

**Mnomen:** Assessing the Feasibility of Anishinaabek-Centered  
Wild Rice Restoration on University of Michigan Properties

by

Samantha Frey Stokes

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fulfillment of the requirements for the degree of  
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Practicum Advisor:

Dr. David Michener

Curator and Academics, Curation & Research Administrative Lead

University of Michigan Matthaei Botanical Gardens & Nichols Arboretum



**Abstract**

For Anishinaabe communities, Mnomen (wild rice/*Zizania sp.*) is a relative that sustains their body and soul. They have cared for this plant in a good way since making a home in the Great Lakes, and they know it best. Supporting their reconnection to this sacred food is one of the steps that can be taken to right the wrongs of the past, and forefront true histories and the resiliency of the people of this land who survived against all odds. Universities, as benefactors of and contributors to colonial society, have a lot of work to do in support of efforts to decolonize land and food.

It was with this in mind that a team of dedicated students, staff, faculty, and Anishinaabek-experts began envisioning the *Mnomen Initiative*. This initiative will build upon existing relationships through the creation and stewardship of ecologically and culturally appropriate landscape through the restoration of Mnomen (wild rice, *Zizania aquatica/palustris*) on University of Michigan (U-M) properties. This practicum is the first stage of the initiative and worked to build a collaborative of Anishinaabe community members, tribal nations, community members and U-M allies who will work to assess the ecological and societal feasibility of wild rice restoration on 10 properties owned by U-M.

By drawing on the western and traditional knowledges brought to this initiative by its members, two properties: St. Pierre Wetlands and Matthaei Botanical Gardens were found to contain waterbodies suitable for Mnomen restoration. Willow Pond at the botanical gardens and a small cove on Bass Lake at St. Pierre Wetlands provide excellent settings for a reintroduction of Mnomen that would not only restore ecological relationships but support the revival of traditional Anishinaabek foodways and relationships to land. Through the cocreation of a space with shared goals, values, and dedication to being in right-relations, this restoration effort has the potential to reshape the way U-M relates to Indigenous people.

## **A Note on Language**

Throughout this report I use various terms from Anishinaabemowin (the Anishinaabe language). I am not Anishinaabe, no less a native speaker, and thus am using these words/concepts not as an expert, but to privilege the language of this land and the worldview from which it is inseparable. As with any language, there are many dialects and accents within Anishinaabemowin, which is reflected in the spellings I use within this report. When referencing other works, or within quotes, I use the spelling/dialect that the author/speaker used. Otherwise, I attempt to privilege the dialect of the Bodewadomi, because it is within their specific homelands that the University of Michigan now resides.

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## Acknowledgements

For my entire life, I have had the privilege of living, working, and learning in the traditional homelands of the Anishinaabek. The Ojibwe (Chippewa), Odawa (Ottawa) and Bodewatomi (Potawatomi) people lived on and stewarded the land now known as the Great Lakes for hundreds of years before settlers created the colonial state which now allows me to live here. To this day, the University of Michigan benefits financially from Anishinaabe lands that were ceded to the federal government in the 1817 “Treaty at the Foot of the Rapids”.

With this statement, I acknowledge and denounce the societal and state sanctioned violence, theft, and genocide inflicted on indigenous peoples to benefit settlers and colonial powers. These words are not enough, but the spirit behind them drives me every day to take actions to restore right relations and stand in solidarity with the Anishinaabek. The goal of this practicum, and of all of my work, is to come into better relationship with the first people of this land: to struggle alongside the Anishinaabek, so that I might live in Anishinaabewaki (Anishinaabe land) not as an extractive, invasive occupier, but as a guest and contributor to the community.

Miigwetch to Jack DesJarlait, his beloved Red Lake Mandaamin & Jeremy Moghtader without whom I would not have met David or entered into the vibrant collaborative of people working to decolonize the Matthaei Botanical Gardens and “bring the seeds home.”

Miigwetch to Suscila Fernandez,  
for being our guide for and caretaker of the SEAS properties.

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You bring me joy, laughter, and inspiration. You are the “practice” to my “preach” and the  
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## Introduction

For Anishinaabe communities, Mnomen (wild rice/*Zizania sp.*) is a relative that sustains their body and soul. They have cared for this plant in a good way since making a home in the Great Lakes, and they know it best. Supporting their reconnection to this sacred food is one of the steps that can be taken to right the wrongs of the past, and forefront true histories and the resiliency of the people of this land who survived against all odds.

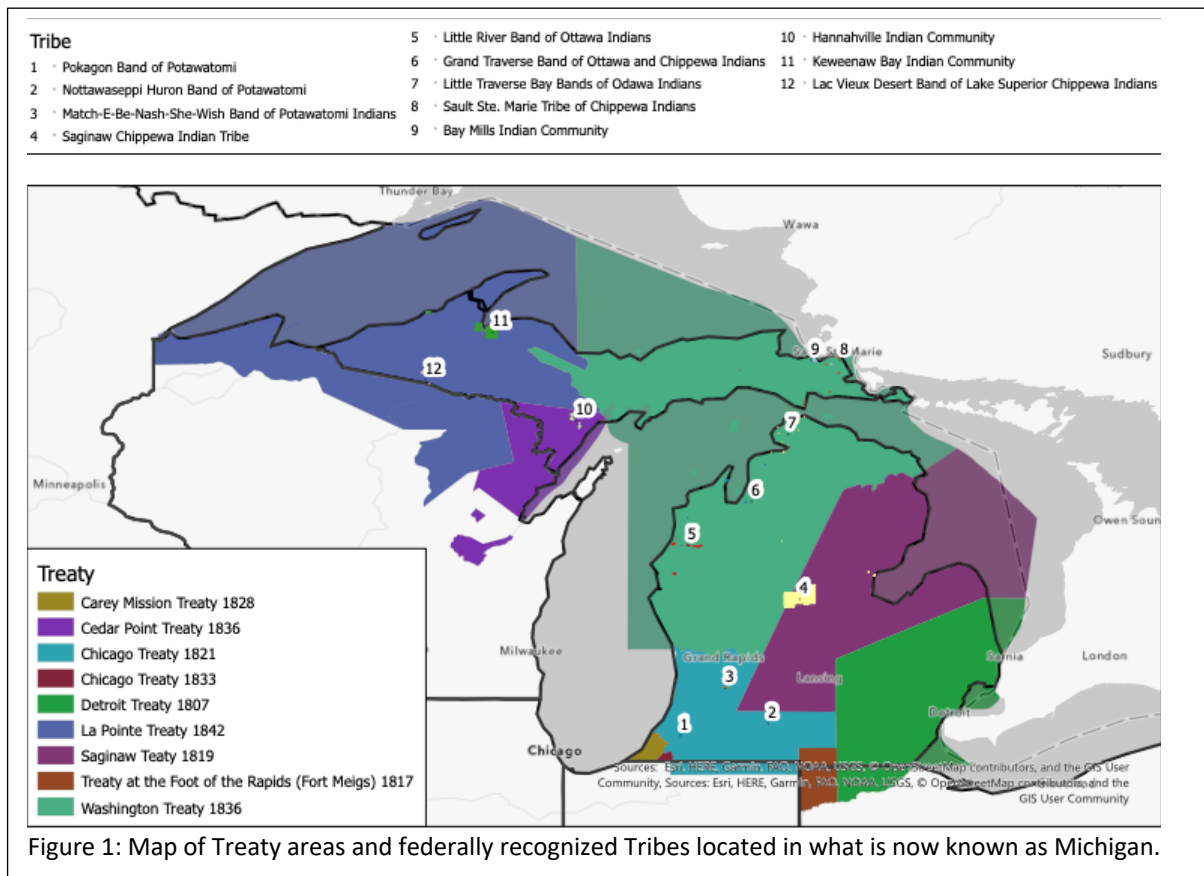
Universities, as benefactors of and contributors to colonial society, have a lot of work to do in support of efforts to decolonize land and food. If this work is to be successful, academics must humble themselves, ask questions, and allow Tribal leaders to guide a revolution in the way academics interact with Indigenous people and their lands.

It was with this in mind that a team of dedicated students, staff, faculty, and Anishinaabek-experts began envisioning the *Mnomen Initiative*. This effort grew out of a desire to deepen relationships with the Anishinaabe community that were forged during the initial stages of the Heritage Seeds for Sustainable Lifestyles Program. A collaboration between University of Michigan and tribal community members, the Heritage Seeds Program works to reconnect local indigenous communities with seeds saved by their ancestors and other cultural resources that will help sustain future generations. The *Mnomen Initiative* will build upon these relationships through the creation and stewardship of ecologically and culturally appropriate landscape through the restoration of Mnomen (wild rice, *Zizania aquatica/palustris*) on University of Michigan (U-M) properties.

## Educational Institutions in a Colonial Context

Contrary to what most students are taught in grade school, North America was far from empty when European settlers arrived on its shores (Dunbar-Ortiz and Gilio- 2016). In fact, an estimated 100 million people, representing a variety of different cultures and speaking a [diversity of languages](#), lived in the Americas (Denevan 1992; Dunbar-Ortiz and Gilio- 2016). Despite the best efforts of colonial powers including, but not limited to the United States government, the descendants of those people are still here. Though the descendants of settlers often spend their whole lives believing that “all the real Indians died off,” this is most emphatically not the case (Dunbar-Ortiz and Gilio- 2016). In this section, I

outline how Universities, like nearly every other aspect of United States society, were founded in and are maintained by settler colonialism<sup>1</sup>.



### The Rotten Roots of Academia

The lands currently occupied by the University of Michigan are within the traditional homelands of the Anishinaabek. In the 1800s, most of the land that is now Michigan is the territory and homeland of the Ojibwe, Odawa, Bodewatomi, Shawnee, and Wyandot. In the Fall of 1817, Michigan’s territorial governor, Lewis Cass, *persuaded* “the Indians” to sign the Fort Meigs “Treaty at the foot of the Rapids”. This treaty ceded 3,840 acres to the

<sup>1</sup> Here I employ Dr. Roxanne Dunbar Ortiz’s definition of settler colonialism: the process by which an imperial power seizes Native land, eliminates the original population by force and removal, or genocide, and resettles the land with a foreign invading population.

territory, half of which was to be used for the creation of a “college in Detroit” where Indigenous youth could gain a Western education (Beck).

