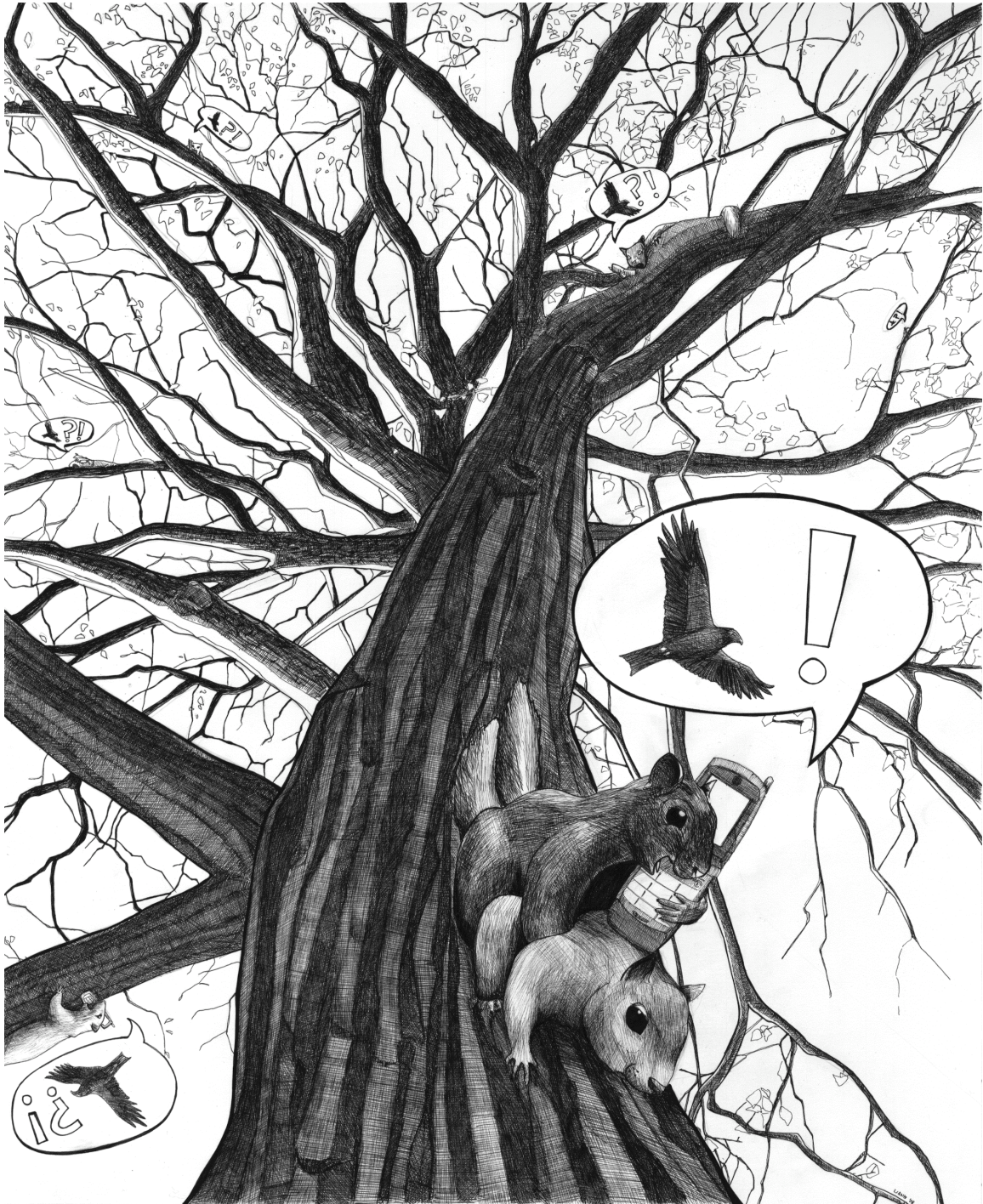


A Mating Menagerie
Illustrating the Diversity of Animal Reproductive Strategies



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IP Thesis
April 21, 2008

I remember driving through North Dakota, homeward bound from another summer as a park ranger. Shadows lengthened over the sage grasslands as dusk approached, the air was crisp yet warm as it blew over the quiet highway and the radio was tuned to an NPR jazz program. The scene was a potent recipe for brainstorming and that evening I was musing about my upcoming Integrative Project. I was so sure and excited about my idea that I was ready to start immediately. The only problem was that this was two years before my thesis even began.

