HERPETOLOGY MUSINGS

Cultivating Inclusive Communities in Taxon-focused Societies

Taxon-focused societies serve as a gateway to science careers

I loved snakes, tadpoles, and millipedes long before I heard words like macroevolution, biomechanics, or phylogeography. My story is almost a cliché: as a child, I constantly read books about reptiles, watched shows on Animal Planet, roamed woods and waded around creeks to look for critters, begged for a pet snake. By grade school, I knew I wanted to be a herpetologist. I'm not the only one who first came to biology due to their love of a particular animal. Many young people discover an organism that ignites their excitement long before they find a home within a particular subfield of biology. As a result, taxon-focused professional societies like SSAR are uniquely positioned to reach very young prospective scientists.

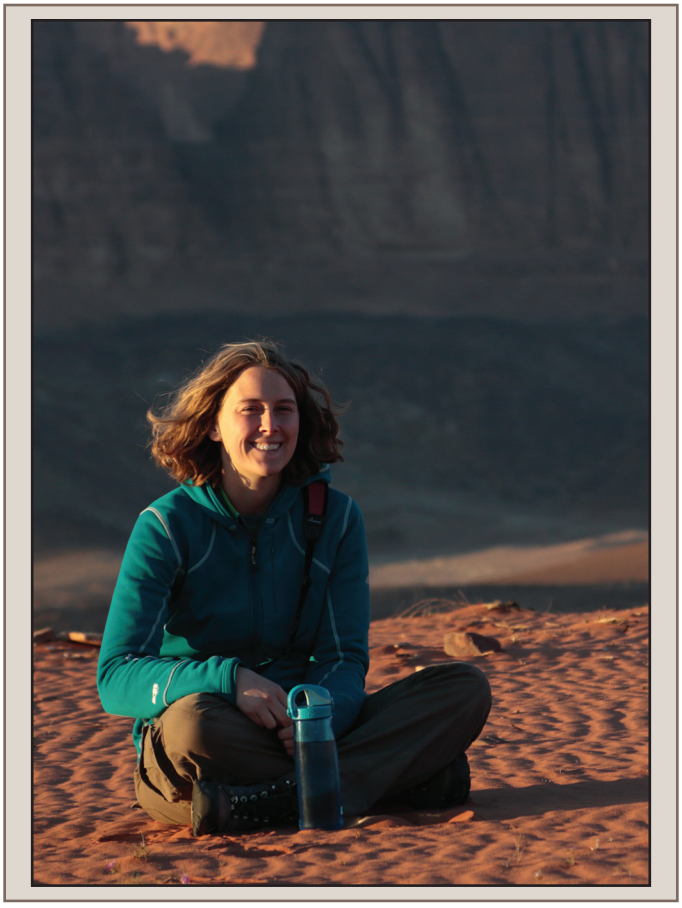
Many students, myself included, gain their first exposure to the scientific community at a taxon-focused conference. I attended my first Joint Meeting of Ichthyologists and Herpetologists as an undergrad in 2011. I have felt like a part of the herpetological community ever since that meeting, thanks to a few individuals who went out of their way to make a nervous, introverted undergrad feel extremely welcome. Several of those folks continue to serve as mentors, collaborators, and friends nearly a decade later. More recently, I've begun to make strong connections with people near my career stage, senior PhD students and postdocs. During low points of grad school, I've taken hope and strength from knowing that they could be my colleagues for many years to come. These relationships have made my experience in biology immeasurably richer. Since taxon-focused societies serve as many students' gateway to the scientific community, we have a huge responsibility to provide everyone with the same welcoming experience that I had. If we don't, we risk pushing young students out of herpetology altogether.

Society leadership should take concrete actions to build a community that welcomes all young scientists

To live up to our responsibility as a gateway to the greater scientific community, we must ensure that our own community is one where everyone can feel a sense of belonging. We have built our society on the basis of a shared commitment to research, conservation, and education focused on amphibians and reptiles. However, a community is really about the people in it and the interactions among them. A person's sense of belonging in a community results from the sum of many individual behaviors. These behaviors can be as simple as saying hello to the people around us, getting to know them as people (beyond their science), and, most importantly, building lasting rapport; repeated positive interactions with the same people do more to create a sense of belonging than do a string of positive interactions with different people. The individual nature of these interactions has led to a mixed bag of results for students. While some students have really found a home in SSAR, others have had a mediocre or negative interaction right off the bat that deterred them from engaging in SSAR (and potentially the field of herpetology) ever again.

People's experiences depend strongly on their identity. Those from minoritized groups are more likely to have negative interactions not only due to the presence of some bigoted individuals, but also due to the words and actions (or inaction) of well-meaning but uninformed individuals in our society. I have personally talked to too many students who came to the annual meeting once and had a bad or weird experience, so they decided never to come back. This problem isn't unique to SSAR—it permeates many professional societies, institutions, departments, and labs. However, since we are many students' first experience with the greater scientific community, we have an outsized impact.