Shortly after the land was ceded, an act was signed which founded that college, which we now know as the University of Michigan. The early college remained in Detroit from its founding in 1821 until 1837, when 40 acres of land became available in Ann Arbor. At that time, the original building in Detroit was left, the lands ceded in the 1817 treaty sold, and the profits used to purchase lands that started the campus in Ann Arbor. To this day, Michigan courts hold that the revenue gained from the sale of the original ceded lands are the monetary foundation of the University of Michigan (Beck)

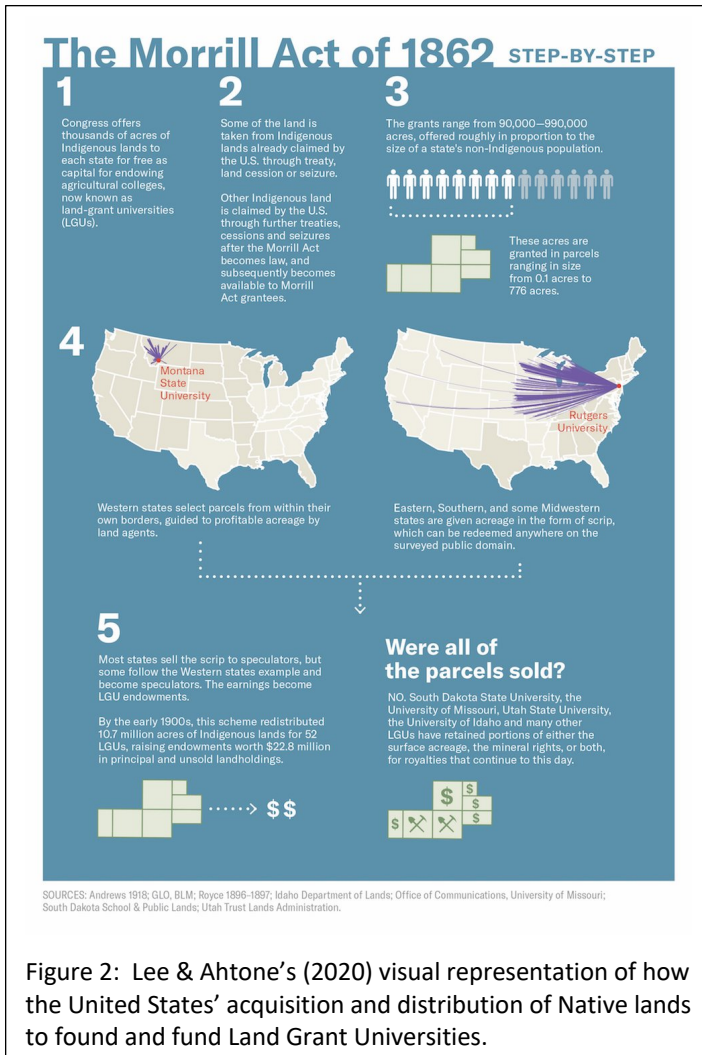
### The University of Michigan in a Land-Grab Landscape

The foundation of the University of Michigan is not unique, nor can it be understood outside the context of what can be considered “[the rotten roots of academia](#)” (Dunbar-Ortiz 2014) in the United States (Harp 2020). This phrase has been employed recently to describe the formation of Land Grant Universities (LGUs), or those that continue to benefit from the Morrill Act (Lee and Ahtone 2020 Mar 30). While the University of Michigan is not technically considered a LGU because it was not granted land via that specific act, profits from the sale of ceded Native lands continue to fuel the school. It is important to understand the University of Michigan in the context of the Morrill Act (Figure 1), which is critical to the formations of institutions of higher learning that benefit from Indigenous lands expropriated through a settler colonial government.

The Morrill Act that was passed by Abraham Lincoln in 1862 and granted over 80,000 parcels of land equaling 11 million acres of land, across 24 states, became the monetary foundation for higher education across the country (Figure 2) (Lee and Ahtone 2020 Mar 30). Recently, a team of Indigenous journalists explored the sources of this land in a report in *High Country News*, compiling a comprehensive data set that tracks the transfer of Indigenous lands into wealth stored in the coffers of Universities across the United States. The results of this report revealed the reality that Indigenous land theft formed the foundation of “[Land Grab Universities](#)” (Lee and Ahtone 2020 Mar 30).

Like the rest of the land in what is now the United States, lands granted in the Morrill Act were obtained through unconscionable means. This included over 160 violence-backed

land cessions, outright land confiscation, and the seizure of treaties that were never ratified by the federal government. All in all, the United States spent only \$400,000 to extinguish the title of nearly 250 tribes to the lands that it then granted to educational institutions via the Morrill Act. The 52 LGUs, on the other hand, benefited from an infusion of land that when adjusted for inflation, is worth half a billion dollars (Lee and Ahtone 2020 Mar 30).



The reality is that today, very little of the lands allocated in the Morrill Act are still owned by LGUs. The few LGUs that kept portions of Morrill Act lands continue to profit from royalties paid on surface acreage and mineral rights. The vast majority sold the appropriated lands, the profits forming the base of their endowment. Today, due to the Morrill Act's mandate that any land sales be done "in perpetuity", all of the profits still remain in University ledgers. Morrill Act lands are the "gift" that keeps on giving. While often treated as a donation, a true telling of the history of the Morrill Act reveals it for what it

truly is: transfer of tremendous wealth to support the education of settlers in support of the United States' colonial project (Lee and Ahtone 2020 Mar 30).

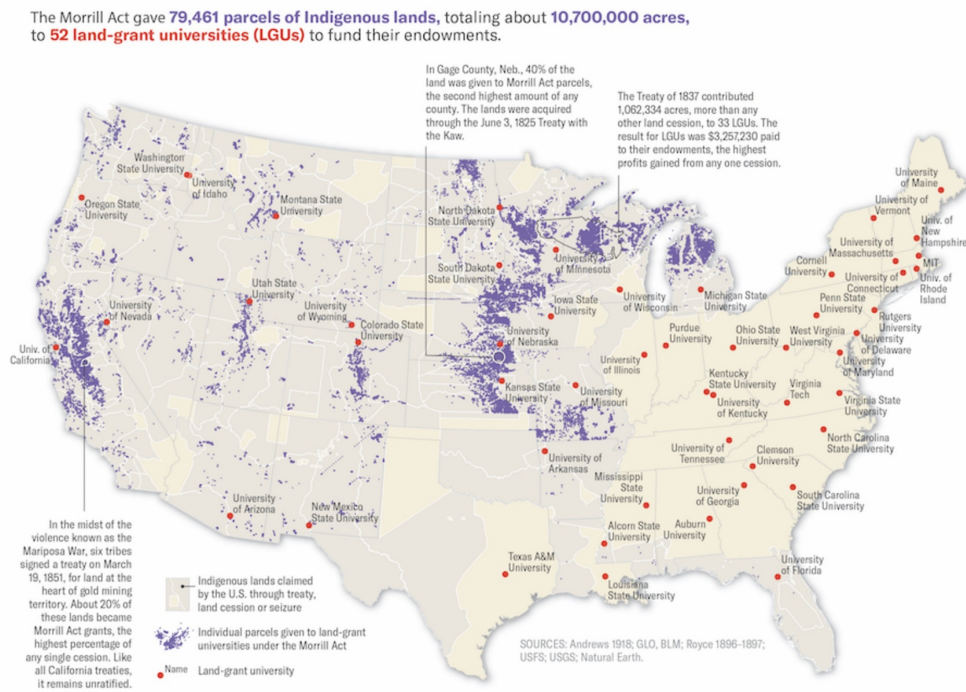


Figure 3: Margaret Pearce's, of High Country News, map of land parcels redistributed by the United States government as part of the Morrill Act (Aiken et al., 1988).

Educational institutions were not only built upon the wealth accrued from lands stolen by a colonial government, but they also served to assimilate the greatest threat to that government: Native children. Boarding schools were central to the colonial project of assimilation: stealing Native children from their families and cultures to “kill the Indian and save the man”(Barrows 1892). Until the passage of the Native American Graves Protection and Repatriation Act, the stolen bodily remains of Indigenous ancestors were stored in museum archives without any intention of ever returning them to their families. These mechanisms of settler colonists: land cessions (grabs), violent removals murder, and enslavement were methods the government used to gain control of the land now called the United States (Kimmerer 2013a; Dunbar-Ortiz 2014). The trauma of these genocidal<sup>2</sup>

<sup>2</sup> I use the term “genocide” very intentionally, as defined by the 1948 (UN General Assembly Convention on the Prevent & Punishment of the Crime of Genocide 1948). “In the present convention, genocide means any of

processes and the disruption of lifeways caused by such policies is still felt today by the 574 federally recognized Indigenous nations and even more tribal communities living within a society that limits their interaction with ancestral lands and foodways (Dunbar-Ortiz 2014; Tara Sweeney 2020).

Today, these legacies of harm continue to loom over the academy, a place where settler colonial thinking continues to subjugate Indigenous ways of knowing while benefiting from the extraction of physical, cultural, and intellectual resources from Native peoples (Kimmerer 2013a). Despite a plethora of land acknowledgements, diversity, equity, and inclusion statements, and a profession to hold values of equity and justice in the highest regard, most Universities fail to support these words with any action. If historic harms and ongoing injustices are ever to truly be healed, then the way that the academy values and interacts with indigenous peoples must change. As academics, beneficiaries of colonial politics and institutions, we have a responsibility to use our privilege to change our teaching, research, and engagement practices from shallow, extractive, and tokenizing interactions into meaningful relationships based in mutual respect and reciprocity. The *Mnomen Initiative*, as a partnership between tribal communities and a leading research University, can serve as a model for how other institutions can partner with Indigenous peoples in ways that center justice and prioritize culturally appropriate restorations and research concerning living cultural landscapes and sacred non-human relatives.

