

Reflections on Service Learning

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In the spring semester of my sophomore year at Fairfield University, I was lucky enough to take Vertebrate Zoology with Dr. Ashley Byun. This class was not only a 300-level biology class, but also a service learning class. For the lab section of the class, we worked with Connecticut's Beardsley Zoo, down the road from Fairfield University in Bridgeport, Connecticut. Bridgeport is Connecticut's most populous city, and also one of its most economically disadvantaged. The Beardsley Zoo is Connecticut's only zoo, and offers a wide variety of activities for children and adults, from lectures to interactive programs and scavenger hunts both at the zoo and in local parks around Bridgeport. All of these programs are offered at low or no cost. The zoo provides both access to education and access to many animals that residents of the Bridgeport and Connecticut communities would not otherwise have.

The Beardsley Zoo is a small zoo, and as a result, the staff size is somewhat small. However, it is part of the Association of Zoos and Aquariums (AZA), a worldwide community, and so it often deals with very important projects and animals. The AZA works to care for, educate about, and conserve many of the world's most endangered species of animals. Research done by the AZA influences its Species Survival Plan (SSP) programs, which are long-term plans including research, education, habitat preservation, and species conservation efforts to benefit not only the species in question, but also the global zoological community. Because of the small staff size, it is hard for the Beardsley Zoo to have time to fully complete all of the research and collect all of the data it needs to. The service learning component of the Vertebrate Zoology lab allows students to work with zoo staff on research projects chosen by the managers at the Beardsley Zoo and Dr. Byun, thus exposing the students to hands-on research in the field of biology, and helping the Beardsley Zoo perform research that has the potential to not only help the animals, but to help the zoo itself in designing and managing exhibits.

The project I was specifically assigned involved the Amur leopard in residence at the Beardsley Zoo at the time, Sofiya. Amur leopards are classified as critically endangered, with a total captivity and wild population of fewer than 300. Sofiya, we were told, was displaying strange, antisocial behaviors, such as constantly pacing inside her indoor enclosure and rarely coming outside. We were also told that a veterinarian had deemed her potentially infertile. The Beardsley Zoo wanted to determine the cause of her strange behavior. This was important to the zoo because if we could determine the cause of the behavior, we could address the issue and potentially alter her behavior. This would be good for business for the zoo, and it would also provide easier observation and potentially more information to share with other zoos concerned with species survival and conservation.

As our research continued through the semester, we realized that Sofiya's infertility and strange behavior might be linked. By contacting other zoos where Sofiya had lived, we were able to obtain a medical history and determine that she might in fact be suffering from a hormonal imbalance as a result of a contraceptive administered at too young of an age. This idea corresponded with findings from the veterinarian at the Beardsley Zoo, who told us that Sofiya's reproductive tract was severely stunted in growth. As we were collecting data, the staff at the Beardsley Zoo could not have been more helpful or interested in what we were finding. Chris Barker and Bethany Baldwin, the animal trainers who work closely with the big cats including

Sofiya, made themselves easily available for questions and discussions about what we were finding.

I remember specifically discussing with Chris our hypothesis, and I remember his reaction when we told him about the early contraception and how it could have stunted her reproductive growth and potentially damaged her permanently. He was visibly angry, frustrated, and upset with the situation. I also remember completely sympathizing with him; he had obviously developed a personal, emotional attachment to Sofiya at work, and I was starting to develop one as well, even just researching for a few hours a week. This realization was incredibly insightful to me in realizing how important the work we were doing was for the Beardsley Zoo. I could really tell that Chris, and by extension the rest of the Beardsley Zoo, was deeply invested in solving the problem and trying to help Sofiya.

There were also other learning experiences involved along the way. In speaking with other professionals outside of the Beardsley Zoo involved in animal healthcare and management, I realized how strong of a force ego can be in the field of academia and research. My research led me to be in contact with a veterinarian, who I apparently inadvertently offended in my questioning, when we were discussing his treatment of Sofiya. Upon receiving a somewhat cold and defensive email, I spoke with Dr. Byun about what was the best course of action. With her advice and guidance, I replied, asking the veterinarian to understand that I was merely a sophomore undergraduate doing some research for a class and that I had certainly not meant to insinuate anything or accuse him of anything. However, that was the end of our correspondence.

We had a similar experience when my research partner and I went to Orlando, Florida this past fall to present our research at the annual Association of Zoos and Aquariums conference. Even though we were incredibly careful to present a statement of fact and not an opinion or an accusation, and we did not single out any zoo or person related to the case, some of the staff from a zoo where Sofiya had lived recognized Sofiya on our poster. When we presented our research, they felt offended (or guilty) and became very defensive, intensely questioning our findings and hypothesis. We again had to remind them that we were only undergraduates researching for a biology class.

Both of these were very important learning experiences not only in the field of academia and research, but also in communication and relationships. These experiences highlighted an ethical contradiction in the work of these scientists. The ultimate goal of this research is to help conserve a species with a wild population of fewer than 40. These dire circumstances, to me, allow no room for ego to impede progress, and yet this seemed to be exactly what was happening. Without a doubt, this sort of self-righteousness is potentially very harmful to the social justice dimension of our research, not only in terms of the well-being of Sofiya herself, but in terms of the consequences for the AZA, the Beardsley Zoo, and the Bridgeport and Connecticut communities. This experience, and the implications of the behavior I encountered, will certainly stay with me throughout the rest of my education and whatever profession I choose, scientific or otherwise.

The relationships that resulted from my service learning experience are invaluable. By collaborating on a project with a common goal, I developed a great relationship with the professor teaching the service learning class, and I realized that this field of biology is incredibly important and fascinating to me, and the importance of that is huge as a student who will finish undergraduate college in one year. I developed a relationship with an international organization, the Association of Zoos and Aquariums, and I will always have that relationship as a member and as a research presenter. Few undergraduates have the opportunity to work with such

organizations. I also developed a great working relationship with some of the staff at the Beardsley Zoo, one I was able to maintain after our semester of research ended. They are incredibly knowledgeable, kind, and passionate people, and I am proud to say I worked with them and honored to say I helped them. This is, in some sense, a microcosm of the relationship between Fairfield University and Connecticut's Beardsley Zoo. The more this particular service learning course is offered, the more students have a chance to build these relationships, the more the zoo can find help for research and projects, and the stronger the bond between the university and the zoo becomes. In this way, Fairfield University's service learning benefits not only the Beardsley Zoo community, but also the Bridgeport community, and the zoological community at large through the Association of Zoos and Aquariums. This has certainly proven to be a formative experience for me, and I am grateful to everyone involved.

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