I was drawn to the idea of parasitic relationships from the first time I learned about them in middle school. Revisiting symbiotic relationships this year in Ecology was exciting for me to get to learn more about them at a college level. Among the list of symbiotic relationships including predation, competition, mutualism, commensalism, and parasitism, the last still struck me as the most interesting. I believe what draws me to this particular relationship among organisms is the degree of selfishness involved and use of the phrase as metaphor in everyday, nonscientific settings. The looseness of the definition is something to expand upon. There is the scientific definition; however, there's also a broader, more abstract use, seen in discussing babies living off of their mothers' womb, a domestic pet reliant on human interaction, or a one-sided human relationship [2].

Purely scientifically, parasitism is a relationship between organisms where one benefits from the other's misfortune. The two organisms involved, parasite and host, can range in a number of different factors. They are hard to categorize in that some parasites use only one hose while others use multiple, some are highly virulent causing rapid debilitation of host while others only cause minor damage, and some parasites are very small compared to their host while others can be the same size as their host [3]. This broad range of different parasitic examples is another element of interest when discussing them. Some parasites are external like lice while others are internal like tapeworms [4].

When confronted with the task of creating a creative, art piece based on or inspired by an ecological concept, I immediately went to parasitism. Creating a series of photographs that showed a progression of a parasite degrading its host seemed the most visually stimulating while also conveying the scientific concept properly. I conceived the idea of creating a sculptural headpiece that would get added to in its complexity as the series of photographs went on. In the first photograph, I shot the host with a few pieces of wire coming out of her mouth, symbolizing the introduction of the parasite. As the series progresses, more wire is added coming out of the host's mouth and protruding into the mouth while wrapping around the head and, overall, just taking over the host. In the final image, the host is depicted as completely taken over by the parasite: she is laying on the ground, wrapped up in wire, string, gauze from the head down. This act of wrapping the host with material was my way of conveying the idea of a parasite taking over and consuming its host to the point of debilitation.

Upon choosing my subject matter, I had to decide where to shoot the series. I wound up thinking about what would make an appropriate background: I wanted to choose something that would be reminiscent of parasites under a microscope. During the research period, I discovered information that said that the habitat, chosen by the host, affects the survivability of the parasite [1]. When thinking about backgrounds, I wanted it to be a 'habitat' that my invented parasite could thrive in, with the intention of making the strongest parasite I could, which would completely take over its host. In this same train of thought, in the editing process, I decided to add depictions of parasites overlaid on the images. In all five of the photographs, different representations of tapeworms can be seen. I chose tapeworms to mirror the wrapping motif already established in the wire headpiece. Also in the research period, I found that hosts had some defenses, but inducible defenses must be introduced or turned on by host exposure to a pathogen. These, however, may not be activated in time to protect the host from the parasite [5]. In thinking about my project, in which I wanted to depict a parasite, in a sense, dominating its host and completely sucking the life out of it, I suppose my host's defenses were not activated in

time and the parasite had an easy fight through its immune system and eventually damaged it enough to the point of depletion of life. At this stage, the parasite would have to move on to a new host or face its own demise.

In conclusion, my goals in this series of photographs was to creatively depict the idea of a parasite feeding off of its host to such an extent that it caused the host's ultimate termination. I aimed to enhance this through the building up of wire and material wrapping around the host's body. This was then mirrored by the addition of legitimate depictions of parasites collaged onto the final photographs. Although the photographs are a relatively abstract representation of the idea of parasitism, I believe this project summary has thoroughly explained my understanding of the ecological concept as well as how I synthesized that idea into inspiration for my photographic series.

## Annotated Bibliography

 [1] Haelewaters, Danny. "Parasite Host Specificity Related to Host Susceptibility to Be Killed?" Web log post. *SciLogs*. Nature.com, 8 Mar. 2013. Web. 23 Apr. 2013.
<a href="http://www.scilogs.com/life\_off\_the\_edge/parasite-host-specificity-related-to-host-susceptibility-to-be-killed/>.</a>

This source was interesting to take into consideration because it focuses on the difficulties of being a parasite. It discusses the fact that the parasite has to deal with its host's predators as well as its own. Another fact brought up is that the habitat, chosen by the host, affects the survivability of the parasite. This came into play in choosing a background for my photographs. I chose a background that was reminiscent of parasites under a microscope to show that it was a habitat in which the parasite could flourish and completely take over the host.

[2] LaMouse, Mack. "Human Parasites –Symbiotic and Parasitic Relationships." *Health Guidance*. N.p., n.d. Web. 23 Apr. 2013.

<http://www.healthguidance.org/entry/13179/1/Human-Parasites--Symbiotic-and-Parasitic-Relationships.html>.

The piece of information that I found the most interesting in this article is the blurry definition of parasitism presented. While it does define the purely scientific nature of parasites, as living off of a host, damaging its health, it also goes into a more metaphorical definition of the term. It sites a baby living off of its mother's womb, a domesticated pet reliant on human interaction, and a one-sided human relationship. I found this interesting in terms of making creative work inspired by the term because it gave a much looser interpretation of the phrase.

[3] Lively, Curtis M. "Parasite-Host Interactions." Diss. Indiana University, n.d. *Indiana.edu*. Indiana University. Web. 23 Apr. 2013.

<http://www.indiana.edu/~curtweb/Pubs/Parasite%20chapter.pdf>.

This source provided a well-researched and thorough dissertation on parasite-host interactions. The first thing that I latched on to was in the first paragraph: it mentioned how some parasites can be completely debilitating and can kill their host and the size relationship between parasite and host can vary from drastic to equal. Another interesting point made is that depending on the reproductive rate of the parasite, it an spread exponentially, at least initially.

[4] "Parasitism." Wikipedia. N.p., n.d. Web. 23 Apr. 2013.

<a>https://en.wikipedia.org/wiki/Parasitism#Ecology>.</a>

This article is a broad overview of the nature of parasites. It delves into several examples of parasites and their typical lifecycles. The article goes into the difference between parasites that live outside their host to those that live inside their host. One interesting fact brought up is how parasites get into/onto their host. Some parasites penetrate their host's external surface while others have to be ingested.

[5] Todar, Kenneth, PhD. "Host-Parasite Relationships." *The Microbial World*. Bacteriology at UW-Madison, 2009. Web. 23 Apr. 2013.

<http://textbookofbacteriology.net/themicrobialworld/NHPR.html>.

This source was pretty straightforward in defining the parasite-host relationship. One thing that made it different from the other sources was that it went into slight detail about host defenses.

There are two groups of defenses: constitutive defenses and inducible defenses. Constitutive defenses are common to all healthy animals that can provide protection through defenses inherent to the host. Inducible defenses must be introduced or turned on by host exposure to a pathogen. The issue with these is that they may not be activated until after the host is extensively exposed to the parasite. This is interesting to think about in terms of sometimes being ill prepared for defense and if the host lacks the proper defenses, the parasite takes over.









