



## Welcome to **BIONEWS!**

Welcome to the 6<sup>th</sup> edition of Bionews, the annual newsletter of the biology department of University of Louisiana at Lafayette. This is our

attempt to help alumni and friends of the department stay informed about the activities of our faculty and students.

As you will see in the following pages, the department's faculty had a productive year in research accomplishments, with several large funding awards. Furthermore, our undergraduate and graduate programs continue to serve a large number of excellent students. For instance, there were a record 100 BS degrees awarded in 2017! The department also experienced the retirements of several key faculty. In next year's newsletter, I hope to provide you with the outcomes of searches to fill the vacancies created by these retirements, but here we recognize Drs. Mopper, Neigel, and Chlan, whose efforts did much to shape the current department.

We hope you will find this newsletter informative. If you have any questions or comments on its contents, please direct them to me ([Leberg@louisiana.edu](mailto:Leberg@louisiana.edu)). For more news on departmental events follow us on Facebook ([www.facebook.com/ullafayettebiology/](http://www.facebook.com/ullafayettebiology/)). Thank you for your interest and support of biology at the University of Louisiana at Lafayette.

Sincerely,

Paul Leberg  
Professor and Head

## Faculty Spotlights!

**Phyllis Griffard** received the Dr. Leon Lahaye Endowed Faculty Development award.

**Pegge Alciatore, Penny Antley, and Bruce Felgenhauer** won awards from the University as Outstanding Advisors.

## Board of Regent Professorships awarded to five faculty members in recognition of their outstanding contributions

This year, faculty awarded these three-year professorships included:

**Suzanne Fredericq**—Freeport McMoRan/BoRSF Professorship for Coastal Biodiversity Research Development

**Bruce Felgenhauer**—Dr. Glynn Granger/BoRSF Professorship in Pre-Medicine

**Karl Hasenstein**—SLEMCO/BoRSF Professorship in Science

**Paul Klerks**—Harold & Adele Comeaux/BoRSF Professorship in Biology

**Brad Moon**—South Louisiana Mid-Winter Fair/BORSF Professorship

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## News and Nuggets from Inside the Department

### Unpacking the Effects of the BP Oil Spill

A University of Louisiana at Lafayette biologist is among researchers asking if the Deepwater Horizon oil spill affected what's on the menu in the northern Gulf of Mexico.

Dr. Kelly Robinson and oceanographers from the University of Southern Mississippi and Oregon

State University will share a \$900,819 grant from the Gulf of Mexico Research Initiative, or GoMRI.

Robinson and her colleagues want to uncover whether the 2010 oil spill diminished plankton and fish populations in the open waters of the Gulf. If so, that could affect its food web and oceanic fisheries, since larval fish eat plankton.

Without plankton to eat, fish populations might decline. Then mammals higher on the food chain, like dolphins and humans, won't have fish and other seafood for dinner, either.

Robinson's share of the grant is \$264,000. She'll use a portion of the money to support a doctoral student in her lab. Robinson will also train undergraduate researchers to identify images of plankton collected during earlier GoMRI-funded expeditions.

The researchers will use plankton-imaging technology and classification software to accelerate identifying and counting the plankton to determine if the oil spill reduced the organisms' numbers. "Instead of someone sitting down and handpicking through a sample to identify and count the number of organisms that are there, which is time-consuming and labor-intensive, you can take a picture of animals by scanning the sample, like you would a piece of paper, with an imaging machine. The machine will then take the picture, and count and identify the different types of animals by using a computer algorithm," Robinson said.

GoMRI is a 10-year, \$500 million research program established by BP after the Deepwater Horizon oil spill. A wellhead on the rig exploded on April 20, 2010. Eleven crew members died. Millions of barrels of crude oil spewed into the Gulf before the well was capped 87 days later.

## The King of Snakes



In March of 2017, recent biology Ph.D. graduate Dr. David Penning and his advisor Dr. Brad Moon, a

Professor of Biology, published a paper in the Journal of Experimental Biology from David's

dissertation research on how kingsnakes eat other snakes that are well matched in size, strength, and ability to constrict. The paper received positive media coverage in more than 10 countries around the world from top scientific journals such as Nature and Science, as well as many non-technical publications such as the New York Times, Los Angeles Times, National Geographic, Smithsonian, BBC, U.K. Daily Mail, Discover Magazine, Huffington Post, Live Science, Science News, and others. The paper scored in the top 0.5% of media attention out of over 8 million papers tracked up to that time, and reached potentially 1.2 billion viewers globally, based on media subscriptions, unique monthly website traffic, and other available statistics. This extensive coverage served both local and much broader communities that included scientists, students, parents, and the general public. It highlighted an example of our research and helped raise the profiles of the university and our faculty and students.

