The Alumnidae *2017: Issue 1*

The Alumnidae

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Dr. Daniel Moen receives National Science Foundation grant

Dr. Daniel Moen was recently awarded a $392,648 grant from the National Science Foundation (NSF) to support an international study on habitat change and the evolution of anurans (frogs and toads). The three-year project will investigate factors that explain large-scale patterns of ecological and morphological evolution across frogs (and toads) around the world. Moen's lab group will work with Dr. John Weins, professor of ecology and evolutionary biology at the University of Arizona, to estimate major transitions between frog habitat types, for example, inhabiting water versus trees, and to explore the causes of these shifts. Pertinent questions include: Are some ecological transitions more common? Are some ecological strategies (e.g., more specialized strategies) evolutionary dead ends? What factors account for these differences? The work will include gathering data on frog body-form from specimens in museum collections around the country, conducting fieldwork in four countries (Cameroon, Madagascar, Spain, and the USA) to collect data on jumping and swimming performance, and estimating a new evolutionary tree of relationships among frog families.

This project will support training of undergraduates, graduate students, and postdoctoral researchers in a diversity of subjects, and will include a summer research program for undergraduates at OSU. Moen will also work with an electronic arts class to develop an outreach video on the project, in collaboration with Andy Mattern (Assistant Professor in OSU's Department of Art, Graphic Design and Art History).

Greetings from the Department Head

Our spring semester has been continuing at a rapid pace. The departmental student advisors (including our new advisor Ms. Libby Howard whom you will read about) have been extremely busy with recruiting events. Indeed, we have had more undergraduate student applications and on-campus visits this spring than ever in the past. It appears Integrative Biology will have another record enrollment in Fall 2017. Graduations are up as well with 20 Physiology, 27 Zoology, and 38 Biology undergraduates receiving their Bachelor of Science degrees this semester. On top of that we had 8 Masters and 5 PhD students finish this spring. Our graduate students have been particularly productive as you will see in the following pages.

This coming July will mark my 10th year as department head and I feel this will be a good time in my career to step down as head and back into research and instruction. I announced this to the faculty in January, and Dr. Matthew Lovern has graciously agreed to serve as interim head beginning in July. I have certainly enjoyed working with all of our alumni, and terrific students, staff, and faculty. Have a great summer.

Loren M. Smith
Department Head
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New staff member joins Integrative Biology

Libby Howard joined the Department of Integrative Biology as an Academic Advisor in March 2017. Libby earned her B.A. in English from Southwestern Oklahoma State University in 2011 and her B.A. in English Education from the University of Central Oklahoma in 2013. After teaching high school English for two years, Libby went on to work as an Academic Advisor at Rose State College while earning her M.Ed. in Adult and Higher Education from the University of Central Oklahoma, which she completed in December 2016.

Integrative Biology student receives a Fulbright U.S. Student Research Award

Christina Anaya, a PhD Student in Dr. Matthew Bolek's lab, has been awarded a Fulbright U.S. Student Research Award to Iceland during the 2017-2018 academic year. The prestigious Fulbright program places U.S. students in schools around the world where they act as an ambassador for the United States and work with research advisors in the host country. "I am extremely thrilled with this opportunity! Not only can I establish international collaborations that will strengthen my professional career, but as a field biologist, I have developed a strong connection to nature and conservation issues. I am truly excited and honored to represent the Department of Integrative Biology and Oklahoma State University in an international context."

The title of her project is "Freshwater and Marine Snails as Parasite Biodiversity Indicators in Iceland". Snails are ideal organisms to indicate a large portion of the parasites that live in an area because many snails act as both reservoir hosts and intermediate hosts. The proposal was written in response to the 2014 Arctic Biodiversity Assessment that encouraged collection of baseline data on parasites in Arctic regions because the effect of climate change on parasite populations is influencing ecosystem health and may have consequences to the people there. Iceland is a unique region because it is more susceptible to perturbations in temperatures due to its small size and location compared to other northern landmasses. Christina also received a Women for OSU Philanthropy Student Scholarship and was named Outstanding Doctoral Student by the OSU President's Leadership & Service Recognition program.

