

Evolutionary Studies from the Student Perspective

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ABSTRACT

The Evolutionary Studies (EvoS) minor at SUNY New Paltz is an incredibly diverse academic program that attracts majors from nearly all disciplines. EvoS students are provided with unique educational opportunities beyond their standard curricula, such as the opportunity to engage and collaborate with researchers and distinguished guest speakers from a variety of fields, many outside their major. Students also learn the broad applicability of evolutionary theory and are given numerous opportunities to become involved in projects and publish papers, all of which have the potential to make them more well-rounded as well as give them advantages when applying for graduate programs and future career opportunities.

KEYWORDS

EvoS, Evolution Education, Interdisciplinary Minors, Higher Education

The Evolutionary Studies (EvoS) minor at SUNY New Paltz is an incredibly diverse academic program that attracts majors from nearly all disciplines. EvoS students are provided with educational opportunities that are unique among interdisciplinary minor programs. First, students have the opportunity to engage with prominent researchers in the field through the EvoS Seminar Series. Second, the multidisciplinary nature of the EvoS program exposes students to ideas and fields that they might not have otherwise encountered and results in a broadened perspective. Third, these eye-opening perspectives and collaborative opportunities often lead to students wanting to publish their work, an achievement which is made more accessible through the *EvoS Journal*. Finally, students have the opportunity to move beyond their standard required curricula to make connections with students and researchers at other institutions through academic conferences and other special projects and initiatives. What follows is a description of what makes EvoS so uniquely valuable for students, from the perspective of several alumni of SUNY New Paltz's EvoS program.

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EVOS SEMINAR SEMIANNR SERIES

Perhaps one of the best examples of the diversity that EvoS offers is the structure of the talk series that takes place each spring semester. Each EvoS talk itself is open to the public (i.e., one does not need to be an EvoS student to attend), but prior to the talk, students who are enrolled in the EvoS Seminar Series course attend a small session (usually 40-50 students) in which the guest gives an informal, shorter talk that is more intimate and interactive. The pre-talks are intentionally less structured than the main talk and thus the format tends to differ from guest to guest. Some speakers talk about their personal history and background in their field of study and how they came to appreciate the explanatory power of evolutionary theory, while others choose to focus in-depth on topics that will only be cursorily mentioned in their main talk; yet other speakers opt to discuss other research areas which may be completely unrelated to the subject of their main talk. These small pre-talks allow students to ask questions or engage in discussions that they may not be able to at the main talk, where the audience is often much bigger. The sessions also allow students to get to know the guests on a more personal level than would be possible otherwise.

Students and speakers move directly from the pre-talk session to the main talk, which is open to all SUNY New Paltz faculty, staff, and students, as well as interested members of the community. After the main talk, the entire audience is invited to a post-talk reception with refreshments (traditionally consisting of pizza, salad, and a sheet cake custom-designed for each speaker), which provides students the opportunity to talk directly with the guest speaker and other attendees of the talk, potentially leading to collaborations with one another and/or even the guest speaker(s).

It is one thing to attend a large talk by a distinguished researcher, and quite another to have the chance to actually get to know him or her on a personal level and speak face-to-face about research, academics, and life. The EvoS program, by design, facilitates this type of interaction between students who are new to the field and speakers who are established, thus fostering the discourse that passes information from one generation of researcher to the next and keeps the discipline moving forward and, well, evolving!

BROADENING PERSPECTIVES

Given the interdisciplinary nature of the EvoS program, it is no surprise that one of the greatest advantages that EvoS students enjoy is having their eyes opened to a vast array of different topics and ideas, and how seemingly disparate fields such as literature and biology can be united with a powerful meta-theory like evolution. In the case of the seminar series, speakers come from a wide variety of backgrounds and have often surprised students with the topics they covered. Dr. Victoria Ingalls discussed how the content of fantasy literature such as the *Harry Potter* series could be analyzed from an evolutionary angle, while James Prosek discussed the fascinating lives of freshwater eels. Prosek made these eels engaging not only by providing a wealth of factual information on them, but also by incorporating his own art and displaying pictures of the eels and aquatic life he had

studied. Students also had the opportunity to see the renowned Robb Wolf give a talk on the *Paleo diet* (a set of approaches to food choice which are informed by our evolutionary past) and evolutionarily informed fitness and exercise. His talk inspired many attendees to rethink how our ancestral past can inform our modern day lifestyle choices by critically evaluating the evidence for the medical benefits of adhering to the Paleo lifestyle in its various forms. His talk was so inspiring, in fact, that an entire section of EvoS students decided to try out the Paleo lifestyle for the remainder of the semester (and, for some, beyond).

We have been honored to have some guest speakers return for multiple talks. Dr. Gordon Gallup has spoken on the science of sex appeal and introduced us to a new hypothesis on the demise of the dinosaurs. Dr. Lee Dugatkin described how Thomas Jefferson spent a good portion of his life collecting naturalistic evidence to combat a theory known as *New World degeneracy*, which posited that all North American species of flora and fauna were small and weak due to the local climate (Dugatkin, 2009). The following year, Dugatkin returned to discuss his new book on the life of Peter Kropotkin, who was born a Russian aristocrat and is famous for his anarchist writings, but was also an early theorist on evolution, especially on the subject of cooperation (Dugatkin, 2011).