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## Undergraduate News

### Pre-Veterinary Society



2017–2018 was another big year for our Pre-Veterinary Society. The society's goal going into each year is to provide pre-vet students with opportunities to enrich their careers at the

pre-professional level through participation in meetings, community service activities, society sponsored events, and networking with the veterinary community.

This year, several veterinarians came and spoke with students, gave presentations, and answered questions about the profession. Dr. Ryan Dhuet of the Zoo of Acadiana spoke about his experiences as the head vet for the zoo, and

offered students opportunities to go behind the scenes with him. We were also able to tour Lafayette Veterinary Care Center with Dr. Marc Bordelon, one of the center's owners and veterinarians. Many members received job opportunities to work in the veterinary field. In addition, Dr. Joseph Taboada, Associate Dean of Students and Academic Affairs at the LSU School of Veterinary Medicine, visited in the spring to meet individually with society members, giving them opportunities to ask questions about the application and admissions process; he also visited again the fall to give an overview and update about applications and admissions.

For the second year, our members came together to donate supplies to our local animal shelters that are always in need of them.

And finally, five students applied for admission to the LSU School of Veterinary Medicine. All five were admitted, with several offered early admission, which bypasses the interview process—a first for UL Lafayette students!

## Biology Undergraduate Research Symposium 2017



The **3rd Annual Biology Undergraduate Research Symposium**, held in Billeaud Hall on April 7, 2017, featured 19 presentations from 22 undergraduate researchers—the largest participation yet! For the first time, the symposium included a poster session in addition to an oral session. Oral presentations were given by Lauren Broussard, Allison Campbell, Fatima Fazal-ur-Rehman, Michelle Hendrick, Nina Hoffpauir, Dahlia Khalifa, Amber Lauchner, Ally Nguyen, Delena Phung, April Pruitt, Betty Robillard, Hayden Torres, and Lauren Wise. Poster presentations were given by Dallata Dinh, Ashlyn Dykes, Caroline Henry, Alyssa Marcel, Alyce Puckett, Sarah Saunier, Cayman Stephen, Ada Tusa, and Alexandra Zeringue. Faculty and graduate students who mentored these

undergraduate researchers included Dr. Scott France, Dr. Suzanne Fredericq, Ms. Samantha Hauser, Dr. Paul Leberg, Dr. Patricia Mire, Dr. Joe Richards, Dr. William Schmidt, Dr. Sherry Self-Krayesky, Dr. Karen Smith, and Dr. Beth Stauffer. Congratulations to all presenters and mentors on a job well done!

## Undergraduates Take On Cognitive Ethology



After taking a class in animal behavior in the fall of 2017, biology majors Constance Fontenot and Grant Lafleur launched a website dedicated to asking the important critical questions regarding recent publications related to animal cognition. The website ([monkeyprize.org](http://monkeyprize.org)) examines both the scientific and popular press coverage of the seemingly groundbreaking scientific discoveries in this field. Each blog entry gives a “monkey prize” to a study that has garnered attention. Constance and Grant recruited three faculty members with distinct areas of expertise to help guide them in this endeavor, including Dr. Daniel Povinelli (Biology, University of Louisiana at Lafayette), Dr. Caroline Arruda (Philosophy, University of Texas at El Paso), and Dr. Brandon Barker (Folklore, University of Indiana, Bloomington). These professors provided insight into how these publications are written and the philosophy behind the writing, and allowed Grant and Constance to become aware of the common sense folk notions that can easily bias both other scientists and the public alike. This past semester was dedicated to getting the website up and running and beginning the process of posting critiques of these scientific articles in a humorous manner that allows those without a PhD in comparative psychology to understand the complexities and foibles of the latest claims about animal intelligence. They

look forward to continuing their work over the summer and into next year.

## Pre-Professional Society



The **UL Lafayette Pre-Professional Society** was extremely active in 2017–2018, with a host of interesting and very informative speakers from deans of professional schools and a wide range of health care providers. The PPS is a group of over 350 active members that are interested primarily in careers in health care. In the Fall Semester, PPS faculty advisor Dr. Bruce Felgenhauer gave his yearly “State of the Union Address,” providing students with much new information needed to be successful in attending the health care school of their choice. In addition, in the second semester, talks were given by diverse health care providers from dentists to physician assistants.

In addition to helping prepare students for their future careers, the PPS was able to raise and donate funds to the Muscular Dystrophy Association, D.R.E.A.M.S, St. Jude Children’s Research Hospital, NAMI (a UL Lafayette Mental Health Awareness group), Down Syndrome Association of Acadiana, Acadiana Autism Society, and the Beacon Club (a UL Lafayette Disability Organization). Their hard work contributed almost \$10,000 to these organizations. To remain active members of the society, the members must volunteer each month at a number of local organizations that are helping those less fortunate.