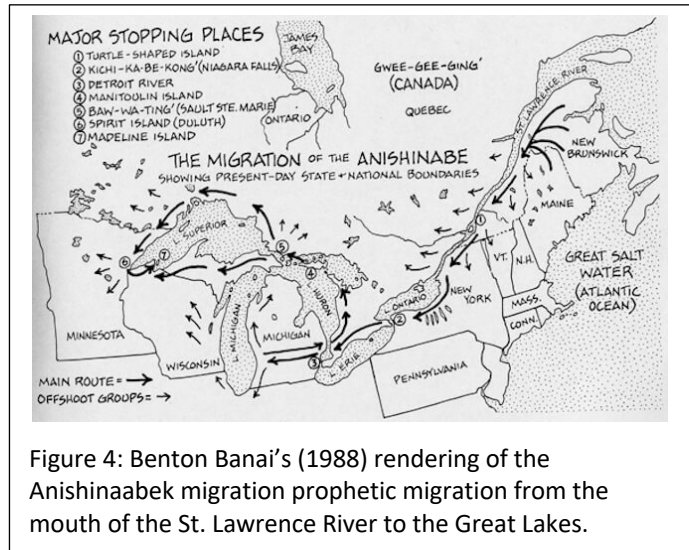
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the following acts committed with intent to destroy, in whole or in part, a national, ethnical, racial or religious group, as such: (a) Killing members of the group; (b) Causing serious bodily or mental harm to members of the group; (c) Deliberately inflicting on the group conditions of life calculated to bring about its physical destruction in whole or in part; (d) Imposing measures intended to prevent births within the group; (e) Forcibly transferring children of the group to another group.”

## The Good Berry & The Anishinaabek

### The Food That Grows on Water

Mnomen is the reason that the Anishinaabe people, a cultural group which includes the Ojibwe (Chippewa), Odawa (Ottawa), and Bodewatomi (Potawatomi) tribes, made the Great Lakes their homeland. While still living on the East Coast near the mouth of the St. Lawrence River, the Anishinaabe people received seven prophetic



visions, the first of which warned the people of a coming danger. To avoid destruction, the Anishinaabe embarked on a 500 year journey, traveling West to the “place where the food grows on water” (Figure 4) (Benton Banai 1988). That food was Mnomen, a grass that at the time, grew abundantly throughout its native range in the Great Lakes, including both the upper and lower peninsulas of what is now the State of Michigan (Barton 2018). As the Anishinaabe made their homes across the region, Mnomen became a staple food, central to identity, culture, and traditional foodways (Herron 2002; Drewes 2008; Barton 2018; David 2018).

Mnomen (“*Mn-o-min*”) is the Anishinaabe word for wild rice, and roughly translates to “the good (mno) berry (min)”. This name refers to two different species of what is commonly referred to as wild rice. Two species: Northern rice, *Zizania palustris* and Southern or river rice, *Zizania aquatica* are found throughout Anishinaabe homelands (Herron 2002; Barton 2018; David 2018). Both species are annual, emergent wetland grasses, which means every year this water-dwelling plant begins a new lifecycle (David 2018).

Mnomen seeds are dormant all winter and begin germinating in the early Spring as ice over the water begins to break up. Small clusters of leaves begin to form underwater in mid-May, and baby plants then grow underwater until they reach “floating leaf stage” in mid-June. By late June, stems become emergent, breaking the surface and growing up to 8 ft above the water. In July, female flowers (Figure 6) begin forming at the top of the stem,

followed by their male counterparts below (Figure 5). This promotes cross-pollination between plants, which occurs via the wind (David 2018).

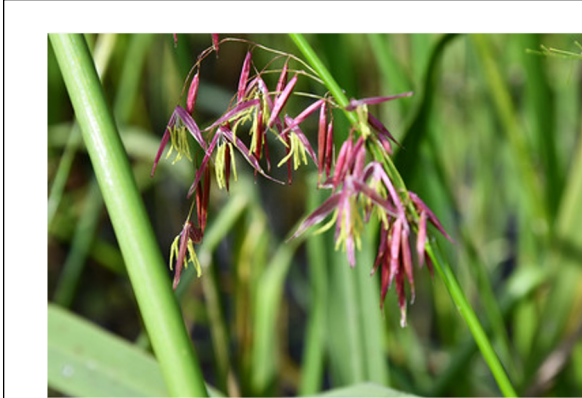


Figure 5: Blooming male flowers (Todd Marsee, MI SEA Grant)



Figure 6: Female flower heads (Todd Marsee, Michigan SEA Grant)

### Disruption to Reconnection

Hundreds of years after making their home in the Great Lakes, the Anishinaabe were faced with the danger from the East Coast: European colonization. This ushered in an era of violent relocations, removals, and land cessions made possible by the signing of treaties between sovereign tribal nations and the United States federal government in the territory of Michigan during the late 1700s and early 1800s (Great Lakes Indian Fish & Wildlife Commission 2018). Colonization and the subsequent landscape changes and industrialization meant that Mnomen suffered alongside the people; dams, pollution, and the destruction of wetlands made this once abundant grass a rarity (David 2018).

For many years, Mnomen and the people struggled to thrive together, and only recently has the hard work of cultural leaders helped to reconnect Anishinaabe people to this sacred food and relative. Today, tribal people across the Great Lakes are working to bring Mnomen home for the physical,



Figure 7: Mnomen is part of this perfect riverine scene in SW Michigan (Sam Stokes)



cultural, and spiritual health of their communities. This process is as unique as the Anishinaabek Nations and communities that participate, but the core values remain the same. I have had the distinct honor of learning from some of the Anishinaabek riverkeepers who are reconnecting to Mnomen with their communities. Based on what I have learned from these experts, I describe below how Mnomen can be harvested and turned into food: an intimate and communal process which must be known if one is to understand the sacred relationship between Anishinaabek and wild rice.



Figure 8: Photographer Todd Marsee displaying his newly carved knockers

### **Lake to Table: Anishinaabek Stewardship of Mnomen**

#### Harvest

During the Fall, Mnomen, and all of those who care for it, must begin planning for the next generation. Seeds begin to develop in late August and continue a staggered ripening that lasts several weeks through September. Left untouched, seeds will gradually fall off the stem, land in the water nearby and bury into the sediment (Figure 9). It is these seeds that will ensure there is Mnomen to grow in the next year. However, seed dispersal can often be a challenge for Mnomen as seeds often fall very close to their parent plant – limiting the



Figure 9: Mnomen seeds floating on the top of nibii (water) before sinking to the bottom and burrowing into the lakebed to begin growing (Todd Marsee, MI SEA Grant)



Figure 10: Guiding the canoe with a pole instead of paddling reduces damage to Mnomen beds (Todd Marsee, MI SEA Grant)

recovery of the species (David 2018). Thankfully, Mnomen has the Anishinaabe people to help care for it. The act of harvesting, done in traditional way helps ensure that seeds find their way into open lakebed where they can grow.

In large Lakes across Anishinaabewaki (Anishinaabe land) where *Zizania palustris* grows, harvesting is done by two people riding inside a long, thin canoe. The person in the back of the boat is the “poler”, using a long, strong, modified log to guide the canoe safely through the Mnomen (Figure 10). As the poler guides the canoe through the rice bed, the person in the front of the canoe does the actual harvesting with a set of “knockers” (Figure 8). Knockers are very slim, light, cylindrical pieces of wood (often cedar) that are used to gently pull Mnomen stalks towards oneself and knock ripe seeds off the stalk and into the canoe.

### Drying & Parching

When canoes come off the water full of rice, it is time to begin thinking about the transition from seed to food. As soon as the Mnomen leaves the canoe, it must be dried to prevent it from molding (Figure 12). Once dried, the Mnomen is ready to be parched. This is the process by which the seeds start transforming into food, becoming incapable of creating new Manoomin life in exchange for supporting human life. Parching entails heating dried rice in a large kettle over very high heat (Figure 13). The rice is stirred constantly to prevent burning and is “done” when the outside husk is brittle and the seed splits with a sharp \*snap\* when light pressure is applied between thumb and forefinger (Figure 14). If this happens, it is time to remove the Mnomen from the heat and allow it to cool (Labine and Herron 2016).



Figure 11: Seeds ripen at different times – having so few fall into the canoe means that it isn't quite time to harvest yet (Sam Stokes)



Figure 12: Mnomen drying under the sun (Todd Marsee, MI SEA Grant)



Figure 13: A large kettle of Mnomen is parched under a watchful eye (Todd Marsee, MI SEA Grant)



Figure 14: Demonstrating how to test the parching of a batch of Mnomen (Todd Marsee, MI SEA Grant)

### Threshing

Once the rice is parched and cooled, the process of removing the husk from the grain begins. The first step in this part of the process is “jigging” (Figure 15). During this process, a person wearing special moccasins dances or “jigs” on the rice (Figure 16). They gently place their feet down and twist, a motion which separates the husk from the seed. Jigging occurs in a smooth, shallow pit lined in a clean buckskin or a tarp to hold the seeds. A brace of small branches/saplings is constructed around the jigging pit and helps support the dancer during this hard work. This brace also ensures that the jigger does not put too much pressure on the Mnomen, crushing the seeds. Jigging is complete when most husks easily fall away from the seeds when only slightly agitated (Labine and Herron 2016).



Figure 15: Jigging the Mnomen (Todd Marsee, MI SEA Grant)



Figure 16: “High-top” moccasins prevent sharp Mnomen hulls from irritating the dancer’s feet (Todd Marsee, MI SEA Grant)

After jigging has loosened the husks, they must be separated from the seeds. Traditionally, this is done via a process called “winnowing” (Figure 17). Parched rice is placed in a flat basket which is then dropped out from underneath it. Everything in the basket

goes up, but only the seeds come down. The husks are very light and so are blown away in the air. This is repeated several times to make sure all of the husks are washed away by the wind. It is prudent to winnow over a tarp, as it is a delicate process and those less experienced can often drop precious seeds (Labine and Herron 2016). Threshing machines are a contemporary technology that enables the processing of large quantities are Manoomin in a fraction of the time it would take to do so by hand (Figure 18). These machines come in every shape and size. Some are the handicraft of ricers to aid their friends and family, while others are made for sale, and still others used in large threshing facilities (Labine and Herron 2016).



Figure 17: Mnomen husks fall away from the seed as a birch-bark winnowing basket is dropped out from underneath them (Todd Marsee, MI SEA Grant)

### Clean, Sort, & Pack

The last steps in readying Mnomen to become food are sorting, picking and packaging. Every food production process needs quality control; nobody wants to break a tooth, get poked by a husk or eat any unsavory or dangerous fungi. This means someone must pick through the Mnomen to remove any of the rocks, sticks, remaining husks, and fungus that is mixed in with the rice grains (Figure 20). Once those items are removed, any broken grains are picked out from the full, long-grains. These smaller grains will be saved and can be milled into flour or cooked up like a porridge (Labine and Herron 2016).