To help us serve as better hosts to new members, conference organizers should set aside time for programming dedicated to the human element. For example, a few months ago, the Society for Integrative and Comparative Biology hosted a workshop led by Professor Kendall Moore of the University of Rhode Island, which centered around her documentary "Can We Talk? Difficult Conversations with Underrepresented People of



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Color: Sense of Belonging and Obstacles to STEM Fields" (www.kendallmooredocfilms.com). The workshop provided a beautiful example of how a professional society can bring its members together beyond their science. Conference organizers could also regularly invite keynote speakers who weave the human side of science into their talks. By designating time at each conference for this type of programming, society leadership would not only demonstrate a commitment to diversity, but also provide members with the tools they need to make our society more equitable and inclusive.

Although individuals play an essential role in helping new members develop a sense of belonging, professional societies must also work from the top down to create a more inclusive community. In order to achieve lasting, substantive progress, leadership must create an institutional framework to make our society more inclusive to people of all identities. A non-exhaustive list of possible institutional reforms might include:

- Modifying our protocol for officer nominations to promote a more diverse candidate pool
- Requiring candidates to provide voters a list of specific actions they've taken and plan to take to make SSAR and STEM more inclusive
- Critically examining our processes for selecting award and grant recipients, and using evidence-based practices to ensure equity in those processes
- Investing financially in students from minoritized groups through dedicated travel and research awards
- Tracking demographic information about our membership, leadership, and award recipients to assess our progress and promote accountability

To help our field reach its fullest potential, we should create inclusive communities not only within our own professional society, but also in our home institutions and local communities. Many students with a strong interest in herpetology (or any other field) never embark on a related career because they have no idea that such careers exist, or they think that such careers are not for people like them. In order to make our field more accessible to everyone, we must embrace inclusive teaching and mentorship practices to better serve students from all backgrounds, showing them that they can belong in herpetology and biology more generally (see Sathy and Hogan 2019 for an accessible overview of inclusive teaching, with references to further resources: www.chronicle.com/interactives/20190719_inclusive_teaching). We should also make a greater collective effort to concentrate our educational outreach efforts in underserved communities where K–12 students might have fewer opportunities to connect with the natural world or to learn about science careers. Professional society leadership can aid these efforts by sponsoring symposia and workshops on mentorship, pedagogy, inclusion, and outreach, and by providing other resources that will equip members to contribute more meaningfully in these areas.

Fellow students: we can play a role in shaping our community

Young members can contribute to the society's improvement. Yet, many of us play a mostly passive role, at least initially—myself included. I first joined SSAR just so I could attend the annual meeting at a discounted price, and it took several years for my involvement to grow. In 2017, Michelle Koo recruited me to the Herpetology Hotline, where I joined several other students in answering herp questions posed by the general public. The Herp Hotline helped me meet new people and expand my reach. In 2018, Rick Shine asked if I would chair the SSAR Student Participation Committee. I accepted. It had not previously occurred to me that a graduate student could step into a leadership position. Since then, I have also become a member of the Long-Range Planning Committee, which identifies focal points for SSAR's continued improvement and generates new ideas to reach our goals. As a result of this sustained involvement, I feel like I've become part of SSAR, and that I can contribute to meaningful change in this community.

We don't need to wait for more senior members to invite us into involvement. We can contribute informally to our community by going out of our way to become friends and colleagues to our peers, and mentors to younger students. We should especially reach out to fellow students who have joined SSAR without a strong pre-existing network, and who could therefore especially use support. Mounting evidence demonstrates the importance of peer support in helping students develop a sense of belonging, which in turn makes them more likely to persist and thrive. When we're ready to become more formally involved in the society's governance, we can reach out to committee chairs to ask them to make space for us. By getting involved now, as students, we can set ourselves up to take on elected positions while we are still early in our careers. We often have different social and educational experiences than older members, so we can offer a fresh perspective. We should use that perspective to make our professional societies the best they can possibly be.

A few final thoughts

Building a research career in the 21st century, I regularly get the message that to be competitive in the academic job market, I need to style myself an evolutionary biologist, a functional morphologist, a biomechanist; definitely *not* a herpetologist. I must convey that I am focused on the questions, and I just happen to work mostly on snakes so far. This messaging might imply that herpetological societies, and, by extension, other taxon-focused professional societies are losing relevance, becoming "antiquated." Yet, I argue that now, more than ever, taxon-focused professional societies have the potential to make a huge positive impact on STEM through their ability to reach budding scientists and science enthusiasts. Not only can they make a positive mark on students, but they also offer a space where students can come into their own and make a positive mark on the field.

If taxon-focused societies serve as an entry-point for young people into the professional science community, then we may play an outsized role in shaping many people's early career stages, and ultimately in their retention in STEM. Young scientists represent a more diverse population than do later-career scientists in terms of both outward and hidden diversity. Therefore, professional societies that reach budding scientists at the earliest stages of their careers could make a substantial contribution to increasing diversity in STEM. Increasing diversity is a worthy goal; people with different life experiences approach questions and problems in different ways, leading to greater innovation. However, increasing diversity alone doesn't get us very far if we don't create an environment where everyone can thrive.