## Mentoring Matters: Biology

The Department of Biology’s “**Mentoring Matters**” (MM) program continues to average around 35-40 student volunteers each semester. These student-academic mentors provide supplemental peer instruction and assistance

for students in several different biology courses: Fundamentals of Biology I and II, Applied Anatomy, Anatomy and Physiology, Cell Biology, Genetics and Microbiology. The exciting news is that “MM” is spreading to other departments; Computer Science and Informatics and Electrical Engineering now have MM-programs. The group hopes to join the University’s “Get on Board Day.” This will help inform the student body about our mission of peers helping each other improve academic success. We have also elected/appointed student leaders who will help guide new academic mentors (group volunteers) and the group as a whole. Finally we are using survey information to better meet the needs of our student peers.

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## Newly Funded Projects!

### **Duke-Sylvester, Scott**

NSF/NIH. Eco-epidemiology of tick-borne rickettsial pathogens. H. Gaff (ODU PI), S.M. Duke-Sylvester (coPI, UL Lafayette lead). 2017–2022. \$1,000,000 total, with \$254,804 to UL Lafayette.

### **France, Scott**

NOAA-OER/UNIVERSITY CORPORATION FOR ATMOSPHERIC RESEARCH. Central Pacific Exploration: EX1705: Cook Islands, Jarvis, and Kingman/Palmyra. PI, 2017, \$59,230.

### **Hasenstein, Karl**

NASA. Assessment of nutritional value and growth parameters of space-grown plants. PI, 2017–2020, \$573,840

### **Hester, Mark**

NSF DEB. RUI-COLLABORATIVE. The Influence of Mangrove Invasion and Rising Temperatures on Belowground Processes in Coastal Ecosystems. Co-PI; S. Chapman (PI), A. Langley, I. Fellar, J. Morris and G. Verutes. 2018–2021. UL Lafayette Collaborative Award, \$341,469; Total Award \$890,396.

### **Klerks, Paul**

LOUISIANA BOARD OF REGENTS. Recruitment of superior graduate students in environmental and evolutionary biology for 2018. PI, **Brad Moon** (CoPI), 2018–2023, \$120,000.

**Leberg, Paul**

LOUISIANA RESTORE CENTER OF EXCELLENCE. Assessment of coastal island restoration practices for the creation of brown pelican nesting habitat. PI, 2017–2019, \$299,733.

**Mopper, Susan (retired 2017, Emerita)**

COYPU FOUNDATION. The role of native plants in preserving pollinator abundance and diversity. PI, 2017–2018, \$79,819.

**Nelson, James**

LOUISIANA SEAGRANT Core submission. Development of Restoration Assessment Tools and Educational Products with Drones. PI, 2018–2020, \$186,000.  
DEPARTMENT OF THE INTERIOR, National Parks Service. Everglades ecosystem restoration and management effects of freshwater inflows and seagrass die-off on recreational fisheries: A trophic & movement ecology approach. Co-PI, 2018–2020, \$112,000 (\$747,300 total).  
CITY OF BROUSSARD, LOUISIANA. Assimilation Wetland Ecological Monitoring Services. Co-PI (Taylor Sloey, PI), 2018–2021, \$223,003.

**Robinson, Kelly**

NATIONAL SCIENCE FOUNDATION, Biological Oceanography Program. Collaborative: RAPID: Response of plankton assemblages and trophodynamics to a historic, hurricane-induced floodwater plume in a subtropical, pelagic environment. PI (Beth Stauffer co-PI), 2017–2018, \$94,446 (\$199,978 total).  
GULF OF MEXICO RESEARCH INITIATIVE. Deep-pelagic plankton dynamics: trophic ecology, community structure, and connectivity with the upper ocean, Co-PI, 2018–2020, \$264,413.

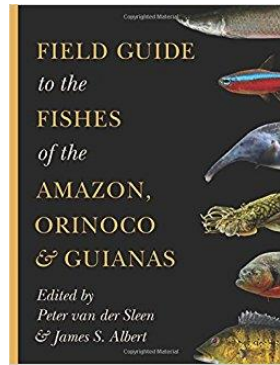
**Stauffer, Beth**

NSF, Research Experience for Undergraduates. REU Site: Healthy Streams, Healthy Coasts: An Interdisciplinary Approach to Watershed Science and Education. CoPI, 2017–2020, \$287,985.

**Wang, Yi-Hong**

The McIlhenny Company. Development of DNA Markers to Detect Genetic Impurities in Tabasco® Products. PI, 2017–2018, \$29,984.

## Edited Volumes 2017



Van der Sleen, P., & J. S. Albert. (eds) Field Guide to the Fishes of the Amazon, Orinoco, and Guianas. University Press.