Figure 18: A wild rice threshing machine, affectionately called “The Manoominator” (Todd Marsee, MI SEA Grant)

Finally, the remaining clean and entire Mnomen seeds are packaged so that it can be shared throughout the community, gifted to friends and family, and sold in support of Indigenous economies. Packaging is an important way to let people know that this wild rice was harvested and processed in a good way (Figure 19). Unfortunately, many people do not know that the “wild rice” they buy in the supermarket is NOT Mnomen. This commodified

wild rice sold in supermarkets is a very uniform, dark colored, domesticated version of “wild rice” that is grown in paddies, sometimes in Minnesota, but also as far away as California (Weinzweig 2010; Lemay 2011; Labine and Herron 2016). Thus, informative packaging is important, so consumers know the Mnomen they are eating grew truly wild in the Great Lakes and was harvested and processed by those who know it best: the Anishinaabek (Dunbar-Ortiz 2014). Packaging might be labeled with the logo of a specific tribe, the stamp of an Indigenous-owned business, or have a statement indicating it was produced by Anishinaabe communities.



Figure 19: Mnomen being packaged for people to take home to enjoy with their family (Todd Marsee, MI SEA Grant)



Figure 20: Women sorting out smaller, broken pieces of Mnomen out from the whole seeds (Todd Marsee, MI SEA Grant)

### Purpose, Goals & Objectives

Mnomen is more than *just* a wetland plant or nutritious seed and the process described above is more than a subsistence activity or economic endeavor. Despite each of these descriptions being accurate, they fail to capture the deep cultural importance of Mnomen as a sacred relative and the incredible dedication, resilience, and resistance Anishinaabek show in carrying forward this relationship. While Mnomen seeds themselves are food for the body, it is the process described above which feeds the community’s mind and soul. Time spent on the water, around the parching fire, or in the jigging pit is time spent reasserting sovereignty over land, food, and futures, despite the effects of ongoing colonial



Figure 21: Both laughter and Mnomen feed the soul at the Keweenaw Bay Indian Community’s 2019 rice camp (Todd Marsee, MI SEA Grant)

violence on land and people. Through the sharing of stories, teaching of traditions, and fostering of a relationship to Mnomen, *the good berry* helps people live Mno Bimaadiziwin, *the good life*.

Supporting Anishinaabek reconnection to Mnomen as part of Mno Bimaadiziwin (the good life) is one of the steps that Universities can take to right the past wrongs, highlight the resiliency of people and the land, and change the way that educational institutions relate to Indigenous Nations. As benefactors of and contributors to colonial society, Universities have a lot of work to do in support of efforts to decolonize land and food. This work is sensitive, deep and meaningful and requires academics to recognize that it is not they who are the experts. If there is any hope for recreating the way the academy interacts with Indigenous peoples and their land, then Tribes must guide the way, and institutions be willing to move at “the speed of respect” (David Michener, personal communication).

It was with this in mind that a team of dedicated students, staff, faculty, and Anishinaabek-experts began envisioning the *Mnomen Initiative*. For the past three years, University of Michigan and tribal community members have been learning and growing (physically and metaphorically) through the Heritage Seeds for Sustainable Lifeways Program. Together, the collaborative based out of Matthaei Botanical Gardens that works to reconnect local indigenous communities with seeds saved by their ancestors and other cultural resources that will help sustain future generations. The *Mnomen Initiative* will build upon these relationships through the creation and stewardship of ecologically and culturally appropriate landscape through the restoration of Mnomen (wild rice, *Zizania aquatica/palustris*) on University of Michigan (U-M) properties.

### Statement of Purpose

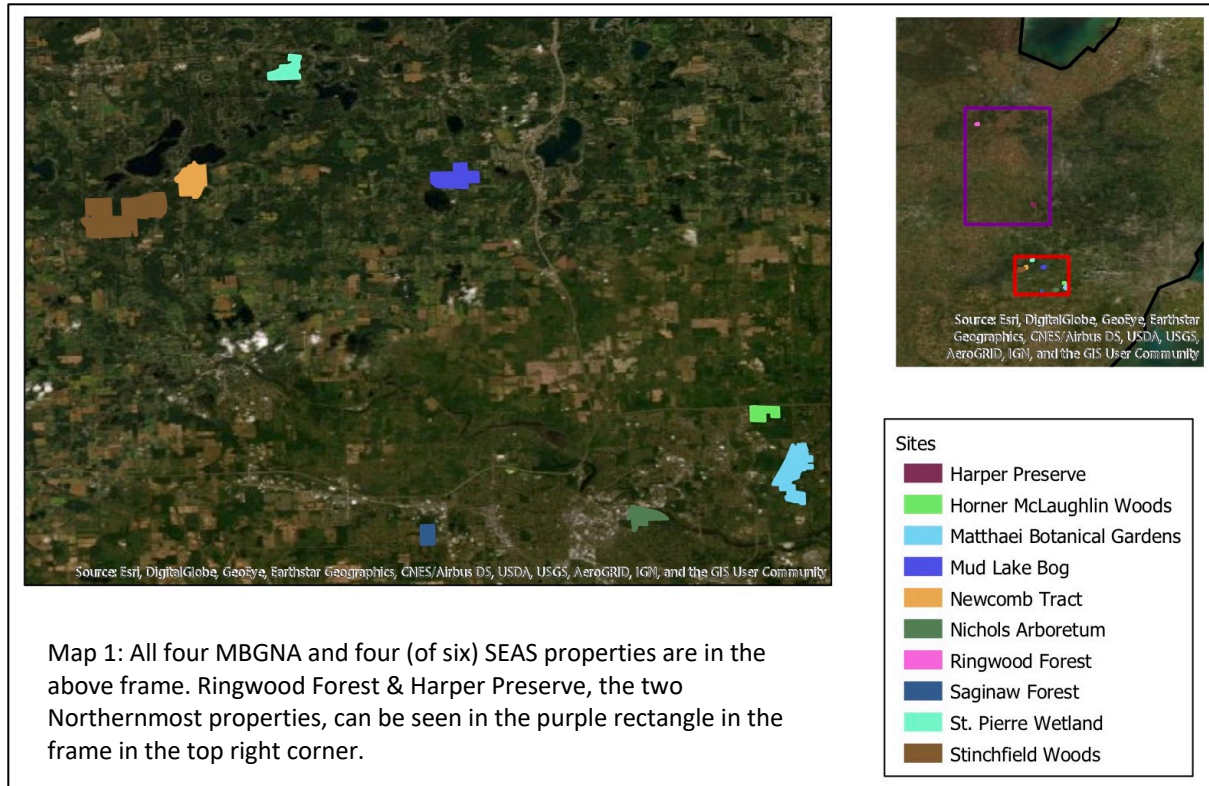
The purpose of the *Mnomen Initiative* is to grow strong, reciprocal relationships between tribal nations, Anishinaabe communities, and the University of Michigan that support the mutual goal of restoring Mnomen to University properties located within Anishinaabe homelands in Southeast Michigan.

Table 1: University of Michigan Properties for Consideration					
Property	Manager	County	Township/City	Acreage	Wetlands (ac)
Saginaw Forest	SEAS	Washtenaw	Scio	80	19
Stinchfield Woods	SEAS	Washtenaw	Dexter	812	4
Newcomb Tract	SEAS	Washtenaw	Webster	207	42
St. Pierre Wetlands	SEAS	Livingston	Hamburg	130	130
Harper Preserve	SEAS	Genesee	Argentine	373	125
Ringwood Forest	SEAS	Saginaw	St. Charles	160	63
Matthaei Botanical Gardens	MBGNA	Washtenaw	Ann Arbor	360	137
Nichols Arboretum	MBGNA	Washtenaw	Ann Arbor	139	10
Mud Lake Bog	MBGNA	Washtenaw	Webster	248	208
Horner McLaughlin Woods	MBGNA	Washtenaw	Ann Arbor	101	12
<b>Totals</b>				<b>2610</b>	<b>750</b>

### Goals & Objectives

The goal of this practicum, which will serve as phase one of the *Mnomen Initiative*, is to build a collaborative of Anishinaabe community members, tribal nations, community members, and U-M allies who will work to assess the ecological and societal feasibility of wild rice restoration on 10 properties owned by the University of Michigan (U-M). This shall be accomplished by pursuing the following objectives, which incorporate both Western scientific and traditional ecological knowledge:

1. Determine which of the 10 U-M properties have the biophysical potential to support Mnomen.
2. Assess the potential of watershed ecosystems within those properties to provide suitable habitat for Mnomen.
3. Identify and describe sites where a collaborative, Anishinaabe-centered Mnomen restoration initiative could be piloted.
4. Assess the cultural, health, ecological, and scholarship benefits that Mnomen restoration would provide to tribal communities and U-M at the sites identified by the ecological assessments.



## Methods

A site's biophysical feasibility was assessed based on seeding restoration guidelines described in reports from across the Great Lakes (Natural Resources Conservation Service 2001; Natural Resources Conservation Service Minnesota 2004; Minnesota Department of Natural Resources 2014; David 2018) and communications/observations by participating Mnomen experts (Appendix 10). In order to limit the cost of this exploratory effort and due to COVID restrictions on travel, incompatible sites were ruled out as early as possible using a triage approach. Data on water/soil quality characteristics was only collected when necessary, to make distinctions between sites or to confirm that a promising site would not be hindered by the presence/absence of a certain characteristic.

## Site Evaluations

### Incompatible Sites

Assessing the capacity of the 10 selected sites to support Mnomen began with ruling out those properties which did not contain standing water using geospatial data and satellite imaging. This eliminated Stinchfield Woods (Appendix 4), Ringwood Forest (Appendix 3),



and Horner McLaughlin Woods (Appendix 7) from consideration. The Mud Lake Bog property was also eliminated as a potential restoration site due to the low pH of bog waters, which are incompatible with Mnomen growth (David 2018). The remaining sites were surveyed by Stokes and accompanying Initiative partners who could still participate despite the COVID19 pandemic (Appendix 10).

Both Saginaw Forest (Appendix 2) and Harper Preserve (Appendix 6) contain large ponds, however neither are suitable for wild rice restoration. Both fail to provide adequate flow to keep water cool and sufficiently oxygenated and have less-than-ideal substrates. Though the lake in Saginaw forest abuts to an open area, it is ringed with trees that shade large portions and has significant cattail growth in shallow areas that would not be suitable for Mnomen. The large pond on Harper Preserve cannot be accessed without passing through privately-owned farmland, limiting easy access by harvesters, students, researchers and visitors. The pond itself has banks that slope off to depth (>4ft) quickly and has very thick algal grow throughout the water-column. Additionally, the neighboring farmer reports that during migratory seasons, waterfowl frequent the pond in large numbers. For these reasons, both sites will not be considered for restoration.