My final project has evolved since then and I have come to realize that this whole eight-month experience is a lot like a long road trip. I have always known the general direction I was headed, but the specific route was revealed only a day at a time. Actually, it often seemed like I embarked on three separate trips: one to discover my concept, another to build confidence as an illustrator, and a third to organize a major off-site exhibition. This written thesis will only focus on the first one. Sometimes I got lost and stalled and had to rely on my fellow passengers to get me going again. Other days I pulled amazing feats of endurance and creativity that I did not know I had within me. I am proud of my journey and while I believe I have reached *a* destination, I am not entirely sure that it is *the* destination. I have finished my integrative project with a body of work but also more questions than when I began. But now, isn't that the whole point?

By the end of this particular trip, I have amassed a series of ten ink drawings that illustrate the diversity of animal reproductive strategies, accompanying interpretive labels, and a slide-based "ranger" presentation on the tribulations of dating in the animal kingdom. The final works, with their attention to detail, composition, and lighting have become environmental and narrative portraits of each animal. Thousands of neurotic little marks—as cross-hatching or circles or scales—help build a surface texture that meets my

high standards of aesthetic quality. In each illustration, it is as if the viewer has stumbled across the animal in the field and is witnessing it in the midst of a specific mating behavior.

My intentions and interest in the subject of animal reproduction were not immediately clear. I did not start the fall semester planning to research and draw squirrels copulating in tree branches. This project emerged as I gathered information on my original concept of animal swarms and group dynamics. At some point, I stepped back from my notes and realized that the facts I wanted to illustrate were not about animals in mass, but about animals in bed (more or less).

Why exactly my subconscious decided to take notice of the promiscuity of blue-footed boobies over other natural history stories requires some self-psychoanalysis. I suspect that it is because I am entering a decade in my life that is traditionally filled with relationships, marriage, and children. As gay male, whose life will be anything but conventional, perhaps I wanted to find models that also challenged our assumptions of reproduction and of what is natural. Neil Shubin sums up my sentiment perfectly in his New York Times Op-Ed Piece¹:

“Biology is about variation. Without variation, the world would be static and unchangeable, and species would gradually disappear as they failed to meet challenges like changing climates and environments. So as we continue our very necessary debates over ethical issues, let’s bear in mind that morality is a concept limited to our species. The natural world is a fuzzy place that doesn’t always accommodate our decidedly human need to find cut-and-dried categories.”

