Tours out of ill-treatment and uncertainty. He also kept steady phone contact with the ex-trainees of Manukelana now working at MacBanana Butterfly Dome (Margate), the Eshowe Butterfly Dome (near Pietermarizburg) and Tembe Butterfly Dome (close to Tembe Elephant Park). This way, he learned from them first hand, the strategies they used, the challenges they faced, and what Nicolas taught them. He was particularly enamored with biological science, registered his own NGO on wetland conservation, and contemplated doing graduate research on green frog conservation in

iSimangaliso Wetland. The consciousness of the above butterfly tour guides that were trained in Manukelana rhymed with that many of their generation that worked in the park wither as independent guides, which is a recent occurrence or with white agencies.

In fact, beginning from 2010, a new generation of black and articulate wildlife and cultural tour guides who were mostly in their twenties and thirties emerged in iSimangaliso Wetland park. These no longer saw scientific knowledge or scientific names as the monopoly of biologists, conservationists and non- governmental organization technicians. They saw it as part and parcel of their everyday interaction with the above groups as well as with tourists. These had post-high school training in conservation ecotourism, were happy to attend seminars, workshops and conferences and spend time in their offices in St Lucia after work reading on the internet, communicating with potential travelers and enhancing their websites. They are no longer shy in combining their knowledge of botany, the life sciences, using scientific nomenclature in addition to indigenous knowledge and its systems when they speak to the media or with white clients they take on tour. Not only does that enhance their stature, it also reflects that they are abreast with developments in the field of science, the environment, and media and ecotourism, and are up to date with names and terminologies that have since found their way from academic texts into newspapers, television, radio and the worldwide web, as well as everyday speech.

Rather than give up face to face with the language challenge, these guides and Sabelo saw the language challenge as opening doors to them to engage a unique career in micro fauna ecotourism that called for detailed on the job knowledge that was educational. The job requirements also enabled them to sharpen their cross-cultural communication skills through interacting with a diverse cast of white peoples and cultures from beyond South Africa. They saw the training and the job as preparing them for a new South Africa that rewarded those that were open-minded and that worked hard.

**Case Study of Vusi and Nomvula as Trainee Tour Guides**

I followed the struggles of Vusi and Nomvula, who weren't acquainted yet with the above tour guides, as they went about their training with Nicolas. As an observer filming the processes and a learner that had only recently taken up butterfly conservation and ecotourism as a research topic, I was keen about what it took to be an effective butterfly tour guide and what motivated the two

trainees.

For three months, I had watched Vusi hang about the Manukelana offices without supervision. He knew little to nothing about butterflies. The founding managers of the project were in an sharp disagreement about management of the butterfly dome. None of them was willing to assign Vusi to any on-going project. None was equally willing to begin the process of training him to be a butterfly tour guide. The four managers who were also owners of the project had conflicting views over the butterfly project – as the signature project on the Manukelana premises. Due to its income and its relatively high visitation numbers as well as its popularity with the world outside the project, the butterfly dome had witnessed significant struggles over control by the managers since its establishment. The divisive nature of these struggles had seen all three founding managers stay away from the dome, except for Sabelo, the youngest of them who had substituted his uncle, Nduduzi who was of late. Though Sabelo was a very effective, knowledgeable and self-trained tour guide, the unsustainable conflict between the three founding managers also scared him off the premises. Sabelo was so disappointed that he began to look for alternative employment. The result was that the butterfly dome and its host plant nurseries were in a state of free-fall. Besides spiders extending their webs inside the dome and gobbling up the butterflies leaving only a few, the plants dried up for want of watering while the restless coastal wind began tearing apart the netting that covered the dome.

At the end of February, after watching the managers in a very depressed state since they had little income for the months of December, January, and February, which is the high tourist season in South Africa, I urged them to phone Nicolas to come to their rescue. Nicolas, always willing to intervene and save his “baby-project” from vanishing, turned up with his best student, Kay, who was also the manager of the Eshowe Butterfly Dome. Kay took to repairing the roof of the dome; while Nicolas turned to training Vusi and Nomvula. Vusi was very excited. He was happy to rid himself of his outcast status. The first thing that Nicolas - following three days of introductory lessons to Vusi and Nomvula – did was instruct the two was to memorize the Latinate scientific names for local host plants and butterflies and to be able to identity them inside and outside the butterfly dome within three weeks.

Vusi and Nomvula panicked.

The three-day training was intensive, detailed, and very affective. Nicolas combined theory and practice of biology and taught them on how to use the various butterfly and host plant texts and butterfly charts in the office. The next two days were spent in and outside the dome, following butterflies and probing plants in the environment. They were devoted to the five senses and particularly the sense of taste, smell and touch and how to distinguish host plants. To round up, Nicolas underlined the importance of the Latinate scientific names of host plants and butterflies, gave them more memory tips, including testing one another. Nicolas left to research plants in the wilderness, promising to come back and test Vusi and Nomvula in three weeks' time, as part of their certification process.

Vusi and Numvula immersed themselves all day long into notes that they took during their lessons, and into a set of guidebooks in the office (Steve Woodhall's *Field Guide to South African Butterflies* 2005; *Pocket Guide: South African Butterflies* 2013; *What's That Butterfly? A Starter's Guide to Butterflies of South Africa* 2012; and Steve Woodhall and Lindsay Gray: *Gardening for Butterflies: Planning and Planting an Insect-Friendly Garden* 2015), as well as stapled photocopied notes by Nicolas. Using the *Field Guide to South African Butterflies* as a Bible and the notes by Nicolas, Vusi and Nomvula began to memorize the names of butterfly host plants, as well as common and uncommon butterflies in the region.  For Vusi, learning the Latinate names seemed like confronting difficult anagrams. For Nomvula they were simply too difficult to grasp. Both had initially complained to Nicolas and he had painstakingly and jokingly done his best to give them memory tips, sound examples, and then tested them briefly to see if they followed. From teaching them to crush the leaves of plants and smell them so as to be able to remember and tell their distinctive smells, to "becoming" particular butterflies as they came and went on nectar plants or searching for the perfect larval host plants on which to lay their eggs, and other word-memory games, Nicolas hoped to set the learning process rolling. Following a few failed attempts by Vusi to engage Nomvula in question-answer quizzes that would help them with rote learning, he wished he were in a formal classroom or had a group of colleagues to learn with. For a moment, I thought he would give up. But surprisingly, he didn't.

He spent much of the working with a guidebook in hand, crisscrossing the yard, checking out plants and butterflies in the indigenous pant nursery.. the butterfly nursery and the dome itself. He revisited the exact host plants Nicolas had introduced them to, taking images with his cellphones.

He opted to take care of potted plants in the nursery and arrange them so as to be able to tell their names on sight. While his earlier attempts to keep himself busy when he was recruited were unfocused, now his interest was geared towards the plants and their various names.

Fortunately, Baba Phungula and Bro' Musa had the all the plants names printed on signage boards next to each species. Each species had its Latinate scientific name, English common name and isiZulu name on each little board. Often Vusi would beseechNomvula to come with him to the indigenous nursery or to the dome to learn. He would question her on the names of butterflies and plants that they went past and about those on the butterfly nursery and those inside the dome. And so they spent the day trying to get right as many names as possible for an eventual exam that will qualify them to work as tour guides.

Vusi spent the next two weeks in and out of the Manukelana office, very absorbed, reading and consigning the guidebooks to memory, while Nomvula was uncertain about staying the course. Having her father in the business as a founder and a co-manager meant that she had little fear about losing her position. Not so for Vusi who had fewer choices of being recruited outside of Manukelana. He didn't bother himself with Nomvula's sitting in the office, mirror in hand placing cosmetics on her face, or with phone in hand chatting or looking up friends on Facebook. For a year after he completed high school, Vusi had loitered at home, wondering what to do with his life since his parents could not afford to send him to university. Now that he found the opportunity, he was under enormous pressure to succeed.

However, each time he asked the project managers questions over the identifying details of particular plants or butterflies, they would direct him to the guidebooks in the office. "All you need to know is in the books. That's how we learned". To Vusi, the response seemed like a convenient pretext to shove him away from their sight.

Unlike Vusi, the co-managers never learnt as individuals. They had a strong cooperative relationship deriving from their challenges and the "structure of feelings" that characterized the late 90s and the first decade of the 21st century. Because one of their driving motivations to start Manukelana was to prove to the rest of the community that young isiZulu-speaking people could work together and could succeed in establishing and running a business venture, they had co-supported one another while learning. What then about transmitting that experience and knowledge

potential to the young? When I ask Vusi how he felt about knowledge transmission between the project managers and himself, he shrugs his shoulders. “They are the managers and I am the employee”. Vusi desisted from approaching them with questions. Apparently, a new class structure was in the offing.

Left alone, Vusi and Nomvula were confounded for the first week since they could not access the morphological structures of the scientific Greco-Latinate names or the meanings of the common English butterfly and plant names. There were no tools that they could turn to: like extra school textbooks, a school or community library or the internet. The latter was unevenly distributed in the country and they weren’t even aware that it could help them in carrying out searches. Finally, there was no teacher in the vicinity who could help them with Latin. In fact, not being Catholic, they weren’t even aware what the word “Latin” meant nor were they able is to be able to recognize Latinate nomenclature and words derived from Greek cultural and historical heritage.

It’s then that Vusi turned to me to practice his gains and I gladly became his student. Having set his target to knowing three butterflies and their host plants a day, Vusi seemed to be meeting with his goals. “Which butterfly is this?” “On what host plant does it lay its eggs?” “On what host plant does it feed?” “Why’s the milk week poisonous?” “How many butterflies use the milkweed as a host plant”? “Which is more important for knowing host plants: the English common name, the Zulu name, or the scientific name?” Often his pronunciation of the latinate-scientific names was very flawed, but he cared little. Thus. rather than produce in him dis-affective feelings towards the environment and knowledge of it, the “challenge” of identification and nomenclature spurred Vusi to prove himself until he achieved relative proficiency. However, if there’s one thing that Vusi and Numvula found to be just as puzzling as the language they were obliged to master, it is that butterfly species weren’t named in isiZulu and Europeans did not bring butterflies to Africa.

**Critique of Latinate Scientific Names: Memorizing Names**

The Linnaean system structured the naming system, but it also gave rise to conflicting name patterns that rendered learning i.e. memorization, pronunciation and meaning comprehension difficult. At the level of pronunciation of the Latinate names, which Nicolas asked them to master, Vusi and Nomvula could at best stutter on the few they tried to master. I could have helped with scrutinizing the phonetic or syntactic interferences between isiZulu and the Greco-Latinate science

names in Vusi or Nomvula's speech production so as to help them. As a former English teacher, I thought of suggesting the idea to the project managers, but the everyday tensions and my own precariousness too in the project held me in check. When I playfully tested Vusi (as we always did) after a few days of learning, on how much he knew of the names of butterflies and host plants that were specific to Dukuduku Forest (there are about 30-40, he could make out seven using their scientific names. Nomvumla could make out only three. When I asked both about the meanings of the names, they said they knew nothing about the meanings. My own efforts at memorizing the Latinate names had also been self-defeating. In changing my research mid-stream, I had to personally wait to reach the US to buy texts on biological scientific Latin e.g., Jaeger's (1955) *A Sourcebook of Biological Names and Terms* as well as Jaeger's (1960) *The Biologist's Handbook of Pronunciations,* a few on systematics.

Beyond studying a few names of the most commonly occurring local butterflies and their host plants, Nomvula, who had just graduated from high school, gave up the training and focused on being the office receptionist. Contradictorily, she was the only individual I learned who had given up training as a tour guide. She wasn't really interested in butterflies or talking to tourists, she said. One of the managers commented that that Nomvula tended to be slow, while I felt that the very masculine nature of scientific Latin had pushed her to lose interest. Besides, having Bro' Musa as her father left her without the pressure to succeed.

**Empowering Languages: Vusi and Tourists**

As soon as Vusi had complete grasp over a functional stock of names and could now extend his corpus with ease, he became a convert to Greco-Latinate butterfly and host plant nomenclature. Now and again he would test my knowledge on specialist plants and rare butterflies coming up with the each changing season. If I didn't know, he would go ahead to call out the Latinate name, the English vernacular name and then test my memory shortly after, just to be sure that I had internalized it. Gradually Vusi's knowledge of butterflies and host plants becomes so adequate to his job that I begin to tell him, "Vusi, you know everything! And it's just been a few months!" This is a great complement for a young person in a society where to be young is traditionally considered less knowledgeable and where one is also constantly made to see oneself in terms of lack and failure.

My praise leaves a visibly positive effect on Vusi. It doesn't take long for him to discover the limited knowledge of the project managers on butterflies and more so butterfly host plants and their relationships with butterflies, especially when you have several competing host plants for a single butterfly species. Vusi begins to receive praise from tourists in terms of his passion and effort and subsequently, the breadth of his knowledge. His tips increase just like the positive comments on the ledger for visitor's feedback. Other tourists would prefer to challenge him on his knowledge and if he showed them the butterfly and host plant texts that to prove them wrong, they would point to his accent. These petty fights frequently occur between tour guides and a minority of tourists, often in groups, who'd usually claim to be in the know, or have a tendency to under-look or to abuse others. Whereas Vusi used to work from Monday to Friday, now he adds Saturdays and even Sundays. Six months after Vusi had his training from Nicolas, it began to appear to me that he knew the three names of most trees, plants, climbers and a majority of the butterflies that are brought into the dome in Manukela: i.e. the Greco-Latinate scientific and the English and isiZulu names.

**"It's Only Scientific Name that Matters!"**

With increased knowledge on the part of Vusi, comes confidence and a twinge of arrogance. Once I was with him in the dome and filming butterflies and I overheard him scolding three female tourists for talking among themselves while he was lecturing their parents on butterfly behavior. The young women were all above 18 and from Spain, "You have to stay quiet and listen to me when I talk. If I am talking and you are talking at the same time, how can you learn? Here in the dome, I am the teacher, and if you want to learn you must listen to me".

"Okay, Mister, we're sorry for talking! We would listen", the women apologized, stopped talking and went about taking pictures of flying butterflies. I was quite stunned by Vusi's utterance and didn't know how to caution him, especially as he had grown up in Khula and was hardly exposed to other cultures. No one had taught Vusi on how to conduct himself with tourists. Or that once you introduce tourists to the dome, there are some that would like you to take them around, point out stuff to them, and give them lectures. There are some who would prefer to be left alone to explore the dome quietly. As a tour guide you have to tailor your services accordingly. It was Vusi's remonstration that made me realize he had come a very long way from being timid learner,

fearful of taking "whites" around the dome, and quite scared of his halting English at the beginning. At another time, I was equally filming when he broke into an argument with another female tourist over the relevance of English common names and Greco-Latinate scientific names. Vusi underlined that, "It's only the scientific names that matter!" And he went on to illustrate the confusion caused by isiZulu synonyms or regional variants of the same plant names. Occasionally, I was a little worried about his cocky attitude

A few months after the end of my fieldwork, when I phoned the office and asked to talk t Vusi, I was informed that he'd been dismissed after two warnings. Vusi, the secretary said, was no longer respectful of the terms of his contract or of management. He will come to work drunk and disregard all remonstrations from project managers. According to Vusi, the managers would not find a butterfly tour guide as proficient as he was in the case where he left.

Thus, while Latinate scientific names of species may convey appropriate and standardized information (Thompson 1997), they also have a wider role or application in the field of conservation and development. They are supposed to enable communication beyond the scientist community so as to stimulate the interest of the many people who may participate in practical conservation measures (New 2007). Latinate scientific nomenclature might have been formulated over time with this first goal in mind. However, with the shifting attention from the role of scientists in enabling change to that of communities since the 1970s, the practical relevance and usefulness of Latinate scientific nomenclature "in the world" is coming into question. It's here that the complexity of its names poses a serious problem to conservation.

**Going Collecting Butterflies: Approaches in the South to Northern Butterfly Names**

While in the northern countries these questions have preoccupied generations of people since the inception of Linnaean nomenclature, in the countries of the south where local populations are still to be drawn into discourses of butterfly conservation, these tensions have cropped up differently because both Latinate scientific and common or vernacular English or Afrikaans butterfly names are considered colonial by a majority of the population, besides that an interest in butterfly studies is also perceived in the same light. Butterfly enthusiasts are most likely not to fancy delving into the complexity of butterfly names particularly when these names are of foreign origin and in a language that is foreign. A brief example will differentiate the case of butterfly names in northern

countries and in countries of the south that where the official language or languages remain those of the former colonial power or powers.

We were going butterfly collecting when Baba Phungula stopped in the middle of a chat and swung his net. It was in a flat wetland and I hardly expected a butterfly basking on the valley floor. Daintily he bent down to collect the butterfly inside his net

"What butterfly is that?" I asked him instinctively. It was a species that was wide spread in the estuary. I had spent some time the week before, filming it on a purple flower *lantana* in front of Dave's Place, a familiar backpacker on Mackenzie Street in St. Ever deliberate, particularly in responding to questions, Baba Phungula's response fizzled out. I took note of his hesitation and waited.

"I don't know the name," he blurted out. "I think I will give it an "indigenous' name".

If I had pressed on Baba Phungula, he would have told me that the Latinate scientific name of the butterfly was *Vanessa cardui*, and he would have repeated the pronunciation *Van-essa car-dui* twice so that I get it right. And then repeat it one last time for himself. Following, he would underline that the English common name is "Painted Lady" and the Afrikaans name, *Sondagsrokkie*.

I had spent several hours the past week filming the butterfly in St Lucia and was acquainted with the butterfly's finicky behavior once you get a little close while it feeds on the bluish flowers of the *lantana camara*. But I hadn't found time to check out its exact name. The Painted Lady is a pretty common butterfly, just like the African migrant, which is a strongly migratory and an only winter-active butterfly of the *Nymphalid* or brush-footed family, and which like the blue pantsy is of a worldwide distribution.

But somehow Baba didn't want to tell me a name he himself did not believe in. Something was getting in his way of communicating the butterfly's name. He found the name - like many others that he had learnt over eight years - inappropriate to the butterfly he had before him. Baba found the name to be alien to the cultural environment. Whose cultural environment, I asked myself. What Baba was telling me was that if I had to know the name of that species, I'd had to wait. But what if I were a tourist, e.g., those they would to travel with on this very trail when it was still

known as the Rasta Forest Trail? Or what about tourists for whom the collecting process was intended? Could Vusi, the young butterfly tour guide, tell tourists that they'd have to wait for the naming of the butterfly they came to see?

The problem was that the Latinate and English names weren't names Phungula was confortable with using when chatting with Black Africans or even when talking to tourists. Baba Phungula had already specified to me his discomfort with speaking to his fellow African in a colonial language to talk of the alienating feeling he gets when speaking with me about things 'African' in a European tongue. "It's difficult to express what I feel in English. Certainly, it can't be the same thing that I feel".

Baba Phungula wasn't comfortable representing or enacting local butterflies in Latinate or English names. His views are definitely very Pan-isiZulu or Pan African and he found his role as a butterfly tour guide as compromising these values since he could not represent butterflies either in isiZulu or some other 'African' language. It was one of the reasons for which he retreated from being a butterfly tour guide, even though he loved butterflies and never gave up the twice-to-thrice weekly and affective practice of going to catch butterflies in Dukuduku Forest to replenish the ever-dwindling stock in the dome.

**Race, Conservation, and Exclusion in South Africa Lepidopterology**

Efforts by (butterfly) collectors in the 18$^{th}$, 19$^{th}$, and 20$^{th}$ centuries to "discover", inventory, and describe the currently-known 671 species of butterflies that occur in South Africa refrained from exploring what local Africans knew or experienced of butterflies, their life cycles, host-plants, uses, and migration. Yet, there is evidence that locals knew of butterfly larvae more than of butterflies themselves, and were aware of their seasonal occurrence and migrations and sometimes of huge sub-continental migrations. A few hours from St Lucia or Khula Village on the Northern Drakensburg Mountain Range, where Rasta worked as a community reserve manager, often taking researchers and tourists to the caves, one finds a rare depiction of bees, ladders and a butterfly scene in Eland Cave. Beyond scholars or rock art clashed over interpretations of the shamanistic motifs in the scene, there's little surviving evidence about butterflies in Bushman culture that they can use to substantiate their claims. The appearance of butterflies in the painting scene, which has

been dated to the Paleolithic era, indicates local awareness of butterflies. The lack of evidentiary information since then till the arrival of the first collectors in South Africa has created a tabula rasa.

The Swiss missionary anthropologist, Henri-Alexandre Junod (1863 – 1934) whose life and pioneering ethnography on 19th century Southern Africa has been critical to the constitution of the region's ethnography as well as informed on the confluence between race and science in early South African history was the first butterfly collector in the region Junod's interests in flora and entomology saw him broach "new discoveries" often along with local guides. These ultimately led to his being commemorated, e.g., through various indigenous plants, e.g., *Junodia pax* (or *junodia paxis)* in the Euphorbiaceae family; *Cyrtanthus junodii* Beauverd; *Crotalaria junodiana* Schinz ex Baker f. (*Crotalaria laburnoides* Klotzsch); *Ischaemum junodii* Hack; *Muraltia junodii* Burtt Davy and the Basidiomycete fungus *Diplocystis junodii* Pole-Evans & Bottomley. Curiously, the above forms of flora have no English, Portuguese or Afrikaans common names, or more so, local African names. This leaves them untranslatable to lay non-botanists or even recognizable to be of utility except for botanical researchers.

Equally, Henri-Alexandre Junod first identified and had named after him, the species *Papilio junodi* also known as *Graphium junodi* and *Junodi Trimen* 1893 (Junod́s Swordtail: English common name), as well as *Eumeta junodi*. He also broached the wattle bagworm, *Eumenta Junodi* (presently known as *Chaliopsis junodi)* described by Haylaerts 1890. Other butterflies that he first identified and that were initially named after him were: *Cigaritis Ella*, synonym or formerly known as *Cigaritis junodi*, or *junodi D'Abreta*, 1980 (Spindasis), or even *Spindasis ella f. barnesi Stempffer*, 1953, and better known through it's English common name Ella's Bar – a butterfly of the *Lycaenidae* family founding in South Eastern Africa and which feeds on *Ximenia caffra*. There is also the *junodi* (van Son, 1935 (*Paralethe dendophilus*) and finally the *Acraea nohara junodi* (junodi Oberthür) or simply *Acrea nohara* which has for English common name the Light Red *Acraea* – a butterfly of the *Nyphalidae* family found from the KwaZulu Natal through Zimbabwe to Kenya. These naming processes appear problematic for two reasons. Firstly, Junod was a Jesuit priest who "saw the glorification of God through his handwork" (Harries 2007: 123). Secondly, though he outlines the assistance of his guide called "Spoon", not a single butterfly or other flora is named after "Spoon". The objectives that lay the long period characterized by butterfly hunters and hunting had little to do with the knowledge that other peoples and cultures had of butterflies,

and more to do with, as one critique has underlined, the "self-serving" interests of butterfly hunters and their patrons. The above presentation largely gives a gist of the confounding problems and issues relating to butterfly nomenclature that initiatives towards community conservation and ecotourism have brought about.

*Picture 24 Alexandre Junod catching butterflies (1905-1907)*

*Picture 25 Butterfly hunters with hunting equipment (Elias Lebombo 'Spoon' in the middle?) Photo taken in 1905.*

Junod's early ethnography centralizes the colonial missionary's heavy reliance on the expertise of locals as butterfly collectors and cultural brokers. The case of Elias Libombo whom Junod calls "Spoon" features prominently not only as a adept interpreter of culture and society but also of the landscape. These are butterflies, which he sells to museums in South Africa and Switzerland, as well as new species or "discoveries" which he sends to Switzerland for naming. While we as readers now know about the assistance Elias provided, we know little of how he benefitted. More over, in the naming processes, the recognition for the discovery was credited to Junod and the describers e.g., Trimen, rather than to the actual collectors that caught and brought the butterflies to him, an event that has underlined to various South African scholars on race and science (e.g., Dubow 1995) the ethics and appropriative dimensions of colonial science.

**Butterfly Names and Northern Values**

For people of non-European descent or cultures in developing countries, the issue of names is more critical than in countries of the north. This arises due to competing languages and cultures. While naming impinges on the unspoken existential rapport that people have with things, the context of

formerly colonized countries, highlights and amplifies these questions as they bring into play issues of power, cultural identity, as well as historical (i.e. colonial and post-colonial) class relations and biases. In other words, the instance of "object names" has affective or dis-affective resonances with desiring users. This is significant as one cannot talk of participation in community conservation without considerations of the role of affect. Not only does affect permeates every cross-cultural activity that foregrounds knowledge and communicative competence, Mazarella (2010) outlines that for "any social project that is not imposed through force alone must be affective in order to be effective" and goes on to precise that an "effective" social movement must draw our "desire:" "a movement across the gap between affect and articulation" (299).

Experts, collectors, and taxonomists that carried out processes of identification, description and naming were from the northern countries. Secondly, contrary to what Mainstream natural science perspectives would make one believe, plant and butterfly names and naming processes weren't and still aren't value free. These reflect northern values and perspectives, oftentimes openly, and sometimes subtly. The name-givers since the time of Linnaeus were not obliged to respond to the needs of non- Europeans (as in the case of Europe) or non-whites (as in the case of North America). While collectors, settlers, and academics came to use these names while on the Africa continent (whether the names were derived from Latin, Greek or modern European languages), their usage did not exclude the parallel and simultaneous usage of vernacular African plant language names by black Africans. So long as these groups worked separately as in the case of apartheid South Africa, and blacks were only given instructions in a language they could understand, there was little worry.

Thus, for many years in South Africa, inventorying species, specie diversity, distribution, and naming was and still remains the exclusive domain of enthusiasts and scientists of European descent. The entire notion of citizen science as in South not only invokes Euro-Africans and white communities, the production and consumption of scientific knowledge itself is seen as European. As such butterfly experts describe the interactions and dependencies between plants, people and animals through interpretive signage displayed in private gardens across the country in exclusively South African scientific lenses. Such knowledge, which excludes local black African perspectives, is shared with general visitors through guided tours and to learners through formal educational programs.