## Selected Publications 2017

- Arruda, C.T. & D.J. Povinelli. Two ways of relating to (and acting for) reasons. *Mind & Language*. 19, 1–28.
- Bernt, M.J. & J.S. Albert. A new species of deep-channel electric knife fish of the genus *Compsaraia* (Apterontidae, Gymnotiformes) from the Amazon River. *Copeia* 105:211–219.
- Blankson, E., N. Deb Adhikary & P.L. Klerks. The effect of lead contamination on bioturbation by *Lumbriculus variegatus* in a freshwater microcosm. *Chemosphere* 167:19–27.
- Blankson, E. & P.L. Klerks. The effect of sediment characteristics on bioturbation-mediated transfer of lead in freshwater laboratory microcosms with *Lumbriculus variegatus*. *Ecotoxicology* 26: 227–237.
- Chakrabarty, P., B.C. Faircloth, W.B. Ludt, C.D. McMahan, T.J. Near, A. Dornberg, J. S. Albert, J. Arroyave, M.L.J. Stiassny, L. Sorenson, and M. E. Alfaro. Phylogenomic systematics of ostariophysan fishes: Ultraconserved elements support the surprising non-monophyly of Characiformes. *Systematic Biology* 66:881–895.
- Choubey L., J. Collette, & K.M. Smith. Quantitative assessment of Fibroblast Growth Factor Receptor 1 expression in Neurons and Glia of the Developing Mouse Brain. *PeerJ* 2017 Apr 18 5:e3173.
- Collette J., L. Choubey, & K.M. Smith. Glial and stem cell expression of Fibroblast Growth Factor Receptor 1 in the embryonic and perinatal nervous system. *PeerJ* 2017 June 29 5:e3519.

- Craig, J. M., W.G.R. Crampton, & **J.S. Albert**. Revision of the polytypic electric fish *Gymnotus carapo* (Gymnotiformes, Teleostei), with descriptions of seven subspecies. *Zootaxa* 4318:401–438.
- Decker M.B., **K. Robinson**, S. Dorji, K. Ciecpiel, C. Barcelo, J. Ruzicka, & R. Brodeur. Jellyfish and forage fish spatial overlap on the eastern Bering Sea shelf. *Marine Ecology Progress Series*.
- Evans, K.M., B.T. Waltz, V.A. Tagliacollo, B.L. Sidlauskas, & J.S. Albert**. Evolutionary modularity allows for big brains & strange faces. *Scientific Reports* 7:1–11.
- Evans, K.M., B.T. Waltz, V.A. Tagliacollo, P. Chakrabarty, & J.S. Albert**. Why the short face: Developmental covariation between face & braincase skull regions drives convergent evolution in Neotropical electric fishes. *Ecology & Evolution* 15:1783–1801.
- Evans, K. M., W. G. R. Crampton, & J. S. Albert**. Taxonomic revision of the deep channel apteronotid genus *Sternarchella* (Apteronotidae: Gymnotiformes: Teleostei) with descriptions of two new species. *Neotropical Ichthyology* 7:1783–1801.
- Gabriel D., S.G.A. Draisma, **W.E. Schmidt**, T. Schils, **T. Sauvage**, C. Maridakis, C.F.D. Gurgel, D.J. Harris & **S. Fredericq**. Beneath the hairy look: the hidden diversity of the *Gibsmithia hawaiiensis* complex (Dumontiaceae, Rhodophyta). *Journal of Phycology* 53:1171–1192. Cover article.
- Geary, B., S.M. Longest, K. Ottewell, S. M. Lantz, S.T. Walter, J. Karubian, & **P.L. Leberg**. Genetic structure of brown pelicans (*Pelecanus occidentalis*) in the northern Gulf of Mexico in the context of human management and disturbance. *PLOS ONE* 12:e0185309.
- Grusz\*, A. L., **E.M. Sigel\***, & C. Witherup. Invited article for 25th anniversary edition: Homoeologous chromosome pairing across the eukaryote phylogeny. *Molecular Phylogenetics and Evolution* 117:83–94. \*co-first authors
- Heestand Saucier, E., A. Sajjadi, & S.C. France**. A taxonomic review of the genus *Acanella* (Cnidaria: Octocorallia: Isididae) in the North Atlantic Ocean, with descriptions of two new species. *Zootaxa* 4323:359–390.
- John S.P., & K.H. Hasenstein**. The role of peltate scales in desiccation tolerance of *Pleopeltis polypodioides*. *Planta* 245:207–220. With cover picture.
- Jones, L., D.M. Johnson, S.M. Duke-Sylvester, & P.L. Leberg**. Closing the gaps for animal seed dispersal: separating the effects of habitat loss on dispersal distances and seed aggregation. *Ecology and Evolution* 7:5410–5425.
- Krayesky-Self S., W.E. Schmidt, D. Phung, C. Henry, T. Sauvage, O. Camacho, B.E. Felgenhauer & S. Fredericq**. Eukaryotic life inhabits rhodolith-forming coralline algae (Hapalidiales, Rhodophyta), remarkable marine benthic microhabitats. *Scientific Reports* 45850 (2017).
- Kulkarni R., & S. Jeyaseelan**. Aiding and abetting the enemy: Nicotine impairs the macrophage defense against *Mtb*. Invited editorial in *Am. J. Respir. Cell Mol. Biol.* 57:263–264.
- Lemaitre, R., J. Poupin, & **D. L. Felder**. Discovery of a new micro-pagurid fauna (Crustacea: Decapoda: Paguridae) in the Lesser Antilles, Caribbean Sea. *Zoosystema* 39:151–195.
- Menard S.S., & G.M. Watson**. Evidence for two populations of hair bundles in the sea anemone *Nematostella vectensis*. *Comparative Biochemistry and Physiology*, 208A:14–23.
- Moore, K. Rajasekaran, J. Cary & **C. Chlan**. Identification of resistance to *Aspergillus flavus* infection in cotton germplasm. *Journal of Crop Improvement* 31:727–741.
- Negri, M, T. Magalhães, N. Rossi, **D. L. Felder**, & F.L. Mantelatto. Reproductive aspects of the shrimp *Cuapetes americanus* (Caridea, Palaemonidae) from Bocas del Toro, Panama. *Crustaceana* 90:1061–107.
- Nestorova G.G., **K.H. Hasenstein**, N. Nguyen, M.A. DeCoster, & N.D. Crews. Lab-on-a-chip mRNA purification and reverse transcription via a solid-phase gene extraction technique. *Lab Chip* 17:1128–1136.
- Oguma, A.Y., & P.L. Klerks**. Pollution-induced community tolerance in benthic macroinvertebrates of a mildly lead-contaminated lake. *Environmental Science and Pollution Research* 24:19076–19085.
- Osland, M., K. Griffith, J. Larriviere, L. Feher, D. Cahoon, N. Enwright, D. Oster, J. Tirpak, M. Woodrey, R. Collini, J. Baustian, J. Breithaupt, J. Cherry, J. Conrad, N. Cormier, C. Coronado-