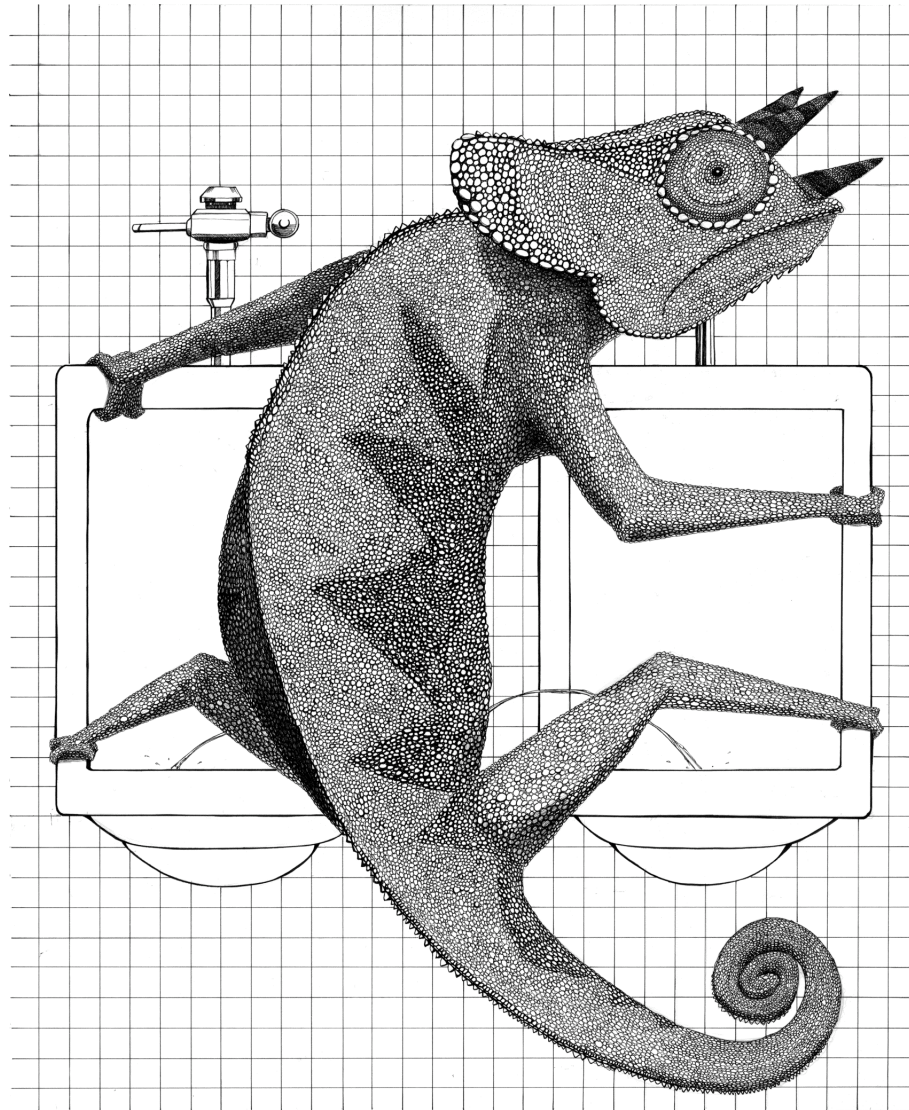
As I chose which animals I would use to show my main point of reproductive diversity, two factors guided my selections. First, my creativity, which remains a wonderfully elusive force, acted as a filter as I read traditionally dry scientific articles. I

¹ Shubin, Neil. “Birds Do it. Bees do it. Dragons Don’t Need To.” The New York Times. February 24, 2008.

could not help but notice which passages of text could translate into compelling images. These little sparks of inspiration now exist as a hundred notes and sketches I jotted down during my research.

The second factor is a more conscious act. Looking through this now lengthy list of ideas, I chose a set of examples that were well balanced and representative of the diversity of animal reproduction: Do I have examples of invertebrates, fish, amphibians, reptiles, birds, and mammals? Are male and female perspectives equally accounted for? If I show promiscuity, do I also show an example of monogamy? I initially planned for a well-rounded fifteen-piece exhibition, but reduced the number to ten as each illustration required more time to achieve the quality I envisioned.

While the final work may have roots in strict scientific illustration, I aimed towards narration instead of objectivity. Each illustration has a lesson and story to tell. In order to better relate these foreign natural histories to my audience, I chose to include parallels within human society. At the start of each illustration, I would ask myself, how would this animal, given a particular adaptation, function in a human context? Or, to make it more personal, what would I do if I had this adaptation?



Perhaps the true reason why I pursued this project is that I am just a lover of knowledge. From my excitement stems a desire to teach and share that information with others. While I certainly use my art making practice to pass on my ideas, I also rely on my experience as a national park service educator. For three summers throughout college, I worked in the remote North Cascades National Park, serving the public through programs that ranged from guided trail walks to evening campfire presentations. I was in charge of interpreting the natural and cultural resources to audiences of all ages, backgrounds, and experiences. This was a great challenge; for example, how was I to

write a curriculum on melting glaciers that was engaging and relevant to people that had never even seen a glacier before?