The following article that's written from a "global" perspective "Google Earth Rediscovery of Lost Butterfly Species" by John R Platt appeared in *Scientific American*, March 14 2013). It betrays some of the perspectives to history, race and nature conservation in South Africa that are still evident today:

> The Waterberg copper butterfly (*Erikssonia edgei*)—a spectacular yellow-orange species roughly 16 millimeters wide with black spots and stripes on its wings—had only been known from a single microhabitat in the Alma District of the Waterberg Mountains. Discovered in 1980, the butterfly disappeared soon after South Africa's first democratic elections in 1994 when what was previously known as Transvaal Province was split into three new provinces. The man who had been monitoring the colony for the Transvaal Nature Conservation Department was transferred to one of the new provinces. Meanwhile the 10 years after the end of apartheid saw a big shift in South Africa's human population, with many people moving away from the segregated rural townships where they had lived for many decades. By the time lepidopterists visited Alma in 2004, they found that it had undergone a massive ecological change.

The article underlines that that's when the world began falling apart in South Africa in 1994 following the end of the apartheid system and the advent of multiracial and constitutional democracy. Indirectly, that's when the third world was at last making its intrusion into the first, with the result that it brought along with it the nightmare of extinction. This article reflects a culmination of some of the unmentioned themes that have characterized South African butterfly natural history and scientific study – the association of butterflies with European settlers and Euro-Africans; the reflection of "discoveries" animated by Western names; the dilemma of threatened species, and of beauty in a tenuous environment; the notion of citizen science as a Euro-African preoccupation, and correspondingly, of the black African as a savage.

**The Curiosities and Spin Offs of Butterfly Nomenclature**

The perplexity of Baba Phungula and Brother Musa at the curiosities of colonial plant nomenclature soon moved from the indigenous nursery to the names of the butterfly host-plants in the butterfly plant nursery. From here they finally moved to the names of the butterflies in the

dome itself. If anything, the entry of butterflies into the picture in complicated their understandings: butterflies are not recognized in terms of specie differentiation in isiZulu. As such they are only generically known. The lack of recognition broke down Baba Phungula and Brother Musa. It took away considerable dry-power from their arsenal of arguments that they had used to fight their white colleagues in the African Conservation Trust. How could indigenous African cultures be self-sufficient when they had no names for individual butterfly species? More critically, as they examined common English, Afrikaans, and Greco-Latinate scientific names of butterflies and began to learn about their meanings or the impossibility of accessing them, it occurred to them that there were still lots of aspects of their environment and country to which they were green. The question was: how much?

It was like waking up from sleep one day and finding that the world that one believed in, even if one questioned it within oneself, was completely gone and replaced by another that appeared unknown and even threatening. The fact that the plant and butterfly names were written down and had been so for over 100 years revealed a problematic existence. To underline the point, Baba Phungula and Bro' Musa turned to an aphorism they often used to evoke their disappointment. It was quite popular in South Africa in the 90s and remains of unknown authorship. It is often deployed cynically to summarize the Black South African's dilemmatic existence: "If you have a secret and wish to hide it from the black person, write it in a book". The other was a direct question over heritage and citizenship: "how can you claim this is *your* country when you do not and cannot own a piece of land in it, and when you do not have a name for the country?" With the entry of butterflies into the picture, the question even got longer: how can you claim this is *your* country when the butterflies that fly the country have foreign names?" And each time a conversation boiled over to such questions, which were many, the two would look away at me, sometimes visibly disturbed and sometimes almost 'livid'. And often they would retreat, each to his corner of the garden, and get back to work for hours. I realized the intimacy with which the gardeners contemplated life, and also that I had to bring plenty of humor into the garden to alleviate any pains were cultivated by the coalescence of national and local politics in the garden soil.

**Cultures Without Butterfly Species Names**

“Most people, including a surprising number of scientists,” Murphy (2007: 65) underlines, “are still under the impression that genomes and biological species are relatively fixed” rather than “extremely dynamic and inconstant entities”. There are two problems with butterfly specie estimates. The first is that while most species that exist might have been discovered, their classification poses a problem of taxonomic uncertainty. Frequent shifts of the class of particular butterflies means that estimates of the number of existing species fluctuate. More critically, not all butterfly species have been discovered. In any case, natural scientists have estimated that there are about 28,000 species of butterflies in the world. Of this population, about 80 percent are found in tropical regions and 20 in the temperate regions. A quick scrutiny of the distribution shows 7800 identified species in the Neotropical region extending from Mexico to the tip of South America, with about 3500 in Peru alone (Lamas 1994: 165-168). There are over 4000 in the Afrotropical region encompassing sub-Saharan Africa, Arabia, and Madagascar, about 1593 in Cameroon and 673 in South Africa. Outside the above we find 760 in America north of Mexico, 482 identified species in Europe, 400 in the Australian mainland, and 26 in New Zealand. Yet, in spite of the overwhelming discrepancy in distribution between the tropics and temperate regions, butterflies remain unnamed in many indigenous languages or cultures. I ask the project managers of Manukelana what they think of it.

The opposition here is not between the north and the south as fixed geographical territories as much as between the mainly industrial powers (including the formerly colonial) of Europe and North America and the non-industrial though most, but not all tend to be in the South. For example, only of recent did Marja-Liisa Olthuis, a language expert at University of Oulu engage school children in an effort to begin naming butterflies in the Saami language in northern Finland (Olthius et al 2013: 101). Yet the contradiction between the Saami and Finnish languages in terms of butterfly naming couldn’t be clearer in spite of the fact that Carl Linnaeus is of Scandinavian origin and one would have expected to see his innovations in botanic nomenclature influence the naming of butterflies in Saami as a Scandinavian language. It is also not likely that indigenous languages in North America have extensive names for various butterfly species. Without delving into the historical factors that encouraged butterfly common or vernacular names in the north at this moment, it appears that the absence of vernacular or common names problem is prevalent in many

cultures and languages across Africa where a significant proportion of the world's butterflies are found.

**The Utility/Non-Utility Argument**

For natural science scholars that are aware of the problem, it is a source of occasional amusement or befuddlement. Some have advanced that the lack of indigenous names is due to particular cultures having no need for butterflies. "When a culture does not have a name for something," Zirlin (2006) says, it "doesn't really exist and certainly isn't important." Zirlin sees this instance as explaining why butterfly names appear to have occurred across the world only of recent, that is, after firstly plants that were used for food and medicine and secondly, birds that provided food. According to Shaw (2016), "Creatures which are the focus of activity and have high utility value have long had folk names at the species level." This accounts firstly for a salient distinction between vernacular English bird names on the one hand and butterfly names on the other. Secondly it also accounts for English butterfly names being largely derived from bird names. Equally, Fabian (2006) underlines, "when English and American naturalists coined English names for butterflies, they didn't coin *sui generis* group names, such as wren or swallow, although they easily could have done so. Rather they created names that incorporated the meaning of an already existing word into the butterfly group name, e.g., swallowtail (1741; having a tail similar to a swallow), orangetip (1747; having an orange wingtip) or skipper (1766; referring to the flight pattern)." The above explanation implies that the non-utility value of butterflies made them invisible in spite of their very conspicuousness, until something happened that brought their existence into focus – perhaps the rise of evolutionary biology in Europe or of the middle class and its interest in preserving the landscape. This perspective calls for research into the biological emergence of butterflies into human consciousness and of naming cultures. While this might be interesting, it is beyond the scope of this chapter.

**The Butterfly-Blindness Argument**

"Judging from the lack of historically widely used names for butterflies, they didn't really exist!" echoes Glassberg (2006). This, when compared to birds from which natural historians,

lepidopterists and enthusiasts derived most butterfly names. Lepidopterists have generally commented that most people (whether across the world) are blind to the existence of butterflies, no matter that they are very colorful and are often fleeting at the corner of one's eyes, or not too out of one's way. And so whether butterflies are plenty in a season or have vanished, except for those people that are amateur or expert butterfly enthusiasts, most will hardly notice their presence or disappearance. This reality is the same in non-industrialized and industrialized societies. Even with the rich butterfly nomenclature in industrialized society, the average person still lacks knowledge of it. Few Americans know much about butterfly names beyond the charismatic monarch butterfly and the common moth (Askew 2017: personal correspondence). So, the blindness question, while it's a reality cannot be narrowed down to a certain "indigenous" people.

**The 'Still-To-Be-Discovered-by-Research' Argument**

Some scholars have been less lenient, arguing that the lack of species differentiation for butterflies and other insect groups does not imply the actual absence of knowledge or names. It simply means the lack of research into these cultures. These state that ethno-entomologists are still to give critical attention to the status and role of insects and butterflies in most of non-Western cultures. There's some truth to the argument when one examines for example cultural anthropological research on human-insects relations in Africa. Except for Brian Morris' *Insects and Human Life* (2004), a broad-ranging survey of the role of insects in social-cultural life or the diverse ways in which human–insect interactions are expressed in Malawi, there are hardly any other full-length research texts that are solely devoted to ethno-entomology in Africa. In the area of butterflies, the only available cultural work to date is Hughes Raffles *Insectopedia* (2010) which is mostly a work based on archival and library rather than ethnographic research. We also have a chapter of *In Amazonia: A Natural History* (2002), which is a historical narrative also based on archival rather than ethnographic research.

**Of Larvae and Butterflies: Natural Science, Emic Understandings and Cultural Practices**

Generally, butterflies have not been viewed as really significant in most cultures worldwide. This includes both Northern and Southern countries. While they are objects of intense attraction to some of the middle class in northern countries as well as to scientists, these groups remain rather

marginal. The Aztecs and Mayas, among some other nations, had a strong religious attraction to butterflies (Beutelspacher 1988), while for some other peoples they were mostly valuable for their larvae. Research indicates that some indigenous peoples tended to differentiate larvae, which was used for food more than fully matured butterflies. Nicolas, the specialist for the Isiphaphalazi Dome believed that locals ate the larvae of butterflies as a delicious dietary supplement in northern Zululand. He felt that the practice (without specifying the species) could affect the conservation status of butterflies in northern Zululand. Several weeks after I began my research I quickly realized that his claim was mistaken. He mistook *amacimbi* the larvae of the Emperor Moth butterfly which hosts on the widespread and sacred Marulua tree for being the caterpillar of a butterfly. *Amacimbi* is cultivated as a staple food in Zimbabwe and parts of South Africa. In another case study of traditional ecological knowledge and indigenous identity, Jackson Hu (2008) examines butterflies and emerging discourses of ecotourism among the Yami or Tao Austronesian people living in Lan-Yu,

> The golden butterflies, which in the past were tabooed and viewed as evil spirits near tribal cemetery, are now welcomed by tribal youth in a recovery project within upstream forests and in eco-tourism gardens near the downstream villages. From a negative prohibition to a beneficial indicator of landscape restoration, the indigenous species (and also their associated Yami sacred landscape) have become atomized and manageable under sophisticated control by modern monitoring techniques. Deployed in many conservation tasks that focused on species and land, modern surveillance strategies were incorporated into and at times have displaced the Yami TEK. This is exemplified by two newly created activities of ECCA (Ecological and Cultural Conservation Association" on Lan-Yu) that I have participated in from 2001-2003.

Situations like the above, which point to negative prohibition might lead to circumstances where cultural knowledge about wildlife becomes unstable or even disappears, only to resurface with changed political-economic or scientific circumstances.

**Implications of the Absence of Indigenous Butterfly Names to the Management of the Manukelana Project**

At the Manukelana Project, I asked the four managers what they thought about the question of isiZulu language and culture having no deeply differentiated names for butterflies. The reactions were immediately affective and very different. They ranged from ridicule, to apologies, to critical concerns of the implications, and to a resigned acceptance of the status quo. According to Baba Phungula, the names were coming until local development was arrested by imperial intrusions and colonialism. Evolutionary perspectives on butterfly nomenclature in Europe bear him right. Butterflies in Europe did not have names until very recent and only after birds did and the social conditions were right to enable society to move away from utilitarian to aesthetic understandings of nature.

As a Pan Africanist who regularly evokes the pettiness of some of the oppressive aspects or perspectives of Western colonial and post-colonial cultures, and which Euro-Africans in South Africa would not accept, Rasta, jumped up from his seat at the question and scoffed at isiZulu culture, an event that surprised me. He found the question of butterflies without names as a laughing matter. He ridiculed the narrow-mindedness of his ancestors for walking tall and yet not taking notice of butterflies. His ancestors called them *isiphphalazi*, a cynical onomatopoeia that means "these that fly without any sense of purpose or direction". The definition also hinted to one of the local aspects towards butterflies or "things" – that of anthropomorphism as evident in folktales. In other words, people behave towards other animals or natural phenomena as if they are 'human' (Morris 2004: 212). Each time Rasta spelled out the meaning of the name, he would imitate the bobbing and erratic flight of butterflies and in so doing draw laughter from listeners. But he also hardly fails to use this instance to suggest and validate an alternative worldview. In a more sober tone, he would argue that colonial land and zoning laws ruptured the relations between his ancestors and the land, and the effects have transcended time and apace. This to him explains the gaps in the environmental knowledge of isiZulu-speakers. "Imagine", he says climbing onto of bucket that's turned up side down. We are at the back of the grove where we always sat for lunch break.

"It's this bucket that connects you to the earth that firms you to the earth. Now consider that someone comes along and kicks the bucket from underneath you: what happens?" he questions dangling as if about to fall.

“You can either fall or suspend in mid-air.” Brother Musa replies.

“Yes, that’s where we still are today. We’ve been suspended in midair and left without balance for over a century and two years now.”

There was some truth in this, Baba Phungula states and he goes on to narrate. Shaka Zulu, as far back as the early 18th century, was impressed with his first meetings with Europeans. He had sought to hold exchange relations with them in terms of knowledge and technology transfer. His wish was to enrich Zulu culture and society. Unfortunately colonial security demands consumed his regime and those of his successors. As a Rastafarian, Rasta, often used the opportunity to underline that if his ancestors and parents had been African enough, been down to earth, and refused indenturing themselves to the mines and to capitalist system, they might not have lost their culture to the Western this much.

Baba Phungula for his part was angry with his forebears over the “lack of knowledge” about butterflies. It placed one in a situation of lack (vis-à-vis “the white man”). He often scoffed at Zulu people’s regard for Shaka Zulu, preferring to hear nothing about the person or his name. It was Shaka who partitioned the Zulu Kingdom and gave the coastal strip to the white men out of his admiration for them and desire for their knowledge and technology. Shaka was the first to betray the Zulu nation. Often times he questioned his own ethnic affiliation to the Zulus even as he ardently advocated Zulu nationalism. Like most of the locals in St Lucia, his ancestral home lay in the Pongolo area in northern Zululand and so he wasn’t really Zulu except through assimilation. Sometimes he got irritable thinking about the cultural loss “his people” had experienced though this category keeps shifting. Then he would find it more productive thinking about how he could act, and there was little else he could do beyond addressing the cultural void than through writing (e.g., books on the environment, garden poetry, motivational texts), and through giving butterflies isiZulu names.

A closer examination revealed that the “lack of knowledge” theory was at best problematic. ‘The people’, it is said ‘they’re dead’ Sahlins (1972:81; also cited by Ingold 1993) underlined.

**Terms for Butterflies in isiZulu**

Whatever explanations for the phenomena, a cursory search showed me that butterflies are known by various names among isiZulu speakers. The two most well known nouns are *i(lu)vemvane* or in short *uvemvane (singular) or izimvemvane* (plural), *iveveshane* and *isiphaphalazi* (singular) or *iziphaphalazi* (plural). Besides these, one also finds *itwabitwabi (derivative of the* !Xu 'Bushman' language) and *ijubajubane*, *"ijuba"* being the diminutive for the turtle dove. Further searches also revealed that the Little Russet Pea (scientifically known as *Argyrolobium tuberosum*) is called *uvemvane olubomvu,* that is, "the butterfly that is red" (also see Koopman 2015: 248). This appellation here is a reversal of how English 'common' butterfly names are derived. While the base from which English common butterfly names for example are derived are bird names or colors, here we find the name of plants being derived from butterflies instead. It implies that isiZulu speakers recognized butterflies in the past. Other plants associated by name with butterflies include *uVemvane* (isiZulu*)* or *Sida rhombifolia*, a perennial or sometimes annual plant (family Malvaceae) native to the tropics and subtropics which has for common names the rhombus-leaved sida, Paddy's lucerne, jelly leaf, Cuban jute, Wireweed, or Queensland-hemp and Indian hemp.

*Picture 26 uvemvane olubomvu (isiZulu), Little Russet Pea (Argyrolobium tuberosum)*

*Picture 27 Vemvane (isiZulu) Wireweed or Sida rhombifolia*

During his stay as a missionary in Zululand from 1883-1889, Thomas B. Jenkison (1884: 7)—like most missionaries—was interested in Zulu manners and customs. In describing the ecology of the country (to encourage migration), he mentions butterflies:

> Insect life is very abundant here. Butterflies are very plentiful all the year round. Some are very large and gaily colored. Many of the white and blue and orange tips remind one of home, and the one called the painted lady is exactly like ours.

Notice that Jenkison does not call the butterflies by any isiZulu names nor does he talk about local cultural perspectives though the focus of his book is Zulu "manners and cultures". Nevertheless, apart from the work of Alexander-Henri Junod (1912-13), another missionary, his work is one of the very few that examines insects and mentions butterflies and their kinds.

Another problem with the notion of "knowledge as stock" is that it precludes the fact that knowledge also arises in encounter. This is the position of growing number of scholars that have since disagreed with the Cartesian view of mind-body or subject-object and the resultant

"cognitive" bias in indigenous knowledge research (Escobar 1999; Hobart 1993; Ingold 1993; Nazarea 2006). Inspired by the views of Bourdieu, Giddens, and others, scholars in disciplines such as anthropology (Ingold 2000; Pálsson 1994), psychology (Clark 1997; Lave 1993; Reed 1993), and sociology Qoas 1993) disagree with the assumption that knowledge and the learning process are "contained in the mind of the learner' separated from the lived-in world (Lave 1993:7). Instead, they promote a practice-oriented view of knowledge that stresses the emergent, relational, embodied, and contextual dimensions of knowledge that are "constituted by a past, but changing, history of practices" (Hobart 1993:17). Although cognitive models suggest that knowledge consists of intellectual processes (i.e., cognitive schema) that are necessary preliminaries to guide action, the practice perspective emphasizes the creative and generative processes of the place-based actions themselves.

Evidence of this always cropped up each time I inquired from Baba Phungula and Bro' Musa about local knowledge over plants and other aspects of the environment. Their often-tentative responses pointed to the instability of orally-transmitted knowledge. Sometimes the knowledge was patchy, apparently disrupted in the process of transmission by the colonial and apartheid governments e.g., what Rasta demonstrated through the stand-on-the-bucket metaphor. Sometimes what came out was that the knowledge belonged to the past and didn't really matter. Sometimes it mattered to present when it underlined a quest for recognition for equally valid alternative knowledges and practices. The implication is that if there had to be any agreed knowledge about the environment, it had to be invented rather that pre-supposed - a position well-articulated over time by Bruce Braun (2008, 2007, 2002).

**Baba Phungula's Arguments about Butterfly Names**

Had vernacular butterfly names in colonial languages including the Latinate *binomen* been meaningful and without critical problems, the project managers would have embraced them and not found anything wrong with them. Just as they had scrutinized the names and labels of plants that the African Conservation Trust brought along for the nursery, and just as they had taken note that Western approaches to indigenous plants and trees were radically different from approaches in isiZulu culture, Baba Phungula and Brother Musa became concerned. In fact, they became endlessly perplexed by the curiosities of butterfly nomenclature. The sticking point was that while

all the local plants that they worked with had "indigenous" names, butterflies had no local names. They were not particularly differentiated as much as plants or the weather in contemporary isiZulu. Rather than explore the phenomenon (not being researchers), the two poured over the foreign butterfly names. For the next months and years, human-butterfly relations became a staple in the bucket list of everyday chats in the garden.

Firstly, the project managers and tour guides found the meanings far-fetched and inaccessible. When they asked Nicolas, the butterfly specialist who introduced them to the names, he repeatedly asked them to forget about the meanings and simply use the names. The pressures imposed by funding, and the intricacies involved in investigating or creating butterfly names in isuZulu language probably discouraged Nicolas. However, being an adult, and having a very curious outlook to esoteric matters, Baba Phungula began to wonder. "It's either these Latinate names mean something to us or they are meaningless, in which case, they would have to be replaced by indigenous names. In the case where indigenous names do not exist, we would have to invent them".

More so, not only did they find the Linnaean binomial Latinate system and all its references odd, the fact that plants indigenous to Africa and to other parts of the world were often named after Europeans, instead of being named after their own traits as plants, preoccupied them. In IsiZulu culture, except for places or human locations, objects are hardly named after people. How come indigenous plants were still named after Europeans? For what reasons or purposes? And why was it that the names remain unchanged and South African scientists were numb to it?

Then there was the idea of discovery that preceded colonization. They found the notion that no one lived on the land before Europeans came as implying *terra nullius*. According to Baba Phungula, now that it's proven that a people lived there, isn't it appropriate that one finds out through painstaking research what those that lived there knew about the item in question? Otherwise the term "discovery" should be replaced with a more realistic term. If names have little to do with objects, and are unknown to their objects, the naming of these objects after people and distant Europeans looks even odder. In effect, Baba Phungula finds in this instance the height of European science ridiculing itself. And how were Africans or non-Europeans to take it? Just allow it? "No, no, no," he takes off his glasses. "We got to change these names and give these butterflies

our own names”.

**Authorizing Butterfly Names**

Baba Phungula and Brother Musa join a list of critiques over the naming of butterflies, in particular. According to Robert Michael Pyle (1996: 87):

> Increasingly, the taxonomist who gives an animal or plant its scientific name is known as its “author” as if the act of bestowing the Linnaeus binomial appellation of genus and species were tantamount to breathing life itself into the organism.

Pyle, a well-established and well-known American butterfly specialist and natural historian, finds classifiers of butterfly names, in spite of their gentility and attention to the creatures that they attend to, as most often possessed of the venality, envy, whimsy, and ego that besets the rest of society. According to him, the names they give to butterflies often show it. He finds butterfly names as betraying every imaginable motive though he does not spell out these motives. What Pyle is talking about is the cultural landscapes that give butterfly names. This is akin to toponymy, a study of place names that provides a window into the cultural emphases of the past. He attributes the origins of butterfly names to the classical education that lepidopterists received and about which they often boasted.

**Nomenclature without Notes, Names without Explanations**

Archival research during fieldwork and post-“fieldwork” revealed to me that while butterflies found in South Africa derived their names from the European canon, there were hardly any notes or texts anywhere that underlined how the names were deliberated upon or selected by the various taxonomists that contributed to the naming of South African butterflies. The assumption is that they took the names they gave to butterflies as their rights as the supposed "discoverers" of these South African species. This contradicts the processes followed by Carl Linnaeus who meticulously annotated all the formal Greco-Latinate names that he gave butterflies, other insects, and plant lives so as to give a rationale for the names and to render them transparent to contemporary taxonomists; more acceptable to the scientific community or community of users, and therefore more adoptable.

The most notable butterfly collectors and taxonomists in South Africa are two pioneers that worked together, even though at a distance: Colonel James Henry Bowker (August 1822 – 27 October 1900), born in 1822 in the Eastern Cape of South Africa, a naturalist, soldier and an imperial administrator, and Roland Trimen (29 October 1840 – 25 July 1916), born in 1859 in London, studied entomology, and came to South Africa when he was 19 for health reasons. Trimen took up a post in the Auditor-General's office in Cape Town and then transferred to the office of the Colonial Secretary. In 1862-1866, Trimen published the first South African insect catalogue, in which he only dealt with butterflies. In 1872 he became curator of the South African Museum in Cape Town (1872-1893), and is greatly credited for having established the museum in terms of acquisitions. In 1893, he resigned in order to return to England for reasons of failing health.

Trimen and Bowker shared a perfect division of labor. While Bowker did the fieldwork in the "wilderness" with which he was well acquainted, Trimen as the museum curator published the findings or packaged and conveyed them to London for validation and publishing. Together they co-authored the seminal *South African Butterflies* (1887–89) made up of three volumes and which in the 19th century remained the standard guides on the subject. The enthusiasm of Bowker, as well as Trimen's monograph, greatly encouraged more recent enthusiastic collectors in Natal.

However, the lack of any notes or annotations has deprived modern day users of vital information and as such relegated efforts towards understanding the meanings behind these names to the domain of guesswork. I wouldn't have been aware of the problem had it not been for the value that Baba Phungula and Bro' Musa placed on knowing the meanings of the names that they often imprinted on customized signage boards or used when talking to tourists. As gardeners and nurserymen, the two came to value in-depth cultural knowledge on any object they came across and which they felt had a meaningful role to play in their everyday life.

"How could you merely memorize names and spit them out without understanding what they mean?" Baba Phungua asked me. "Our job here is not to make money." For Baba Phungula and Rasta, their work was largely symbolic.

As I began to scrutinize the Latinate and common English and Afrikaans names of butterflies to understand Baba Phungula and Brother Musa', I realized first of all that while Baba Phungula couldn't differentiate the names structurally, the three sets of names were composed differently. Being formal, the "Latinate" names were more specific. Each always begins with the genus followed by the specific specie name and sometimes the sub-specie name. The examples below represent some of the commonest butterflies in Southern Africa outside the *acraea* family.

