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STATEMENT OF TEACHING ACCOMPLISHMENTS AND PHILOSOPHY

"Maybe the single most important thing we can do for conservation in general is to give people an appreciation of nature." ~ Dr. Anurag Agrawal

I see my role as a faculty member as not just sharing scientific knowledge but also teaching critical thinking, the fantastic diversity of the natural world, and the exciting process of science. Every student who takes a class from me, whether a science major or not, will practice valuable career techniques and critical thinking in addition to learning ecological concepts and a deep appreciation of local flora and fauna. My interdisciplinary background prepares me to flexibly teach a wide variety of university courses in wildlife ecology and conservation. At University of Massachusetts and University of Delaware, I prepared lectures across a broad array of topics such as conservation biology, behavioral ecology, entomology, population ecology, ornithology, and more. I also designed and led my own graduate student readings course in "Urban Wildlife Ecology." As a teaching assistant, I have taught lessons for Environmental Science and data analysis and field ornithology for ecological professionals. In addition to my formal teaching at a university, I have led countless out-of-classroom lectures, workshops, exercises, and outreach activities for the general public and am continually honing my scientific communication skills.

Academic Teaching. In general, my academic teaching style is comprised of three main components: 1) engaging and inclusive teaching, 2) practicing deliverable skills and, 3) going outside.

Engaging and Inclusive Teaching. First, by incorporating group learning and activities with prepared lectures, students can feel more comfortable to express ideas and questions to the class. I strive to include activities that are creative, relatable, and fun. For example, in a wildlife ecology course, I might ask students to use an artistic media of their choice to describe the habitat needs of a species or write a 'choose-your-own-adventure' style story to a conservation issue to understand the variety of perspectives and outcomes. I also believe that it is essential to incorporate diverse methods in lectures to connect students with the material via an approach that works best for individuals. Some students work best with hands-on activities, while others retain information from examples. Besides teaching the details of an ecological concept, I share real-world examples through videos, current literature, or news events, and combine both visual and auditory learning in my lecturing style. I also continually educate myself on making teaching more inclusive by decolonizing classroom learning through increasing representation in material and framing conservation topics within inherent power and social justice issues.

Practicing Deliverable Skills. Second, I find that students thrive when ecology courses are combined with practicing other relevant professional skills. As a senior graduate student, I realized that many essential responsibilities were never taught in a formal classroom, such as how to write a grant, review a scientific paper, or give a presentation. When I designed my graduate student readings course, I integrated learning urban ecology concepts with practicing professional, scientific skills. For example, as a class, we read urban ecology literature under various topics and discussed limitations and potential improvements in each manuscript as a collective peer review. Then, I asked each student to develop an NSF-style research proposal on their study species within an urban-associated topic of choosing and present their idea to the class using the IGNITE talk format. I received positive feedback on this approach from all students that took the course, and one student designed a dissertation chapter based on the proposal he developed for the class.

In addition, most students across disciplines can benefit from lessons in data management and analysis. I am well experienced to teach analytical lessons from my experience giving workshops in coding, spatial analyses, data visualization, and biostatistics for ecological professionals and my *Software Carpentry* Instructor training for teaching computer programming. My data analysis lessons emphasize a pedagogy of hands-on practice, relatable examples, and exercises that build off previous knowledge. For example, when teaching statistical analysis to ecologists, we work with real bird survey data and discuss how to clean and format data before building the model to test a hypothesis. After producing results and graphs, we demonstrate the benefits of reproducibility in science

by fixing a mistake and rerunning the analysis. I am well prepared to take these skills to classrooms and teach data analysis to students by grounding lessons within a 'real-world' ecological context.

Going Outside. Finally, for students majoring in ecology or conservation, getting out in the field is an essential component of their education. Spending structured and unstructured time observing the environment can encourage critical thinking in ways beyond the capabilities of an ecology textbook and inspire students to care about the flora and fauna they are learning about. During my field courses as an undergraduate, I learned how to develop and answer scientific questions and began to recognize and appreciate the concepts and ecological diversity I had learned in lecture. In the field, ecology students can engage with the process of science more intimately and understand the value of how their degree can be used in a real-world setting. To that point, most of my teaching experience has been 'in the field,' where I have designed and led labs in avian ecology, entomology, and forest sampling to teach methods that will be beneficial to ecology students in future job applications. I have also given countless demonstrations to the public on bird banding, nest monitoring, plant, and animal identification and trained dozens of graduates and postgraduates on ecological field methods. My ideal course involves students answering ecological questions from start to finish: developing hypotheses with peers in the classroom, collecting real ecological data in the field, and analyzing results together as a class.

Mentorship. Student mentorship is an essential responsibility of faculty, and I look forward to developing a lab that will provide local research opportunities for undergraduates. To date, I have mentored twelve undergraduates in independent research, the majority from underrepresented groups. Two undergraduates have turned their work into published manuscripts, and two more are in the process of writing up current projects. To my knowledge, nearly all have continued in ecology by going to graduate school, the peace corps, research internships, and working at conservation NGOs. My mentorship approach is to guide them in research and provide a support network for open discussion about topics in their life and career. As a mentor, my objective is a mutually beneficial relationship with two goals: First, to convey the importance of responsibility, critical thinking and to help the mentee graduate from a 'student of science' to a colleague. Second, to learn applicable skills and produce a useful and novel product within a topic that both interests and advances the mentee's career. For some students, that may be a scientific paper; however, there is increasing undergraduate interest to be exposed to and competitive for non-academic careers. My background in federal agencies and scientific communications will help me also facilitate projects and products that are valuable to broader audiences and career goals.

Outreach. As an ecologist in human-dominated landscapes, some of the most satisfying experiences have been the opportunities to share my work with the public, and I recognize the tremendous value of engagement that extends beyond the university setting. Thus, I foresee my teaching program branching out to provide extension products, service, and scientific communication to the local community through public lectures, educational opportunities, and media. Outside of academia, I frequently give public seminars and serve on Q & A panels for non-profits, special-interest groups, and schools to engage with, and listen to, the communities I work in. By listening, I ensure the problem-solving I tackle, and solutions I provide are broadly used and inclusive. However, local outreach can only have so much reach; therefore, I also use approaches that reach larger audiences, such as social media, public interest articles, infographics, and blogging. I also frequently participate in virtual webinars to expand the communities exposed to my research while reducing my carbon footprint. During my research in residential landscapes of Washington D.C., I was often told by householders that learning about my research was their 'first interaction with a 'real-life scientist' and that "your research changed the way I think about my yard." In the future, these are the experiences I aim to expand by connecting my lab with the surrounding community, producing products that can be used by the public, and increasing the diversity of people that learn and actively interact with ecologists.