My interested in sexual selection and reproductive biology was solidified during a course studying Darwin and his impacts on the current study of evolution. I was intrigued that from the advent of the theory of evolution scientists recognized the selection force exerted in the pursuit of reproduction was important enough to be singled out. I was drawn to the nuances and variations that existed in sexual selection and that in particular the current field of post-copulatory or cryptic sexual selection. Once I defined the area of research that captivated me I have pursued courses and research in this field with enthusiasm. The experiences I have gained in a variety of research settings and disciplines have contributed to my growing interest in pursuing graduate research and a career in the field of reproductive and evolutionary sciences.

I gained my first practical experience in reproductive biology during my semester abroad at the University of Tasmania. I chose the small southern island of Australia because I was able to interact with all three types of mammalian reproduction, volunteer with several different scientists in the comparative endocrinology and ecophysiology research group, and take a course on reproductive biology and endocrinology for reproduction. This experience in Australia equipped me with an understanding of foundational reproductive physiology and endocrinology. The following summer I undertook a conservation research internship at the Memphis Zoo on the physiological limitations of sperm collection in Fowler's toads. I found that I loved both the challenges and rewards of conducting independent research. In particular, I was incredibly proud of designing and implementing an experiment that examined the effects of stress and our methodology on sperm production. I also benefited from analyzing the data that I generated, and producing an honors thesis based on the research.

Following graduation from Beloit College I undertook post baccalaureate research to gain experience in the female side of reproduction, engage with different researchers in various settings, and be exposed to new techniques and methods. Continuing in the field of reproductive conservation research I received a summer fellowship from the San Digo Zoo Institute for Conservation Research followed by a technician internship at the Smithsonian Conservation Biology Institute. At the San Diego Zoo I engaged in molecular research on the role of estrogen receptor sensitivity to phytoestrogens in rhinoceros infertility. I engaged in research to use fibroblast cells as a model for rhinocerous fertility and was delighted to find we could detect differences among individuals. At the Smithsonian, I continued with molecular research developing estrogen hormone profiles of Maned Wolves during breeding season and induced estrous. I also conducted research in female gamete biology by testing the efficacy of several follicle culture methods. Working with these dynamic zoological conservation organizations has been incredible. I was able to interact with researchers in many different fields and in addition to my research I have been able to participate in electro-ejaculations of several equid species, sperm cryopreservation, testicular culture. In my current position as a research fellow at the National Institutes of Environmental Health Sciences I am continuing to engage in gamete developmental biology although in a very different context. My research is on mechanisms of oocyte activation and the effect of the surrounding environment. The NIEHS is an incredible institution to work at, especially because of the access to

confocal microscopes and a microinjection apparatus. It is incredible to observe phenotypic effects result from RNA I have injected into an oocyte. Participating in research around the United States, in different organizations, with several study species has been compelling. It has prepared me with a large breadth of knowledge and experience that will aide me in developing experiments in graduate research.

My curiosity about evolution has stayed with me through all my research experiences. I value the application-based nature of research relating to conservation biology and human health sciences. I am also curious about the forces that underlie the development of reproductive systems of different species, and the process of fertilization. These research interests are strongly aligned with PROFESSORS.

I am especially interested in DEPARTMENT, UNIVERSITY because of my desire to engage in interdisciplinary research and educational outreach. As an undergraduate I was a teaching assistant and also lead a science program for 6th grade girls. I found that both teaching my peers and blossoming scientists strengthened my approach and dedication to research. I am also very interested in engaging with feminist critiques of biology and entering into discourse on situating reproductive biology in a cultural context.. The strength of my undergraduate education as well as my internship experiences have provided me with an ample foundation with which to undertake graduate research, and a career in reproductive biology research.