



Motivations for International Conservation Research

bridging conservation and culture on a personal level

I took my first international trip at two years old to attend my uncle's wedding in Taipei, Taiwan. Over the next decade, all trips and vacations were exclusively to visit family in Taiwan every few summers. Unfortunately, after I started middle school, visits to Taiwan fell out of priority, and summers became focused on camps, classes, and internships. Over the ensuing years, revisiting Taiwan was never considered seriously, and I had become unaware of the cultural heritage that played such an influential part of my formative years.

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After graduating college, I learned of news that forced my scope of interests to widen again and include my Taiwanese family and cultural heritage. I learned that my grandma, who had helped my parents raise me in Austin for the first year of my life, was beginning to lose her memory dramatically. My sharp, active, and spirited 4 ft. octogenarian grandma had started losing her lively spark. Suddenly I realized how long it had been since I had seen my family, who I was so close with in my early childhood. Over a decade had passed since I last saw many of them, and a desire for reconnection with my family and heritage began to brew.

When I enrolled in the Applied Biodiversity Science (ABS) program at Texas A&M University in 2014, I didn't have a concrete project in mind. I knew I was driven to study anthropogenic effects on the ecology of herpetofauna, and that I was interested in studying biodiverse and tropical systems that were strongly impacted by these effects.

When I discovered the National Science Foundation East Asia & Pacific Summer Institute (NSF-EAPSI) summer research fellowships, I saw an opportunity for my personal and academic desires to overlap. I could, essentially, concurrently pursue my desires to reconnect



The author (far left, seated) celebrating Lunar New Year with her extended family.

with my family and heritage and conduct an independent research project on the densely populated tropical island of Taiwan. As a first generation student from the USA, I had been removed from my Taiwanese heritage, and I desired to rediscover my family and culture. Additionally, Taiwan was exceptionally suitable for my conservation interests as an island that “appear[s] to feature exceptional plant endemism and exceptional threat,” as Myers et al. 2000 stated in their seminal “Biodiversity hotspots for conservation priority” Nature article.

I began to formulate my dissertation, influenced by both academic and personal motives. My drive to perform research in Taiwan was fueled by my enthusiasm for conservation on a tropical island with highly juxtaposed ecological and economic interests. Thus, Taiwan seemed to be the perfect stage for me to explore the ABS mission of bridging ecology, culture, and governance.

The ensuing summer of 2015, I collaborated with local road ecologist, Te-En Lin, at the Taiwan Endemic Species Research Institute (TESRI), a Taiwan governmental research and management institution, on an exploratory study of the effects of roads on Taiwan's native and endemic reptiles and amphibians (herpetofauna) funded by the NSF-EAPSI fellowship.

I was incredibly fortunate that Te-En expressed interest in hosting me during my fellowship, as he managed an extensive roadkill observation citizen science network. The Taiwan Road Observation Network (TaiRON) is a Taiwan citizen science group that collects opportunistic road kill observations for potential scientific and wildlife management use. Te-En and a concerned group of citizens started the informal Facebook interest group in 2011 with no specific scientific goals in mind, but it has since then grown into a Facebook group with over 13,000 members from all disciplines and professions. I was also able to visit a few family members a handful

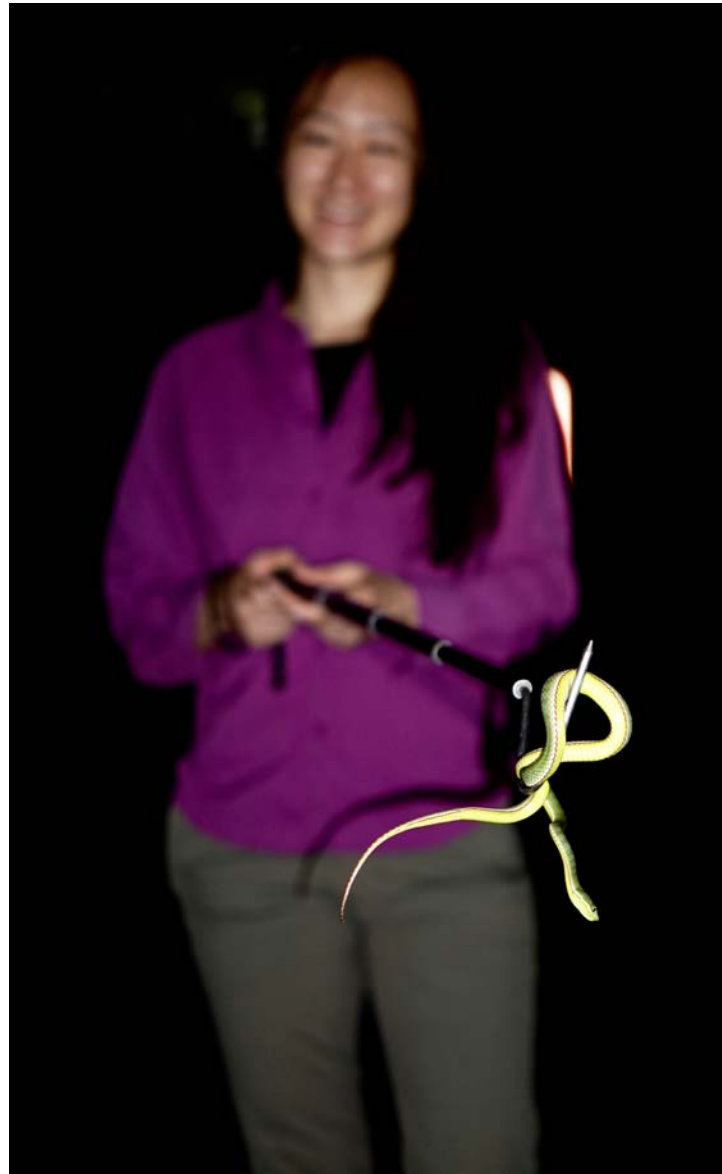
of times over the eight-week fellowship, but not as much as I had hoped.