Currently, societies like ours have a lot of work to do. Students have had unsavory or belittling experiences at conferences; researchers have feared for their safety during fieldwork due to

the attitudes and actions of the people around them; taxonomists have named species after men who committed acts as abhorrent as participating in campaigns to exterminate indigenous people; professional societies have honored members well-known to hold hateful views. It's not surprising that many people have switched to more welcoming fields. Although we have seen some positive change in recent years, these issues continue to plague us. We need to rapidly accelerate our rate of improvement if we hope to stay relevant.

Ultimately, we need people from the widest possible variety of perspectives pushing forward the research endeavor, pursuing innovative tactics to conserve the species we love, and encouraging public appreciation of the natural world. Society leaders should explore every possible avenue to create a climate where everyone can feel a sense of belonging. They should continually assess their activities, learn from both successes and failures, and take concrete actions that will move the society ever forward. Simultaneously, members should also work through our home institutions and local communities to build a bridge for budding herpetologists. By working at all levels to ensure that any young person can find a home here, we stand a much greater chance of not only surviving, but of strengthening the entire scientific enterprise.

Editor's note: Jessica Tingle is a PhD candidate at the University of California, Riverside, whose research currently focuses on the evolution of specialized locomotion and associated morphology in snakes. She is the Chair of SSAR's Student Participation Committee, Website Coordinator, and a member of the Long-Range Planning Committee.

NEWSNOTES

International Herpetological Symposium

This year, 2020, marks the 43rd anniversary of the International Herpetological Symposium. The first annual symposium on Captive Propagation and Husbandry of Reptiles and Amphibians was held in July 1976, at Hood College in Fredrick, Maryland. The International Herpetological Symposium (IHS) evolved from this meeting. The primary purpose of the IHS is to provide a forum for the dissemination of information and results of research pertaining to the natural history, conservation biology, captive management, and propagation of amphibians and reptiles. Each year the IHS is held in a different location hosted by a zoological, herpetological, or herpetocultural institution.

Unlike most herpetological societies or associations, IHS does not have a voting membership, but an electoral body. That body consists of the members of the Board of Directors, the Advisory Council, publication editors, and chairs of various committees. Dedicated zoologists, herpetologists, industry professionals, and private herpetoculturists volunteer their time in planning and organizing the annual symposia and other IHS related events and programs.

Over the years, an increasing number of people with varied interests in herpetology have attended IHS meetings, and this curious mix has allowed IHS to develop its "unique" flavor. Although IHS is often visualized as an organization with an interesting blend of academia and herpetoculture, the types of people who attend the meetings far exceed those bounds.

Progressive programs such as the youth awards and dedicated collegiate presentations have opened the doors to the next generation of reptile and amphibian enthusiasts and conservationists. The IHS Junior Herpetologist and NextGen program was implemented in 2015 by the IHS board and sponsors to help promote the fields of herpetology, conservation, education, and herpetoculture to the younger generation. Thanks to the generous support from Timberline Live Pet Foods and our kind sponsors, full travel grants are awarded annually for winners and their chaperones to attend the meetings and present their papers. In attempt to promote new research at the undergraduate level, IHS implemented the Collegiate Speed Session during the 2018 meeting. This session has been a big hit, and if you are interested in participating in this session at future meetings, more information can be found on our website under *Speaker Information*.

Each year, the IHS Grants Program committee selects projects to receive funding in four categories: Herpetological Natural History, Herpetological Conservation Biology, Captive Propagation, and Herpetological Education. IHS strongly encourages researchers and educators to apply. Proposals are due by April 30 of each year with recipients notified by September. Applicants may be anyone from the herpetological community and recipients are expected to present their findings at a future symposium. Grants are made possible by the generous contributions of attendees and donors during the auctions at the close of each symposium.

During the annual conference, IHS honors those who have demonstrated significant contributions in the field of herpetology. The Joe Laszlo Memorial Award is presented to the speaker at the annual IHS meeting who has demonstrated that his or her work represents new and exciting views and advances in herpetology or herpetoculture. The IHS Award in Conservation is presented to a speaker who has demonstrated that his or her work represents exceptional accomplishments in the field that benefit herpetological conservation. The IHS Lifetime Achievement Award is a prestigious award which recognizes a lifetime commitment in the fields of herpetology, conservation, education and/or herpetoculture.

IHS has something for everyone, and all are welcome. Unfortunately, IHS was unable to meet in June of 2020 due to the COVID-19 pandemic. Instead, we encourage you to join us next year in the beautiful city of Atlanta, Georgia on June 9–12, 2021. IHS is proud to announce the Keynote Address will be given by Joseph Mendelson III, Ph.D., and the Banquet Speaker will be Whit Gibbons, Ph.D. Visit the IHS website for more information on speakers and registration; IHS offers special registration rates