- Molina, J. Donoghue, S. Graham, J. Harper, **M. Hester**, R. Howard, K. Krauss, D. Kroes, R. Lane, K. McKee, I. Mendelsohn, B. Middleton, J. Moon, S. Piazza, N. Rankin, F. Sklar, G. Steyer, K. Swanson, C. Swarzenski, W. Vervaeke, J. Willis, & K. Wilson. Assessing coastal wetland vulnerability to sea-level rise along the northern Gulf of Mexico coast: Gaps and opportunities for developing a coordinated regional sampling network. *PLOS One*. 12:e0183431.
- Penning, D.A., & B.R. Moon.** The King of Snakes: Performance and Morphology of Intraguild Predators (*Lampropeltis*) and their Prey (*Pantherophis*). *Journal of Experimental Biology* 220:1154–1161.
- Pescinelli, R.A., T.M. Davanzo, J.A.F. Pantaleão; A.C. Batista, **R.T. Bauer**, & Rogério C. Costa. Population dynamics, relative growth and sex change of the protandric simultaneous hermaphrodite *Exhippolysmata oplophoroides* (Caridea: Lysmatidae) close to an upwelling area. *Journal of the Marine Biological Association of the United Kingdom*.
- Powers, S.P., S. Rouhani, S., B.C. Baker, H. Roman, J. Grabowski, S.B. Scyphers, J.M. Willis, & **M.W. Hester**. Ecosystem services lost when facilitation between two ecosystem engineers is compromised by oil. *Marine Ecology Progress Series* 576:189–202.
- Quinn, R.A., S. Hazra**, R. Smolowitz & **A.Y. Chistoserdov**. Real-time PCR assay for *Aquimarina macrocephali* subsp. *homaria* and its distribution in shell disease lesions of *Homarus americanus*, Milne-Edwards, 1837, and environmental samples. *J. Microbiol. Meth.* 139:61–67.
- Reis, R. E., **J.S. Albert**, F. Di Dario, M.M. Mincarone, P. Petry, & L.A. Rocha. A reply to Vitule et al. (2016): Current vs. future threats to the freshwater fish biodiversity in South America. *J. Fish Biol.* 90:1191–1195.
- Richards J.L., T. Sauvage, W.E. Schmidt, S. Fredericq**, J. Hughey, & P.W. Gabrielson. *Sporolithon ptychoides* (Sporolithales): the generitype species of the type genus of the order assessed by sequencing type and topotype material. *Journal of Phycology* 53:1044–1059.
- Robinson K.L.**, J. Luo, S. Sponaugle, C. Guigand, & R.K. Cowen. A tale of two crowds: public engagement in plankton classification. *Frontiers in Marine Science* 4.
- Roxo, F.F., N. Lujan, **V.A. Tagliacollo, B.T. Waltz.**, C. de Souza, C. Oliveira, & **J.S. Albert**. Shift from slow- to fast-water habitats accelerates lineage/phenotype evolution in a clade of Neotropical sucker-mouth catfishes (Loricariidae: Hypoptopomatinae). *PLOS One* 12:e0178240.
- Ruan C-J, R Yan, B-X Wang, **S. Mopper**, W-K Guan, J Zhang. The importance of yellow horn (*Xanthoceras sorbifolia*) for restoration of arid habitats and production of bioactive seed oils. *Ecological Engineering* 99:504–512.
- Ruan C.J., & **S. Mopper**. High-crown grafting to increase low yields in *Camellia oleifera*. *J. Horticultural Science & Biotechnology*. 92:439–444.
- Satbhai, K.S.**, F.R. Louka & **P.L. Klerks**. Individual and combined effects of petroleum hydrocarbons phenanthrene and dibenzothiophene on reproductive behavior in the amphipod *Hyalella azteca*. *Water Air Soil Pollution* 228:91.
- Schmidt W.E.**, C. Lozada-Troche, D.L. Ballantine, **N. Arakaki**, J.N. Norris, D. Gabriel & **S. Fredericq**. Taxonomic transfer of *Chrysymenia enteromorpha* and *C. wrightii* to *Botryocladia* (Rhodymeniaceae, Rhodymeniales, Rhodophyta). *Phytotaxa* 324:122–138.
- Shaw, J.A., L.K. Bryant, F.M. Malle, **D.J. Povinelli**, & J.R. Pruett. The relationship between joint attention and theory of mind in neurotypical adults. *Consciousness and Cognition* 51:268–278.
- Sloey, T., & M.W. Hester**. Impact of nitrogen and silicon on increasing mechanical stem strength in *Schoenoplectus acutus* and *Schoenoplectus californicus*: Applications for restoration. *Wetland Ecology and Management*.
- Stauffer, B.A.**, A.G. Gellene, D. Rico, C. Sur, & D.A. Caron. Grazing of the heterotrophic dinoflagellate *Noctiluca scintillans* on dinoflagellate and raphidophyte prey. *Aquatic Microbial Ecology* 80:193–207.
- Sullivan, T.J., & J. Neigel**. Differential host mortality explains the effect of high temperature on the prevalence of a marine pathogen. *PLOS One* 12(10).