Though I briefly explored Taiwan, my motivations to return were stronger than before. Academically, I had the opportunity to continue a large-scale, long-term conservation project that would provide insights and aligned with my scientific interest in road effects. I would maintain my supportive Taiwanese connections and involve hundreds of local citizens with the conservation of reptiles and amphibians. My personal motivation stemmed from heartbreaking news I received during my visit; my grandma had been diagnosed with Alzheimer's. Since she has not been capable of travel to the U.S. for several years, I felt the need to visit her as often as possible before her memory degraded. I was determined to return for a longer period of time to accomplish more in-depth collaboration and instill deeper connections to my family and heritage. So I applied for and received a Fulbright Research Fellowship.

Currently, indigenous peoples are the only citizens allowed to own guns for and hunt due to traditional rights. Despite the fact that indigenous peoples are the only people permitted to hunt, poaching is rampant across the island, which targets highly endangered species like the Formosan Pangolin (*Manis pentadactyla pentadactyla*) and Yellow-margined box turtle (*Cuora flavomarginata*).

Unfortunately, Taiwan's government have been focused on economic policy for the past few decades, leading to soft conservation regulations that negatively impact the unique and heavily endemic biodiversity in Taiwan.

My independent project gave me the opportunity to practice conservation strategies encouraged of ABS students, such as co-management of ecological projects with local actors. I worked closely with Te-En and his lab in designing studies that engaged citizen scientists in implementation of fieldwork, and I



The author using a snake hook to hold a Bamboo Pit Viper (*Trimeresurus stejnegeri*) found foraging during a night survey in Taiwan's montane jungles.

design. Since Te-En wasn't confident in his English, I was able to help garner the international attention Te-En's incredible work deserves by introducing him and his project to prominent western road ecologists, as road ecology is still a predominantly western field. I am also engaging Te-En and other local researchers across several Taiwan governmental and academic institutions in co-publishing studies utilizing TaiRON's data for English journals.

I have gained tremendous amounts of academic experience and perspective, but it is exceeded by my personal growth. One of the first and most notable realizations I had was how at home I felt in Taiwan, though I had spent so little time there as an adult. Although I was aware and conscious of my role as a foreign researcher, I have also never been so readily and warmly accepted into a community and greater society. This is not only because the Taiwanese are extremely welcoming and hospitable, but also because I've never been somewhere where my last name was so common, and the way I looked was in the majority. I've never been a Smith or a Jones.

It was strange to reconcile my expatriated self with how easily and literally at home I felt in Taiwan. I seized the opportunity to reconnect and spend invaluable quality time with aging family members, as well as see and meet cousins and other family I hadn't seen in over a decade. I spent all my Taiwanese holidays surrounded by my large extended family, a vast difference from holidays in the states with my small nuclear family, which has given me a much greater sense of rootedness in Taiwan. I feel extremely fortunate to have been able to connect with Taiwan on such a meaningful and personal level, with both its cultural and ecological heritage.

My past year has given me a much deeper connection to Taiwan's community and culture, as well as deeper understanding and knowledge of the ecology, natural history, and conservation efforts in the country. I've also noticed

helped field projects his lab managed. I feel privileged to have been able to act as a cultural and linguistic bridge between US, Taiwanese, and Australian conservation and road ecologists who expressed interest in our project.

Te-En, has an impressive handle of his road ecology operations in Taiwan, and I was lucky to learn citizen science project management skills from him and contribute what I could, mainly in international networking and study



The author (left back row) and adviser Dr. Lee Fitzgerald (left front row) with her Taiwanese host collaborator, Te-En Lin (middle back row) and his lab after a successful day of looking for salamanders on Ali Mountain. Photo credit: Lee Fitzgerald

how the culture shapes conservation uniquely. TaiRON is likely the largest and most successful citizen science road observation network in the world, and the robust and highly participatory nature of the TaiRON citizen science group is due to the communal, caring, responsible culture in Taiwan. I personally have experienced this strong sense of community and high societal care myriad times, like when I dropped my wallet in the metro and it was easily found, or when I paid the equivalent of \$6 USD for a dental exam because I, an alien resident, was covered under Taiwan's universal National Health Insurance (consistently rated one of the best medical programs in the world), or how everyone greets strangers as their aunties, brothers, and family. Because of this care and strong community,

I believe Taiwanese culture is able to sustain its robust and highly participatory citizen science programs, and I have high hopes for the modern spread of robust community care of wildlife and conservation ethic in Taiwan.

It is hard to fully encompass the impact the year in Taiwan has had on my academic and personal endeavors, or the impact I have had on the road ecology community in Taiwan. Over the year of working with Taiwanese collaborators, attending a range of conferences focused on policy and ecology in Taiwan, conversing with locals, and spending precious time with family, I gained a much deeper understanding of the intersection between Taiwan's ecology, policy, and culture. □