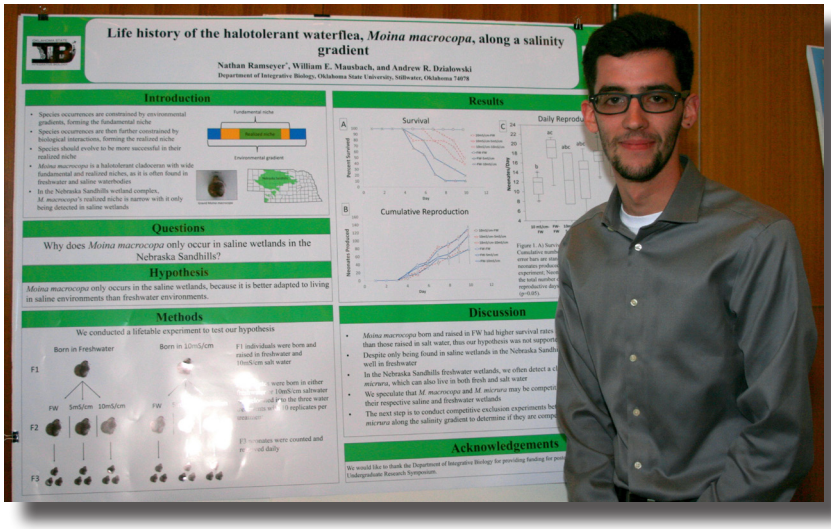
Integrative Biology graduate student awards and honors

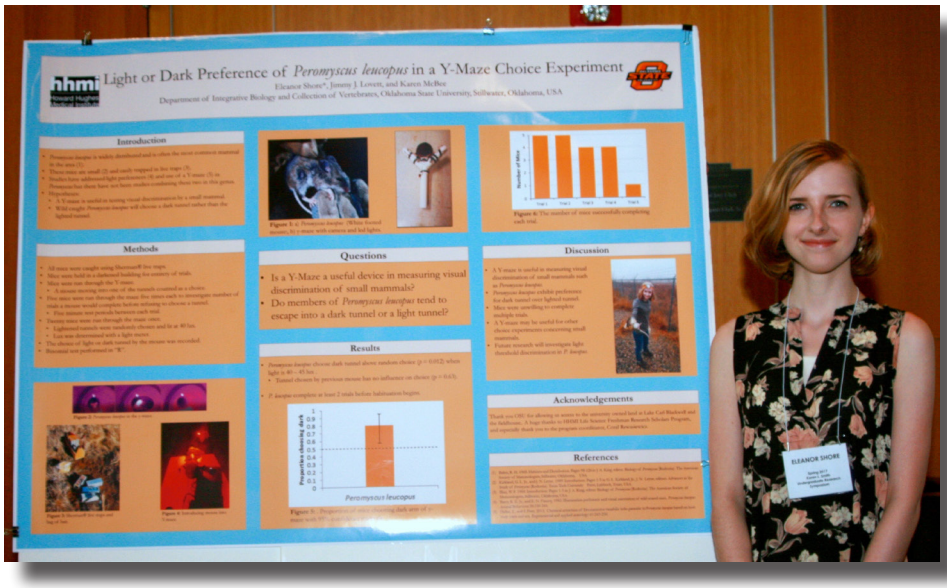
Ann Money was one of three Oklahoma State students to receive a highly-competitive National Science Foundation Graduate Research Fellowship. Ann is the curator of education and research at the Oklahoma Aquarium in Jenks. She returned to school to earn a doctorate in integrative biology at OSU where she is conducting research into the health of coral systems and possible explanations for the hardiness and survival of certain coral species affected by worldwide coral bleaching. Ann works with Dr. Jennifer Grindstaff. Scott Goeppner, a PhD student in Dr. Barney Luttbeg's lab, was recognized with an honorable mention from NSF for his integrative biology doctoral research at OSU

Several Integrative Biology students received awards at the 2017 annual meeting of the Southwestern Association of Naturalists. PhD students Lynne Beaty and Adam Simpson qualified as finalists for the Wilks award and presented their research in the plenary session, with Adam bringing home the top Wilks Award. Justin Agan placed 2nd and Bill Mausbach placed 3rd in the Hubbs poster competition, and Scott Goeppner received a McCarley Grants-in-aid of research. For other graduate student awards and honors see pages 4 and 5. Lynne Beaty was also selected as one of OSU's Honorary Commencement Marshals for Spring 2017.