I, with all the other new interpreters, received lessons in the art of interpretation. Some were right out of a government textbook:

$$(KA + KR) \times AT = IO$$

Translation: Knowledge of the Audience + Knowledge of the Resource) x Appropriate Techniques = Interpretive Opportunity.

Others methods were, fortunately, more inspirational. Freeman Tilden, the father of modern interpretation for the National Park Service, created a list of eight principles in 1957 that still guide new generations of educators. My favorite two are:

- I. Any interpretation that does not somehow relate what is being displayed or described to something within the personality or experience of the visitor will be sterile.
- IV. The chief aim of interpretation is not instruction, but provocation.

I have realized that these two ideas have not only guided my Integrative Project, but also deeply define my goals as an artist. Just replace the words “interpretation” with “art” and you will have my artist statement. I aim for art that has a purpose, tells a story, and brings people together. If I am trying to teach something specific, I believe that learning should be an enjoyable experience. My apparent humor achieves this, though it is still an unconscious force that I am currently articulating.

One of the main issues I have wrestled with all year is the relationship between text and image. My response from all my research came in the form of both drawings and writings, but what exactly was the best interaction between images and words? Does, or should there be a hierarchy? Which is more effective in explaining a particular issue?

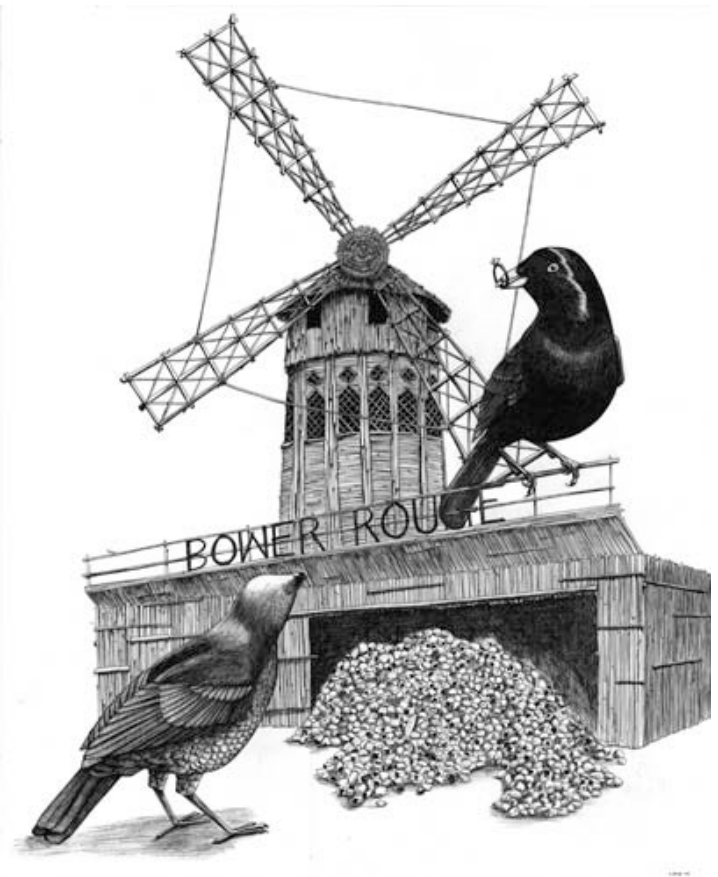
Because I am first and foremost an art student and not an English major, I approached this project with the goal of making my artworks as narrative as possible.