Though the Huron River flows through Nichols Arboretum (Appendix 8) for approximately half of a mile, the riverbanks at this site are eroded due to high foot traffic and recreation activities such as canoeing, tubing, and swimming. This stretch of the Huron River also flows quickly with few eddies and has a cobbled bottom, all of which would hinder the ability of Mnomen to successfully take root and establish. Lastly, this relatively narrow river is shaded on both sides, limiting the hours of direct sunlight available to any restored wild rice. For these reasons, Nichols Arboretum was also excluded as a potential restoration site.

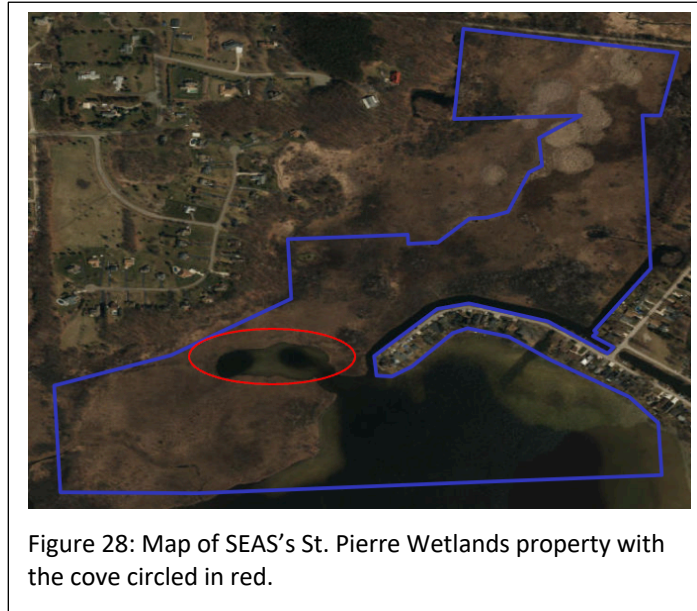
The Northeastern border of Newcomb Tract (Appendix 1) is the Southern side of Base Line Lake, and the Northwestern border follows the lake's outlet into the Huron River. The site is currently closed and has no access except through the property directly to the east along the shoreline, which is owned by the Michigan Sailing Club. The sailboats and boats of neighboring homeowners and recreators mean that there is almost constant traffic on both the Lake's main body and into the Huron River outlet which would prevent the establishment of a wild rice bed.

There is a small pond within Newcomb Tract to the South of Base Line Lake that gets very little traffic and has a deep, organic, mucky substrate. However, during his April 2020 visit to this site with Stokes and Fernandez, Roger Labine (Appendix 10) did not consider this pond a priority for Mnomen restoration. This pond is surrounded by forest which severely limits direct sunlight and makes it very difficult to access with any watercraft. It exhibits very little flow of water, which likely contributed to a 2°C higher temperature reading than the next warmest site when measured in April 2020. Additionally, this site had higher turbidity (68 NTU) and pH (9.24) than is desirable (8 NTU, 6-8 pH) (David 2018; Labine 2020). For these reasons, this pond is not considered for a restoration.

#### Secondary Potential Restoration Site: St. Pierre

The Southern border of St. Pierre Wetlands runs East-West through Bass Lake. On the Northwestern corner of the lake is a small cove that shows potential as a Mnomen restoration site. This cove is in full sun, has very few cattails (invasive or native) and no phragmites encroaching on the banks, though both the native and invasive species have been found on the property. Though a large patch of water lilies (*Nymphaea spp.*) does occupy the mouth of the cove, they do not significantly invade the banks within and thusly are unlikely to compete with any seeded Mnomen.

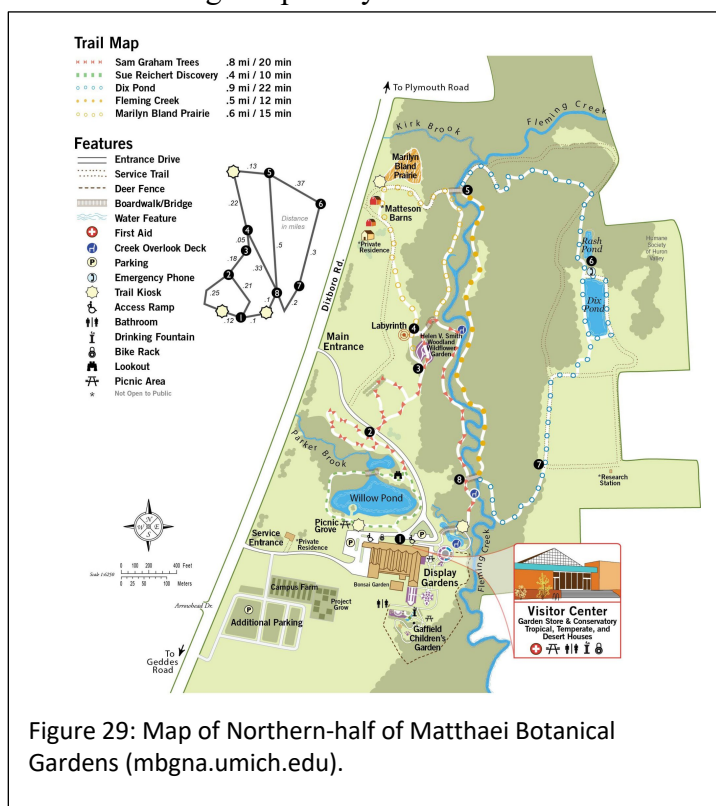
The bottom of this cove is shallow (<3ft) in the shape of a figure-eight along the bank and through the middle, with two deeper pools on the Western and Eastern ends. The cove substrate is soft up to a foot down without large cobbles, though is less organic and mucky than ideal. Though some algae and aquatic plants are present, they are in low enough densities so as not to provide significant competition with any seeded Mnomen. The water at the site showed a suitable pH of 8.59 and dissolved oxygen of 89% in April of 2021. There is an adequate flow of water in and out from the main body of the lake, but low enough turbidity (0.47 NTU) to keep the water clear.



The above conditions contributed to experts and Initiative partners Scott Herron and Roger Labine suggesting that this site be considered suitable for restoration. However, before any restoration could occur, some concerns need to be addressed. Additional soil testing is necessary to better assess the sulfate levels in the cove, which measured high (44.5ug/g) in a sediment sample collected in August 2020. Further soil testing would also be useful to get a better understanding of the organic content and how much calcium carbonate (how calcareous) is in the substrate. Mnomen struggles to grow in areas with high sulfates and substrates without adequate organic muck. Lastly, there is currently no easy access to Bass Lake through St. Pierre wetlands, meaning currently we rely on the kindness of a neighbor to allow us to launch our canoes. Restoration of Mnomen cannot be considered successful if inadequate access prevents University researchers, students, and most importantly Anishinaabek stewards from having a relationship with this plant. As such, access to Bass Lake through SEAS managed properties must be constructed before any restoration efforts should go forward.

### Primary Potential Restoration Site: Willow Pond at Matthaei Botanical Gardens

This feasibility analysis revealed that Willow Pond, a water-feature at the entrance of Matthaei Botanical Gardens, right in front of the conservatory, is the best option for Mnomen restoration. This small pond (~1ac) is one of the first features visitors see when entering the botanical gardens and is the waterbody which prompted this assessment. My advisor, David Michener, suggested this practicum because over many visits to the site for Heritage Seeds Projects, Scott Herron mentioned that Willow Pond looked like it could be a nice site for Mnomen. It is unsurprising and fitting then, that this pond's ecology, context, and education potential make it the site of highest priority for Mnomen restoration.



Willow pond is centrally located on the Matthaei Botanical Gardens property at the end of the main-entrance drive to the parking lots and conservatory entrance. Willow pond is man-made and water flows in from Parker Brook to the Northwest, through a settling pond and over a cascade into Willow Pond. The water then continues over a cascade and into the main body, where it can then leave via a drain on the East-end. This drain goes under the entrance drive, and lets out into Fleming Creek, on the other side. Willow Pond's connection to these creeks means it maintains the water flow necessary to keep water cool and oxygenated (>80%) for Mnomen (Labine 2020).

Perhaps the pond's greatest physical feature is the 4 feet of organic muck that compose its bottom and is the ideal growing medium for Mnomen. Water depth in the pond varies spatially and temporally, but even in the deepest areas/times only infrequently surpasses 3 feet. Sun exposure is very high, limited only by trees behind the Northern bank, and the water has limited turbidity and is clear to the bottom. Previous controlled burns have significantly reduced the population of invasive cattails, and other aquatic vegetation only sparsely populates the pond, posing little risk of out-competing Mnomen. While an excellent site for bird watching and home to a mated pair of Jijaak (cranes), the pond does not suffer from an overabundance of geese, which can significantly harm Mnomen by grazing on young shoots.

Willow Pond is not only ecologically well-suited to Mnomen, but it is also the perfect location for education and relationship building around this sacred plant. Students of all ages and increasingly from different walks of life and representing different peoples, visit the pond as part of their trip to the botanical gardens. Additionally, a Mnomen restoration on the pond will continue a growing effort to create a regenerative, perennial, food-landscape that supports food sovereignty research and practice. Mnomen in the pond would stand alongside a newly planted food forest, native perennial food plants, the [U-M Campus Farm](#), and [Indigenous Collaborative Garden](#): a testament to the productivity, diversity and importance of Great Lakes food and agriculture. Lastly, an Anishinaabek-centered, collaborative, and reciprocal Mnomen restoration at Willow Pond sends a clear message to all those who visit the botanical gardens: we recognize the Anishinaabek foundation of the University and respect, value, and support the revival of sovereign, land-based Anishinaabek foodways.

#### Next Steps: A Pilot

Forthcoming restoration efforts would benefit from the instillation of water-quality data loggers in the cove at St. Pierre Wetlands and Willow Pond at Matthaei Botanical Gardens. These loggers could provide measures of water pH, dissolved oxygen, conductivity, temperature, and level over time, helping Mnomen stewards know what to expect during seeding efforts and stand establishment. Selecting an appropriate seed source for each site is also critical and must necessarily rely on the expertise and intergenerational knowledge of Anishinaabek elders and ricekeepers, who will know where Mnomen may be growing in

habitats like the selected restoration site. It will be critical to involve Tribal governments and natural resources departments throughout this restoration effort, but especially when sourcing or harvesting Mnomen to seed. Respectful and culturally sensitive protocols should be discussed with guiding elders/ricekeepers ahead of time and followed in a way that reflects the sacred nature of this work.