*Danaus chrysippus aegyptius*
*Tirumala petiverana*
*Amauris niavius dominicanus*
*Amauris ochlea ochlea*
*Amauris albimaculata albimaculata*
*Amauris echeria echeria.*

However, in spite of the precision, only the most dedicated butterfly tour guides would make out some of the above species or sub species outdoors. This was what I found out at the Manukelana, Ramsgate and MacBanana butterfly sanctuaries. In other words, there was little companionship between the names of the butterflies and what a Pyle (1996: 91) terms the "home ground" that these names sought to relate with. Now after replacing the above names with the English common names below, most tour guides readily recognized the species since they are the commonest along the subtropical Kwa-Zulu Natal coastline:

African monarch
Blue or dappled monarch
Friar
Novice
Layman
Chief

In other words, when the English "common" names of butterflies are introduced, guides readily found a sense of understanding between the names and the realities these names sought to enact.

The recognition occurs in spite of the fact that the guides might not completely understand the meanings of the names or even recognize their medieval English or European origins.

On the contrary, academic knowledge of the processes by which the Greco-Latinate names were constituted can only be reached through deduction, firstly of the landscapes that informed the fieldwork and secondly of the taxonomic name-making contexts. Without any diaries, notebooks or writings left behind by the butterfly hunters or collectors and taxonomists we can hardly have clues or evidence or ultimate clues on the contexts that informed the processes of name selection and construction.

**A Few Observations**

A critical error often made by lepidopterists is to believe that scientific butterfly names are of Latin origin. Closer examination of the South African corpus (at the end of this chapter), shows that while they are Latinized, a good part of the corpus is of Greek origin and European folklore or mythology. Latin largely provided the language and the alphabet. Looking at the "Latinized names, we have first of all the genus that is often derived from a Greek figure or European folklore or mythology and then the species name or sub-species names which is often specific (2005:13). The species and subspecies names could also bederived (a) from the locality where the butterfly is found (2) from the name of a person (3) from some other trait. Sometimes the genus, species and sub-species names are all those of persons after whom the butterfly is named e.g.,

| | |
|---|---|
| *Thestor dicksoni dicksoni* | Dickson's Skolly |
| *Thestor dicksoni malagas* | Atlantic Skolly |
| *Thestor dicksoni warren* | Warren's Skolly |

**Greek Gods and Mythic Figures "Butter-Flying" in Africa**

Pyle (1984) observes that the Latinate names of many Swallowtails commemorate heroes of the Trojan wars, and this is true not only of butterflies in the United States but also in Southern Africa. Among the swallowtail species in Southern Africa we have the following clade members, followed by the names of the taxonomists, and the years they were named.

*Papilio demodocus* Esper or *Papilio demodocus demodocus* (Citrus Swallowtail).
*Papillo demoleus* Linnaeus
*Papilio dardanus cenea* (Mocker swallowtail)
*Papilio constantinus constantinus* (Constantine's Swallowtail)
*Papilio echeriodes echeriodes* (White-banded Swallowtail)
*Papilio nireus lyaeus* (Green-banded Swallowtail)
*Papilio ophidicephalus* (Emperor Swallowtail) [please check spelling; = "snake-headed"]
*Papilio euphranor* (Bushkite or Forest Swallowtail)

**Greek Sources**

[Papilio = butterfly in Latin]
Demodocus: character from Homer, a storyteller at the court of Alcinous.
Demoleus: character from Virgil's Æneïd, one of the Greeks who warred against Troy.
Erithonioides: lit. 'resembling Erithonius' and Erithonius is an older name for Demoleus

In the last three names, I found that the historical origins of the genus names could be traceable only with a lot of difficulty. Due to time constraints, I had to drop the effort. In almost all entries I came across online, the butterfly name has come to replace the original reference of the term thereby invalidating its existence and prior meaning. Another critique outlines a less examined instance in the literature on butterfly nomenclature beyond that memorization, pronunciation, and difficulties with meaning. Commenting on the attribution of the fabled name "basilisk" to a newly discovered animal, an anonymous writer in 1837 states,

> "While the application of the fabled name destroys the force of the fable, the memory of the fable turns the real animal into ridicule. The application of sounding names where there's no analogy to warrant their use, has done much mischief in all the departments of Natural History, and also in all the other subjects from which these names ate taken...We have deemed it advisable to notice, in this striking instance of it, the *prostitution* of poetic or allegorical names to the subjects in Natural History".
>
> *The Analyst: A Quarterly Journal of Science, Literature, Natural History and the Fine Arts (Vol. VI, No XXI).*

While the speaker's comments applied to a purely European context, they are equally applicable to the colonial and post-colonial contexts where the fables in question aren't known. Take the commonest butterflies that are widespread over the continent and in Southeast Asia: the pansies (name of the genus in common English):

1. *Junonia oenone oenone* [could be related to Juno, the Roman goddess]
2. *Junonia natalica natalica*
3. *Junonia hierta cabrene*
4. *Junonia terea elgiva*

The validity of the Latinate scientific names is that they fix the butterfly species so that it is unique across the world and does not confound specialists. The Latinate nomenclature gives all butterfly enthusiasts a common language. The problem is that this "common" language is uncommon as the way in which it is constituted poses a challenge both to those that speak European Romance languages and to those that do not. It's possible that the taxonomists could have devised more user-friendly names still using the Latin language. The English common vernacular names for the above butterflies tell a friendlier and less philistine reality.

1. Blue pansy
2. Brown pansy
3. Yellow pansy
4. Soldier pansy

The usefulness of the Latinate scientific name in terms of subspecies differentiation is seen in the confusion posed by the similarity of the common names below.

*Picture 28 Dark blue pansy (Ghana); Latin name: Junonia oenone (Linnaeus, 1758)*

*Picture 29 Blue pansy (South Africa); Latin name: Junonia oenone oenone*


*Picture 30 Blue pansy (Thailand, Malaysia, Singapore); Latin name: Junonia orithya wallacei*

We could keep listing many varieties of blue pansies across the tropics (wherever English was imposed as a colonial language) that are undifferentiated. Whereas were an English speaker confronted with someone from another language, they could both be talking about the same specie or sub-specie and using the names issued by their respective languages without being aware they are talking about the same specie or sub-specie of butterflies.

Lolaus Bowkeri [or Bowker's Sapphire] brings together such as: Midas, Perseus, Poseidon.

**English "Common" Names**

Characters from European Folklore

**Elf series**

Marbled Elf

Small Marbled Elf

**Sylf series** (derived from sylphs, an imaginary spirit of the air)

Bamboo

Dismal

Drakensberg Grassveld

Eastern Gold-Spotted

Eastern Tulbagh

Grassveld

Marsh

Modest

Mountain

Netted

Uitenhage

**Elfin series:**

Forest Elphin,

Nothern Darl Elphin,

Ruona Elphin,

Small Elphin,

Southern Dark Elphin.

**Nymph Series:**

Mottled-Green

**Tree Nymph:**

Boisduval's tree nymph

Moranty's

Natal

Rosa's

**Patronyms and Descriptive Butterfly Names**

Patronyms that commemorate patrons, sponsors, familial relations, friends and self compose about a half of South African Latinate scientific and vernacular English butterfly names from the early 19th century up till recent. Under this category, we have welk-known patrons and those are less known and may have been family. One of the most well-known patrons at the time in London was Rochchild after whom *Papilio grosesmithi* Rothschild, 1926 is named.
We also have: D'Urban's Woolly Legs (*Lachnocnema bibulous*), after D'Urban who was once a colonial governor of Durban City in South Africa.

Sarah's Ranger (*kedestes sarahae*): patron unknown.

Derogatory names as well are also attributed to a high number of butterflies, for example, the widow series and the rangers series.

There are also names based on European myths and mythic figures outside of the Mediterranean area, e.g., there is the 'Sandman series' (*Pyrginae*), which is made up of fifteen butterfly species, named after characters in Dutch and Central and northern European folklore that puts people to sleep as well as brings good dreams to those that sleep at night by sprinkling magical sand onto their eyes. The sandman has also been referred to as an anesthetist and thus a quasi-sinister figure.

**Colonial administrators:** Southey (who killed, robbed and mutilated Hintsa, see below); D'Urban who founded the city (not less than 14 butterflies are named after him).

**South African social history**: butterflies named after Cape colored truants or criminals, see the "skolly series" made up of 34 butterflies;

**Euro-African collectors and lepidopterists**:

Trimen

*Mylothris trimenia or* Trimen's Dotted Border;
*Lepidochrysops trimeni or* Trimen's Blue
*Aloeides trimeni southeyae* or Southey's Copper;
*Aloeides trimeni trimeni or* Trimen's Copper

The vernacular names point to English social classes or positions and may have quite little to do with Latin or Greek.

**English "Common" Names**

No butterfly names are based on African myths or mythological figures. None after any African e.g., collecting assistants. Except for a few butterflies whose names are adopted from African (military) leaders the rest of the names are generic e.g., Pondo widow.

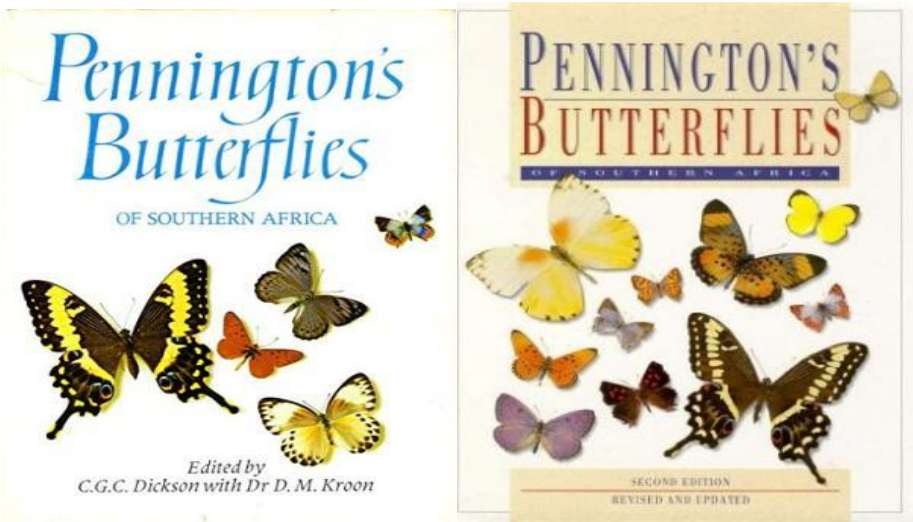
Place names compose about a quarter of all the names. Of these places, most are in habitats that are accessible to Euro-Africans, that is, where butterfly collection was possible. Most appear to be in white-managed conservancies as well as in protected areas. The latter in most cases were white-managed up till recent. Places like Dukuduku Forest have been literary hands-off for lepidopterists (who are almost entirely Euro-African) as well as Euro-African researchers. Outside of patronyms and place-based names, only about a third of South African butterfly names tend to be descriptive – that is, are based on particular butterfly characteristics e.g., color patterns, flight, or take their origin from bird names. According to Phungula "patronyms" raise questions of realism in naming; of the relevance of historical names that have outlived their usefulness, and most critically about the place of the individual in objects of collective use. Questions of naming, also point to the ownership and colonization of nature, people, and of the environment.

**Butterfly Names as Acts of Appropriation**

From the inception of my field research, I failed to see any problem with the Latinate scientific names or the common or vernacular English or Afrikaans names of butterflies. I had assumed that

butterflies were an exotic subject party due to their names. It was Baba Phungula who brought my attention to the issue of European or South African settler natural historians creating butterfly names through various processes. Example included bequeathing their own names, or those of patrons, familial relations and friends, rather than describe the butterfly by its own characteristics.

Taking a step backwards, I began to scrutinize butterfly names, their constitution and usage. While I perused the handbooks used in the office Baba Phungula voiced that the structure of a good number of butterfly common names often had little to do with the butterflies themselves. Those that were used as an object of 'apostrophy' place their primary emphasis on either the person who patronized the collecting process, or provided some emotional comfort to the collector, or to the collector who "discovered" the butterfly; while the secondary name then described or named the species. Typical example would be Pennington's Skolly: Kenneth Mission Pennington (1897-1974) being a school master and influential butterfly collector in South Africa (see Pennington's Butterflies of South Africa) and having 14 taxa bearing his name, and "skolly" being a truant or petty criminal who's colored or of mixed ethnic origin in the Western Cape of South Africa. The name could be seen as misleading since the description has little to do with the specie itself. Rather the name directs the user or reader attention to something external to the specie. One of the authoritative books on South African butterflies is associated with Pennington.




*Picture 31 Two editions of Pennington's Butterflies, South Africa*

The many examples present in the South African corpus raise questions over subjectivity and otherness in giving names to non-human entities at the time of naming; questions over desire and possession, as well as of descriptive relevance. Adding the names of particular colors to persons' names to stand for butterflies doesn't adequately identify a butterfly species.

Due to the discrepancies that Baba Phungula, Rasta, Mduduzi and Bro' Musa found out on butterfly names, they came to see Black Africans throughout much of rural South Africa, for example in Zululand, as living close to the natural environment but are not of that natural environment as much as European-Africans. He finds it an inversion of place-based relations orchestrated by imperialism, colonialism and apartheid, and part and parcel of the challenges facing conservation today within black communities.

**Barbarous Butterfly Names**

Barbarous name creation was also one of the practices that enabled taxonomists to come to terms with a world with which they found exceptionally strange and un-European. "Barbarous" names were attributed to particular species (Dimock 1984: Jaeger 1955) due in part to their morphological features, e.g., being brownish or darkish in color, smallish, and at the same time not as aesthetically intricate or as colorful as others. Because the Bushmen of the Cape were the first that Europeans came in contact with in the Southern region they and most of the features of their landscape were subject to a barrage of barbarous names that would pass today as very racist. A typical example of a butterfly species with such a name is the *Gegene "hottentota*", which was the last to be (scientifically) named in the genus of skippers called *Gengene* in the *Hesperiida* family. The *Gengenes* genus consist of: *Gegenes nisi* (Linnaeus, 1764), *Gegenes nostrodamus* (Fabricius 1793), *Gegenes pumilio* (Hoffmannsegg 1804), and the *Gegenes hottentota* (1824, Latreille).

In 1824, Latreille named this particular specie *Gegenes hottentota*. Soon after it seemed to have been a trend picked up by what the British Association for the Advancement of Science (BAAS) would call "déclassé naturalists" who dropped the standardized Greek and Latin in all naming in favor of vernacular names through which they "insisted upon naming species after Peruvian princesses and Hottentots". Angered by the reckless adoption of vernacular names in naming new species, the British Association for the Advancement of Science (BAAS) sought in the 1840s "to

stop the flood" (Leach 2013: 86).

The first Europeans who came into contact with the Khoi-Khoi (Khoekhoen people, a sub group classified under the Bushmen) described them in subhuman terms. They were seen as lacking in the ability for developed speech: "they stammered and stuttered instead of talked" (Hunt 1870: 355). Their viewers found them to 'stink with oil and tallow' (Dampier 1697) as well as "uncouth", "uncivilized", and "savage" (Mackinnnon 1987: 55-65). They were "lacking" in "culture" and "civilization".

Armchair scholars in Europe seized upon these descriptions to portray them as providing the evolutionary link between primates and humans. The Western European context was characterized at the time by emerging encounters between Africa and Europe and on-going public displays of Khoi-Khoi people in Europe (of which Sarah Baartman is the most well-known), followed by Zulu people, and subsequently the capture and exile to London of the Zulu King Cetshwayo and subsequent efforts by English businessmen then to use some of his retinue in subhuman public displays. The story and fate of Saartjie "Saartje" Baartman (1788 – 1815), derogatorily nicknamed "Hottentot Venus" and of Cetshwayo kaMpande 1826 – 1884; King of the Zulu Kingdom (1872 - 1879) and its leader during the Anglo-Zulu War of 1879) is well documented (insert references). It's noteworthy that the Manukelana Project is named after one of the regiments of Cetshwayo that took part in the Anglo-Boer War. Equally, while the Latin scientific name came earlier and designated only one species, the English common names that came later to designate these various species (except for one) all bear the barbarous term "Hottentot" irrespective of the formal Latinate name.

The above table indicates a broader phenomenon with English vernacular butterfly names: they are more disposed towards stereotypic and derogatory types than Latin scientific names.

**Southern African Moth Names with Epithet "*Caffra*" or "*Caffraria*"**

"Kaffir" is an offensive ethnic slur used by white South Africans to refer to black South Africans that was common until only very recently. While there are no indigenous butterflies in South Africa that are still called "*caffra*", there is one called *Aloeides caffrariae*, Henning 1987 (the Border Copper, English "common" name), a butterfly of the *Lycaenidae* family found on the coastal

grassland in the East Cape, which stands out as an oddity. It is striking that this butterfly, which is included in the online African Database, has been left out of the *Butterflies of South Africa's National Botanic Gardens: An Illustrated Checklist* (2010), which is found online. It left me wondering if it was the sensitivity of the name? Or that it was left out by coincidence? On the other hand, one finds an abundance of moths in South Africa that take noun *caffra.* Examples include:

*(1)* *Neurosymploca caffra* (Linnaeus, 1764);

*(2)* Synonym *Neurosymploca caffra* (Hampson, 1920) English common name: Belted Burnet.This genus is composed of six species, three that could be considered derogatory: *caffra, hottentota and pagana* which occur *alongside affinis, concinna and meterythr*

*(2) Ancylolomia caffra* (Zeller, 1877): a moth in the *Crambidae* family. Synonym *Thyretes caffra (Wallengren, 1863);*English common name: Bar Maiden.

*(3) Gracilodes caffra, (Guenée, 1852)*

Common English name: Orange Drab.

http://www.africanmoths.com/pages/ZYGAENIDAE/zygaenidae/neurosymploca%20caff ra.html Accessed: 20th August 2016.

"African Moths": Oxford University Museum of Natural History.

Composed of eleven species: *angularis angustipennis, caffra, disticha, fenestrata, finissima, fuscosa, metopis, nyctichroa, nysa, opisthenops.*

*(4) Gorgopi caffra* (Walker, 1856): Little is written or known of this genus.

*(5) Siccia caffra,* Walker, 1854.Common English name: Speckled Grey Footman.Synonyms: *Lithosia nigropunctata, Melania punctigera, Siccia humilis.*

*(6) Thyretes caffra* Wallengren, 1863,English common name: Bar Maiden.The ten species in this genus include: *caffra, buettikeri, cooremani, hippotes, Montana, monteiroi, negus, signivenis, trichaetiformis, ustjuzhanini.*

*(7) Nassinia caffraria* (Linnaeus, 1767) has for English common name "Threaded Looper". It has

four synonyms: *Geometra caffraria, Bombyx petavia, Nassunia caffraria, and Nassunia bupaliata.* The species in this genus include *aurantiaca, caffraria* and *pretoria.*

*(8) Agrotis caffra,* (Hampson, 1903) has for synonyms *Porosagrotis caffra. The species in this genus include: caffra, bionica, hemileuca, ipsilon, lata, oliveata, puta, segetum, semiomelas, spinifera and trux.*

(9) Other insects that take the *caffra* epithet include - *Miomantis caffra*, a new mantid record in *Mantodea Mantidae,* among a whole lot of others that would make for an extensive inventory.

As evident above, with the exception of moth naming, the attribution of "barbarous names" was more in common with vernacular English more than with Latinate scientific names. However, the naming of butterflies after amaZulu and amaXhosa leaders who resisted English dominion underlines the contexts and preoccupations of butterfly collectors who sent or acquired descriptions and specimens for naming. In this sense, Bowker's participation in the endless skirmishes and wars between South African kingdoms or peoples and the British beginning from the late eighteenth and throughout the nineteenth century is critical.

**South African Butterfly Nomenclature: The Imprint of the Collectors**

The contribution of Roland Trimen and James Henry Bowker to the discovery, identification and naming of South African butterflies has been noted (Williams 2013). The values and subjective motivations that animated Trimen and Bowker or how their times influenced them in attributing specific names to different species of butterflies is still to be thoroughly examined. How did South African butterflies get the names they have today? How do the names reflect settler consciousness? Above all, what frictions do the name give rise to, today?

According to an article in the Natal Mercury after his death, "in the pursuit of nature (Colonel James Henry Bowker) has contributed more to current knowledge than any other man in the country, particularly in regard to butterflies of which he made an especial study, and was instrumental in discovering more than 40 new specimens formerly unknown to science". In other words, Bowker was the perfect image of the heroic natural scientist besides being a soldier. How did the two calling affect each other?

Both Trimen and Bowker were deeply attached to the British colonial administration: Bowker became a Colonel in the Cape service (that is, the present Eastern Cape Province and Western Cape Province combined), a Commander of the Frontier Armed and Mounted Police, a Governor's Agent in Basutoland, subsequently James High Commissioner of Basutoland from 1868 to 1871, a Colonel during the Seventh and Eighth Kaffir Wars, and also Chief Commissioner on the diamond fields of Griqualand West (see Trimen and Bowker 1887).

Though Trimen and Bowker were interested in natural history, Bowker in particular, was deeply influenced by military and administrative politics from about 1860 to the late 1880s, during which time he worked in Caffraria, Griqualand West, Basutoland, Natal and Zululand. A European acquaintance in Burman (2007: 123) describes Commandant James Henry Bowker and later Colonel in the Cape Forces and the Cape Governor's Agent in Basutoland as "an experienced old warrior in native wars who knew their ways and customs as none other did." In combining his interests as 'an ardent Naturalist in Entomology and Botany' and his colonial appointments, Bowker showed unparalleled observational and collecting skills as a natural scientist in South Africa at the time, often exploiting his expeditions as a soldier to collect both butterflies and fossils. In examining the names of most of the butterflies that Bowker discovered and had Trimen name them, one sees the names as encapsulating some of the tragic circumstances of the times, particularly the war-ridden, drought-stricken and sere countryside.

Bowker's work as an imperial administrator or military person is largely anecdotal and less well-established to talk of how it must have influenced butterfly naming processes. Narratives of his role in the Frontier Wars and the War of Guns indicate that he was very versed in the arts of bush war, negotiating conflict and subjugating "natives". For example, he is known for waiting out rebels (with the same patience one requires to study butterflies) hidden in caves in the Lesotho mountains for days if not weeks, unable to attack them for want of sufficient British soldiers or ammunitions. Travel guides to South Africa, Swaziland and Lesotho (e.g. Macrea, Reif, Velton et al 2012) underline that San Bushmen largely inhabited the town area known today as Semonkong, which lies 113 kilometers from the capital Maseru in Lesotho. Known as "the Place of Smoke", Semonkong was established from 1873 and the 1880s as a refuge for Basotho displaced by the Gun War. The texts establish without reference or evidence that following a series of "genocidal campaigns" against the San Bushmen by the British (other texts say it was by Boers), the last of

Lesotho's San were finally exterminated by an expedition led by a certain Colonel Bowker (Macrea, Reif, Velton et al 2012). Following, the Basutho that were displaced by the Gun War sought refuge in the area. The allegations raise questions over Bowker's role and vision in the ordering of South African society in 19th century. That Bowker's participation and experience of the most seminal conflicts in South Africa shaped the naming of butterflies he discovered in the rustic and war-ridden countrywide is evident from the somber and brooding anthropogenic names attributed to most of the butterflies that he named with Trimen.

**Interpreting Butterfly Names and Series**

The "widows genera" indicate Bowker's vision of the countryside from the perspective of a soldier and administrator – dark, brooding and dismal. When one considers the sundering of the countryside by wars, and the trooping of hundreds of thousands of those disenfranchised of their land, cattle and crops by colonial wars and taxes to indenture themselves to the mines and to white pioneer farms, then one understands the extent of abjection rural residents must have faced in a desolate countryside. The effect of these transformations is still evident in the gender divide one sees today in South Africa and the reclamations of land and identity, including place identity. The sharpness of the particular designation "Pondoland Widow" given the crushing poverty that characterized Mpondoland in the late 19th century Eastern Cape, and the acuteness of "Golden Gate Widow" as it reminds one of reality of the successive 19th century imperial and colonial wars that decimated huge swathes of amaXhosa and amaMphondo men leaving the countryside teeming with starving widows, and thus making way for urban, farming, and mining indentured labor.

**The Digaana Series**

*Dingana alaedeus* Wakkerstroom Widow

| | |
|---|---|
| *Dingana alticola* | Red-banded Widow |
| *Dingana angusta* | Long Tom Widow |
| *Dingana clara* | Wolkberg Widow |

| | |
|---|---|
| *Dingana dingana* | Dingaan's Widow |
| *Dingana fraterna* | Stoffberg Widow |
| *Dingana jerinae* | Jerine's Widow |

This series is entirely named after widows. Most of the butterflies here are brown and found in pretty remote country sites. Dingane kaSenzagakhona Zulu (ca1795-1840), also transcribed as Dingaane, is the ruler that succeeded Shaka Zulu after assassinating the latter (in 1828) and launching years of catastrophic fighting between Zulu royal factions and between Dingane and the Voortrekkers. It was a period when the Zulu kingdom appeared dispersed and in factions. His conflict with the Voortrekkers led to the Battle of Blood River (1838) and the Battle of Maqongqo (1840), shortly after which Dingane found his death while escaping into the hands of his former Swazi enemies and he seeking refuge with a few followers in Nayawo territory on the Lubombo mountains. A group of Nyawo and Swazi assassinated him in Hlatikhulu Forest. It is worth signaling that Mr. Mlambo managed this same forest as an Emzemvelo Kwa-Zulu Natal Park appointed community conservation officer.

What then does the Dingaan series of "widows" have to say about Dingaane the Zulu king? It's likely that those that named the butterflies (beginning with Trimen in 1873) might have thought of the strings of at-risk and wandering widows left in the country by Dingaane's undertakings or entrapment. However, without detailed biographical information on the collectors and their views of the time, particularly for Trimen who first created the Latinate name "*Dingana-Dingana*," it is hard to tell. Nevertheless, the effect of the names on the Manukelana managers is one of puzzlement and cynicism. Despite the vast acclaim showed towards Shaka Zulu's figure, many isiZulu-speakers also consider him as having sold out the Zulu Kingdom to the British in his efforts to acquire their knowledge of arms, medicine and writing. The latter gives credit to Dingaane for ruthlessly engaging the Voortrekkers even though this led to a humiliating defeat and loss of Zulu life.