**Sullivan, T.J., & J.E. Neigel.** Effects of temperature and salinity on prevalence and intensity of infection of blue crabs, *Callinectes sapidus*, by *Vibrio cholerae*, *V. parahaemolyticus*, and *V. vulnificus* in Louisiana. *J. Invertebrate Pathology*.

**Tagliacollo, V. A., S. M. Duke-Sylvester, W. A. Matamoros, P. A. Chakrabarty, and J. S. Albert.** Coordinated Dispersal & the Pre-Isthmian Assembly of the Central American Ichthyofauna. *Systematic Biology* 66:183–196.

**Ukey, R., W. Holmes, R. Bajpai, & A.Y. Chistoserodov.** Evaluation of thioesterases from *Acinetobacter baylyi* for production of free fatty acids. *Can. J. Microbiol.* 63:321–329.

Vieira C., **O. Camacho**, Z. Sun, **S. Fredericq**, F. Leliaert, C. Payri, & O. De Clerck. Historical biogeography of the highly diverse brown seaweed *Lobophora* (Dictyotales, Phaeophyceae). *Molecular Phylogenetics and Evolution* 110:81–92.

Visser, J.M., & **S.M. Duke-Sylvester.** LAVegMod v2: Modeling Coastal Vegetation Dynamics in Response to Proposed Coastal Restoration and Protection Projects in Louisiana, USA. *Sustainability* 9 1625.

Wicksten M., S. De Grave, **S.C. France**, & C. Kelley. Filter-feeding in a Deep-Sea Benthic Shrimp (Decapoda: Caridea: Styrodactylidae), with Records of the Deepest Carideans. *ZooKeys* 646:17–23.

Wilson, R.M., R.B. Tyson, **J.A. Nelson**, B.C. Balmer, J.P. Chanton, & D.P. Nowacek. Niche Differentiation and Prey Selectivity among Common Bottlenose Dolphins (*Tursiops truncatus*) Sighted in St. George Sound, Gulf of Mexico. *Frontiers in Marine Science*.