Through my research into other artists, I discovered that this balance of image and text is a common issue. Even one of the most prolific contemporary painters, Walton Ford, struggles with it. His large-scale works are rooted in the tradition of naturalist paintings, much like John James Audubon. Ford's subjects and themes take on complex issues of colonialism and globalization and are anything but objective scientific illustrations. I relate to Ford's attention to detail and narration and aspire to achieve the creative fluency he commands in his art making.

In an interview for his book, *Tigers of Wrath, Horses of Instruction*, he laments:

I think we've lost the ability to read allegory. People look at my paintings and there's a tremendous amount of information in them and they say, "What's it about?" I'm like, "Goddamn I've given you everything! I've thrown the freaking kitchen sink in it!" Even though it's obscure or cryptic, the code is in the picture. Nobody even attempts to decode it on their own.

Even though he incorporates written notations within his images, his tiny script does not always add up to enough clues for his audience to decipher his main concepts. Because I also struggled with my viewers not taking the time to read my cursive text in one version of my project, I chose to separate words and images from the same page.



Note: upper left is Walton Ford's "Au Revoir Zaire."

In my final ten illustrations, I believe I have solved these issues of text, image and audience interaction by following my two favorite interpretive principles: first, relating the subject to something recognizable in the viewer's own life and second, that provocation leads to the desire to learn more. Let's use the deep-sea angler as an example.



Most viewers have never seen this fish before and would be unaware of their sexual dimorphism, that is, the significant differences in physical appearance between the two sexes. The female can be nearly 60 times the length of the male and 500,000 times as heavy². I chose to illustrate the genders by creating a familiar wedding scenario, where the female is wearing a bridal veil and the male is dressed in a mini-tuxedo. While this provides a few clues to what is going on, it does not explain the more interesting fact about deep-sea anglerfish: that the males act as parasites, fusing their bodies to the females until only their testes are left to fertilize the female whenever she ovulates. This bizarre illustration of a deep-sea marriage *is intended to activate enough curiosity in the viewer to want to learn more*. By providing access to an interpretive label, the audience is then able to glean the whole natural history:

Phantom Anglerfish, *Haplophyrne mollis*

Anglerfish exhibit sexual dimorphism, where the females are 500,000 times as heavy as the males. Given such disparities in size, it makes for reproduction to be a complicated and fascinating act.

During puberty, the males undergo a metamorphosis that causes their olfactory organs to increase in size and their teeth to fall out. Since they are no longer able to capture and eat their normal prey, they are forced to find some other source of nourishment. Guided by pheromones released by the female, a male will latch onto her soft underbelly and begin to feed like a parasitic leech.

So strong is this attachment that their circulator systems begin to intertwine so that his body slowly fuses to hers. Over time, his internal organs are no longer needed and dissolve completely, with the exception of his testicles. The female has been transformed into what scientists call “a self-fertilizing hermaphrodite.” If she’s truly lucky, she may have multiple males attached; biologically speaking, this means she has more genes to choose from. Socially speaking, this type of arrangement keeps her husbands from cheating on her.

Earlier in the year, my ultimate hope was that the illustrations could exist and articulate my concept *without* any text. In the end, I have realized that both image and

² Pietsch, Theodore W.

text must co-exist in order to fulfill my goals within this project. This decision has had a positive response by viewers at the final exhibition. The number of people actually taking the time to read the text surprised me and I heard explicit appreciation that I had something available to explain my art. The viewer would approach the artwork from a distance and then realize that there were details to examine more closely. Staring with one's nose just inches away from all the tiny marks provided further opportunity to contemplate on the subject. However, it was not until the viewer moved over to the interpretive label that everything was fully explained. I am convinced, now more than ever, that writing will continue to be an important aspect of my creative process.



I am also convinced that there is still much more to explore. Am I able to illustrate my life's own narratives? How do I better introduce color into my drawings? Can I tell a longer story in the form of an illustrated book? How does an increase or decrease in scale affect my work? These are all future destinations from where I stand now and I am thankful to depart from such a solid foundation as this integrative project. I am about as excited to go as a chameleon with his hemipenes on a double date.

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