*Zintha Hintza* (Trimen 1864); Common English name: Hintsa Blue.

Synonyms include:

*Castalius hintza (Trimen, 1864) Lycaena hintza Trimen, 1864*

*Castalius hintza krooni Dickson, 1973 Castalius resplendens Butler, 1876*

Hintsa ka Khawuta (1789 – 12 February 1835) was the 4th paramount leader of the amaGcaleka people. He was a renowned amaXhosa King (of the stature of King Shaka) who resisted British colonists through the "Sixth Xhosa War", was captured in 1835, and upon attempting to escape was shot, plundered of his bodily ornaments and had his body dismembered for mementoes with the head preserved and taken to England.

***Kedestes macomo* (Trimen, 1862); Macomo's Ranger**

"Macomo" is a misspelling and a mispronunciation of the clicked name Maqomo. The young Maqomo who was to be a leader of the amaXhosa, fought with his father who acquiesced to the endless encroachments of British Cape Colonists by ceding them land belonging to the Mgqika people in exchange for peace. Though he was of the amaNgqika-Xhosa, his military prowess and resistance to his father, saw him become a military commander to Hintsa, the amaGcaleka-Xhosa king. Maqoma is reputed for having rejected conventional war in favor of guerilla fighting (Leband 2014: 97) thereby prolonging for many decades the Frontier Wars that were to check the advance

of British colonization to the east. Maqoma found that conventional war was useless in the face of the overwhelming firepower of the British.

**The "Gaika Butterflies"**


*Picture 32 "SOUTH AFRICA: Kaffir War Tini Macomo Running for his Life - Antique Print 1878".*

"Gaika" is an English misspelling of Ngqika [ŋ!ɦiːk'a] which has a click after the velar nasal /ŋ/. English writers and colonist government documents never represented clicks in the names of the Khoi-Khoi, isiXhosa or isiZulu people whose languages employ them. Nevertheless, the name either refers to the father of Maqoma called Ngqika ka Rharhabe 1779 – 1829), the royal head of the Rharhabe amaXhosa, who live west of the Kei River; or it could refer to the Ngqika clan itself.

For the Gaika Blue (from the genus *Ploymmartinale*) with scientific name *Zizula Hylax.* its synonyms, the dates when named, and the various regions of the world where these variants appear are: *Papilio hylax* Fabricius, 1775; *Lycaena gaika* Trimen, 1862, South Africa; *Lycaena mylica* Guenée, 1862: Réunion; *Lycaena cleodora* Walker, 1870, Egypt; *Lycaena perparva* Saalmüller,

1884, Madagascar; *Zizera gaika* (Trimen); Butler, 1900;

Rothschild, 1915; *Zizera horii* Matsumura, 1915, Saipan; *Zizeeria gaika* (Trimen); Winter-Blyth, 1957; *Zizula gaika* (Trimen); Lewis, 1974; *Zizula hylax* (Triman); D'Abrera, 1986.

The Gaika Brown (from the genus *Satyrinae)*, scientific name *Pseudonympha gaika* and synonym *Pseudonympha gaika Riley*, 1938, by contrast, is restricted to South Africa to the Eastern Cape in Gaika Skop, along the Amatolas, Hogsback, Witterberg, and near the Drakensberg mountain ranges.

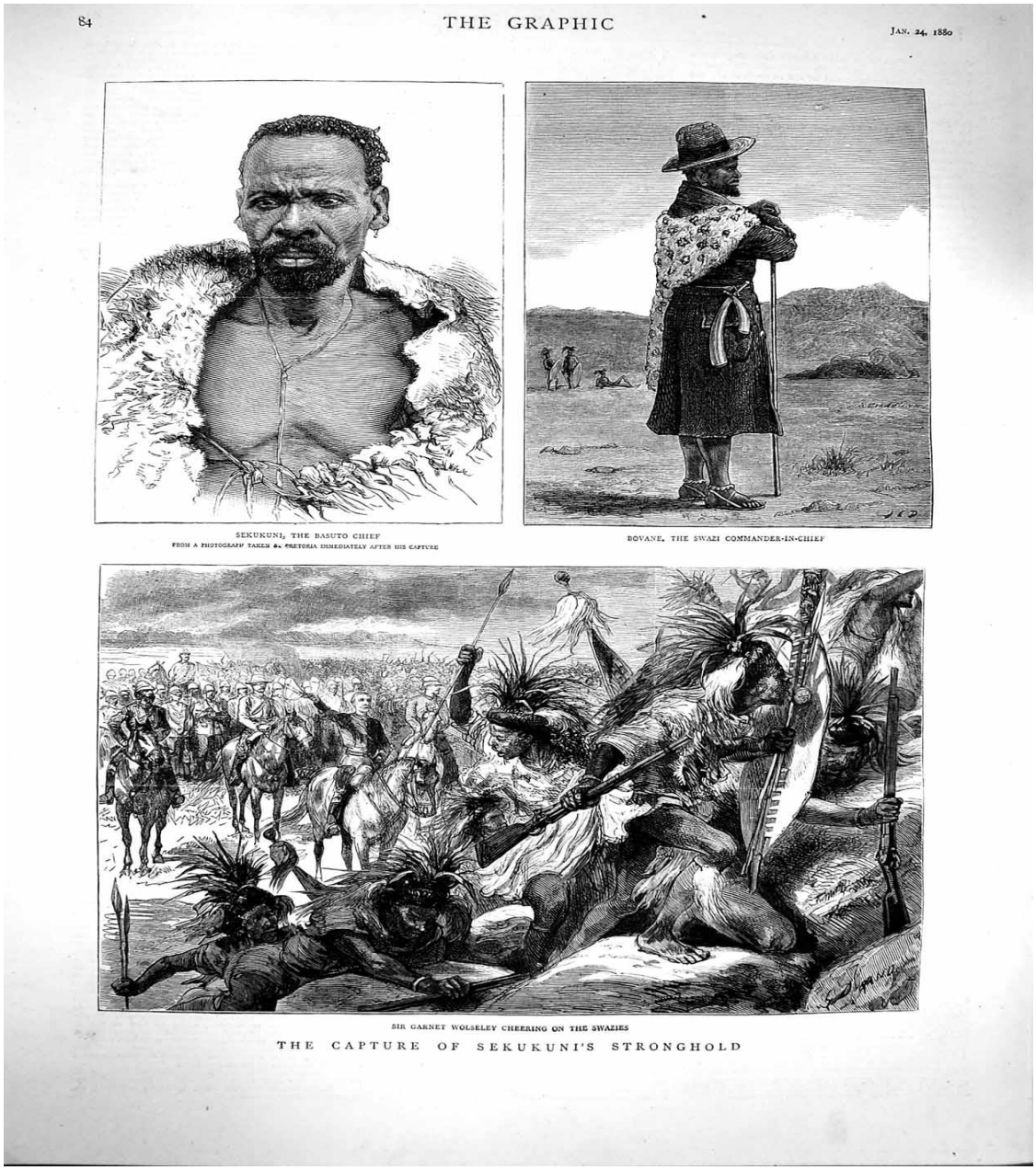
Others curious nomenclatures include the Shadefly Series:

Zulu Shadefly: (*Coenyra hebe*, (Trimen, 1862a).
Secucuni Shadefly (*Coenyra rufiplaga* Trimen, 1906).
Pondo Shadefly (*Coenyra aurantiaca* Riley, 1938): see image at end of chapter.

*Picture 33 Male of a Pondo Shadefly (Coenyra aurantiaca Riley, 1938). Note that the males are usually more colorful than the females, as is common among other animal species, thus the despondent looks of widows.*

While the first and last names on the above list that were generated by Trimen refer to ethnic groups subjugated by imperial and colonial forces, the second name Secucuni Shadefly continues with the list of conquered leaders as shown by the already discussed cases of Ngqika, Maqomo and Hintsa. Secucuni (more commonly spelled Sekukuni) was the Chief of the Basutho people in

South Africa whom the British defeated and brought under their administration in 1879. Bowker played a critical role in their subjugation.




*Picture 34 Chief Secucuni after whom Trimen gave the common name Secucuni shadefly (Coenyra rufiplaga Trimen, 1906). Notice the look on his face in the first image and in the second, his figure contemplating.*

Note that the images above are from an Old Original Antique Victorian Print 1880 Sekukuni Basuto Chief Wolseley Swazies Bovane 084M121 A full page from a volume of the GRAPHIC, an illustrated British weekly newspaper in 1880.

Trimen named various butterflies named after his close collaborator Bowker. These names exclude other genera outside butterflies that Bowker also "discovered". Thus:

*Dingana bowkeri* Trimen, 1870 (Bowker's widow or Dingaan's widow)
Iolaus bowkeri Trimen 1864
*Stugeta bowkeri bowkeri* (Trimen, 1864) (Bowker's marbled sapphire or tailed blue)
*Teracolus agoye* subsp. bowkeri
*Serradinga bowkeri* (Bowker's widow)
*Tarucus bowkeri* (Bowker's blue)
*Tarucus bowkeri subsp. Transvaalensis (*Bowker's Dotted Blue).

Some South African herbs named either after Colonel Bowker or his sister include:
*Liparis bowkeri Harv*., a terrestrial herb;
*Bauhinia bowkeri*, a species of legume in the Fabaceae family;
*Prestonella bowkeri,* a species of air-breathing land snail;
*Chlorophytum bowkeri* is a robust perennial herb.

Besides aspects of South Africa fauna and flora, we also have Fort Bowker, now a monument in Idutwaya (former President Thabo Mbeki's village), which was built around 1860 to keep the Gcaleka north of the Mbashe River that is still named after Bowker. A memorial monument in Durban is also named after him as well as a road in Maseru, the capital of Lesotho.

**Against Scientific Latin and Vernacular English and Afrikaans Butterfly Names?**

Baba Phungula's problem crosscuts questions of ethics, reciprocity, practicality, nationalism, and the identity of the nation-state as well as Pan-Africanism. While at the beginning of my fieldwork, the founding managers tormented me with questions that revealed a perchance for conspiracy theories, their questions became more focused as time went on and we built a closer rapport and learned to frame questions. *For example, he would ask why should the humor and desires of taxonomists be a burden to other peoples across the globe with scientific names that nobody understands? And why is it that tour guides have to necessarily find a language to communicate*

*with Europeans and entertain them for a living when the same is not true the other way round?*

Nicolas argues that as tour guides they need a language that butterfly specialists and tourists from European countries and who are versed with butterflies could easily understand. Because formal names were in Latin or derived from Greek, speakers of various European tongues who were versed with butterflies could all relate to the names. As such the creation and use of local names, just as with English and Afrikaans common names wouldn't make sense. Baba Phungula began to scrutinize the scientific names of butterflies and the more he read about butterflies the more issues he found with the names and with the naming processes. These issues were more likely to impede rather than contribute to learning processes.

**'Indigenous' Cultures without Butterfly Names: Creating New Names?**

Following the abolishment of official apartheid in South Africa in 1994, stringent calls emerged from black, colored and Asian communities to overturn the names of affective places and objects that kept alive scathing memories in the minds of the formerly oppressed. In any case, Baba Phungula's concerns led him to ask: "What about inventorying butterflies and plants in local ecosystems and giving them iSiZulu names which can then be adopted countrywide?"

Nicolas tried to dissuade him by insisting on the complexity of creating new butterfly names and getting them authorized. But the gardener and ex-soldier would not give up. With deadlines to meet in establishing the butterfly dome, and being a rather solitary and careful scientist, Nicolas kept his distance from Phungula. A feud emerged between the two over questions of recognition, and in the end, the entomologist proposed that he would undertake the project when he finds time.

"How would you create new names for butterflies in isiZulu when you cannot speak a word in the language?" Phungula asked him, a question that led to anger.

What I understood from the other founding managers is that it wasn't just the questions over naming and ways of knowing nature that were significant, as much the ways in which the problem was approached and discussed. The process of naming butterflies, Baba Phungula would find out, wasn't so easy.

Nicolas spelled out to him that creating a new butterfly name mostly happens when a new species

ot sub species is discovered. In this case the discoverer describes the species following an established scientific format, suggests a two-word scientific name in line with the principles of butterfly nomenclature, establishes explanations for the names, and works with university academics to get the names accepted and then proposed for recognition. This could mean submitting the description and suggested names to a peer-reviewed journal where a panel of experts in the field would determine if the science and the name is sound and from there it could be proposed for acceptance and registration by the International Commission on Zoological Nomenclature which promotes stability and universality in the scientific names of animals. He underlined that the entire process would take a lot of time and resources which he, Baba Phungula didn't have and couldn't afford. Baba Phungula said he could work with university student interns in describing the butterflies, proposing names and pushing forward the proposal. Nicolas informed him that recognizing the names required peer review and Baba Phungula didn't belong to any academic establishment. The response pained Baba Phungula.

"Then why don't we work together to do it since you're an expert?" Baba Phungula asked Nicolas.

Though Nicolas holds a PhD and consults various organizations as a natural scientist, he does not hold a position at university and is not interested in academic work. Rather than take time to explain his difficulties to Baba Phungula, he tells him that he had thought of the vernacular name issue but still needed to find time to do the work.

"But how would you do it alone when you don't know isiZulu?" Baba needled him.

The question irritated Nicolas and he began to keep his distance from Baba Phungula. Since then the two didn't utter a word about the naming project again.

Not long after arrived, Baba Phungula spelled out the conflict to me very sketchily, knowing that I was also interviewing and learning from Nicolas. It was Rasta who let me know of the gravity of the case. The conflict occurred over a long period of time. According to Rasta, when Nicolas disagreed with Phungula and refused to assist him, Phungula fought him very hard and made sure he booted him out of the project. It appeared then that when it came to a head the conflict between the two became less one about naming butterflies and more of a power struggle. Scholars have elaborated on issues of reason (Lowe 2006), power (Li 2002; Walley 2005), anti-politics (Li 2007;

Ferguson 1997?) and misrecognition (or the possibility of various combinations) between state or NGO actors and members of local communities.

I tried to reconcile both, but Phungula wouldn't accept going back to Nicolas and Nicolas wouldn't trust Phungula either. At the end of the day, Nicolas who lived far away in Pietermaritzburg and only visited the project on invitation from Rasta (and following pressure from me) couldn't trust me too as he felt that I was too close to Phungula and Musa. Efforts on my part to gain Nicolas's confidence or to show to him my impartiality only saw him muted. While I had taken months to express to the founding managers of the project that I was ethically and professionally bound to safeguard their interests, to be as objective as possible and not take sides in their conflicts - an event that earned their trust in my impartiality – I found it hard telling Nicolas the same. While I empathized with him and I felt that he had acted in good faith as well as made my understanding clear to the project managers,

There were deeply hurt feelings on both sides and mutual distrust. Whereas Nicolas used to buy palm-wine from close to Mozambique and would share it with the founding members several years ago, he never did so anymore. They will sit in formal meetings in the office where Nicolas would be invited so he could advise them on how to manage the butterfly dome. But then they never ate together or shared informal chats.

When questions over the relevance of Latinate scientific names and English/European ones for butterflies in Dukuduku Forest and the merits of the coining local names came to a head, something had to give way in Manukelana. It was either Baba Phungula's way or the highway for Nicolas. According to Rasta, Phungula made sure he ejected Nicolas out of the project. It was an embarrassing outcome that struck me when I learnt of it given my developing closeness with both baba Phungula and Nicolas. to I came to realize that the conflict was not so much about names or even so about Phungula and Nicolas. It was a conflict over power and control of the butterfly house. I believe that had the name issue not arisen, a similar one would have emerged over the butterfly house. In the end, when the African Conservation Trust made an elaborate proposal that would have seen them take ownership of the butterfly project since only they had the expertise to manage it in the long term, the founding managers of the project felt it was time to terminate the ACT contract along with Nicolas's. But would how they manage the butterfly dome with it

collapsing when they lacked the expertise for breeding and taking care of the dome?

The consequences on project growth and stability were significant. The butterfly dome suffered on various fronts from the lack of technical expertize until I arrived. For over eight months I kept soliciting the managers to bring in the Nicolas if the dome were to survive. In the end, finding that they were caught between the excrutiating oain pain of humbling themselves and saving face, which increasingly was an untenable peoposition, I began to remonstrate bitterly with them for allowing their emotions to run awry.

**Coining Indigenous African Names for Butterflies**

When Baba Phungula asked me months later whether he was fit to coin the names for butterflies just as with indigenous plants, I asked "Why not? Have you coined any yet?" He said he had a list of some he had coined, and needed pictures of different butterfly species in and around the Dukuduku area to establish the list. There was the fast and high flying green banded swallowtail which Baba Phungula called "mpazima" denoting "a dashing flash of green". The name was very appropriate. Just to confirm its appropriateness, I found it embossed as a logo on a group of locally owned taxis whose founder and owner (he's of late) had doubted the rationality of the partnership between the Manukelana business managers. He'd thought that their venture looked too foolhardy in a landscape where the casualty rate for partnerships was very high.

*Picture 35 mpazina sunbathing or taking in salts*

Baba Phungula's problem was about carrying out a project that would take the allure of authority. He wanted to create names that would be accepted by scholars and scientists. Somewhere deep down in Baba Phungula he wanted to be a poet, gardener and naturalist. Like Nicolas, I told him that getting the naming project through a university would be a tall order because of the complex ways and long time frames that academics tends to follow. The question was if he could coin the names and next popularize them through siZulu guide books for butterflies. There he didn't need anybody to approve the book for local publication and distribution. It was the second instance that led me to understand how bruised the egos and persons of my collaborators were.

Baba Phungula as an ex-soldier enamored with plants, butterflies and indigenous names calls to mind the life of South African soldier, butterfly hunter and taxonomist Henry William Bowker. Only both lived at different times and had different objectives towards the environments.

**Baba Phungula: Not Against Latinized or English Common Names, but for 'Alternative' Nomenclatures**

On the second butterfly collection trip into the forest, a few weeks after establishing a confidential rapport with me, Baba Phungula brought up the question of naming butterflies and explained to me why he felt it was important. He didn't mind if he couldn't carry out the task himself. "Could you help me push forward this project?" he asked me. The best I could do was to encourage him to undertake the job bit-by-bit and day-by-day and to promise him my assistance if he was willing. If he could bring up the names, I could help him publish them and that would be a good start for a discussion with academic bodies in Kwa-Zulu Natal Province at least.

Writing about "the butterfly people" American historian and butterfly enthusiast William Leach

(2014: 82) states that as natural history spread throughout Europe and America, it offered nearly "unconditional communion" with the beauty and power of nature. This unconditional communion and power of nature continues to this day. It could be seen in the zeal of butterfly collectors, now replaced by watchers with binoculars and advances in audiovisual technology, by global travel to seek out butterflies otherwise known as "butterflying", and the socialization of butterfly education. It could also be seen in butterfly naming practices. The art of collection and collectors are long gone, replaced by lepidopterists and lepidopterology. In the place of museums that house dead specimens, butterfly domes and sanctuaries with living butterflies have taken their place. The same dramatic changes could be said about butterfly conservation and ecotourism in the private sanctuaries in the South. But these changes wouldn't come about without much opposition due to institutional legitimacies and other vested interests.

But if butterflies were re-named in isiZulu, what about the other South African kingdoms or peoples such as the isiXhosa, isiPedi, isiNdebele, Sestwana, Khoikhoi and San who cut across boundaries into Namibia and Botswana, the Setwana who cut across South Africa into Botswana, and the Sotho-Shangaan who cut across nation-state boundaries into Mozambique? How would this complexity or fragmentation be addressed? Baba Phungula stressed that those other languages too would pick from the Manukelana example and address the problem. The outcomes are that the effort would bring in more knowledge and draw local attention to butterflies. He underlined his cause by making allusion to the problems involved in training students in Mathematics or technology in South Africa using foreign languages. It rendered understanding by non- native speakers difficult. The question was very real – international comparisons of Mathematics performance in the world underlined a huge problem in South Africa. Because students were taught different concepts in foreign languages, they found it difficult to understand. The issue of Mathematics and technology preoccupied Baba Phungula for some time, and not just that, the predominance of foreign languages in Africa.

**Manukelana, St Lucia Butterfly House, or Isiphaphalazi Butterfly Dome?**

The butterfly dome where I did research was originally known as "Manukelana", the short form for "Manukelana Art and Indigenous Nursery Project". The project managers saw the dome as part and parcel of the whole project rather than a separate entity. However, in St Lucia Town, the

Afrikaans tour operators referred to it as "St Lucia Butterfly House", extracting the dome from all the other "meaningless" projects on the premises. This epithet "St Lucia" created the impression that the project was located in St Lucia Town (an Afrikaans settlement), though it's actually in Dukuduku Forest, along the R618, two miles to Lake St Lucia Estuary Bridge. Above all it created the impression that it was a project founded and managed if not by Afrikaans speaking Euro-Africans (Dutch Afrikaans, English, and others. I used the word to avoid "settlers") by whites. For how could blacks found and manage a butterfly house? The misnomer could have cost the project managers state and corporate funding which they desperately needed to expand their project, but they didn't worry, if by claiming it, St Lucians could bring them tourists and invest meaningfully and impartially in the project. The project thus appears as "The St Lucia Butterfly House" in a travel book as well as in regional tourist brochures in 2011, 2012, and 2013 when it was still jointly run with African Conservation Trust professionals.

It is not evident whether the Euro-Africans sought to appropriate the project as the project managers repeatedly underlined. Again, whether "the whites of St Lucia" (as the managers or the people of Khula Village and Dukuduku Forest call them) found the name "Manukelana" difficult to enunciate, or they felt threatened by the idea that the four founding members and project managers referred to their organization as a regimen in the forces of King Cetshwayo, a distant successor to Shaka Zulu, is not evident.

Volunteers to the project from Europe and the US had a different take on the dome. From the founding members' narratives of butterfly conservation in the region, they fell in love with the translation of "butterflies" in isiZulu and how this melodious name, "Isiphaphalazi" whose use is limited to northern coastal Zululand, came about. The ancestors, Mr Mlambo underlined, found no use for butterflies and so called them "these things that fly without purpose or sense of direction". It wasn't only the phonetics of the word that pleased the volunteers, but also the vision of butterflies bobbing, changing direction, or floating aimlessly. This vision of butterflies seemed to incarnate that of volunteers and tourists who were known in largely rural northern Zululand as *isivakashela* or "wanderers." In another perspective, history underlines Shaka Zulu's last words upon being stabbed by his half-brothers – and a loud and disappointed cry at that, as well as a prediction or curse, "You can kill me, but you'd never defeat the swallows!" By "swallows", he meant the "swifts" that came to that part of the continent by way of the sea. The founders of the

project, who were overjoyed with the affective attachment of their project's volunteers were happy to adopt the name "Isiphaphalazi Butterfly Dome", even as the local people of Khula Village and Dukuduku Forest continued to call it "Manukelana" meaning "a place of struggle".

I wasn't aware of tensions over place names in the region, or the significance that speakers attached to particular names of objects, things, places or events until I attended in October 2015 a wetland science workshop organized by the iSimangaliso Wetland Park and World Heritage Site. Towards the end of the workshop, the park's education secretary had praised the presenters for their productive presentations and urged them to do several things, among which to refer henceforth in their projects to St Estuary as "iSimangaliso Wetland Park", a development I found to be quite dramatic even if the rest of the scientists present didn't show it.. Following the end of the workshop, I asked a few isiZulu attendants what they thought of the name issue and they all said it's an issue between the park and its Afrikaans scientists. During the course of a free visit into the park organized by the park for workshop attendants, one scientist raised the issue of names and the others simply laughed. They were all Afrikaans speakers. That was when an interlocutor informed me that for residents inside the park to lose the name of their town or locality was tantamount to losing their identity and place inside the park. The patron saint of the recently built Catholic Church in the small St Lucia island-estuary was the Saint Lucia herself, whose eyes were removed during torture. Once I invited Baba Phungula inside the church since I lived next door, he couldn't stay for long without feeling uneasy and asking us to leave. He could not stand the pictures of the European or Middle Eastern looking saints on the walls and lots of questions that were welling up inside of him. Baba Phungula could not understand how I could be African and Christian.

The survival of the name "Dukuduku" had been critical in resident testimonies of settlement and ownership of the forest. The name stretches back to the first travel writers that visited the area. Without written accounts of the name tagging with oral testimonies, Rasta tells me, the state would have since evicted the largely non-literate residents of the forest before they became literate. In *Ecology and Conservation of Estuarine Systems: Lake St Lucia As a Global Model* (2013) edited by Perissinotto, some of the outstanding long-term researchers in the estuary and who tend to be largely Afrikaans have ensured in the preface of the book and in the articles that follow, that they

have enacted the name "St Lucia Estuarine System" as the largest coastal freshwater system in Africa and which subsumes all the major rivers in the region that drain into Lake St Lucia.

A faction in the park's management (that were opposed to the scientists) was quietly fighting back the Afrikaans' influence through seeking to impose the name iSimangaliso through academic papers done under its 'purview'. Their hope was that the name would be adopted by journalists as they write about conservation and ecotourism, and following by tour operators, tourists and then locals. Yet, the quiet and unobtrusive and uncontested way she had introduced or sort to reinforce the appellation hardly made one suspect that it was part of a significant long-term undertaking by the park to appropriate and extend its hold over the estuary. Two reputable siZulu-speaking tour guides also confided to me that they had seen a document where the park had mapped how it intended to enclose all territory beginning from Mampelana on the south of Dukuduku Forest right up to the border with Mozambique within its confines. It was a troubling proposal that was very much talked about by what I could call the isiZulu elite around iSimangaliso. The above events led me to begin paying attention to how places, objects, and things were referred to.

It was Baba Phungula who explicitly drew my attention to the politics of name in conservation and ecotourism in South Africa and how it had personally affected him. It was then that I recalled he never made use or mentioned his middle or Christian baptismal name "Amos" and which he had long since rejected; his Zulu surname, Bhekinkosi, which he hardly mentioned (by virtue of having not known his father?), and the name of the country itself "South Africa", which he found to be a "meaningless" geographical reference from the colonial perspective of metropolitan London.