Wu, X., S. Wang, H. Chen, Z. Jiang, H. Chen, M. Gao, R. Bi, **P.L. Klerks**, H. Wang, Y. Luo, & L. Xie. Assessment of metal contamination in the Hun River, China and evaluation of the fish *Zacco platypus* and the snail *Radix swinhoei* as potential biomonitors. *Environmental Science and Pollution Research* 24:6512–6522.

## In Memoriam



It is with great sadness that we report the passing of Dr. Jeffery Spring. With 35 years of outstanding service to the University and its students, Jeff has touched many lives. Through his research, he made

many contributions to our understanding of insect physiology. A thoughtful and dedicated colleague with a great sense of humor, Jeff will be sorely missed. Dr. Spring's obituary can be found [here](#).

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## Awards and Honors

### Graduate Student Awards & Accomplishments

In 2017, continuing graduate students were authors on 23 peer-reviewed publications, presented 16 off-campus seminars, and gave 59 conference presentations. Below are some examples of awards made to students in our graduate programs.

**Babitch, Jaylyn.** Untangling phytoplankton from the estuarine food web. Coastal Connections Winner of 3-Minute Thesis competition.

**Costa, Ana Paula.** Cetacean Society International, 22nd Biennial Society for Marine Mammalogy Conference in Halifax (NS), Canada. Travel grant, \$500.00.

**Fulbright, Michael C.,** Penning, D.A., and Hillard, C.J. Going Out on a Limb: Scaling of Terrestrial and Arboreal Defensive Strikes by Ratsnakes. Graduate Student Research Showcase, University of Louisiana at Lafayette. Awarded 1st Place in the STEM Poster Competition.

**Hauser, Samantha.** United States International Association of Landscape Ecologist, Honorable Mention for Best Student Presentation, \$150.



**James, W. Ryan.** Louisiana Sea Grant Coastal Connections 3-Minute Thesis Competition Winner, \$500.

**Jones, Scott F.** Coastal Conservation Association of Louisiana, Ted Beaulieu, Sr. Scholarship, \$5,000.

**Kim, Leslie Y.** 1st place award for best oral presentation at the II International Symposium on Phylogeny and Classification of Neotropical Fishes, Londrina, Brazil.

**Rogers, Deborah.** Richard G. Neiheisel and Mary B. Neiheisel Endowed Graduate Dissertation Award, University of Louisiana at Lafayette.

**Rupp, Ariana,** Jay Huner Travel Award to present a paper at the Louisiana Academy of Science

**Rupp, Ariana,** H. Dickson Hoese and Richard Moore Award from the UL Lafayette Department of Biology for Best Graduate Student Publication in Biology for 2017.

**Scioli, Justin.** Smithsonian Tropical Research Institution, Ernst Mayr Fellowship, \$5,000.

**Yando, Erik.** Society of Wetland Scientists, Student Research Grant, \$1000

## Graduate Student Research Showcase

The Graduate Student Research Showcase is a campus-wide event organized by the Graduate School that strives to acknowledge and celebrate the contributions of graduate students to the UL Lafayette by providing graduate students the opportunity to showcase their research, projects, and original works. Biology graduate students excelled at the showcase events and earned multiple awards in 2017.

**Ariana Rupp** won 1<sup>st</sup> place in the STEM Paper (Oral Presentation) Competition.

**Michael Fulbright** won 1st Place in the STEM Poster Competition.

**Brittany Foret** and **Marques Jackson** won 2nd Place in the STEM Poster Competition.

**Erik Yando** won 3rd Place in the STEM Poster Competition.

**Scott Jones** won 2nd Place in the university-wide 3-Minute Thesis Competition.

**Michael Fulbright** won 3rd Place in the university-wide 3-Minute Thesis Competition.

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## New Faces in 2017



Our newest faculty member, **Dr. Erin Sigel**, joined the faculty in January 2015. She obtained a Ph.D. in biology from Duke University and

had a post-doctoral fellowship with the Smithsonian Institution. Her research interests include the patterns and processes that underlie plant diversification. Her main research focus includes ferns, a plant lineage with an extensive history of both ancient and recent chromosomal duplications. During the coming years, she will be setting up her research program and developing courses. She is also working to upgrade our herbarium. Welcome Erin!

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## Retirements in 2017

Three long-time members of the Department retired in 2017.



**Dr. Caryl Chlan** joined the faculty in 1989. Caryl's degrees were from Clemson University (BS) and the University of Georgia (MS, PhD); she had postdoctoral positions at both UCLA and

LSU. Her research in plant molecular biology is well respected by her colleagues. She provided considerable service to the department and university and was considered to be an outstanding instructor by the students.

