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The loricariid catfish was perched inside a hollow log. As I peered inside the log, I could see an aggregation of brightly colored orange fish eggs just beyond the catfish. I realized that I was witnessing a male loricariid guarding its nest. The loricariid used its pectoral fins to lock itself in place to prevent predators from entering and eating the eggs. Just a day earlier, I had read about this behavior in a paper titled, "Life cycles, limiting factors, and the behavioral ecology of four Loricariid catfishes in a Panamanian River" (1), and I was now witnessing it firsthand! This experience during a trip to Guyana, along with several others, had a profound effect on me. It was among my first opportunities to directly witness male nest-guarding behavior and, more generally, the ecological roles of fishes in streams. It also gave me a keen appreciation for fishes and the niches they occupy. I am now a first year Ph.D. student in UC Berkeley's Department of Environmental Science, Policy, and Management, and am currently taking a course in Population and Community Ecology with Dr. Mary Power, the very person who wrote the article that awakened me to the nest-guarding behavior of male loricariids (1).

During my youth, I always had a strong interest in nature. This interest was reflected in my academic performance, as I always performed well in life science courses. Thus, when it came time to select an undergraduate major, naturally I chose biology. During my tenure as an undergraduate at Cal Poly Pomona, I learned about the harmful impacts that humans are having on the environment in the form of over-harvest, habitat degradation, and climate change. I found contemporary rates of extinction to be quite alarming, and decided to focus my efforts on human impacts on the environment. Despite reading about the effects of anthropogenic activities on our environment as an undergraduate, I did not fully realize the extent that human activities are negatively affecting the environment. That quickly changed when I started working as an environmental consultant, and observed firsthand how habitat degradation, urbanization, and introduction of invasive species has led to the decline of native fish species in Southern California. Together, these experiences strengthened my convictions that I wanted to work with threatened and endangered species.

During the same spring that I was accepted to graduate school at UC Berkeley (spring 2008), California's salmon populations experienced a huge crash. In response, the Pacific Fishery Management Council voted to close the Pacific salmon fishery in both Oregon and California, the most extensive closure since the fishery's inception in 1851. The thought that salmon could become locally extinct was extremely devastating given their ecological, cultural, social, and economic importance. For example, conservative estimates put the cost of the Pacific coast salmon crash at \$290 million (2). With these thoughts looming in my mind, I became interested in the factors influencing salmon population dynamics and decided to focus my research on the sustainability and stability of coastal coho salmon in California, a population complex that is listed as endangered under the U.S. Endangered Species Act. As I discussed the plight of Pacific salmon with my graduate adviser, a freshwater fish ecologist specializing in work with salmon, questions of fisheries sustainability piqued my interests. These discussions, along with my recent readings on the relationship between biocomplexity and sustainability of locally adapted salmon populations, have given me the framework with which I can conduct my research.

Outreach and Mentoring: While I was working in the lab of Dr. Jonathan Baskin, I worked closely with a high school student named Brian Diep. Passing on knowledge and skills I had learned to Brian was an extremely fulfilling experience. Seeing Brian learn and employ the techniques I had taught him was met with a great sense of accomplishment. Similarly, while I was in Guyana, working with the Macushi (the local Amerindians) was a fruitful experience.

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The Macushi taught us how to select prime fishing locations. In turn, we had the opportunity to share our research findings with the Macushi as well, which was a mutually beneficial and rewarding experience. For instance, because the Macushi relied mostly on cast nets for fishing, many had never seen some of the smaller fishes inhabiting the rivers that we were able to capture with our fine-mesh seine nets. Indeed, many of the Macushi we encountered were thrilled to see the candiru, an infamous catfish in South America known for its bizarre behavior of swimming up the human urogenital tract. Additionally, while in Guyana, our team also distributed booklets to the Macushi, which contained a visual catalogue of fishes of the Rupununi River, so they could get a sense of the scope of our project. These experiences taught me the importance of promoting environments in which all parties (e.g., teachers, educators, students, citizens) can further their learning.

As a graduate student at UC Berkeley, I plan to continue my efforts in outreach and mentoring. To accomplish this, I have joined a campus program which involves high school students in restoring Strawberry Creek, a small creek flowing through the UC Berkeley campus. The project aims to incorporate high school students and teach them the importance of maintaining habitat to promote the sustainability of wildlife. Moreover, as a Burmese-American in the Environmental Sciences, I hope to serve as a role model to students from diverse backgrounds in the hopes of instilling a sense of excitement about this increasingly important discipline. Specifically, I hope to involve undergraduate students from UC Berkeley in all aspects of my research – from data collection to presentation of results. Through this experience, I hope to provide students with a better understanding and appreciation of the techniques and methodologies used in field research in the hopes that they will one day pursue research in ecology and conservation.

Experiences such as these will prove invaluable because I plan to pursue a career in academia and teach at the university level. These experiences will thus provide me with the necessary background to effectively communicate science and train future researchers.

Support: While exploring different graduate programs, UC Berkeley stood out to me because of the wide-ranging expertise of the faculty. As a student at UC Berkeley, I will be working with Dr. Stephanie Carlson, a freshwater fish ecologist with an extensive amount of experience working with salmonids. I will also be drawing on the expertise of Dr. Mary Power, a renowned ecologist whose research focuses on stream food webs, as well as Dr. Vincent Resh, a stream macroinvertebrate ecologist with decades of research experience focusing on the ecology of California's stream invertebrates. Additionally, UC Berkeley offers a substantial number of courses focused on aquatic sciences. As a student, I plan to take Stream Hydrology, River Restoration, and Biology of Aquatic Insects to broaden my understanding of stream ecosystems. I will also be taking Aquatic Ecology with Dr. Carlson, which will focus on a range of topics including "Trophic cascades in aquatic ecosystems" and "Harvest-induced evolution in fish populations", as well as a more focused class on Fish Ecology. With the guidance of the aforementioned professors and enrollment in coursework relevant to my research, I am confident that I will leave Berkeley with a solid background in aquatic ecology. Furthermore, studying in an interdisciplinary Environmental Science program will give me further exposure to the role of anthropogenic impacts on our environment.

References: 1. Power ME (2003) *Catfishes*, ed Arratia G (Science Publishers, Inc. , Enfield, NH), Vol 2, pp 581-600. 2. Yardley W (2008) Salmon Gone, Fishermen Try to Adapt on a Changing Coast. (New York Times, New York).