Swyngedouw (2009) underlines that "the political arises when the given order of things is questioned; when those whose voice is only recognized as noise by the police order claim the right to speak, acquire speech. As such, it disrupts the order of being, exposes the constituent antagonisms and voids that constitute the police order and tests the principle of equality", he equally fails to stress that questioning this given order sometimes begins with self-scrutiny or "the technologies of self" (Foucault 1988: 16-49) however tentative these might be as we see in the case of the founding members of Manukelana Project. Nevertheless, questions over the meanings of participation, collective action and empowerment are bound to emerge unless the process is reflexively managed with a view to redressing issues that relate to historical, ecological, and social

justice.

**From the Name of the Thing Towards Empathic Agonism**

At the end, Baba Phungula began to pose various questions that have preoccupied contemporary thinking in human non-human relations: "Are butterflies aware of the names that humans call them? Are scientists aware that the names that are given to living things remain nothing but names, even if these names make us like or not to like them?" Baba Phungula was questioning the correlation between human thought and non-human entities or how human communities know butterflies. In other words, he was echoing the meaninglessness and incommunicability to butterfly specie of human representations. Thus The foremost American lepidopterist, Pyle (1984: 80), echoes the same opinion when he talks of the troubles that butterfly lovers find with names: "The attention we pay names can actually get into the way of enjoyment. As a human invention, they mean nothing to the butterfly. Their beauty does not depend on the label". The basis meaning that issued from baba's thinking was that things existed independently of human perception, cognition or consciousness. It was an argument that he'd occasionally put forward to question or reject the very notion of the "indigenous" when he was not challenging South African white or imperial, colonial or post-colonial perspectives. His broader question, which neither him nor I could broach was what do anthropocentric perspectives serve?

Baba's questions are not about "indigenous" knowledge per se. They are about local as well as particular ways of knowing. While he adduces the term "indigenous" to reinforce his arguments for other ways of knowing more than the Western and to argue for the co-production of knowledge over the environment, he does not establish the difference in his use of the term. Talking about the shutting down of conversation (or anti-politics, see Li 2007), he stresses how it leads to an intolerable situation that forecloses the thinking process. "Sometimes it makes gardening difficult," he tells me. In looking at Baba's thoughts on his computer which he frequently transferred from his pocket notebook at the end of each day, I realized that for him being and working in the garden had become synonymous with thinking and creativity, and above all, having an empathic mind. Over the years, the ex-soldier had developed a close affective attachment to plants, butterflies, and the garden as well as wetlandscape that he could hardly spend more than three days out of Khula village without hurrying back so he could get to work. His life, his being,

thinking, like Bro' Musa's and Rasta's was all tied up with the garden. The images and metaphors that Baba and his colleagues often used became largely derived from land tenure, gardening, plants and butterflies. They focused for the most part attending to the earth, to the growth of plants, people and the possibilities and joys of flight. They saw frustrations and blockages whether issuing from personal weaknesses, social malaise, anti-politics, or state corruption as foreclosing the possibility of flight.

**Gardening, Citizen Science, and Inventive Life**

Contemporary projects of 'empowerment' and capacity building following state and economic actors are often limited to material and technical transformations. As such the ability to act and to change the order of things in terms of the symbolic order, or the way reality is conceived, including the shifting or shuffling of who can claim to be in the know (Swyngedouw, 2009) remains a tall order. Two camps emerged at Manukelana: Sabelo, the younger manager and tour guide and Vusi and Nomvula were quietly opposed to the founding members of the project. The younger generation felt that the founding members of the project squandered a lot of capital in fruitless fights with the African Conservation Trust and its scientists. They did not find the questions over symbolic recognition, particularly over plant and butterfly names or "indigenous" knowledge production, as worth staking the financial aspect od the business in. was only one. The founding members on the other often accused talked of the younger generation as being complacent with colonization and failing to understand the staying power of racial oppression in South Africa. As Baba Phungula outlines the challenges their business came to face as opposed to the optimism that came with its founding, his look gets lost to butterflies bobbing, floating, zapping past in the garden. He's disappointed that they can't make a difference in lives of the communities they set out to help due to the want of funding. "Whites still control the land, money, capital, knowledge, everything". "Blacks" he continues don't even have the "right" names for things in their environment." They can't respond to questions from school pupils or dwellers in the forest when they ask them about the names of particular butterflies. As conservationists and eco-tourism guides, they can't educate. More strikingly they can't get to give names to their own unnamed environments due to post-apartheid and post-colonial socio-organizational entanglements.

Baba Phungula would also demonstrate a deep affective intertwining between him and butterflies (Bro' Musa included). *Do butterflies make sounds?* Baba once asked me. He once heard a butterfly sigh just when he caught it. It was a pretty quiet day and the air was very crisp. While the question has been controversial among butterfly scientists, evidence has emerged that some species do make audible sounds. *How do butterflies that have never felt the smell or taste of a human react upon first encounter?* It was a question that led me to observe the close and unguarded relations between domesticated and non-domesticated species of butterflies. I realized in that MacBanana Dome in south of KwaZulu Natal Province, a few species of butterflies were not afraid of landing on people's faces and arms to take up the salts transpiring from human their bodies.

*Is it fair that humans should catch butterflies and use them for experiments or deprive them of their freedom for purposes of conservation ecotourism? What if that happens to humans, would it change the answer or our perspective? In gardening the earth, which is the most important tool: the human hands, or the objects that enhance its limitations?* These among many other questions were characteristic of the questions that Baba Phungula and Bro' Musa often asked as they worked. For the nurserymen or gardeners, laboring the earth and the mind (which they see as intertwined) to allow growth is conterminous with environmental citizenship.

For the founding managers of Manukelana their concerns were not so much about the re-distribution of material resources though in the end they realized they realized bitterly that they had achieved neither.

**From Biological to Bio-Cultural Diversity: Legitimacies at Stake in Butterfly Nomenclature**

In reviewing Henry Edward Knox's *Natural History of British Moths, 1869* (Four Volumes with nearly Four Thousand Colored Specimens), which was intended for the study of systematic entomologists as well as unscientific lovers of nature, Rev. F.O. Morris (himself the author of *A Natural History of British Butterflies*) finds these handsome volumes containing pictorial and written descriptions of every known species of British moths. He goes on to state that they are:

> so accurately and carefully given as to afford all the information necessary to the formation of a complete collection. Each specimen has its English as well as its scientific name, the

> date of appearance, locality, food, both in its caterpillar and winged state, and every other peculiarity relating to its habits and modes of existence. The figures are drawn on stone from nature, and printed in colors in so perfect a style as to enable any one, however unscientific, to recognize the insect delineated at a glance; while the accompanying text is so charmingly simple and explanatory as to render its perusal easy and pleasant to the most unscientific readers. Indeed, we do not recall any strictly scientific treatise so pleasantly penned. Every here and there the purely technical language is relieved by some poetical suggestion or personal reminiscence; as when – after describing the characteristics of the pretty little fawn-colored Vespertaria, the author of the four volumes says, "The name of the moth furnishes me with an argument against those who advocate the adoption of an exclusively Latin nomenclature by those persons who have never been put to the trouble of learning any other than their mother tongue. Staunch Churchman as I am, I exercise the widest tolerance towards those who are not so happy as to be within the pale of the church. You may imagine, therefore, with what feelings I one day last year received the intelligence that a brother entomologist had recently captured and killed some two hundred *Presbyterians*".

The above except from *The Christmas Bookseller*, January 1st 1869, already foregrounds language and representation as a site of struggle in entomology that would go on for over a hundred and forty seven years. While this critique was directed towards a class struggle in England, pitching those that reclaim science and "who have never been put to the trouble of learning any other than their mother tongue" and the most unscientific that could and were longing to read science, it could very well be extended between the former and the formerly colonized now struggling to emerge out of the gauze wire of historical environmental enclosure to contribute to local experiences and knowledge of the environment.

The neo-liberalization of the environment and the introduction of ecotourism and notions of participatory governance or empowerment in "remote" places like Mafia Island (Walley 2004) as well as iSimangaliso Wetland Park and World Heritage Site has tended to produce different and often passionate and affective epistemological and ontological conflicts between intervening groups and locals. While these policies might initially be welcomed, and even supported with the hope that they would help resolve longstanding socio-ecological problems, they tend to highlight

prior rifts in the society in question, or even so, introduce newer ones. Among these rifts one finds the conflicting categories of nature and a questioning of the concept of "nature" itself. In environments where communities have long suffered historical exclusion and marginalization among other things, one finds a problematization of participation in the co-production of environmental knowledge. Conflicts emerge between local science and global science, whether virtual or actual. This is true in cases of top-down conservation development projects as well as bottom-up projects that come to rely on capacity building by external NGOs and funding by state and outside organizations.

This chapter demonstrates that in the relatively unknown area of butterfly conservation and ecotourism, naming butterflies (in Latinate science and former colonial languages), identifying them in relatively safe vicinities, and engaging annual censuses (where the urban middle class go out hopping, discovering and counting butterflies) look like very tame processes in relation to engaging and organizing communities in knowing and caring for butterflies in ways that respect their cultures, enabling them take control of conservation in their own environments and backyards and supporting the growth of rural African citizen scientists within a context that responds to their own anxieties. This, whether in terms of learning culturally appropriate science as well as reclaiming knowledge from scientists, the power to self-organize from the state, and engaging economic openings that enable them to unleash their potential without institutionalized or bureaucratic biases and corruption. In other words, it calls for deeper understandings on how to tap into and channel the diverse affects e.g., in learning the ropes of ecotourism, that attend local engagements in world-making processes.

We began with Hall's assertion (1992: 294) that in the encounter between Europeans and New World, Hall (1992: 294) notes, "Europe brought its own cultural categories, languages, images, and ideas to… describe and represent it and that Europe fit the New World into existing conceptual frameworks, classifying it according to its own norms, and absorbing it into Western traditions of representation". From there we moved onto analyzing the awkward encounters (see Tsing 2004) brought about by some of these names and categories at the turn of the 21st century. We have also sought to explore the cultural landscapes from which these names and categories emerged. This necessitated "temporalizing the landscape" i.e., delving into the past and experiencing its dynamics so as to emerge from it with better understandings. According to Maffi (2008), "(W)ithout

widespread and in-depth understanding of the nature and value of bio-cultural diversity, it will not be possible to ensure that this diversity is cherished, protected, and sustained". The nature and value of this diversity implicates bio-cultural understandings, representations of past and present (Hall 1992: 294), enactments (Deleuze and Guattari 2007) all of which are infused by power relations. It is as much about understanding how people in diverse places attend to the things of this world, or as Gell (1998:7; Thomas 1998: ix) puts it, "the nature of agency in the vicinity of things" as it is about citizenship. In attending to conflicting enactments of plants, butterflies, landscapes and environments, emerging understandings (from this project) hope not only clarify some of the diverse tensions that arise from neoliberal and other institutional processes but also to foster newer becomings as previously marginal actors seek to invent and enact more accommodating nature-cultures and modes of citizenship. In broaching the notion of affective environmental labor at the unstable margins of state-managed conservancies, particularly in the ways in which past and present landscapes entangle mainstream or citizen scientists, this chapter hopes to have nudged the discourse on conservation a little forward.

## Conclusion

## Gardens, Affective Assemblages, and Biosocial Becomings

Following Tsing (2013), just as imperial legacies continue to produce contested landscapes, there are not many anthropological accounts on what brings gatherings together, in other words, processes of adaptation and survival or rescue, re-building, or innovation. The objective of this project was to study collective action and empowerment in a way to make evident processes of recovery from "wreckages" and the emergence of new assemblages, defined by Tania Li (2007) as "the hard work required to draw heterogeneous elements together, forge connections between them and sustain these connections in the face of tension". In the narratives that make up this non-linear, estuarine-like project, I strive to guide us through everyday practices, mobilizations and contests through which ideas, affects, and 'natural' objects emerge within "world-making projects" and how in so doing groups of persons or communities not only reconstitute themselves but also experience shifts in their knowledge basis and new ways of relating to the environment. In so doing, we learn that assembling alternative environmental projects is more than just assembling the material wherewithal to enable change. It is about assembling place-based relations which calls for understandings of local histories and enabling participation in environmental processes, knowledge production and a politics of recognition. Such a politics would open spaces for collective empowerment in the sense of human and non-human biosocial becomings. While this might seem to be a tall order in the contested terrain that is St Lucia estuary, these discourses or better, contested understandings of place, participatory politics, ecological restoration and empowerment are very much a part of everyday life.

In the opening section, I established the dynamics of wetland processes and the unpredictable and vulnerable nature of field research. Not only are these intertwined, they also reflect on the character of coastal estuaries. Starting out from this premise alters the field research process in terms of

predispositions: openness, sensitivity, and adaptability which are prerequisites for work in ambiguous environments. The opening section also outlines the persistence of colonial regimes of conservation, the institutional legitimacies that give rise to these and the challenges that these pose towards effecting environmental change process. It also underlines the non-linear character of affective and place-based ethnographic approaches which is evidenced by the dilemmas, coincidences, and unexpected kinships experienced by the researcher, but also in the process of searching for the location of a conservancy (Nicolas), in gardening process (the caterpillars) and environmental restoration (all in Chapter 2).

The Introduction outlines the historical contexts that have complicated environmental flows and biosocial relations in St Lucia Estuary and the contradictions to which these have given rise e.g., lose-lose propositions in forestry management as well as challenges e.g., how do those individuals and collectives that are hardworking, honest and economically challenged face the realities of racism on the one hand and of Black Economic Empowerment on the other without giving in to conspiracy theories, and losing sense of personal or collective initiative? In focusing on a group of young South Africans who practice the religious faith of Rastafarianism, this project shows how the group's attempt at carving a space for their religious practices is shaped by the group's ideas of conservation and sustainable development. The project demonstrates how such practices of conservation and development are embedded in a particular history -- that of racial segregation, absence of religious freedom and post-apartheid state's neoliberal and political policies.

Chapter One, "Research Methods and Conceptual Approaches," examines how the relationship between field experiences and theoretical design obliged me to adopt a grounded approach. It outlines the notion of assemblages as well as bricolage and creativity as being central to efforts in grass roots conservation ecotourism (like with alternative development) projects in marginal or peripheral areas or as with communities at the peripheries of state-managed conservancies. It outlines vulnerability as giving rise to knowledge co-production and at the same time enables the researcher to doing away with the notion of the heroic scientist (inherent in actor network theory) while validating humility and ethical conduct. Finally, the field methods e.g., the particular character of butterflies challenges photography and while it draws one to understand their habits, it also draws one towards a closer understanding of the relations that my collaborators hold with

butterflies. In this sense, while some scholars would critique technology as alienating, it also enables affective understandings of forms of bio-sociality.

Chapter Two, 'Gardening for Conservation: The Emergence of the Manukelana Art and Indigenous Nursery as an Affective and Ecologically Productive Space," examines how neoliberal policies opens spaces for bricolage and creativity. I account for the emergence of the structure/process that is the nursery or garden starting from the generation of the concept to institutional involvement, the recruitment of the members of Manukelana and 'structures of feelings' at the time, the withdrawal of initial park support (just as they rescind my research proposal), and the involvement of other actors, including the entry into scene of caterpillars and butterflies, which changes the dynamics of collective action and notions of empowerment. Of critical significance in this chapter is the notion of affective labor – or laboring for the environment - as a process that emerges through practice and involves not only human social intercourse but also connectivity with plants, butterflies, and landscapes (even leading to a doubling of biosocial 'becomings').

Chapter Three, "Ontologies of Human-Plant Connectivity: Articulating Plant Names, Agencies, and Landscapes," brings into focus the affective relations between the nurserymen and indigenous plants and how plant agency and names come to matter in the nursery/garden. The concerns of the projects' founding members devolves over the status of indigenous plants in South Africa; kin relations between plants, soils and (colonial?) landscapes; and how planters mediate these relations. It also examined the spiritual value of indigenous plants and their status in academic and popular literature on gardening and floristics; and lastly, the huge problem of South African plant nomenclature including the survival of derogatory names and the implications to academic production, gardening and landscaping, to racial politics and nation-building.

Chapter Four, "The Affective and Cultural Landscape of South African Butterfly Names" scrutinizes the absence of specific names for butterfly species in isiZulu language (and other African languages), the preponderance of English vernacular and Afrikaans names, and more critically, the drive by lepidopterists to have conservancies adopt Latinate scientific nomenclature to reach out to global butterfly watchers. Thus comes the challenges in terms of memory and

pronunciation and rewards in terms of opening up spaces for affective learning and how the interpreters' performance is evaluated. Of critical importance to this chapter is the examination of the cultural landscapes that emerge in European butterfly nomenclature in Africa and efforts by Baba Phungula to co-create butterfly names in isiZulu with Nicolas, the butterfly scientist. It's an effort that does not work, and which leads to anxiety. Butterfly names are highly affective and the promotion of a mosaic of nomenclatures, Baba Phungula seems to say, would lead both to biosocial as well as biocultural diversity.

Chapters Two, Three, and Four mostly underline the ways in which conservation practices create different meanings for communities, the state and 'conservation experts', and how that generate new meanings for the status of the environment, ecotourism, human-place-nature relations and knowledge production. As a whole the project shows how human environment and natural resource relations intersect with community practices at the peripheries of state-managed conservancies e.g., how particular histories of racialized conservation practices produce different actors who shape new modes of interaction with nature in post-apartheid South Africa. The dissertation further examines the logics, dispositions and techniques of conservation and sustainable development practices and how such interacts with ideas of place.

The Manukelana Project was established with funding from the South African National Lottery and the United Nations Development Program Global Environmental Facility (GEF) Small Grants Program (SGP). Both sources of funding were enabled by the African Conservation Trust that provided the project's founders with capacity building and skills acquisition. Some aid came from the Department of Cooperative Development and Governance and farm technology from the Department of Agriculture Forestry and Fisheries (DAFF). The founding managers of the project acquired a lot of skills in the areas of technical and managerial expertise over breeding indigenous trees, as a foundational project. With the growing renown of the project and its founding members, due in part to their seamless collaboration with the ACT, urban gardeners, landscape designers, herbalists, home owners flocked into the premises looking for indigenous trees or advice. The latter meant that they also became consultants. They acquired working knowledge of butterflies: identification, behavior, collection and breeding, though not enough to enable them deal with some of the emergent complications of e.g., of seasonal survival. For reasons of expertise, the butterfly dome stayed under the care of the African Conservation Trust. Nicolas made sure that it was

always impeccable in terms of maintenance. Extensive publicity was given to the dome by friends of the African Conservation Trust (in offline and online personal communication), on tourism marketing sites and in local journals. Hundreds of foreign visitors trooped to the project weekly, mainly to see butterflies. The dome became one of the ten items in the bucket list of one out of three tourists visiting St Lucia Estuary. The founding members became local consultants and entrepreneurs for greening projects and landscape restoration. Because they were Rastafarian, their frequent performances and attitude towards visitors pushed tour operators in St Lucia to suggest that they take up ethnic tourism. As a result, they became ethnic tour guides. The founding members came to wear many caps: they undertook funding projects to establish school gardens, home gardens, eradicate alien plants along Lake St Lucia, green urban neighborhoods. In this way their project became directly relevant to the neighboring Khula community. Their training in permaculture methods enabled then to help the ACT with training about a hundred women on the premises once every two weeks. They also projected training local youth in worm farming as well as local woodcarvers in sustainable methods of forest use. The African Conservation Trust placed all the founding members on a comfortable income equal to that of state teachers anywhere in the country. The latter constructed cement block houses for themselves, and two bought cars. All four took great care of their families. So successful was the butterfly project that Nicolas and the ACT set out to construct three others across Kwa-Zulu Natal Province. With funding coming in from the very sponsors of Manukelana, the founding members were ready to go help with the handy work. Nicolas had to train about a handful of butterfly tour guides/interpreters at Manukelana to eventually run the other domes.

They sustained over the years, a strong measure of collegiality, camaraderie and goodwill among themselves, given that they hardly knew one another (except for Musa and Mduduzi) before they meet to begin the project at the turn of the 21st century. That they had stayed this long is a feat in South Africa where outside of the African National Congress and kinship ties, human relations particularly among blacks tend to be very fluid processes. The staying power of their friendship and collegiality attest to their strengths of character, the 'structures of feelings' that swept through South Africa with the release of Mandela from prison, through the 1994 democratic elections and Thabo Mbeki's declaration in 1996 that he was an African. They staying power of their friendship

was also forged by the adversity of their Dukuduku locality which they exploited through scavenging for whatever opportunities they could grab.

The staying force of their friendship was formalized by the registration of their business and its constitution, and its recognition by various state agencies and regional tourism boards. The project site itself with its six hectares of land situated at two miles to the very expensive coastal resort of St Lucia Town was a considerable investment. This, coupled with its the built infrastructure and coupled rich indigenous plant life, wetland, water tank system, butterfly dome, permaculture tunnel, worm farm, boardwalk, craft store, tea garden and kitchen even if this was not used. These were enduring achievements that gave each of them a deep sense of pride.

Yet, in spite of the above achievements, the four were ill-equipped to deal with conflicts that came their way and which they had tended to look past. Most of these conflicts stemmed from formal or structural problems e.g., managerial issues. They were rendered more acute by the constitution of their corporation which did not give space for resolving conflicts of interest, complex succession issues, and many others. Traditional isiZulu culture tends to avoid open conflict, and the discussion of potential conflicts of interest in establishing a business could be readily seen as a sign of mutual distrust, and might in itself be generative of future conflicts.

**Why did the project stall?**

The Manukelana Project ran into difficulties for various reasons, all of which appear intertwined. Firstly, there were the power struggles between the founding members and the African Conservation Trust, e.g., between Baba Phungula and Nicolas who couldn't agree on the question of creating butterfly names in isiZulu. Baba Phungula was reticent about explaining the event, except to tell me that he didn't appreciate Nicolas's unwillingness to help out in a matter than he considered critical to the entire project. I took it that he didn't want to see me biased in my relationship with Nicolas since he knew I had to equally spend time with Nicolas and interview him as a main actor in the Manukelana Project. However, before the crisis over butterfly nomenclature, which could have been handled otherwise, various managerial transitions and experiments had already hurt the ACT-Manukelana organization.

As soon as the ACT began giving the project a major facelift and the founding members capacity training following external funding, they appointed the various founding members of Manukelana over different sections of the project. Thus Rasta became the public secretary, Baba Phungula, the accounts keeper, Bro' Musa, the technology and maintenance officer, while Mduduzi bred butterflies and managed the plant nursery. However, the first signs of trouble began when the four founding project members learned that Rasta was claiming credit within the Khula and Dukuduku communities for being the manager of the project. Now, while all of them had managed the project collectively without a problem, the arrival of the ACT with the modern notion of individuation and division of labor had instigated divisions and power struggles between them.

Following the threat that Baba Phungula's drive for knowledge production posed to ACT's management of the project (whites are averse to be being questioned by blacks in South Africa), the African Conservation Trust began to seek for a review of their contract. They wanted to take control of the butterfly dome and the permaculture project and allow the founding members to manage the indigenous nursery, the tea garden and kitchen, worm farm, and ethnic tourism project. The latter projects did not produce much income or bring in as much recognition as the butterfly dome. It appeared that the NGO, rather than empower the founding members to run the project independently, was looking for ways to keep the successful parts of the project for itself and award the mere symbolic parts to the founding members. The founding members discovered the NGO had been able to acquire considerable property for itself by operating that way in many vicinities across the province. While a low intensity power struggle had characterized their relations, now the founders of Manukelana were afraid that the African Conservation Trust was contemplating dispossessing them of the project. The four colleagues came together and when their contract with the ACT petered out in 2012, they informed the ACT that they weren't renewing it. Even so, when the ACT proposed to buy the butterfly dome, Manukelana four rejected the proposal. They informed the ACT that they could not sell the land since it belonged to the community. More so, the ACT was not a community based organization so it could not own property in Khula Village. The ACT settled on renting office space on the project site as well as retained the permaculture tunnels which they used for training agricultural students on internship and hundreds elderly women gardeners from Khula village.

**Managing Transition: The African Conservation Trust**

As soon as the ACT left, Rasta took over management of the project, combining this with his role as publicity secretary. Phungula remained as accounts secretary and Musa as technology manager. However, whether intentionally or unintentionally, Rasta also continued to advertise himself to outside organizations and communities as the owner and manager of the project. The notion that four people could collectively manage a business is unthinkable to Rasta The four decided to experiment with rotatory management to sort out tensions between them. Not only did this endeavor end up creating divergent perspectives over what mattered in orienting the project e.g., Phungula tends to pay much attention to proper accounting, while Rasta is a spend-thrift; questions over how each of them was qualified to manage also arose. Rsata directed the question to Bro' Musa since the latter never completed elementary school. The question rankled Musa for years. One of the reasons why Musa did his best to secure land and personal funds for the project or to prove his expertise in carving was to challenge the fact that he had little formal education.

**Managing Transition: Mduduzi**

Alongside the conflicts with the ACT, was that of managing internal transitions. The passing away of Mduduzi rocked the relationship between Manukelana founders and the ACT. The "brevity" of his illness, the fact that Mduduzi's amaZulu colleagues didn't inform the experts of the African Conservation Trust, or the Trust's friends and other foreign volunteers that worked with the project and who were close to Mduduzi was not taken lightly. At worst, Mduduzi's funeral became racially polarized over the choice of Matt Mattson who was attached to the ACT, and who became a close colleague with whom he often worked, sorting seeds and plants, to give the funeral oration. It's a proposition that carries a lot of weight in isiZulu tradition. While Bro' Musa and Baba Phungula were fine with the honor, Rasta, who would not be eclipsed by the shadow of any white person, took offense. He begged to give an alternative oration to the rather huge crowd. In doing so, he underlined that Matt wasn't closer to Mduduzi more than Mduduzi's isiZulu-speaking colleagues. The event was the last straw between the ACT partners working on the project, who were all white, and the amaZulu project founders.