### **Carrying Us Forward Together**

The historic and contemporary harms of settler colonialism are violent, persistent, and to some extent, wholly unmeasurable. The academy as a mechanism and result of this colonial violence has played a central role in the assimilation Native peoples, profiting from stolen land, and simultaneously exploiting and invalidating Indigenous knowledge. Perhaps the greatest benefit of an Anishinaabek-centered Mnomen restoration on University properties is the space it creates to be accountable for these wrongs. This is a space to cultivate and caretake relationships that will foster collaboration and reciprocity across and throughout Tribal and University communities through the dedication to an important, beloved, and sacred plant: Mnomen.

In a recent publication, members of the Kawe Gidaa-Naanaagadawendaamin Manoomin (First we must consider wild rice) project published an article on transforming research relationships through University-Tribal partnerships (Matson et al. 2021). In this article, the team outlines ten considerations-responsible relationships that they have drawn from lessons learned in working as a collaborative since 2018 (Matson et al. 2021). While all these considerations are important, there are six I wish to highlight because in addition to being features of a successful, long-term collaboration with Tribal Partners, they are also successes in their own right. These actions: 1) honoring treaties & recognizing tribal sovereignty; 2) addressing past & present harms – building accountability; 3) recognizing, valuing, and honoring Indigenous labor, knowledges, and traditions; 4) growing relationships beyond formalizing documents & initiatives; 5) navigating institutional obstacles and 6) embracing different ways of knowing ourselves and the world; are part of the reason to restore Mnomen. As collaborators in this effort gather, each of these actions supports the others and cultivates a rare space within academia where Indigenous people and their knowledges are not an afterthought or anecdote, but central to the work.

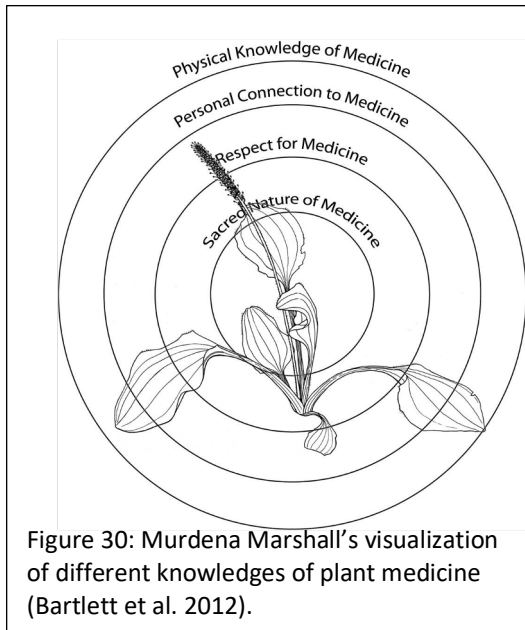


Figure 30: Murdena Marshall's visualization of different knowledges of plant medicine (Bartlett et al. 2012).

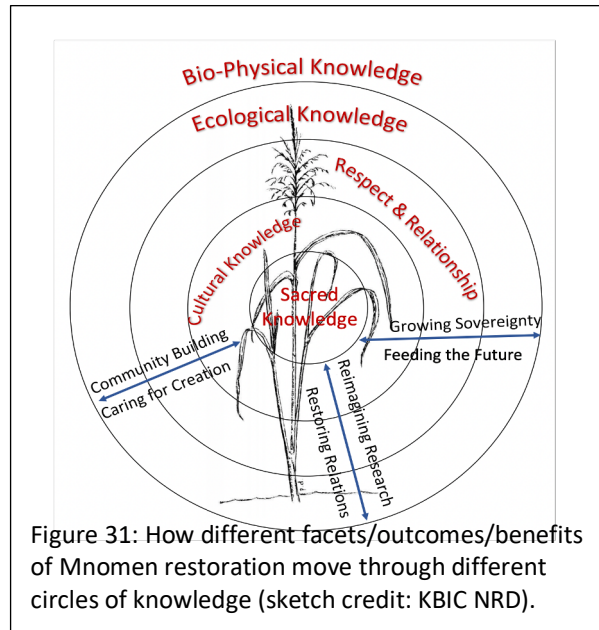


Figure 31: How different facets/outcomes/benefits of Mnomen restoration move through different circles of knowledge (sketch credit: KBIC NRD).

Currently, academia is maintaining an “intellectual monoculture,” where only western science is considered the legitimate interpretation of a universal reality (Kimmerer 2013b). However, science is not solely the purview of white men practicing western traditions; science as a “process of human inquiry” is practiced by all people (Kimmerer 2013b). Indigenous knowledges (IK) or traditional ecological knowledges (TEK) did not suddenly come into existence when anthropologists started studying them and ecologists started citing them in the literature. These knowledges are co-created in community, are contextual and deeply embedded with relations to land and all creation (Kimmerer 2012). For Mnomen restoration to be successful, and more importantly meaningful, many knowledges are necessary, and sacred Anishinaabek understanding of this plant relative must remain central.

Figure 31 is Stokes' rendering of how different knowledges contribute to knowing Mnomen and how the keepers, teachers, and learners of this knowledge can support help to bring about positive change. This figure was created with inspiration from the illustration in figure 30, which shows Mi'kmaq elder, Murdena Marshall's depictions of the different levels at which one can know a plant. In both figures, the outermost rings are drawn most from empirical observation, “truth”, the comfortable domain of western science. As one works inward, the knowledge becomes more intertwined with relationships, feelings, social context, and “right or wrong” instead of “true or false” (Kimmerer 2012). This complex

relationship is central to any plant, but especially Mnomen which is a sacred fulfillment of the migration prophesy.

The beauty and potential of a collaborative Mnomen restoration is that it can and must live throughout each of these rings and that each person involved brings to the effort not only their knowledge, but desire to link it with others'. In the space created in the service of Mnomen, those traditionally excluded, devalued, or uncomfortable with one form of knowledge will have the support and understanding of their collaborators to learn on. More importantly, the knowledge, cultural practices, and sacred traditions of the people who have stewarded Mnomen since time immemorial will be central in an initiative on properties currently owned by a University.

In this space, all knowledge is reciprocal: not taken, but offered and cherished; not discovered, but reawakened or newly appreciated. Not all IK must or should be shared, but that which is, should support the common goal of restoring relations between Mnomen and its people and those willing to work for the survival of both. A restoration of Mnomen is not just the recovery of a single plant, or even the filling of a vital ecological niche; it is the tangible revitalization of a thousands-years old relationships between Anishinaabek and the plant that led them to their homelands. And while no singular effort can reform the relationship between Indigenous peoples and an academy with rotten roots, the collaborative re-creation of a home for Mnomen on Anishinaabek lands currently owned by the University of Michigan may offer the kind of accountability and growth necessary to set this relationship on a new trajectory.



## References

- Barrows I. 1892. Captain Richard H Pratt on the Education of Native Americans. In: Official Report of the Nineteenth Annual Conference of Charities and Correction. Denver, Colorado: National Conference on Social Welfare Proceedings.
- Bartlett C, Marshall M, Marshall A. 2012. Two-Eyed Seeing and other lessons learned within a co-learning journey of bringing together indigenous and mainstream knowledges and ways of knowing. *Journal of Environmental Studies and Sciences*. 2(4):331–340.  
doi:10.1007/s13412-012-0086-8.
- Barton BJ. 2018. *Manoomin: The Story of Wild Rice in Michigan*. East Lansing, MI: Michigan State University Press.
- Beck J. On the Original Native land gift that made UM. University of Michigan Office of the Vice President of Communications. [accessed 2020 Feb 3].  
<http://www.umich.edu/~aium/land.html>.
- Benton Banai E. 1988. *The Mishoomis Book*. University of Minnesota Press.
- David PF. 2018. *Manoomin ( Wild Rice ) Seeding Guidelines*.  
[https://data.glifwc.org/archive.bio/Admin report 18-09.pdf](https://data.glifwc.org/archive.bio/Admin%20report%2018-09.pdf).
- Denevan W. 1992. The Pristine Myth: the Landscape of the Americas in 1492. *Annals of the Association of American Geographers*.:369–385.
- Drewes AL. 2008. *Sustaining a Ricing Culture: An Integrated Landscape Approach to Understanding Harvest, Distribution and Management of Wild Rice (Zizania Palustris) Across the Upper Great Lakes Region*.
- Dunbar-Ortiz R. 2014. *An Indigenous Peoples' History of the United States*. Boston, Massachusetts: Beacon Press.
- Dunbar-Ortiz R, Gilio- DW. 2016. "All the Real Indians Died Off" and 20 Other Myths About Native Americans. Boston, Massachusetts: Beacon Press.
- Great Lakes Indian Fish & Wildlife Commission. 2018. *Ojibwe Treaty Rights*.  
[www.glifwc.org](http://www.glifwc.org).
- Harp R. 2020. *The Rotten Roots of Academia*. <https://mediaindigena.libsyn.com/the-rotten-roots-of-academia-in-america-ep-204>.
- Herron SM. 2002. *Ethnobotany of the Anishinaabek Northern Great Lakes Indians*.