The EvoS Seminar Series also takes full advantage of local talent. SUNY New Paltz's own Dr. Jeff Reinking gave a seemingly complicated talk on molecular biology, but made it very accessible, which the students appreciated and enjoyed. Lastly, Laura Johnsen, an alumna from Dr. Glenn Geher's evolutionary psychology research lab, was able to cap off her undergraduate thesis project with an EvoS Seminar Series talk, a terrific opportunity for herself as well as the audience. Along with her advisor Dr. Andrea Varga, from the Department of Theatre Arts, Johnsen provided an evolutionary perspective on analysis of the themes in the costume design for the campus production of *Cabaret*, on which they both worked. Overall, one can see that EvoS offers students a wealth of information regarding the ubiquitous applications of evolutionary theory, as well as the opportunity to get personally involved at quite a sophisticated level.

PUBLICATION OPPORTUNITIES

One aspect of the EvoS program that makes it stand out among other minors is that it offers students a number of opportunities to author academic publications, one of the most valuable experiences that aspiring researchers can have under their belt when applying to graduate schools and academic careers. EvoS instructors encourage motivated students to polish and submit outstanding assigned papers for publication. In addition, collaboration in the form of publication opportunities is fostered at the aforementioned post-talk receptions, where enthusiastic swapping of ideas can take place. Finally, advanced EvoS students are often offered the opportunity to write reviews of evolution-themed books for publication in various journals, a great way to become exposed to both the literature and the writing process in the field of evolution research.

Once an idea for a manuscript is born, students have an outlet to publish in the EvoS Consortium-created *EvoS Journal*. The *EvoS Journal* is an open-access, peer-reviewed journal that encourages undergraduate students not only to submit

for publication but also to participate in the peer-review process—both of which benefit any student looking to apply to graduate programs in the future. Students who are enrolled in the EvoS Seminar Series course (which is mandatory to earn the EvoS minor) are required to write a substantial final paper that covers some area or application of evolutionary theory. Providing students with the incentive that a strong paper can be submitted for publication has resulted in students devoting a great deal of effort to the assignment, and a number of undergraduates from SUNY New Paltz and other institutions have been successful in having their work published (e.g., Geher & Gambacorta, 2010; Johnson & Pratarelli, 2011). Additionally, graduate students have found a great deal of success publishing in this journal. Published papers range from theoretical work (e.g., Carmen et al., 2013; Geher & Gambacorta, 2010; Glass, Wilson, & Geher, 2012) to reviews of books (e.g., Carmen, Dillon, & Geher, 2010; Glass, 2011a, Trouton, 2012) and movies (e.g., Glass, 2011b) that were inspired by the talks given by EvoS guest speakers.

COLLABORATIONS AND SPECIAL PROJECTS

In addition to publication opportunities, the EvoS program has created a wealth of other collaborations, special projects, and opportunities for students to further delve into the research community. SUNY New Paltz's close ties to the other EvoS communities in the region (especially at Binghamton University and the University at Albany, SUNY) have resulted in a number of collaborative efforts and lab trips between the schools designed to foster inter-institutional support and cooperation, such as the combined effort to help build a full-fledged EvoS program at Albany.

Another extremely valuable experience for students in the EvoS program is the opportunity to become involved in the research community by attending events such as the Northeastern Evolutionary Psychology Society's annual conferences. The ability to meet other students and researchers in the field and to present a poster or talk at an academic conference gives students interested in pursuing research careers a huge jump start toward this goal. A number of EvoS students, some of whom were undergraduates, were able to become founding members of new professional organizations such as the Feminist Evolutionary Psychology Society (FEPS) and the Applied Evolutionary Psychology Society (AEPS).

One exceptional project that came out of the collaborative nature of the EvoS program was the special issue of the journal *Evolution: Education and Outreach (EEO)* which was entirely devoted to the EvoS Consortium and guest edited by EvoS pioneers Rose Sokol Chang, Glenn Geher, Jennifer Waldo, and David Sloan Wilson. The journal's editor-in-chief Dr. Niles Eldredge, after honoring SUNY New Paltz by giving a talk in the EvoS Seminar Series, appreciated the mission of EvoS enough to collaborate on this special issue, in which a number of students scored publications (e.g., Geher, Crosier, Dillon, & Sokol Chang, 2011; Waldo & Greagor, 2011). The special issue of *EEO* was only one of the many remarkable endeavors that have come out of EvoS's curriculum-bridging efforts and the connections that it creates.

CONCLUSION

Being an EvoS student is a great opportunity to hear directly from prominent researchers in various fields (and interact with them), broaden one's perspective, collaborate with individuals that students may not have the opportunity to meet otherwise, and get an early start on publications. EvoS provides individuals with a novel view of the natural world – life is interdisciplinary, yet unified by a set of basic scientific principles – and the EvoS program at SUNY New Paltz reflects this idea perfectly. It provides its students and alumni (including us, the authors) with mentors, collaborators, publication opportunities, and (most importantly) prospects for the future. In more ways than one, the Evolutionary Studies program has the potential to change lives; EvoS offers students a wealth of interconnected information that spills over the confines of academia and saturates the way in which we understand the world around us.

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