With the passing away of Mduduzi, also came a crisis over filling his position in the organization. Bro' Musa wanted to bring in a brother to take Mduduzi's place as a shareholder. Rasta wanted the position to be eliminated though in the end he also proposed bringing in his estranged wife, a proposal that his colleagues found a little crazy. Baba Phungula also proposed bringing in a kin relation. Eventually, to avoid a protracted conflict, Bro' Musa suggested they bring in one of Mduduzi's relations. When the young Sabelo was selected by his family, Rasta quickly wooed Sabelo with whom he formed a block against Bro' Musa and Baba Phungula. Bro' Musa was left to deal with the double pain of losing Mduduzi, a road companion, and seeing his companion's nephew, whom he fought for, misled.

Rasta saw his efforts to manage the project as a last-ditch attempt to save it from total collapse. He underlined his conviction that joint management of any enterprise by a group was a strong recipe for failure. He cited the case of farming cooperatives in South Africa and others across Southern and East Africa. His colleagues on the other hand were apprehensive. They saw his efforts to grab power as a prelude of a scheme to chase them out of the business. The fear on both sides (as I will find out) was not unwarranted if one examines the reality of affirmative action initiatives in South Africa. Since 1994, the South African state began buying back farms from white farmers and handing these over to black community cooperatives in a bid to address the national land problem and black poverty. But most of these ventures have failed. The reasons are many, among which the fact that not only do the owners lack management skills, the cooperatives suffer from often intractable power struggles; a majority lack the necessary expertise for farming and have little access to capital; they are unable to cope in a competitive environment, and their structures are too rocked by embezzlement of funds, equipment, or even sabotage. Finally, being projects that are mostly initiated in a top-down manner, their new owners often lacked the commitment to make them work. There's little doubt too that the outcomes of the elite form of the BEE program has also affected these cooperatives. Rather than discuss their fears (and the sources), and how these could have been affected by the prevailing political and economic climate, the Manukelana founders let them fester.

**More on Status Differentiation**

Rasta's actions and behavior also hurt Bro' Musa and Baba Phungula's pride. As immigrants to Khula, the two felt that the community came to perceive them not as co-owners in the project but as labor working for Rasta. It was a reversal of the basis on which they founded the project. Efforts on Rasta's part to account for wages on the basis of labor input on the one hand as opposed to their earnings as co-owners, only reinforced their fears of control and eviction. Any other efforts on the part of Rasta to distribute roles or scrutinize tasks and performance only amplified the reality of control. Rasta's age difference, self-assertiveness, strong Rastafarian inclination and the fact that he considered himself to have deeper roots in the community in terms of growing up there, his political engagements, as well as social activism only reinforced his colleague's alienation.

**Passive Resistance: Retreat into a State of Paralysis**

Bro' Musa and Baba Phungula became deeply wounded by Rasta's attitude and planning. They saw little kinship or positive affect in his actions or behavior. Rather than confront him, they sought to express their dissatisfaction indirectly by being silent and avoiding him as much as they could. In so doing, they were partially responding to a norm in traditional Zulu culture which calls for restraint and the avoidance of open conflicts between peers. When their retreated failed to bring him to heel, they refused to cooperate with him on critical issues over the project. While the tensions began in 2012, they intensified in 2013 and 14. Passive resistance rankled Rasta who broadcast to common acquaintances that his colleagues who were intensely jealous wanted to kill the business.

The emerging tangle of complex dis-affections began to be visible on the garden landscape as grass took over the footpaths, leafy litter formed a thick carpet on the garden dune floor and began to fleet everywhere with the restless sea wind; the garden plants grew wild, and outside the fence wind-blow litter from the community began to pose a health hazard. Numerous pests began to find their way into the butterfly house where they entrenched themselves and gobbled up butterflies and their eggs. Snakes proliferated in the yard and the wind began to shred the shade cloth that ran along the fence and shielded many buildings. The tour guides became increasingly refractory too, and local tourism boards began to warn Manukelana about the danger that the premises posed to

tourists. One of the painful explanations that all three surviving nurserymen gave to explain the conflict between them were differences in values and perceptions. They pointed to the entry of money and power in their project through the ACT and as such to neoliberal market capitalism. However, they also contradicted themselves in efforts to individually absolve themselves of blame for the crisis. Each repeatedly stressed to me that they didn't know one another sufficiently when they came together to found the corporation. If they did, they said, they wouldn't have entered into any agreement. I didn't hesitate to remind them, individually or collectively, how these accounts contradicted the strong affective bonds that led them to generate the project and to garner much support from near and far, including prompting me to take notice of the project.

Actor Network Theory would propose that the actors of the Manukelana Project are fragmented because they line up for-versus-against particular matters of concern. But this answer explains an effect and a not a cause. Affective, phenomenological or place-based sensibilities indicate that the actors of Manukelana embody difference and inequality from the start (Tsing 2013). And while this comes about as a result of the histories that constitute them, and reactions to emerging conflicts, I found that the actors often wished that these conflicts never existed or they hoped that the conflicts would somewhat go away without active and creative interventions at problem solving.

Self-interested calculations largely emerge in a situation characterized by constrains and threat. Absent the above, it is also obvious that uneven distribution of awareness and the lack of affective understandings often opens up spaces for anti-politics, non/misrecognition and dis-affective politics. And so long as there's no recognition, or little impetus for open dialogue, the persistence of differences and the perception of inequality whether due to race, ethnicity, education, age, gender, place of origin or nationality, even values, only hardens and increases bitterness and confusion. What could we have done otherwise? I often thought I heard different actors asking themselves?

Initially I thought about the simple goals of association that founded Manukelana and also that the contract that the founding members had signed with the African Conservation Trust was inadequate. Could very clear and detailed articles of association and a comprehensive contract

have diminished conflict in the organization and its network? It is likely. But what I also found most likely was the need for affective and open approaches, a politics of recognition and inventiveness. Had Rasta, Baba Phungula, Bro' Musa, and Mduduzi known before hand the events that unfolded and compromised organizational relations between them and network relations with Nicolas, the African Conservation Trust, isiMangaliso Wetland Park and World Heritage Site and other agencies, there's no doubt that they would have prepared themselves to handle these events appropriately. Thus for over seven months, I bewailed the loss of courage, optimism, inventiveness, solidarity, racial blindness, Pan Africanism that pulsated through the group and enabled them to engage a network that would create a butterfly house, a teagarden, permaculture farm, and so on, all of which meant a lot to many. However, what I didn't recognize then was that my struggles towards assembling them was having any effect.

What amazed me about the project managers at Manukelena and which I found very redeeming, is that the different reasons or legitimacies which they used to explain their positions never pushed them to contemplate harming one another physically as it appears to be the norm in protracted conflict situations in Kwa-Zulu Natal.

**Research and Minor Politics**

One of my conclusions is that researchers in the estuary and wetland appear to have taken the meanings of the political more narrowly, confining it to the state-societal relations or the domain of 'politics'. Most ethnographies on the environment as such give away the notion that calls for "decolonization" engage mainly the state and other implicated actors, while side-stepping the domain of scholarly knowledge production on intimate and affective environment relations. Yet, it is at this level of face to face interactions that change could be discussed, enacted and believed in. In some respects, in failing to translate a broader and more realistic experience of the social in the estuary, however harmonious or tense, these forms of knowledge not only portray insensitivity, but also appear to foster in the eyes of locals, processes of colonization and social violence, however well-intentioned that the actions or responses of experts might be. While Viveiros de Castro (2014) has called for a "decolonization of thought," some scholars e.g., have gone further to call, in theory or practice, for a "deterrestrialization of thought." These are ideas or processes that ethnographers whose works straddle aquatic spaces such as wetlands and estuaries are intimate

with.

**Terrestrial Frustrations: A Tendency towards Wreckage**

One afternoon Sabelo, who was now very exhausted with being a part of the project for over four years, recalled to me an anecdote that reflected on the resource curse. Two individuals were chatting on the Transvaal veldt. On being asked why God put so many minerals and in such vast quantities on South African soil, one of the two replied that God wanted to see what they would do to one another. The anecdote reminded me of the lose-lose proposition that one radical group in the forest engaged – maybe if they cut down much of the forest and there was none, then might be the South African state, iSimangalisi Wetland Park and the Conservation lobby would leave them alone with the land. The "resource curse" is a recurrent metaphor frequently alluded to by scholars and managers when talking about iSimangaliso Wetland Park and St Lucia Estuary.

One evening, after spending over two weeks trying to convince Baba Phungula and Bro' Musa as well as Rasta about the need to collaborate with Nicolas to keep the butterfly dome running, I thought I was making some progress. As a result I went to an internet café, where I sent Nicolas word on Facebook about the butterfly dome and my initiative. Nicolas doubted Phungula's stand. However, when I told him that Phungula wouldn't mind working with him and would actually want him to be a part of their team, just like Bro' Musa who had proposed in a meeting chaired by Nicolas that Nicolas should manage the dome for their own good, he went quiet. Then he spoke of Rasta's overbearing attitude in the way Rasta controlled the project. Nicolas had informed me before of Rasta's open racism. Afrikaans acquaintances in St Lucia had repeatedly remonstrated with me for being friends with Rasta, a racist. When I confronted Rasta over the issue, he had accepted the accusation, but insisted that he was simply paying back whites in their own coins. Everyone I met commended Rasta for his intelligence, resourcefulness, and openness – but it was his headiness and disdain of any that stood above him, and his tendency towards controlling the environment, which I often associated with his past as a park ranger and a community forest reserve manager, that left anyone around him uneasy in the long term. So long as Rasta was in control of the project, Nicolas couldn't find himself working there. According to the young tour guides in Manukelana, the conflict between the founding members and managers would be

difficult to resolve because of their ages. People in their fifties, they said, could hardly change their habits or let go scores.

**Allowing the Project to Collapse in order to Rescue it**

According to Nicolas, the only feasible way to rescue the entire project is to allow the project to founder. In which case, a new buyer that understands its worth, and most likely the African Conservation Trust, could then step in, buy it, and spruce it back to life. My understanding was that since the African Conservation Trust had depended on Nicolas's expertise to establish the Eshowe, Tembe, Mac Banana and Isiphaphalazi butterfly domes, Nicolas was sure that they would recruit him to manage and direct the project. Even though he managed the Eshowe butterfly dome on behalf of the Eshowe community, he felt that Isiphaphalazi dome, the first project that he initiated post-Phd, was his signature project, and one he couldn't allow to fail. I am certain if Nicolas had what it could take to buy the project from the founding members and make an exemplary model of it with some community youth as tour interpreters, he would have done so. This option however was held up by the land question. So long the state wasn't issuing land titles to any in Khula Village or Dukuduku Forest, buying any land or business project on any of these sites remains a risk. There is acute uncertainty about who owned or owns land in Dukuduku Forest, Khula Village, Ezwenelisha or Kayelisha: whether it was the colonial or now the post-colonial state, or a community that has been rendered complex through different waves of immigrants, and returned evictees, or whether it belongs to the protected area conservancy, absent evictees or former clans that lived in the area, the Zulu monarchy, or even to Unkhululunkhulu. Without a land title, which most now see as a colonial document but a necessary evil (given that it attested to the power of the individual over the communal or collective), any land sale or transfer posed a great risk for any buyer whether white or isiZulu-speaking. Between 2009 to date many whites have bought parcels of land cheaply in a highly-contested section of Dukuduku Forest only to lose it following intervention by iSimangaliso Wetland Park. In the face of such uncertainty and the intractable land claims pursued by forest claimants, a question mark would remain over the entire Manukelana project for years to come. Even if the present project owners are desirous of selling the project and leaving, no buyer will take it when the land lacks a title.

**A Harsh Optimism**

Various community actors were attuned to the Manukelana Project and its founding managers. These network associates ranged from lodge owners in St Lucia Town, Monzi Village, or even as far afield as Swaziland where students were usually sent to the butterfly dome. These also included the various experts and consultants of the African Conservation Trust, including the Wildlands Conservation Trust, Nicolas, the natural scientist, councilors of the uMkhanyakude municipal area, and international volunteers that have worked on the project, as well as all the tour guides that Nicolas trained. In chatting with most of these figures in the course of two years, I repeatedly learned that the surviving founding members have what it takes, including the necessary network resources, to bring the project back to its feet and to make it run successfully. Their familiarity with the landscape of St Lucia estuary, a space that is neither aquatic or terrestrial, but "littorale," in other words, a crucible for transformative social dynamics, a place of heightened prospects for mobility mediated by alternative moralities, diverse institutional legitimacies, and forms of economic exchange as well as competing valuations of space and the material, symbolic, or metaphorical stuff around which human life circulates, including butterflies, plants, fish, birds, wildlife. Jennifer Johnson (2014) use of the term "littorales" in her research on women and fisheries in Lake Victoria, Uganda, conjures up spaces characterized by a plethora of actors; spaces that are so strategic, so hard to govern, bound or contain by external forces and ideologies, and plied largely by peoples with such tolerance for change and unpredictability, but who when pushed can rise and take a stand. Such a conclusion pertains to Dukuduku Forest and its dwellers and to the rest of St Lucia Estuary, whether one talks of the Afrikaans of St Lucia Town or the English sugarcane farmers of Monzi. Contrary to the fears of the younger people in Manukelana and other acquaintances that the project would collapse, Baba Phungula surprisingly gives me a hopeful view as my stay with them comes to an end. "If this project had to go, it would have gone a long time ago." And he reminded me of the reasons why they set up the project in the first place. His views contradicted Nicolas's thinking. Days later, Rasta who over the years has struggled to run the 'business' without adequate consultation of his friends, among other weaknesses, also spelled out the reasons that led to the rise of the project. They were purely non-material and they echoed Baba Phungula reasons. What however happened was that Manukelana founders hardly ever talked about or shared these non-material reasons or their differences with their capacity builders or

employees, and how these were central to the new society they set out to create or how these risked being compromised by other less compatible aspects of neoliberal capitalism or mainstream science.

Looking at Manukelana as a case-study, one can underline that while neoliberalism capital policies and opens opportunities for creativity and collective unfolding as well as empowerment, it could also be faulted alongside intertwined hegemonic institutions such as mainstream science, technology, the market and corporate funding for fudging alternative collective values, long-term non-material, non-technical and symbolic values in favor of rational individual interest, profit-making, and short term engagements which do not favor the development of the commons. Baba Phungula's drive for a common front in terms of environmental knowledge production that would bring in amaZulu people who might promote conservation but provide little impetus in terms of monetary input into ecotourism is a case in point.

**Human-Non-Human Biosocial Relations**

If there's one topic that Baba Phungula, Bro' Musa, Rasta Mlambo, Sabelo, Nicolas, Vusi the tour guide, and all the actors in this project could talk about extensively and at varying levels of intensity, it is their recognition of the livelihood practices and intimate biosocial relations that humans hold with plants, forests, butterflies, rivers and land/waterscapes. All of them saw these life forms as worthy of recognition and enduring efforts towards promoting and enabling beneficial alliances with these. Tsing (2013: 14) hints to anthropologists and ethnographers:

> Perhaps it should be our job, too, to learn something about their livelihood practices and interspecies relations—as we do for humans. These potential allies might make a difference in the stands we are willing to take. Infinite patience and historical retracing would be good guides.

It is more likely that if the different actors that are involved in conservation ecotourism pursuits, and who share the above views appropriate the same affect and channel these towards understanding institutionalized differences between them, then one can talk of richer and more

meaningful human and non-human bio-social processes. If Mduduzi came to find common cause with Matt Mattson, a poet, and one of the first whites to give a funeral oration in Khula Village, it was through sowing seeds:

> It is late afternoon - soft sunlight filters through the Sapiums, and we are sowing *Macaranga* seeds stored in a Maize Meal bag. Behind us, in the shadehouse, long lanes of quiet air are still-hung over bays of saplings. We work on at our seed trays, mostly silent. "You must do it carefully," says Mdu, "you must show them that you love them."
>
> Excerpted from 'A Garden Inside Me' - *The Story of Manukelana*, by Mark Mattson.

Mattson elsewhere echoes an aphorism that always escaped Mdu's lips, "Everything begins with the seed."

**Nomenclature and Actor Networks**

Names articulate as well as perform. Austin in *How To Do Things with Words* (1975), underlines that words can shape behavior and, hence, reality. Behavior in this might reside with the named or the users of the name. Baba Phungula and Bro' Musa underline both realities. Bro' Musa states that subject names have a way of shaping behavior, at least, when attributed to and by humans. And he cites a professional colleague's troublesomeness, erratic behavior, or occasionally a tendency to dismantle things as conterminous with his name in isiZulu. If the colleague has to reform his character he had to begin with his name. Baba Phungula, however, is reticent about mentioning his own personal struggles with his middle or Christian name which he ceased using a long time ago. He is shy of being known by his surname too. Both names bring memories that's his a little at odds with - his middle name, memories or feelings of Christian colonization in South Africa; and his surname, thoughts of Zulu domination and subjugation of northern Zululand by Shaka Zulu. His mother migrated with him to the midlands from northern Zululand, shortly after a great fire burnt his school when he was of school going age. Equally, calling the name 'Shaka Zulu' irritates him, as it does with many today in northern Zululand. This is a contradiction because the 'culture' that he defends in terms of plant names and butterfly names is the Zulu culture, which

was imposed upon his conquered and assimilated people. The plant and butterfly names themselves came with a second wave of colonization. While the Tembe royalty in northern Zululand has struggled for a long time to extricate itself from the tutelage of the Zulu paramount domination, it is hard to imagine how they can recover their language, which has been largely supplanted by isiZulu and which Baba Phungula and most of the young that were born of recent do not speak or know. The dynamics of mobility, urbanization in KwaZulu Natal, intermarriages and the struggle against apartheid and for regional autonomy have largely seen the intensive assimilation of non-Zulus in the north of Zululand, such that the outside world is hardly aware that what we call "amaZulu" is a conglomeration of various different peoples that were conquered and assimilated by Shaka and his successors. Nomenclature performs or evokes. It constitutes what Ogden (1997) describes as a lingua franca or vehicle through which organizational or cultural values are increasingly articulated and action legitimized. They also provide a window to study the articulation of such values.

**The Social and the Affective Domains**

In examining the 'sociology of the social', Latour critiques social scientists for 'shrinking' the term "social' to humans and modern societies, while "forgetting that the domain of the social is much more than extensive" (Latour 2005: 6). Equally, Haraway (2008, also see Latimer and Miele 2013) brings attention to the affective dimension of human/non-human relations as a critical challenge to dominant knowledge practices. The neglect of presensing the non-human in the social and the affective dimension sits uneasily in social science research at the St Lucia Estuary. I hope this project would begin to nurture work in this direction in the area research.

Latour (2009) projects "a bright new period of flourishing … for (ex-physical and ex-cultural) anthropology" following his observation that "nature has shifted from being a *resource* to become a highly contested topic". He sees the movement from a modernist and a post-modernist predicament where disputes are finally coalescing not over nature as a resource but over newer becomings. That search for a common world is immensely more complex now that so many radically different modes of inhabiting the earth have been freed to deploy themselves he underlines. Clearly opened to anthropologists is the task of composing a world that is not yet

common, a task he finds to be as big, as serious and as rewarding as anything they have had to tackle in the past. Latour agrees with Viveiros when the latter states, 'Anthropology is the theory and practice of permanent decolonization', and though 'anthropology today is largely decolonized (…) its theory is not yet decolonizing enough'. This project has striven to keep this perspective of decolonization in its sights as it has sought to examine issues of "nature", the commons, race, bureaucratic science, the role of knowledge, technology, affect, place and creativity.

**Beyond the Social and the Biological: The Non-Human World and Empowerment**

Significant paradigmatic changes often occur in periods of political and social change. In this light, Ingold and Palsson (2013: 38-39) underline that the Arendtian 'human condition' – the social and the political life of Anthropos – has been radically expanded and transformed over time; not only does the modern polis admit women, slaves and barbarians, a host of non-human species – animals, plants and microbes – have also entered the scene. Palsson (2013: 246) thus views 21st century ethnography as destined to reframe the relations of humans and the environment in non-reductionist terms and in ways that outline the porous boundaries and relational nature of human bodies. This development is most relevant to South Africa where the imperial, colonial and apartheid, and now post-apartheid regimes have been bedeviled by ideological binaries of sorts that are increasingly challenged by the emerging reality of entanglements between humans, non-human entities and the natural environment as well as of citizen science.

**Post-Apartheid and Assemblage Politics: From Conservation Science to Community Conservation?**

Nicolas left South America for South Africa to research and contribute to the country's biological diversity. As he intimated to me, the geographical location of South Africa on the same latitude with Argentina are supposed to bring both countries together culturally. Both are mid-level developing countries with significant settler populations, a history of colonialism and as such have a lot in common. Both countries were or have also struggled with legacies of imperialism, oppression, capitalism, and a large class of suffering masses. But the reality is that South Africa is in the throes of various ideologies of change. And nowhere do these are these ideologies as salient

as over the relations between communities and the environment: the nature of the land, cultural heritage and the meanings and practices of "Conservation". It is what convinced him that his contribution as a scientist lay more in enabling community conservation than pursuing university teaching and academic research. If you have to promote biodiversity, you must focus on the community and the environment. Looking at the five strategically-placed butterfly domes that he has established across Kwa-Zulu Natal and the Butterfly Route Project that takes tourists to experience northern Zululand and its different butterfly ecosystems as well as wildlife, one sees a truly transformative endeavor. Whereas butterflies weren't a part of the conservation ecotourism agenda in Kwa-Zulu Natal, today they feature as an intrinsic part of it and butterfly watching has been moved from strictly private butterfly houses where most blacks might feel uneasy attending to large domes that are often located close to community forest reserves. This enhances the watching experience, promotes local employment and the scientific knowledge. Nevertheless Nicolas was to experience challenges with his understandings of environmental knowledge and local participation and empowerment. Contemporary projects of 'empowerment' and capacity building to enable participation in environmental governance as scientific, state and economic actors suggest, are often limited to material and technical transformations. The symbolic and the intellectual are often dropped on the wayside or not given recognition due to historical, disciplinary, material and ideological constraints or blinkers. As such the ability to act and to change the order of things, in other words, defining collective action and empowerment in terms of the distribution of material resources and the way reality is conceived, including the shifting or shuffling of who can claim to be in the know (cf. Swyngedouw, 2009) remains a tall order.

**Environmental Subjectivities: From Charcoal Burning to a Conservationist**

Setting out to Dukuduku Forest from his Natal Midlands, Phungula aimed to be a charcoal burner. The process involved the burning down of patches of forest, or "roasting" indigenous trees as the Afrikaans-speakers termed it in St Lucia, extracting charcoal from the residue, and selling this to intermediaries, including a shop-owner in St Lucia, who would then retail them to the general public for diverse purposes, most importantly, for outdoor barbecues. It was a project that carried low investment and high returns, especially since the forest was either a community or a state forest. Through using the proceeds, Phungula sought to build a house and carve out a quiet place for himself, far from national politics and in a part of the country that was less prone to the violence

for which the Natal Midlands is notorious. At the time, promoting the causes of environmental sustainability was the least of his concerns. As a former soldier and a mineworker, he'd never thought of such projects. The closest he'd ever thought of the subject was practicing agriculture which wasn't possible in his rural Msinga, an area that remains prone to drought, land conflicts and extreme poverty. Political participation, which was a highlighted civic responsibility at the time drew him into community advocacy. A chanced meeting with Rasta in a political ANC rally where he was a fiery speaker brought the latter to him and the cause of conservation. Thus an affective train was set into motion and through which Phungula rediscovers himself by working with fellow gardeners and conservationists.

More critically, far from being a garden project that leads to them to bask in the comfort of isolation from the turbulence of modernity or to disinterestedness in politics (Murray 2006), gardening processes lead them to rediscover themselves through plants, butterflies, worms, wetlands, forestry. As they came to work with state agencies, market actors, scientists and experts in conservation, they would broach issues of critical significance e.g. the practices of these institutions that militated against ethical conservation. Among these was the differences and criteria for selection and presencing of plant and butterfly nomenclature; uncovering the networks of botanic and lepidopteran nomenclature; the inferior status accorded to indigenous/vernacular ontologies and relationships, and conflicting meanings of conservation and ecological restoration. Baba Phungula and Bro' Musa recognize that without engaging processes of knowledge production on the environment and redressing how "nature" is known, represented and enacted, any dream of empowerment would always be doomed to failure.

**James Leach, Kinship and Creativity**

Finally, how do the different strands of this project fit together? How does one make the move between woodcarving and protecting the forest, bricolage and gardening, or the struggles to assemble place in the Manukelana Project as one among many around Khula Village, Dukuduku Forest and St Lucia Estuary? What does one make of the drive that characterizes the founding members of the Manukelana Project to contribute to assembling the wreckage of the watershed in their own way? In *Creative Land: Place and Procreation on the Rai Coast of Papua New Guinea* (2003: 217), James Leach contrasts Western notions of creativity to alternative understandings. He

sees the former to be characterized as ‘genius’, which like a biogenetic substance is considered to be internal to a person rather than an aspect of relationships. Creative individuals or geniuses, according to psychologists, have a divine spark which is lodged either in nature or divinity, thus giving humans that possess the ability to touch this creative power momentary elevation. Leach sees this characterization as reproducing dualism between the individual and an entity that exists beyond or separate to them. In contrast, he finds that creativity to the Reite people in New Guinea is a different thing altogether. It is fully human in character, conventional and embedded in relationships:

> Recreating the conditions for human existence through everyday activities of gardening, growing and gendering persons, and creating places, shows us that the notion of creativity as extraordinary is not their understanding… Theirs is an existence in which creativity is the inherent principle.