Karen L. Smith Undergraduate Research Symposium

On 19 April 2017 the Integrative Biology Department held the Spring Karen L. Smith Undergraduate Research Symposium in the OSU Conoco Phillips Alumni Center. Karen, who passed away on 2 November 2012 was the senior academic counselor in the department. The symposium was established in November 2012 in recognition of Karen's tireless efforts to enhance the undergraduate experience - especially those in the Department of Integrative Biology. The symposium provides professional development opportunities for undergraduates in the department. For the Spring symposium there were 19 poster presentations by undergraduates working in the Integrative Biology Department. Ten faculty members and 11 graduate students from the Integrative Biology department worked as collaborators and mentors for the undergraduates. All posters were evaluated by a group of faculty and graduate students and this year there was a tie for the top poster. Congratulations go to Nathan Ramseyer (**below left**) and Eleanor Shore (**below right**) who both received the Karen L. Smith Undergraduate Research Excellence Award. This award includes $250 and is made possible by the Karen L. Smith Undergraduate Research Symposium Fund. Nathan presented results of his work with Dr. Andy Dzialowski and PhD student Bill Mausbach on the life history traits of the halotolerant water flea *Moina macrocopa* along a salinity gradient. Eleanor collaborated with PhD student Jimmy J. Lovett and Dr. Karen McBee on the light or dark preference of *Peromyscus leucopus* in a y-maze choice experiment.





2017 Annual Integrative Biology Awards Celebration

The 2017 Annual Integrative Biology Awards Celebration was held in Click Hall at the Conoco Phillips Alumni Center on 19 April 2017. The banquet, our largest turn out yet, was attended by our generous donors, award winners, and department members and their families. Award winners are listed below and on the following page.

Integrative Biology Department Undergraduate Student Awards:

Dr. Ron and Sharion Austin Scholarship in Rural Dentistry: Thomas J. Lawlis
Dr. G. Michael Steelman Scholarship: Stephen Tinker
Dr. Raymond Dixon Scholarship: Anna Smith
Dr. Raymond Dixon Scholarship in Rural Health: Corey Hembree
Dr. Raymond Dixon Externship: Cerra Linn
Outstanding Sophomore: Avery Melton
Outstanding Junior: Khanh To
Outstanding Biological Science Senior: Maggie Pearce
Outstanding Physiology Senior: Eric W. Bates
Outstanding Zoology Senior: Kelsey Brass
Bryan P. Glass Fellowship: Tabitha Gunnars

Left to right:
Front: Khanh To, Maggie Pearce, and Cerra Linn
Middle: Stephen Tinker, Thomas J. Lawlis, Corey Hembree, Kelsey Brass, and Eric W. Bates
Back: Anna Smith, Tabitha Gunnars, and Avery Melton

Left to right: Kenzie Lawlis,Thomas J. Lawlis, Sharion Austin, and Dr. Ron Austin. Thomas received the Dr. Ron and Sharion Austin Scholarship in Rural Dentistry. This scholarship was established in 2015 by Dr. Austin and his wife Sharion to support a student in the College of Arts and Sciences who is majoring in Biological Sciences, Physiology, or Zoology and must have graduated from a high school in a rural area of the country. This is the second time Thomas has been presented the award.

Student Winners
2017 Annual Integrative Biology Awards

Zoology Graduate Student Society Awards:

Best Lunchtime Seminar Presentation: Fall 2016 - Ashley Love*; Spring 2017* - Bill Mausbach
Margaret S. Ewing Outstanding Mentor Award: Dr. Polly Campbell
ZoGGS Travel Awards: Bill Mausbach, Madeleine Naylor, Ryan Koch, Meelyn Pandit, Sarah Gardner
M.S. Science Communication and Outreach: Kelsey Deal
Ph.D. Science Communication and Outreach: Lynne Beaty

Left to Right: MS students Kendall Scarlett and Elizabeth Mendoza, and Dr. Matt Lovern. Kendall and Elizabeth received Wilhm Graduate Student Travel Awards. This award was established in 2012 by former Zoology department head Dr. Jerry Wilhm and his wife Winona. This award is to be given annually to a graduate student in the Department of Integrative Biology for expenses involved in attending a national/ international meeting.

Integrative Biology Department Graduate Student Awards:
Outstanding Integrative Biology Masters Student: Danielle Perryman
Outstanding Integrative Biology Doctoral Student: Lynne Beaty
S. L. "Bud" Burks Memorial Graduate Research Award: Chathurika Henpita
Wilhm Graduate Student Travel Award:
Elizabeth Mendoza & Kendall Scarlett
Wilhm Teaching Assistant - Masters: Ryan Koch
Wilhm Teaching Assistant - Doctoral: Christina Anaya
Waters Grant-in-Aid of Research: Bill Mausbach

Left to right: Taylor Neighbors and Gertie Mulder (Integrative Biology Administrative Staff). Thank you Gertie and Taylor for another outstanding Awards Celebration and congratulations toTaylor on receiving one of the A&S Oustanding Staff Awards for 2017.

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☐ Karen L. Smith Undergraduate Research Symposium Fund (22-98530)
☐ Dr. Bryan Glass Student Scholarship/Fellowship Fund in Integrative Biology (22-98930)
☐ Wilhm Graduate Student Travel Award (22-82350)
☐ Other: _____

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