- Kimmerer RW. 2012. Searching for synergy: Integrating traditional and scientific ecological knowledge in environmental science education. *Journal of Environmental Studies and Sciences*. 2(4):317–323. doi:10.1007/s13412-012-0091-y.
- Kimmerer RW. 2013a. *Braiding Sweetgrass*. 1st ed. Milkweed Editions.
- Kimmerer RW. 2013b. The Fortress, the River and the Garden. *Contemporary Studies in Environmental and Indigenous Pedagogies*.(Simpson 2000):49–76. doi:10.1007/978-94-6209-293-8\_4.
- Labine R. 2020. Personal Communication During Site Survey.
- Labine R, Herron SM. 2016. Native Wild Rice Coalition Keweenaw Bay Rice Camp.
- Lee R, Ahtone T. 2020 Mar 30. Land-Grab Universities. *High Country News*.  
<https://www.hcn.org/issues/52.4/indigenous-affairs-education-land-grab-universities>.
- Lemay K. 2011. True Wild Rice Probably Isn't What You Think It Is—It's Better. *Indian Country Today*. <https://indiancountrytoday.com/archive/true-wild-rice-probably-isnt-what-you-think-it-isits-better>.
- Matson L, Ng GHC, Dockry M, Nyblade M, King HJ, Bellcourt M, Bloomquist J, Bunting P, Chapman E, Dalbotten D, et al. 2021. Transforming research and relationships through collaborative tribal-university partnerships on Manoomin (wild rice). *Environmental Science and Policy*. 115:108–115. doi:10.1016/j.envsci.2020.10.010.
- Minnesota Department of Natural Resources. 2014. *Wild Rice Restoration Implementation Plan for the St. Louis River Estuary*. [accessed 2021 Apr 22]. [www.cardnojfnew.com](http://www.cardnojfnew.com).
- Natural Resources Conservation Service. 2001. WILD RICE ESTABLISHMENT Conservation Sheet 644b. [accessed 2021 Apr 22].  
[https://www.nrcs.usda.gov/Internet/FSE\\_DOCUMENTS/nrcs141p2\\_024363.pdf](https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs141p2_024363.pdf).
- Natural Resources Conservation Service Minnesota. 2004. *Wild Rice Seeding Guidelines (644)*. [accessed 2021 Apr 22]. [www.dnr.state.mn.us](http://www.dnr.state.mn.us).
- Tara Sweeney. 2020. Indian Entities Recognized by and Eligible To Receive Services From the United States Bureau of Indian Affairs. <https://www.govinfo.gov/content/pkg/FR-2020-01-30/pdf/2020-01707.pdf>.
- UN General Assembly Convention on the Prevent & Punishment of the Crime of Genocide. 1948. *Convention on the Prevention and Punishment of the Crime of Genocide: UN General Assembly Resolution 260 A (III)*. doi:10.5771/9783845258911.

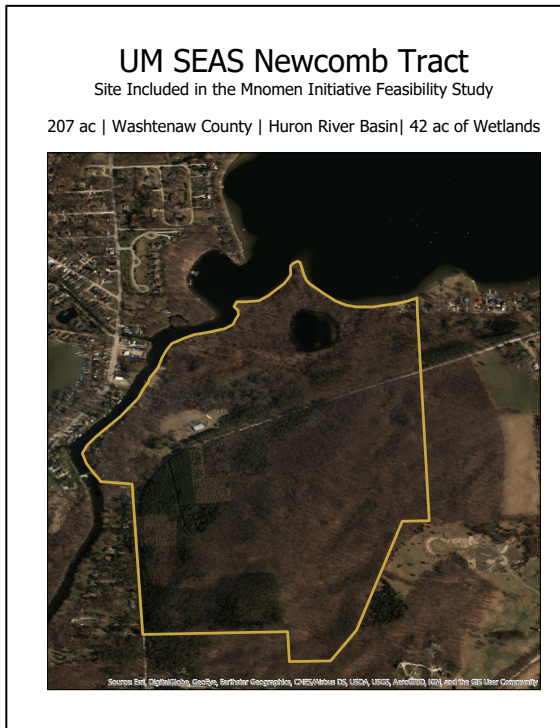
[https://www.un.org/en/genocideprevention/documents/atrocity-crimes/Doc.1\\_Convention on the Prevention and Punishment of the Crime of Genocide.pdf](https://www.un.org/en/genocideprevention/documents/atrocity-crimes/Doc.1_Convention on the Prevention and Punishment of the Crime of Genocide.pdf).

Weinzweig A. 2010. Beware the Wild Rice Imposters. The Atlantic.

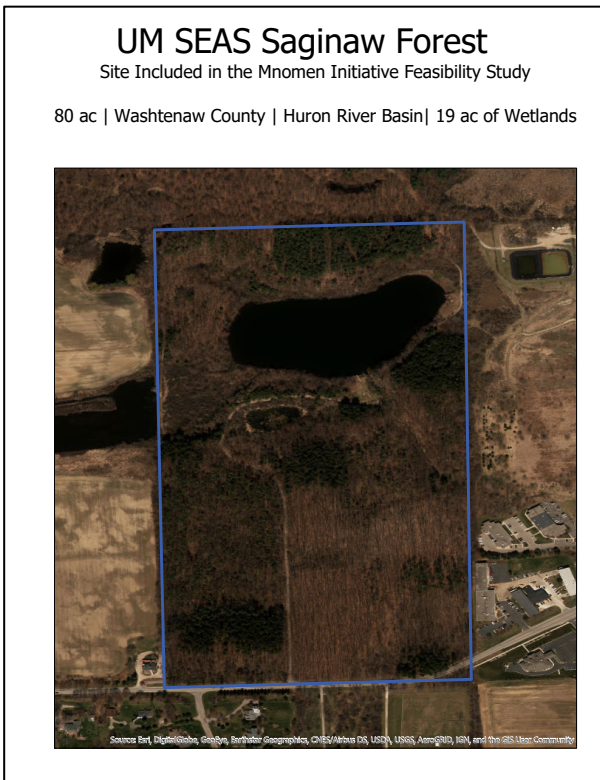
<https://www.theatlantic.com/health/archive/2010/11/beware-the-wild-rice-imposters/66202/>.

## Appendices

### Appendix 1



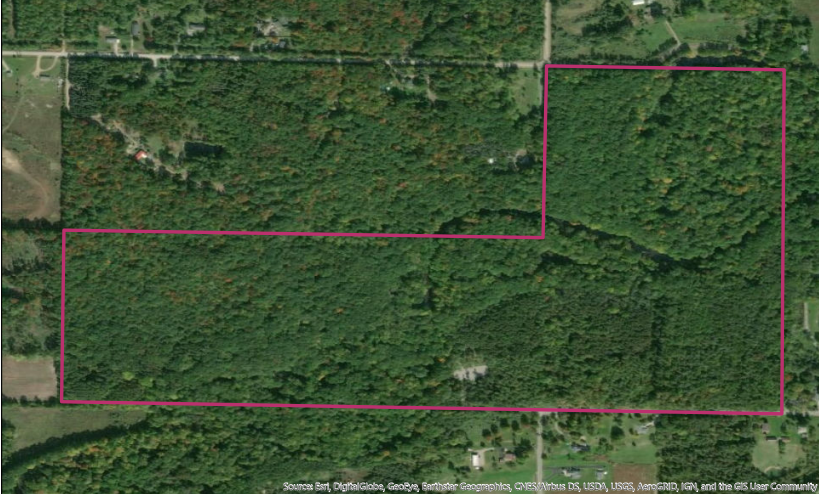
### Appendix 2



Appendix 3

**UM SEAS Ringwood Forest**  
Site Included in the Mnomen Initiative Feasibility Study

160 total ac | Saginaw County | Shiawassee Basin | 63 ac of Wetland




Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Appendix 4

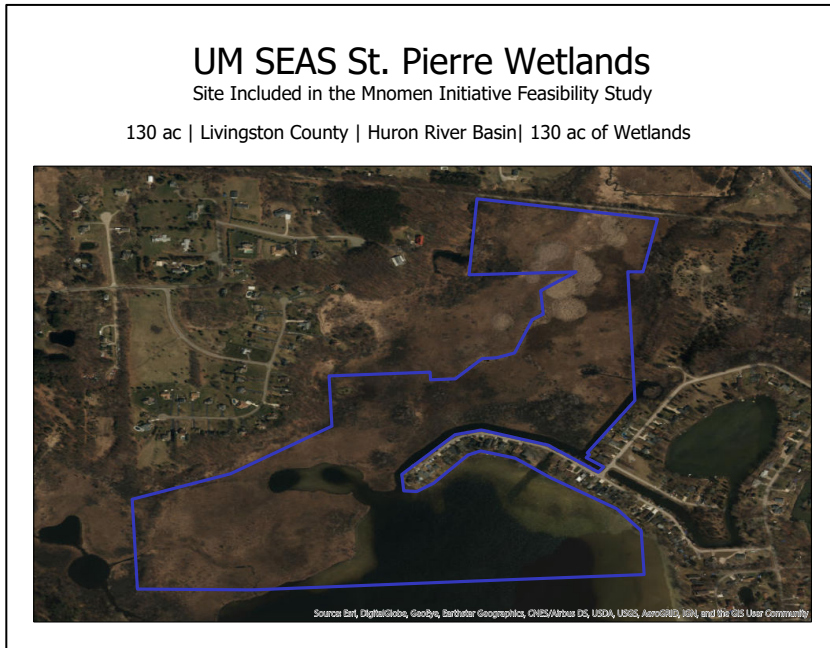
**UM SEAS Stinchfield Woods**  
Site Included in the Mnomen Initiative Feasibility Study