It is this embeddedness of creativity to survival that connects processes of bricolage used in this project with affective laboring processes (which one could also refer to as ‘labor of love’ or affective environmental labor) as described in chapter 2. “Affective environmental labor” is necessarily linked to empowerment, otherwise the production not only of favorable material conditions that enhance human social life, but also of non-human life and the living environment. Empowerment, as Swyngedouw (1999) suggests, goes further than the production of favorable material living conditions, or skills, to include symbolic knowledge about society, the environment, or the world, as well as who can claim “to be in the know” - a notion which I find to be akin to Rancière's understanding when he talks of the ‘distribution of the sensible’ (2004).

## Appendix

Table 1. List of Butterflies in South Africa

| **HESPERIIDAE** | |
|---|---|
| **COELIADINAE** | |
| *Coeliades forestan forestan* | Striped Policeman |
| *Coeliades keithloa* | Red-tab Policeman |
| *Coeliades libeon* | Spotless Policeman |
| *Coeliades lorenzo* | Maputo Policeman |
| *Coeliades pisistratus* | Two-pip Policeman |
| *Pyrrhiades anchises anchises* | One-pip Policeman |
| **HESPERIINAE** | |
| *Acada biseriata* | Axehead Skipper |
| *Acleros mackenii mackenii* | Macken's Dart |
| *Andronymus caesar philander* | White Dart |
| *Andronymus neander neander* | Nomad Dart |
| *Artitropa erinnys erinnys* | Bush Night-fighter |
| *Astictopterus inornatus* | Modest Sylph |
| *Borbo borbonica borbonica* | Olive-haired Swift |
| *Borbo detecta* | Rusty Swift |
| *Borbo fallax* | False Swift |
| *Borbo fatuellus fatuellus* | Long-horned Swift |
| *Borbo ferruginea dondo* | Ferrous Swift |
| *Borbo gemella* | Twin Swift |
| *Borbo holtzi* | Variable Swift |
| *Borbo lugens* | Lesser-horned Swift |
| *Borbo micans* | Marsh Swift |
| *Fresna nyassae* | Variegated Acraea Hopper |
| *Gegenes hottentota* | Marsh Hottentot Skipper |

| | |
|---|---|
| *Gegenes niso niso* | Common Hottentot Skipper |
| *Gegenes pumilio gambica* | Dark Hottentot Skipper |
| *Kedestes barberae barberae* | Barber's Ranger |
| *Kedestes barberae bonsa* | Barber's Karoo Ranger |
| *Kedestes barberae bunta* | Barber's Cape Flats Ranger |
| *Kedestes callicles* | Pale Ranger |
| *Kedestes chaka* | Shaka's Ranger |
| *Kedestes lenis alba* | Eastern Unique Ranger |
| *Kedestes lenis lenis* | False Bay Unique Ranger |
| *Kedestes lepenula* | Chequered Ranger |
| *Kedestes macomo* | Macomo Ranger |
| *Kedestes mohozutza* | Fulvous Ranger |
| *Kedestes nerva nerva* | Scarce Ranger |
| *Kedestes niveostriga niveostriga* | Dark Ranger |
| *Kedestes niveostriga schloszi* | Greyton Dark Ranger |
| *Kedestes sarahae* | Sarah's Ranger |
| *Kedestes wallengrenii wallengrenii* | Wallengren's Ranger |
| *Moltena fiara* | Strelitzia-tree Night-fighter |
| *Parnara monasi* | Water Watchman |
| *Parosmodes morantii morantii* | Morant's Orange |
| *Pelopidas mathias* | Black-banded Swift |
| *Pelopidas thrax inconspicua* | White-banded Swift |
| *Platylesches ayresii* | Peppered Hopper |
| *Platylesches dolomitica* | Dolomite Hopper |
| *Platylesches galesa* | White-tail Hopper |
| *Platylesches moritili* | Honey Hopper |
| *Platylesches neba* | Flower-girl Hopper |
| *Platylesches picanini* | Banded Hopper |
| *Platylesches robustus robustus* | Robust Hopper |
| *Platylesches tina* | Small Hopper |

| | |
|---|---|
| *Zenonia zeno* | Orange-spotted Hopper |
| *Zophopetes dysmephila* | Palm-tree Night-fighter |
| **HETEROPTERINAE** | |
| *Metisella aegipan aegipan* | Mountain Sylph |
| *Metisella malgacha malgacha* | Grassveld Sylph |
| *Metisella malgacha orina* | Drakensberg Grassveld Sylph |
| *Metisella meninx* | Marsh Sylph |
| *Metisella metis metis* | Western Gold-spotted Sylph |
| *Metisella metis paris* | Eastern Gold-spotted Sylph |
| *Metisella syrinx* | Bamboo Sylph |
| *Metisella willemi* | Netted Sylph |
| *Tsitana dicksoni* | Dickson's Sylph |
| *Tsitana tsita* | Dismal Sylph |
| *Tsitana tulbagha kaplani* | Eastern Tulbagh Sylph |
| *Tsitana tulbagha tulbagha* | Western Tulbagh Sylph |
| *Tsitana uitenhaga* | Uitenhage Sylph |
| **PYRGINAE** | |
| *Abantis bicolor* | Bicoloured Skipper |
| *Abantis paradisea* | Paradise Skipper |
| *Abantis tettensis* | Spotted Velvet Skipper |
| *Abantis venosa* | Veined Skipper |
| *Alenia namaqua* | Namaqua Sandman |
| *Alenia sandaster* | Karoo Sandman |
| *Calleagris kobela* | Mrs Raven's Flat |
| *Calleagris krooni* | Kroon's Flat |
| *Caprona pillaana* | Ragged Skipper |
| *Celaenorrhinus mokeezi mokeezi* | Western Large Flat |
| *Celaenorrhinus mokeezi separata* | Eastern Large Flat |
| *Eagris nottoana knysna* | Southern Rufous-winged Flat |
| *Eagris nottoana nottoana* | Northern Rufous-winged Flat |

| | |
|---|---|
| *Eretis djaelaelae* | Marbled Elf |
| *Eretis umbra umbra* | Small Marbled Elf |
| *Gomalia elma elma* | Green-marbled Sandman |
| *Leucochitonea levubu* | White-cloaked Skipper |
| *Netrobalane canopus* | Buff-tipped Skipper |
| *Sarangesa motozi* | Forest Elfin |
| *Sarangesa phidyle* | Small Elfin |
| *Sarangesa ruona* | Ruona Elfin |
| *Sarangesa seineri durbana* | Southern Dark Elfin |
| *Sarangesa seineri seineri* | Northern Dark Elfin |
| *Spialia agylla agylla* | Grassveld Sandman |
| *Spialia agylla bamptoni* | Strandveld Sandman |
| *Spialia asterodia* | Star Sandman |
| *Spialia colotes transvaaliae* | Bushveld Sandman |
| *Spialia confusa confusa* | Confusing Sandman |
| *Spialia delagoae* | Delagoa Sandman |
| *Spialia depauperata australis* | Wandering Sandman |
| *Spialia diomus ferax* | Common Sandman |
| *Spialia dromus* | Forest Sandman |
| *Spialia mafa mafa* | Mafa Sandman |
| *Spialia nanus* | Dwarf Sandman |
| *Spialia paula* | Mite Sandman |
| *Spialia sataspes* | Boland Sandman |
| *Spialia secessus* | Wolkberg Sandman |
| *Spialia spio* | Mountain Sandman |
| *Tagiades flesus* | Clouded Flat |
| **LYCAENIDAE** | |
| **LYCAENINAE** | |
| *Lycaena clarki* | Eastern Sorrel Copper |
| *Lycaena orus* | Western Sorrel Copper |

| **MILETINAE** | |
|---|---|
| *Aslauga australis* | Southern Purple |
| *Lachnocnema bibulus* | Common Woolly Legs |
| *Lachnocnema durbani* | D'Urban's Woolly Legs |
| *Lachnocnema laches* | Southern Pied Woolly Legs |
| *Lachnocnema regularis regularis* | Regular Woolly Legs |
| *Thestor barbatus* | Bearded Skolly |
| *Thestor basutus basutus* | Basuto Skolly |
| *Thestor basutus capeneri* | Northern Skolly |
| *Thestor brachycerus brachycerus* | Knysna Skolly |
| *Thestor brachycerus dukei* | Duke's Skolly |
| *Thestor braunsi* | Brauns' Skolly |
| *Thestor calviniae* | Calvinia Skolly |
| *Thestor camdeboo* | Camdeboo Skolly |
| *Thestor claassensi* | Claassens' Skolly |
| *Thestor compassbergae* | Compassberg Skolly |
| *Thestor dicksoni dicksoni* | Dickson's Skolly |
| *Thestor dicksoni malagas* | Atlantic Skolly |
| *Thestor dicksoni warreni* | Warren's Skolly |
| *Thestor dryburghi* | Dryburgh's Skolly |
| *Thestor holmesi* | Holmes's Skolly |
| *Thestor kaplani* | Kaplan's Skolly |
| *Thestor montanus* | Mountain Skolly |
| *Thestor murrayi* | Murray's Skolly |
| *Thestor obscurus* | Peninsula Skolly |
| *Thestor overbergensis* | Overberg Skolly |
| *Thestor penningtoni* | Pennington's Skolly |
| *Thestor petra petra* | Rock Skolly |
| *Thestor petra tempe* | Tempe Skolly |
| *Thestor pictus* | Langeberg Skolly |

| | |
|---|---|
| *Thestor pringlei* | Pringle's Skolly |
| *Thestor protumnus aridus* | Dry Skolly |
| *Thestor protumnus protumnus* | Boland Skolly |
| *Thestor protumnus terblanchei* | Terblanche's Dry Skolly |
| *Thestor rileyi* | Riley's Skolly |
| *Thestor rooibergensis* | Rooiberg Skolly |
| *Thestor rossouwi* | Rossouw's Skolly |
| *Thestor stepheni* | Stephen's Skolly |
| *Thestor strutti* | Strutt's Skolly |
| *Thestor vansoni* | Van Son's Skolly |
| **POLYOMMATINAE** | |
| *Anthene amarah amarah* | Black-striped Hairtail |
| *Anthene crawshayi juanitae* | Juanita's Hairtail |
| *Anthene definita definita* | Common Hairtail |
| *Anthene dulcis dulcis* | Mashuna Hairtail |
| *Anthene larydas* | Kersten's Hairtail |
| *Anthene lemnos lemnos* | Large Hairtail |
| *Anthene lindae* | Linda's Hairtail |
| *Anthene liodes* | Liodes Hairtail |
| *Anthene livida livida* | Pale Hairtail |
| *Anthene millari* | Millar's Hairtail |
| *Anthene minima* | Little Hairtail |
| *Anthene otacilia otacilia* | Otacilia Hairtail |
| *Anthene princeps princeps* | Cupreous Hairtail |
| *Anthene talboti* | Talbot's Hairtail |
| *Actizera lucida* | Rayed Blue |
| *Actizera stellata* | Red-Clover Blue |
| *Azanus jesous jesous* | Topaz-spotted Blue |
| *Azanus mirza* | Mirza Blue |
| *Azanus moriqua* | Thorn-tree Blue |

| | |
|---|---|
| *Azanus natalensis* | Natal Spotted Blue |
| *Azanus ubaldus* | Velvet-spotted Blue |
| *Brephidium metophis* | Tinktinkie Blue |
| *Cacyreus dicksoni* | Dickson's Geranium Bronze |
| *Cacyreus fracta fracta* | Water Bronze |
| *Cacyreus lingeus* | Bush Bronze |
| *Cacyreus marshalli* | Geranium Bronze |
| *Cacyreus virilis* | Mocker Bronze |
| *Chilades trochylus* | Grass Jewel Blue |
| *Cupidopsis cissus cissus* | Common Meadow Blue |
| *Cupidopsis jobates jobates* | Tailed Meadow Blue |
| *Eicochrysops hippocrates* | White-tipped Blue |
| *Eicochrysops messapus mahallakoaena* | Northern Cupreous Blue |
| *Eicochrysops messapus messapus* | Southern Cupreous Blue |
| *Euchrysops barkeri* | Barker's Smoky Blue |
| *Euchrysops dolorosa* | Sabi Smoky Blue |
| *Euchrysops malathana* | Common Smoky Blue |
| *Euchrysops osiris osiris* | Osiris Smoky Blue |
| *Euchrysops subpallida* | Ashen Smoky Blue |
| *Harpendyreus noquasa* | Marsh Blue |
| *Harpendyreus notoba* | Salvia Blue |
| *Harpendyreus tsomo* | Tsomo Blue |
| *Lampides boeticus* | Long-tailed Blue |
| *Lepidochrysops asteris* | Brilliant Blue |
| *Lepidochrysops australis* | Southern Blue |
| *Lepidochrysops bacchus* | Wineland Blue |
| *Lepidochrysops badhami* | Badham's Blue |
| *Lepidochrysops balli* | Ball's Blue |
| *Lepidochrysops braueri* | Brauer's Blue |
| *Lepidochrysops dukei* | Duke's Blue |

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| *Lepidochrysops glauca* | Silvery Blue |
| *Lepidochrysops grahami* | Graham's Blue |
| *Lepidochrysops gydoae* | Gydo Blue |
| *Lepidochrysops hypopolia* | Morant's Blue |
| *Lepidochrysops ignota* | Zulu Blue |
| *Lepidochrysops irvingi* | Irving's Blue |
| *Lepidochrysops jamesi claassensi* | Claassen's Blue |
| *Lepidochrysops jamesi jamesi* | James's Blue |
| *Lepidochrysops jefferyi* | Jeffery's Blue |
| *Lepidochrysops ketsi ketsi* | Ketsi Blue |
| *Lepidochrysops ketsi leucomacula* | Margate Blue |
| *Lepidochrysops lerothodi* | Lesotho Blue |
| *Lepidochrysops letsea* | Free State Blue |
| *Lepidochrysops littoralis* | Coastal Blue |
| *Lepidochrysops loewensteini* | Loewenstein's Blue |
| *Lepidochrysops lotana* | Lotana Blue |
| *Lepidochrysops mcgregori* | McGregor's Blue |
| *Lepidochrysops methymna dicksoni* | Dickson's Monkey Blue |
| *Lepidochrysops methymna methymna* | Monkey Blue |
| *Lepidochrysops oosthuizeni* | Oosthuizen's Blue |
| *Lepidochrysops oreas junae* | June's Blue |
| *Lepidochrysops oreas oreas* | Peninsula Blue |
| *Lepidochrysops ortygia* | Koppie Blue |
| *Lepidochrysops outeniqua* | Outeniqua Blue |
| *Lepidochrysops patricia* | Patrician Blue |
| *Lepidochrysops penningtoni* | Pennington's Blue |
| *Lepidochrysops pephredo* | Estcourt Blue |
| *Lepidochrysops plebeia plebeia* | Twin-spot Blue |
| *Lepidochrysops poseidon* | Baviaanskloof Blue |
| *Lepidochrysops praeterita* | Highveld Blue |

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| *Lepidochrysops pringlei* | Pringle's Blue |
| *Lepidochrysops procera* | Potchefstroom Blue |
| *Lepidochrysops puncticilia* | Mouse Blue |
| *Lepidochrysops quickelbergei* | Quickelberge's Blue |
| *Lepidochrysops robertsoni* | Robertson's Blue |
| *Lepidochrysops rossouwi* | Rossouw's Blue |
| *Lepidochrysops southeyae* | Southey's Blue |
| *Lepidochrysops swanepoeli* | Swanepoel's Blue |
| *Lepidochrysops swartbergensis* | Swartberg Blue |
| *Lepidochrysops tantalus* | King Blue |
| *Lepidochrysops titei* | Tite's Blue |
| *Lepidochrysops trimeni* | Trimen's Blue |
| *Lepidochrysops vansoni* | Van Son's Blue |
| *Lepidochrysops variabilis* | Variable Blue |
| *Lepidochrysops victori* | Victor's Blue |
| *Lepidochrysops wykehami* | Wykeham's Blue |
| *Leptotes babaulti* | Babault's Blue |
| *Leptotes brevidentatus* | Short-toothed Blue |
| *Leptotes jeanneli* | Jeannel's Blue |
| *Leptotes pirithous pirithous* | Common Blue |
| *Leptotes pulcher* | Sesbania Blue |
| *Orachrysops ariadne* | Karkloof Blue |
| *Orachrysops brinkmani* | Brinkman's Blue |
| *Orachrysops lacrimosa* | Restless Blue |
| *Orachrysops mijburghi* | Mijburgh's Blue |
| *Orachrysops montanus* | Golden Gate Blue |
| *Orachrysops nasutus nasutus* | Southern Nosy Blue |
| *Orachrysops nasutus remus* | Northern Nosy Blue |
| *Orachrysops niobe* | Brenton Blue |
| *Orachrysops regalis* | Royal Blue |

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| *Orachrysops subravus* | Grizzled Blue |
| *Orachrysops violescens* | Violescent Blue |
| *Orachrysops warreni* | Warren's Blue |
| *Oraidium barberae* | Dwarf Blue |
| *Pseudonacaduba sichela sichela* | Dusky Blue |
| *Tarucus bowkeri bowkeri* | Bowker's Southern Blue |
| *Tarucus bowkeri transvaalensis* | Bowker's Northern Blue |
| *Tarucus sybaris linearis* | Western Dotted Blue |
| *Tarucus sybaris sybaris* | Dotted Blue |
| *Tarucus thespis* | Fynbos Blue |
| *Tuxentius calice calice* | White Pie |
| *Tuxentius hesperis* | Western Pie |
| *Tuxentius melaena griqua* | Griqua Pie |
| *Tuxentius melaena melaena* | Black Pie |
| *Uranothauma nubifer nubifer* | Black Heart |
| *Zintha hintza hintza* | Hintza Blue |
| *Zizeeria knysna* | Sooty Blue |
| *Zizina otis antanossa* | Clover Blue |
| *Zizula hylax* | Gaika Blue |
| **PORITIINAE** | |
| *Durbania amakosa albescens* | Coastal Rocksitter |
| *Durbania amakosa amakosa* | Amakosa Rocksitter |
| *Durbania amakosa ayresi* | Northern Rocksitter |
| *Durbania amakosa flavida* | Shongweni Rocksitter |
| *Durbania amakosa natalensis* | Midlands Rocksitter |
| *Durbania amakosa penningtoni* | Pennington's Rocksitter |
| *Durbania amakosa sagittata* | Qwa Qwa Rocksitter |
| *Durbania limbata* | Natal Rocksitter |
| *Durbaniella clarki belladonna* | Ironstone Rocksitter |
| *Durbaniella clarki clarki* | Clark's Rocksitter |

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| *Durbaniella clarki jenniferae* | Jennifer's Rocksitter |
| *Durbaniella clarki phaea* | Dark Rocksitter |
| *Durbaniopsis saga* | Boland Rocksitter |
| *Deloneura immaculata* | Mbashe River Buff |
| *Deloneura millari millari* | Millar's Buff |
| *Baliochila aslanga* | Common Buff |
| *Baliochila lipara* | Lipara Buff |
| *Cnodontes penningtoni* | Pennington's Buff |
| *Teriomima zuluana* | Zulu Buff |
| *Alaena amazoula amazoula* | Southern Yellow Zulu |
| *Alaena amazoula ochroma* | Northern Yellow Zulu |
| *Alaena margaritacea* | Wolkberg Zulu |
| *Ornipholidotos peucetia penningtoni* | White Mimic |
| *Pentila tropicalis fuscipunctata* | Northern Spotted Buff |
| *Pentila tropicalis tropicalis* | Southern Spotted Buff |
| **THECLINAE** | |
| *Aloeides almeida* | Almeida Copper |
| *Aloeides apicalis* | Pointed Copper |
| *Aloeides aranda* | Aranda Copper |
| *Aloeides arida* | Arid Copper |
| *Aloeides bamptoni* | Bampton's Copper |
| *Aloeides barbarae* | Barbara's Copper |
| *Aloeides barklyi* | Barkly's Copper |
| *Aloeides braueri* | Brauer's Copper |
| *Aloeides caffrariae* | Border Copper |
| *Aloeides caledoni* | Caledon Copper |
| *Aloeides carolynnae aurata* | De Hoop Copper |
| *Aloeides carolynnae carolynnae* | Carolynn's Copper |
| *Aloeides clarki* | Coega Copper |
| *Aloeides damarensis damarensis* | Damara Copper |

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| *Aloeides damarensis mashona* | Mashona Copper |
| *Aloeides dentatis dentatis* | Roodepoort Copper |
| *Aloeides dentatis maseruna* | Maseru Copper |
| *Aloeides depicta* | Depicta Copper |
| *Aloeides dicksoni* | Dickson's Copper |
| *Aloeides dryas* | Dryas Copper |
| *Aloeides egerides* | Red Hill Copper |
| *Aloeides gowani* | Gowan's Copper |
| *Aloeides henningi* | Henning's Copper |
| *Aloeides juana* | Juana Copper |
| *Aloeides kaplani* | Kaplan's Copper |
| *Aloeides lutescens* | Worcester Copper |
| *Aloeides macmasteri* | McMaster's Copper |
| *Aloeides maluti* | Maluti Copper |
| *Aloeides margaretae* | Marguerite's Copper |
| *Aloeides mbuluensis* | Mbulu Copper |
| *Aloeides merces* | Wakkerstroom Copper |
| *Aloeides molomo krooni* | Molomo Copper |
| *Aloeides molomo molomo* | Kroon's Copper |
| *Aloeides monticola* | Cedarberg Copper |
| *Aloeides nollothi* | Nolloth's Copper |
| *Aloeides nubilus* | Cloud Copper |
| *Aloeides oreas* | Oreas Copper |
| *Aloeides pallida grandis* | Splendid Giant Copper |
| *Aloeides pallida jonathani* | Kammanassie Giant Copper |
| *Aloeides pallida juno* | Tsitsikamma Giant Copper |
| *Aloeides pallida littoralis* | Knysna Giant Copper |
| *Aloeides pallida liversidgei* | Baviaanskloof Giant Copper |
| *Aloeides pallida pallida* | Giant Copper |
| *Aloeides penningtoni* | Pennington's Copper |

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| *Aloeides pierus* | Dull Copper |
| *Aloeides pringlei* | Pringle's Copper |
| *Aloeides quickelbergei* | Quickelberge's Copper |
| *Aloeides rileyi* | Riley's Copper |
| *Aloeides rossouwi* | Rossouw's Copper |
| *Aloeides simplex* | Dune Copper |
| *Aloeides stevensoni* | Stevenson's Copper |
| *Aloeides susanae* | Susan's Copper |
| *Aloeides swanepoeli* | Swanepoel's Copper |
| *Aloeides taikosama* | Dusky Copper |
| *Aloeides thyra orientis* | Brenton Copper |
| *Aloeides thyra thyra* | Red Copper |
| *Aloeides titei* | Tite's Copper |
| *Aloeides trimeni southeyae* | Southey's Copper |
| *Aloeides trimeni trimeni* | Trimen's Copper |
| *Aloeides vansoni* | Van Son's Copper |
| *Aphnaeus hutchinsonii* | Hutchinson's Highflier |
| *Argyraspodes argyraspis* | Warrior Silver-spotted Copper |
| *Axiocerses amanga amanga* | Bush Scarlet |
| *Axiocerses coalescens* | Black-tipped Scarlet |
| *Axiocerses croesus* | Dark-banded Scarlet |
| *Axiocerses tjoane tjoane* | Common Scarlet |
| *Chloroselas mazoensis* | Purple Gem |
| *Chloroselas pseudozeretis pseudozeretis* | Brilliant Gem |
| *Chrysoritis adonis adonis* | Adonis Opal |
| *Chrysoritis adonis aridimontis* | Eastern Adonis Opal |
| *Chrysoritis aethon* | Lydenburg Opal |
| *Chrysoritis aridus* | Namaqua Opal |
| *Chrysoritis aureus* | Golden Opal |
| *Chrysoritis azurius* | Azure Opal |

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| *Chrysoritis beaufortius beaufortius* | Beaufort Opal |
| *Chrysoritis beaufortius charlesi* | Charles' Opal |
| *Chrysoritis beaufortius stepheni* | Stephen's Opal |
| *Chrysoritis beaufortius sutherlandensis* | Sutherland Opal |
| *Chrysoritis beulah* | Beulah's Opal |
| *Chrysoritis blencathrae* | Waaihoek Opal |
| *Chrysoritis braueri* | Brauer's Opal |
| *Chrysoritis brooksi brooksi* | Brooks' Opal |
| *Chrysoritis brooksi tearei* | Teare's Opal |
| *Chrysoritis chrysantas* | Karoo Daisy Copper |
| *Chrysoritis chrysaor* | Burnished Opal |
| *Chrysoritis daphne* | Daphne's Opal |
| *Chrysoritis dicksoni* | Dickson's Strandveld Copper |
| *Chrysoritis endymion* | Endymion Opal |
| *Chrysoritis felthami dukei* | Duke's Opal |
| *Chrysoritis felthami felthami* | Feltham's Opal |
| *Chrysoritis irene* | Irene's Opal |
| *Chrysoritis lycegenes* | Mooi River Opal |
| *Chrysoritis lyncurium* | Tsomo River Opal |
| *Chrysoritis midas* | Midas Opal |
| *Chrysoritis natalensis* | Natal Opal |
| *Chrysoritis nigricans nigricans* | Dark Opal |
| *Chrysoritis nigricans rubrescens* | Gamka Dark Opal |
| *Chrysoritis nigricans zwartbergae* | Swartberg Dark Opal |
| *Chrysoritis oreas* | Drakensberg Daisy Copper |
| *Chrysoritis orientalis* | Eastern Opal |
| *Chrysoritis palmus margueritae* | Eastern Water Opal |
| *Chrysoritis palmus palmus* | Western Water Opal |
| *Chrysoritis pan henningi* | Henning's Opal |
| *Chrysoritis pan lysander* | Lysander Opal |

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| *Chrysoritis pan pan* | Pan Opal |
| *Chrysoritis pelion* | Machacha Opal |
| *Chrysoritis penningtoni* | Pennington's Opal |
| *Chrysoritis perseus* | Perseus Opal |
| *Chrysoritis phosphor borealis* | Northern Scarce Scarlet |
| *Chrysoritis phosphor phosphor* | Southern Scarce Scarlet |
| *Chrysoritis plutus* | Plutus Opal |
| *Chrysoritis pyramus balli* | Ball's Opal |
| *Chrysoritis pyramus pyramus* | Pyramus Opal |
| *Chrysoritis pyroeis hersaleki* | Hersalek's Opal |
| *Chrysoritis pyroeis pyroeis* | Sand-dune Opal |
| *Chrysoritis rileyi* | Riley's Opal |
| *Chrysoritis swanepoeli* | Swanepoel's Opal |
| *Chrysoritis thysbe bamptoni* | Bampton's Opal |
| *Chrysoritis thysbe mithras* | Brenton Opal |
| *Chrysoritis thysbe osbecki* | Western Common Opal |
| *Chrysoritis thysbe psyche* | Psyche Opal |
| *Chrysoritis thysbe schloszae* | Schlosz's Opal |
| *Chrysoritis thysbe thysbe* | Common Opal |
| *Chrysoritis thysbe whitei* | Algoa Opal |
| *Chrysoritis trimeni* | Trimen's Opal |
| *Chrysoritis turneri amatola* | Amatola Opal |
| *Chrysoritis turneri turneri* | Turner's Opal |
| *Chrysoritis turneri wykehami* | Wykeham's Opal |
| *Chrysoritis uranus schoemani* | Schoeman's Opal |
| *Chrysoritis uranus uranus* | Uranus Opal |
| *Chrysoritis violescens* | Violescent Opal |
| *Chrysoritis zeuxo* | Jitterbug Daisy Copper |
| *Chrysoritis zonarius coetzeri* | Coetzer's Donkey Daisy Copper |
| *Chrysoritis zonarius zonarius* | Donkey Daisy Copper |

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| *Cigaritis ella* | Ella's Bar |
| *Cigaritis mozambica* | Mozambique Bar |
| *Cigaritis namaqua* | Namaqua Bar |
| *Cigaritis natalensis* | Natal Bar |
| *Cigaritis phanes* | Silver Bar |
| *Crudaria capensis* | Cape Grey |
| *Crudaria leroma* | Silver-spotted Grey |
| *Crudaria wykehami* | Wykeham's Grey |
| *Erikssonia acraeina* | Eriksson's Copper |
| *Phasis braueri* | Brauer's Arrowhead |
| *Phasis clavum clavum* | Namaqua Arrowhead |
| *Phasis clavum erythema* | Roggeveld Arrowhead |
| *Phasis pringlei* | Pringle's Arrowhead |
| *Phasis thero cedarbergae* | Cedarberg Arrowhead |
| *Phasis thero thero* | Silver Arrowhead |
| *Trimenia argyroplaga argyroplaga* | Large Silver-spotted Copper |
| *Trimenia argyroplaga cardouwae* | Dasklip Silver-spotted Copper |
| *Trimenia macmasteri macmasteri* | McMaster's Silver-spotted Copper |
| *Trimenia macmasteri mijburghi* | Mijburgh's Silver-spotted Copper |
| *Trimenia malagrida cedrusmontana* | Cedarberg Scarce Mountain Copper |
| *Trimenia malagrida malagrida* | Scarce Mountain Copper |
| *Trimenia malagrida maryae* | Overberg Scarce Mountain Copper |
| *Trimenia malagrida paarlensis* | Paarl Scarce Mountain Copper |
| *Trimenia wallengrenii gonnemoi* | Piquetberg Silver-spotted Copper |
| *Trimenia wallengrenii wallengrenii* | Wallengren's Silver-spotted Copper |
| *Trimenia wykehami* | Wykeham's Silver-spotted Copper |
| *Tylopaedia sardonyx peringueyi* | Namaqua King Copper |
| *Tylopaedia sardonyx sardonyx* | King Copper |
| *Hemiolaus caeculus caeculus* | Azure Hairstreak |
| *Leptomyrina gorgias gorgias* | Common Black-eye |

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| *Leptomyrina henningi* | Henning's Black-eye |
| *Leptomyrina hirundo* | Tailed Black-eye |
| *Leptomyrina lara* | Cape Black-eye |
| *Myrina dermaptera dermaptera* | Lesser Fig-tree Blue |
| *Myrina silenus ficedula* | Common Fig-tree Blue |
| *Myrina silenus penningtoni* | Namaqualand Fig-tree Blue |
| *Capys alphaeus alphaeus* | Western Orange-banded Protea-butterfly |
| *Capys alphaeus extentus* | Eastern Orange-banded Protea-butterfly |
| *Capys disjunctus disjunctus* | Russet Protea-butterfly |
| *Capys penningtoni* | Pennington's Protea-butterfly |
| *Virachola antalus* | Brown Playboy |
| *Virachola dariaves* | Black-and-Orange Playboy |
| *Virachola dinochares* | Apricot Playboy |
| *Virachola dinomenes dinomenes* | Orange Playboy |
| *Virachola diocles* | Orange-barred Playboy |
| *Virachola vansoni* | Van Son's Playboy |
| *Hypolycaena buxtoni buxtoni* | Buxton's Hairstreak |
| *Hypolycaena lochmophila* | Coastal Haitstreak |
| *Hypolycaena philippus philippus* | Purple-brown Hairstreak |
| *Iolaus aemulus* | Short-barred Sapphire |
| *Iolaus alienus alienus* | Brown-line Sapphire |
| *Iolaus aphnaeoides* | Yellow-banded Sapphire |
| *Iolaus diametra natalica* | Natal Yellow-banded Sapphire |
| *Iolaus lulua* | White-spotted Sapphire |
| *Iolaus mimosae mimosae* | Southern Mimosa Sapphire |
| *Iolaus mimosae rhodosense* | Zimbabwe Mimosa Sapphire |
| *Iolaus nasisii* | Zimbabwe Yellow-banded Sapphire |
| *Iolaus pallene* | Saffron Sapphire |
| *Iolaus sidus* | Red-line Sapphire |
| *Iolaus silarus silarus* | Straight-line Sapphire |

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| *Iolaus silas* | Southern Sapphire |
| *Iolaus trimeni* | Trimen's Sapphire |
| *Stugeta bowkeri bowkeri* | Bowker's Sapphire |
| *Stugeta bowkeri henningi* | Henning's Sapphire |
| *Stugeta bowkeri tearei* | Teare's Sapphire |
| *Stugeta subinfuscata reynoldsi* | Dusky Sapphire |
| **NYMPHALIDAE** | |
| **BIBLIDINAE** | |
| *Byblia anvatara acheloia* | Common Joker |
| *Byblia ilithyia* | Spotted Joker |
| *Eurytela dryope angulata* | Golden Piper |
| *Eurytela hiarbas angustata* | Pied Piper |
| *Sevenia boisduvali boisduvali* | Boisduval's Tree Nymph |
| *Sevenia morantii* | Morant's Tree Nymph |
| *Sevenia natalensis* | Natal Tree Nymph |
| *Sevenia rosa* | Rosa's Tree Nymph |
| **CHARAXINAE** | |
| *Charaxes achaemenes achaemenes* | Bushveld Charaxes |
| *Charaxes bohemani* | Large Blue Charaxes |
| *Charaxes brutus natalensis* | White-barred Charaxes |
| *Charaxes candiope* | Green-veined Charaxes |
| *Charaxes castor flavifasciatus* | Giant Charaxes |
| *Charaxes cithaeron cithaeron* | Blue-spotted Charaxes |
| *Charaxes druceanus druceanus* | Southern Silver-barred Charaxes |
| *Charaxes druceanus entabeni* | Entabeni Silver-barred Charaxes |
| *Charaxes druceanus moerens* | Marieps Silver-barred Charaxes |
| *Charaxes druceanus solitaria* | Blouberg Silver-barred Charaxes |
| *Charaxes etesipe tavetensis* | Scarce Forest Charaxes |
| *Charaxes ethalion ethalion* | Satyr Charaxes |
| *Charaxes guderiana guderiana* | Blue-spangled Charaxes |

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| *Charaxes jahlusa argynnides* | Argynnides Pearl-spotted Charaxes |
| *Charaxes jahlusa jahlusa* | Western Pearl-spotted Charaxes |
| *Charaxes jahlusa rex* | King Pearl-spotted Charaxes |
| *Charaxes jasius saturnus* | Foxy Charaxes |
| *Charaxes karkloof capensis* | Eastern Cape Karkloof Charaxes |
| *Charaxes karkloof karkloof* | Eastern Karkloof Charaxes |
| *Charaxes karkloof trimeni* | Western Karkloof Charaxes |
| *Charaxes marieps* | Marieps Charaxes |
| *Charaxes pelias* | Protea Charaxes |
| *Charaxes phaeus* | Demon Charaxes |
| *Charaxes pondoensis* | Pondo Charaxes |
| *Charaxes protoclea azota* | Flame-bordered Charaxes |
| *Charaxes vansoni* | Van Son's Charaxes |
| *Charaxes varanes varanes* | Pearl Charaxes |
| *Charaxes violetta violetta* | Violet-spotted Charaxes |
| *Charaxes xiphares bavenda* | Venda Forest-king Charaxes |
| *Charaxes xiphares draconis* | Drakensberg Forest-king Charaxes |
| *Charaxes xiphares kenwayi* | Wolkberg Forest-king Charaxes |
| *Charaxes xiphares occidentalis* | Langeberg Forest-king Charaxes |
| *Charaxes xiphares penningtoni* | Pennington's Forest-king Charaxes |
| *Charaxes xiphares staudei* | Blouberg Forest-king Charaxes |
| *Charaxes xiphares thyestes* | Eastern Cape Forest-king Charaxes |
| *Charaxes xiphares xiphares* | Forest-king Charaxes |
| *Charaxes zoolina zoolina* | Club-tailed Charaxes |
| *Charaxes wakefieldi* | Forest Queen |
| **CYRESTINAE** | |
| *Cyrestis camillus sublineata* | African Map Butterfly |
| **DANAINAE** | |
| *Amauris albimaculata albimaculata* | Layman Friar |
| *Amauris echeria echeria* | Chief Friar |

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| *Amauris niavius dominicanus* | Common Friar |
| *Amauris ochlea ochlea* | Novice Friar |
| *Danaus chrysippus orientis* | African Monarch |
| *Danaus dorippus dorippus* | Dorippus Tiger |
| *Tirumala petiverana* | Dappled Monarch |
| **HELICONIINAE** | |
| *Acraea acara acara* | Acara Acraea |
| *Acraea acrita acrita* | Fiery Acraea |
| *Acraea aganice aganice* | Common Wanderer |
| *Acraea aglaonice* | Clear-spotted Acraea |
| *Acraea anemosa* | Broad-bordered Acraea |
| *Acraea axina* | Little Acraea |
| *Acraea barberi* | Barber's Acraea |
| *Acraea boopis boopis* | Rainforest Acraea |
| *Acraea caldarena caldarena* | Black-tipped Acraea |
| *Acraea egina areca* | Elegant Acraea |
| *Acraea horta* | Garden Acraea |
| *Acraea lygus* | Lygus Acraea |
| *Acraea machequena* | Machequena Acraea |
| *Acraea natalica* | Natal Acraea |
| *Acraea neobule neobule* | Wandering Donkey Acraea |
| *Acraea nohara nohara* | Light-red Acraea |
| *Acraea oncaea* | Window Acraea |
| *Acraea petraea* | Blood-red Acraea |
| *Acraea rabbaiae perlucida* | Southern Clear-wing Acraea |
| *Acraea satis* | East Coast Acraea |
| *Acraea stenobea* | Suffused Acraea |
| *Acraea trimeni* | Trimen's Acraea |
| *Acraea violarum* | Speckled Red Acraea |
| *Telchinia alalonga* | Long-winged Orange Acraea |

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| *Telchinia anacreon* | Orange Acraea |
| *Telchinia burni* | Pale-yellow Acraea |
| *Telchinia cabira* | Yellow-banded Acraea |
| *Telchinia cerasa cerasa* | Tree-top Acraea |
| *Telchinia encedon encedon* | White-barred Acraea |
| *Telchinia esebria* | Dusky Acraea |
| *Telchinia igola* | Dusky-veined Acraea |
| *Telchinia induna salmontana* | Soutpansberg Acraea |
| *Telchinia rahira rahira* | Marsh Acraea |
| *Telchinia serena* | Dancing Acraea |
| *Pardopsis punctatissima* | Polka Dot |
| *Lachnoptera ayresii* | Blotched Leopard |
| *Phalanta eurytis eurytis* | Forest Leopard |
| *Phalanta phalantha aethiopica* | Common Leopard |
| **LIBYTHEINAE** | |
| *Libythea labdaca laius* | African Snout |
| **LIMENITINAE** | |
| *Euphaedra neophron neophron* | Gold-banded Forester |
| *Euryphura achlys* | Mottled-green Nymph |
| *Hamanumida daedalus* | Guinea-fowl |
| *Cymothoe alcimeda alcimeda* | Battling Glider |
| *Cymothoe alcimeda clarki* | Amatola Glider |
| *Cymothoe alcimeda marieps* | Marieps Glider |
| *Cymothoe alcimeda transvaalica* | Limpopo Glider |
| *Cymothoe alcimeda trimeni* | Trimen's Glider |
| *Cymothoe coranus coranus* | Blonde Glider |
| *Neptis goochii* | Streaked Sailer |
| *Neptis jordani* | Jordan's Sailer |
| *Neptis kiriakoffi* | Kiriakoff's Sailer |
| *Neptis laeta* | Common Sailer |

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|---|---|
| *Neptis penningtoni* | Pennington's Sailer |
| *Neptis saclava marpessa* | Spotted Sailer |
| *Neptis trigonophora trigonophora* | Barred Sailer |
| *Pseudacraea boisduvalii trimenii* | Boisduval's False Acraea |
| *Pseudacraea eurytus imitator* | Wanderer False Acraea |
| *Pseudacraea lucretia expansa* | Chief False Acraea |
| *Pseudacraea lucretia tarquinea* | Southern False Acraea |
| **NYMPHALINAE** | |
| *Hypolimnas anthedon wahlbergi* | Variable Diadem |
| *Hypolimnas deceptor deceptor* | Deceptive Diadem |
| *Hypolimnas misippus* | Common Diadem |
| *Junonia hierta cebrene* | Yellow Pansy |
| *Junonia natalica natalica* | Brown Pansy |
| *Junonia oenone oenone* | Blue Pansy |
| *Junonia orithya madagascariensis* | Eyed Pansy |
| *Junonia terea elgiva* | Soldier Pansy |
| *Precis antilope* | Darker Commodore |
| *Precis archesia archesia* | Garden Commodore |
| *Precis ceryne ceryne* | Marsh Commodore |
| *Precis octavia sesamus* | Gaudy Commodore |
| *Precis tugela tugela* | Leaf Commodore |
| *Protogoniomorpha anacardii nebulosa* | Clouded Mother-of-Pearl |
| *Protogoniomorpha parhassus* | Common Mother-of-Pearl |
| *Catacroptera cloanthe cloanthe* | Pirate |
| *Antanartia schaeneia schaeneia* | Long-tailed Admiral |
| *Vanessa cardui* | Painted Lady |
| *Vanessa dimorphica dimorphica* | Northern Short-tailed Admiral |
| *Vanessa hippomene hippomene* | Southern Short-tailed Admiral |
| **SATYRINAE** | |
| *Aeropetes tulbaghia* | Mountain Pride |

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|---|---|
| *Gnophodes betsimena diversa* | Yellow-banded Evening Brown |
| *Melanitis leda helena* | Common Evening Brown |
| *Paralethe dendrophilus albina* | Albina Bush Beauty |
| *Paralethe dendrophilus dendrophilus* | Southern Bush Beauty |
| *Paralethe dendrophilus indosa* | Indosa Bush Beauty |
| *Paralethe dendrophilus junodi* | Northern Bush Beauty |
| *Cassionympha camdeboo* | Camdeboo Brown |
| *Cassionympha cassius* | Rainforest Brown |
| *Cassionympha detecta* | Cape Brown |
| *Coenyra aurantiaca* | Pondo Shadefly |
| *Coenyra hebe* | Zulu Shadefly |
| *Coenyra rufiplaga* | Secucuni Shadefly |
| *Coenyropsis natalii natalii* | Natal Brown |
| *Coenyropsis natalii poetulodes* | Wide-eyed Brown |
| *Melampias huebneri huebneri* | Boland Brown |
| *Melampias huebneri steniptera* | Namaqualand Brown |
| *Neita durbani* | D'Urban's Brown |
| *Neita extensa* | Savanna Brown |
| *Neita lotenia* | Loteni Brown |
| *Neita neita* | Neita Brown |
| *Paternympha loxophthalma* | Hillside Brown |
| *Paternympha narycia* | Small Hillside Brown |
| *Physcaeneura panda* | Dark-webbed Ringlet |
| *Pseudonympha gaika* | Gaika Brown |
| *Pseudonympha hippia* | Burchell's Brown |
| *Pseudonympha machacha* | Machacha Brown |
| *Pseudonympha magoides* | False Silver-bottom Brown |
| *Pseudonympha magus* | Silver-bottom Brown |
| *Pseudonympha paludis* | Paludis Brown |
| *Pseudonympha paragaika* | Golden Gate Brown |

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|---|---|
| *Pseudonympha penningtoni* | Pennington's Brown |
| *Pseudonympha poetula* | Drakensberg Brown |
| *Pseudonympha southeyi kamiesbergensis* | Kamiesberg Brown |
| *Pseudonympha southeyi southeyi* | Southey's Brown |
| *Pseudonympha southeyi wykehami* | Wykeham's Brown |
| *Pseudonympha swanepoeli* | Swanepoel's Brown |
| *Pseudonympha trimenii namaquana* | Trimen's Northern Brown |
| *Pseudonympha trimenii nieuwveldensis* | Nuweveld Brown |
| *Pseudonympha trimenii ruthae* | Ruth's Brown |
| *Pseudonympha trimenii trimenii* | Trimen's Brown |
| *Pseudonympha varii* | Vári's Brown |
| *Stygionympha curlei* | Curle's Brown |
| *Stygionympha dicksoni* | Dickson's Brown |
| *Stygionympha geraldi* | Gerald's Brown |
| *Stygionympha irrorata* | Karoo Brown |
| *Stygionympha robertsoni* | Robertson's Brown |
| *Stygionympha scotina coetzeri* | Coetzer's Hillside Brown |
| *Stygionympha scotina scotina* | Eastern Hillside Brown |
| *Stygionympha vansoni* | Van Son's Brown |
| *Stygionympha vigilans* | Western Hillside Brown |
| *Stygionympha wichgrafi grisea* | Wichgraf's Coastal Brown |
| *Stygionympha wichgrafi wichgrafi* | Wichgraf's Brown |
| *Stygionympha wichgrafi williami* | William's Brown |
| *Dingana alaedeus* | Wakkerstroom Widow |
| *Dingana alticola* | Red-banded Widow |
| *Dingana angusta* | Long Tom Widow |
| *Dingana clara* | Wolkberg Widow |
| *Dingana dingana* | Dingaan's Widow |
| *Dingana fraterna* | Stoffberg Widow |
| *Dingana jerinae* | Jerine's Widow |

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| *Dira clytus clytus* | Cape Autumn Widow |
| *Dira clytus eurina* | Eastern Cape Autumn Widow |
| *Dira jansei* | Janse's Widow |
| *Dira oxylus* | Pondoland Widow |
| *Dira swanepoeli isolata* | Blouberg Widow |
| *Dira swanepoeli swanepoeli* | Swanepoel's Widow |
| *Serradinga bowkeri bella* | Gorgeous Widow |
| *Serradinga bowkeri bowkeri* | Bowker's Widow |
| *Serradinga clarki amissivallis* | Lost Widow |
| *Serradinga clarki clarki* | Clark's Widow |
| *Serradinga clarki dracomontana* | Drakensberg Widow |
| *Serradinga clarki ocra* | Ocra Widow |
| *Serradinga kammanassiensis* | Kammanassie Widow |
| *Tarsocera cassina* | Sand-dune Widow |
| *Tarsocera cassus cassus* | Spring Widow |
| *Tarsocera cassus outeniqua* | Outeniqua Widow |
| *Tarsocera dicksoni* | Dickson's Widow |
| *Tarsocera fulvina* | Karoo Widow |
| *Tarsocera imitator* | Deceptive Widow |
| *Tarsocera namaquensis* | Namaqua Widow |
| *Tarsocera southeyae* | Southey's Widow |
| *Torynesis hawequas* | Hawequas Widow |
| *Torynesis magna* | Large Widow |
| *Torynesis mintha mintha* | Mintha Widow |
| *Torynesis mintha piquetbergensis* | Piquetberg Widow |
| *Torynesis orangica* | Golden Gate Widow |
| *Torynesis pringlei* | Pringle's Widow |
| *Bicyclus anynana anynana* | Squinting Bush Brown |
| *Bicyclus ena* | Grizzled Bush Brown |
| *Bicyclus safitza safitza* | Common Bush Brown |

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|---|---|
| *Heteropsis perspicua perspicua* | Eyed Bush Brown |
| *Ypthima antennata antennata* | Clubbed Ringlet |
| *Ypthima asterope asterope* | African Ringlet |
| *Ypthima asterope hereroica* | Herero Ringlet |
| *Ypthima condamini condamini* | Condamin's Ringlet |
| *Ypthima granulosa* | Granular Ringlet |
| *Ypthima impura paupera* | Bushveld Ringlet |
| **PAPILIONIDAE** | |
| **PAPILIONINAE** | |
| *Graphium angolanus angolanus* | Angola White-lady Swordtail |
| *Graphium antheus* | Large Striped Swordtail |
| *Graphium colonna* | Mamba Swordtail |
| *Graphium leonidas leonidas* | Veined Swordtail |
| *Graphium morania* | Small White-lady Swordtail |
| *Graphium policenes policenes* | Small Striped Swordtail |
| *Graphium porthaon porthaon* | Cream Striped Swordtail |
| *Papilio constantinus constantinus* | Constantine's Swallowtail |
| *Papilio dardanus cenea* | Mocker Swallowtail |
| *Papilio demodocus demodocus* | Citrus Swallowtail |
| *Papilio echerioides echerioides* | White-banded Swallowtail |
| *Papilio euphranor* | Forest Swallowtail |
| *Papilio nireus lyaeus* | Green-banded Swallowtail |
| *Papilio ophidicephalus ayresi* | Marieps Emperor Swallowtail |
| *Papilio ophidicephalus entabeni* | Entabeni Emperor Swallowtail |
| *Papilio ophidicephalus phalusco* | Southern Emperor Swallowtail |
| *Papilio ophidicephalus transvaalensis* | Woodbush Emperor Swallowtail |
| *Papilio ophidicephalus zuluensis* | Eshowe Emperor Swallowtail |
| **PIERIDAE** | |
| **COLIADINAE** | |
| *Catopsilia florella* | African Migrant |

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|---|---|
| *Colias electo electo* | African Clouded Yellow |
| *Eurema brigitta brigitta* | Broad-bordered Grass Yellow |
| *Eurema desjardinsii marshalli* | Angled Grass Yellow |
| *Eurema hecabe solifera* | Common Grass Yellow |
| **PIERINAE** | |
| *Afrodryas leda* | Autumn-leaf Vagrant |
| *Belenois aurota aurota* | Brown-veined White |
| *Belenois creona severina* | African Common White |
| *Belenois gidica abyssinica* | African Veined White |
| *Belenois thysa thysa* | False Dotted Border |
| *Belenois zochalia zochalia* | Forest White |
| *Colotis annae* | Scarlet Tip |
| *Colotis antevippe gavisa* | Red Tip |
| *Colotis auxo* | Sulphur Orange Tip |
| *Colotis calais calais* | Topaz Tip |
| *Colotis celimene amina* | Lilac Tip |
| *Colotis celimene pholoe* | Namibian Lilac Tip |
| *Colotis doubledayi* | Doubleday's Veined Tip |
| *Colotis erone* | Coast Purple Tip |
| *Colotis euippe omphale* | Smoky Orange Tip |
| *Colotis evagore antigone* | Small Orange Tip |
| *Colotis evenina evenina* | Common Orange Tip |
| *Colotis ione* | Bushveld Purple Tip |
| *Colotis lais* | Kalahari Orange Tip |
| *Colotis pallene* | Bushveld Orange Tip |
| *Colotis regina* | Queen Purple Tip |
| *Colotis vesta argillaceus* | Veined Tip |
| *Dixeia charina charina* | African Small White |
| *Dixeia doxo parva* | Black-veined Small White |
| *Dixeia pigea* | Ant-heap Small White |

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| *Dixeia spilleri* | Spiller's Sulphur Yellow |
| *Eronia cleodora cleodora* | Vine-leaf Vagrant |
| *Leptosia alcesta inalcesta* | African Wood White |
| *Nepheronia argia varia* | Transkei Large Vagrant |
| *Nepheronia argia variegata* | Variegated Large Vagrant |
| *Nepheronia buquetii buquetii* | Buquet's Vagrant |
| *Nepheronia thalassina sinalata* | Cambridge Vagrant |
| *Pinacopteryx eriphia eriphia* | Zebra White |
| *Pontia helice helice* | Meadow White |
| *Teracolus agoye agoye* | Speckled Sulphur Tip |
| *Teracolus agoye bowkeri* | Bowker's Speckled Sulphur Tip |
| *Teracolus eris eris* | Banded Gold Tip |
| *Teracolus subfasciatus subfasciatus* | Lemon Tip |
| *Mylothris agathina agathina* | Common Dotted Border |
| *Mylothris rueppellii haemus* | Twin Dotted Border |
| *Mylothris trimenia* | Trimen's Dotted Border |
| *Appias epaphia contracta* | Diverse Rainforest White |
| *Appias sabina phoebe* | Albatross Rainforest White |
| *Pieris brassicae* | European Cabbage White |

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