812 ac | Washtenaw County | Huron River Basin | 4 ac of Wetlands

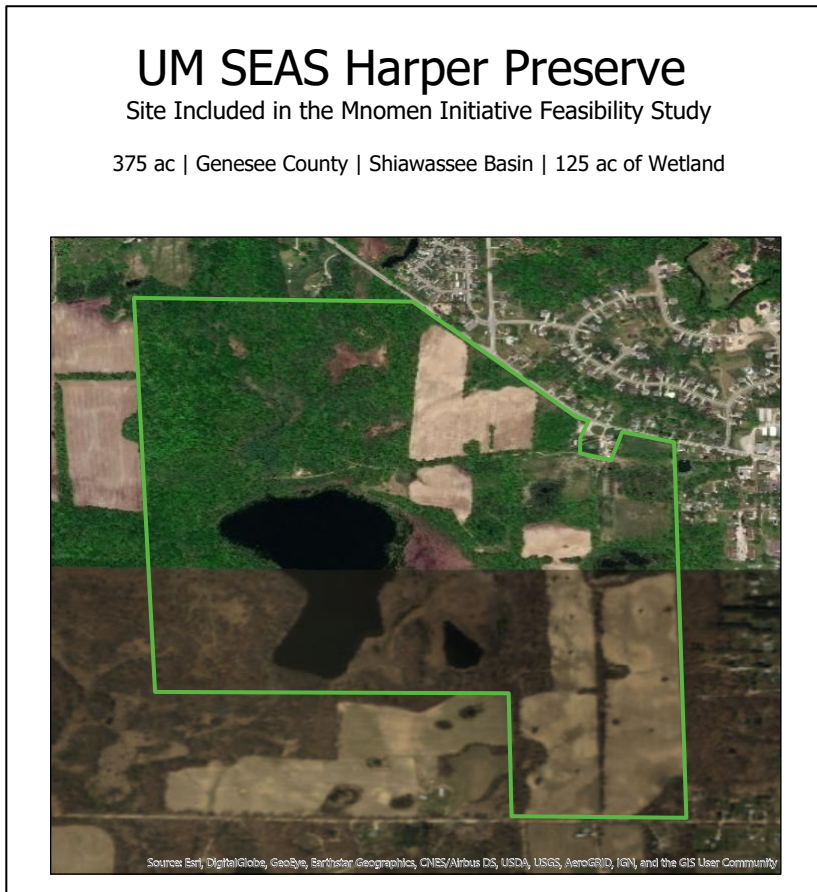


Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Appendix 5



Appendix 6



Appendix 7

## MBGNA Horner McLaughlin Woods

Site Included in the Mnomen Initiative Feasibility Study

101 ac | Washtenaw County | Huron River Basin | 12 ac of Wetlands

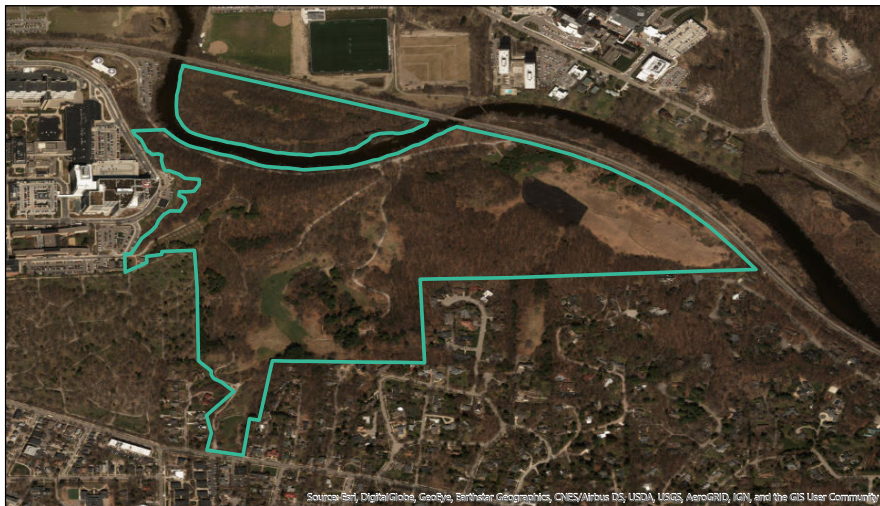


Appendix 8

## MBGNA Nichols Arboretum

Site Included in the Mnomen Initiative Feasibility Study

139 ac | Washtenaw County | Huron River Basin | 10 ac of Wetlands



Appendix 9

# MBGNA Matthaei Botanical Gardens

Site Included in the Mnomen Initiative Feasibility Study

360 ac | Washtenaw County | Huron River Basin | 137 ac of Wetlands



Sources: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



#### Appendix 10: U-M Graham Sustainability Institute Catalyst Grant PIs & Partners

Sustainability is the focus of the *Mnomen Initiative* - cultural and ecological in a very specific Michigan context but with national and international resonance in Reconciliation work as well. This funding will underpin the *Mnomen Initiative*'s agency to build and deepen relationships with key Tribal stakeholders whose cultures and institutions bring unique resources to an extremely challenging mission: renewing Mnomen (wild rice) culture on University lands by mutually determining with Anishinaabe experts a pilot case to undertake. Multiple voices must literally be at the table - both planning meetings and at times seeing some of the key sites during working sub-meetings.

#### **University of Michigan Principal Investigators (4 UM units)**

**Dr. David Michener** *Curator, Matthaei Botanical Garden & Nichols Arboretum*

David's curatorial realm includes the stewardship policies and long-term priorities of the Matthaei-Nichols extensive natural areas where Anishinaabe engagement is critical.

**Dr. Rebecca Hardin** *Associate Professor, School for Environment & Sustainability*

Rebecca offers an expertise in the design of accessible learning and teaching tools that prioritize the co-creation of socially, culturally, and scientifically relevant knowledge.

**Dr. Greg Dowd** *Professor & Interim Chair of the Department of American Culture*

Greg's roles in U-M's Native Studies, as well as Native Student engagement and oversight of the U-M's NAGPRA compliance, brings a much-needed fusion of historical awareness and contemporary ethical issues.

**Dr. Benjamin Secunda** *NAGPRA Project Manager, UM Office of Research*

Ben's nationwide respect for his abilities to listen, and his diplomatic skills in highly nuanced University and Tribal contexts will be invaluable. Ben's scholarship is on Pokagon (and Anishinaabe) land history and subsequent affiliation perspectives.

### **UM Student Investigators (2 UM units + UM Doris Duke Conservation Scholar at Vassar)**

**Samantha Stokes** *M.S. Candidate, School for Environment & Sustainability*

Samantha is a master's student focusing her studies on environmental justice as it pertains to indigenous food sovereignty and decolonized university land management. Her practicum, an analysis of the social and ecological feasibility of Anishinaabe-centered Mnomen restoration, will be the first phase of the *Mnomen Initiative*.

**Maeghen Goode** *Dual Masters: School for Environment & Sustainability; Urban Planning Candidate, Taubman College of Architecture & Urban Planning*

As a dual degree master's student, Maeghen brings a growing understanding of land use management and environmental discrepancies in low income areas.

**Manavi Jaluka** *Earth Science Major, Vassar University* Manavi is a U-M Dorris Duke Conservation Scholar who was assigned to contribute to the *Mnomen Initiative* & Indigenous Collaborative Garden (itself based in the Heritage Seeds project funded by GSI) during her time in Ann Arbor. Due to the COVID19 pandemic, the program is now being run remotely, and we are still figuring how to engage with Manavi in this way over the summer and beyond per the DDCS guidelines.

### **Tribal Faculty Collaborators at other Down-State Michigan Universities**

**Dr. Kyle Whyte** *Citizen Potawatomi Nation; Professor & Timnick Chair, Michigan State University Department of Philosophy and Department of Community*

*Sustainability* Kyle is nationally recognized for his seminal work in environmental justice, indigenous rights, and increasingly, food and cultural sovereignty. Key work has been with the Menominee Nation and its lands.

**Dr. Scott Heron** *Citizen Miami; Professor of Biological Sciences, Ferris State University College of Arts & Sciences* Scott's work in ethnobotany and wild-rice

restoration in western Michigan is fundamental to why he is also a Research Associate of the UM Matthaei Nichols.

### **Tribal Experts**

Nottawaseppi Huron Band of Potawatomi Dr. David Michener, Dr. Ben Secunda, and Samantha Stokes visited the NHBPTerritory on February 4, 2020 to meet with Doug Taylor, John Rodwan, and Eric Kerney to introduce the *Mnomen Initiative* and solicit their ongoing engagement. This meeting was essential to ensure that the Tribe dislocated from its historic Huron River Basin is involved and benefits. These persons oversee the Band's own Mnomen work.

**Douglas Taylor** *Elder, Veteran & Tribal Historic Preservation Officer*

**John Rodwan** *Environmental Department Director*

**Eric Kerney** *Senior Environmental Specialist*

Pokagon Band of Potawatomi On February 6, 2020, Dr. Ben Secunda, a scholar of Pokagon history with deep ties to the community, introduced Samantha Stokes and Dr. David Michener to key tribal members whose participation and leadership will be essential.

**Gary Morseau** *Tribal Council Member & Chair of the Food Sovereignty Committee*

**Marcus Winchester** *Director, Language & Culture Department*

**Christine Morseau** *Language & Cultural Arts Teacher*

Saginaw Chippewa Indian Tribe Members and institutions of the Tribe remain engaged with the Matthaei Nichols in the Indigenous Collaborative Garden, and there is great interest in engaging with the *Mnomen Initiative*. COVID 19 suspended an on-site meeting.

**Shannon Martin** *Executive Director, Ziibiwing Center of Anishinaabe Culture & Lifeways* Shannon agreed to lend her knowledge and wisdom to the development of this initiative. She also proposed specific wild-rice experts of the Tribe (below)

**Carey Pauquette** *Environment and Planning Department; Wild Rice Committee.*

**Kathy Hart** with the *Saginaw Chippewa Tribal College* working on wild rice.

**William Johnson** *Director of the Michigan Anishinaabe Cultural and Repatriation Alliance*, who coordinates communication among state-wide Tribal representatives.

Match-E-Be-Nash-She-Wish (Gun Lake) Band of Potawatomi Indians At a meeting hosted by the Pierce Cedar Creek Institute on February 25, 2020 Samantha discussed the *Mnomen Initiative*.

**Alex Wieten** *Water Resources Specialist*, agreed to take the project back to the tribe's environmental division for approval to officially engage, which is not currently possible due to mandated COVID 19 closures.

Walpole Island Bkejwanong First Nation Multiple Tribes in the Great Lakes region have historic ties to the U-M-stewarded lands in southern Michigan. Bkejwanong representatives have been involved from the initial planning meetings of *Heritage Seeds for Sustainable Lifeways*. Dr. Michener and Samantha were hosted at a February 21-23, 2020, meeting on the Bkejwanong territory to celebrate heritage corn. While there, they began discussing the *Mnomen Initiative* with cultural and food sovereignty leaders and land stewards.

**Montana Riley** at the *Walpole Island Cultural Center* anticipates formal endorsements for ongoing engagement after offices reopen after COVID19.

Native Wild Rice Coalition. Both these Tribal co-founders of the Coalition are engaged. It was they who first suggested that the downstate U-M properties likely have high potential.

**Roger Labine** *Cultural Leader & Ricekeeper of Lac Vieux Desert, Native Wild Rice Coalition*<sup>3</sup> Roger was recognized in 2019 with a *Michigan Heritage Award*.

**Scott Herron** is listed above as a Tribal Faculty Collaborator.

### **Community Experts - Institutional**

The Pierce Cedar Creek Institute is a 742-acre Environmental Education Center & Biological Field Station in Hastings, Michigan. The Institute is partnering with the Gun Lake Tribe to share the knowledge and resources necessary to restore Mnomen. After a February 25<sup>th</sup> meeting the institution agreed to support this project.

**Ricki Oldencamp** *Stewardship Coordinator*

**Corey Lucas** *Stewardship Manager*.

### **Community Experts - Individual**

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<sup>3</sup> <http://www.nativewildricecoalition.com/>

**Barb Barton, MS** *Expert and Author of “Manoomin: The Story of Wild Rice in Michigan”* is an accomplished plant ecologist, tribal consultant, and manoomin expert in full support.