Professionally, she was heavily involved in both the regional and national sections of the American Society of Plant Biologists.



**Dr. Susan Mopper** joined the faculty in 1993. She had degrees from Florida State University (BS, MS) and Northern Arizona University (PhD), as well as postdoctoral positions at both her alma matters.

Susan studied the ecology of plant–animal interactions, and her research contributions have been recognized by the Ecological Society of America. In 2003, she was named a Foundation Distinguished Professor. In addition to outstanding service as a faculty member, Susan was director the University’s Ecology Center, where she implemented several major improvements.



**Dr. Joseph Neigel** earned degrees from Johns Hopkins University (BS), and the University of Georgia (PhD). Following a post-doc at UCLA, he joined the biology faculty in 1987. Joe

was a gifted teacher, and his research papers were among the most cited of any of our faculty. He has made many contributions to the understanding of population genetics and evolution of marine organisms. For this work, he was named Distinguished Research Fellow at the Bodega Marine Laboratory of UC Davis. In 2004, he was named a Foundation Distinguished Professor.

With 82 years of combined distinguished service to the University as educators and researchers, these retirements are well deserved!

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## 11 Graduate Degrees Conferred

### Doctor of Philosophy in Environmental and Evolutionary Biology

**Evans-Jackson, Kory.** Dissertation: Evolution of craniofacial diversity in Neotropical electric

fishes (Gymnotiformes: Teleostei). **Advisor: Dr. James Albert**

**Jones, Landon.** Dissertation: Modeling the Effects of Animal Movements and Behavior on Spatial Patterns of Seed Dispersal in Fragmented Landscapes. **Advisor: Dr. Paul Leberg**

**Mueck, Kristy.** Dissertation: Physiology of the Invasive Apple Snail, *Pomacea maculata* (Perry, 1810), in Louisiana. **Advisor: Dr. Lewis Deaton**

**John, Susan.** Dissertation: Drying Without Dying: The Resurrection Fern *Pleopeltis polypodioides*. **Advisor: Dr. Karl Hasenstein**

**Sullivan, Timothy.** Dissertation: Molecular ecology of blue crab diseases. **Advisor: Dr. Joseph Neigel**

### Master of Science in Biology

**Collette, Jantzen.** Thesis: Validation of the tgFGFR1-EGFP Mouse Line as a Tool to Study Fibroblast Growth Factor Receptor 1 Cellular Localization and Expression After Experimental Manipulations. **Advisor: Dr. Karen Smith**

**Fontenot, Christopher.** Non-thesis track. **Advisor: Dr. Scott Duke-Sylvester**

**Foret, Brittany.** Thesis: Examination of Opioid and Glucocorticoid Receptor Pathways in Rhesus Macaques (*Macaca mulatta*) Exhibiting Self-Injurious Behaviors. **Advisor: Dr. Karen Smith**

**Franco, Marco.** Thesis: A Mesocosm Assessment of the Ecotoxicological Effects of Crude Oil in Two Species of Fiddler Crabs (*Uca* spp.) from the Northern Gulf of Mexico. **Advisor: Dr. Paul Klerks**

**Hucks, Katrina.** Thesis: Evaluation of maximum entropy models for assessing the influence of restoration scenarios on coastal wildlife populations. **Advisor: Dr. Paul Leberg**

**Stein, Alexis.** Non-thesis track. **Advisor: Dr. Bruce Felgenhauer**

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## Your Gifts Make A Difference!

### New Undergraduate Research Facilities



We have recently opened our new Undergraduate Research Laboratory. Several groups and individuals contributed funding, time or talent to the task of creating this resource from what was a storage space: Student Technology Enhancement Program (STEP), Pre-Professional Society (PPS), UL Honors, , Dean of Science, Physical Plant, Pegge Alciatore, Bruce Felgenhauer, William Schmidt and Sherry Kraysky-Self. **Funds for equipping this space also came from donations from alumni.** Currently, there is an inverted epifluorescent microscope, compound and stereo-microscopes, thermocycler, bacterial growth chamber, freezer and refrigerator, microwave, ice maker, refrigerated centrifuge, micropipettes and several electrophoresis rigs.

### How to Donate

**Donations to the Biology Department's University of Louisiana at Lafayette Foundation fund allow us to make investments in new research directions and student education programs that are difficult to fund through our modest operating budget.**

Gifts can be made online by visiting:

<https://www.ul Lafayette foundation.org/giving/sciences>

Under Designation, choose "Other" and enter "BIOLOGY DEPARTMENT" in the "Other" box.

Contributions to our foundation fund can also be made by sending a check, made out to **Biology Department Fund UL Lafayette Foundation**, to the foundation. Their address is:

UL Lafayette Foundation  
P.O. Box 44290  
Lafayette, LA 70504-4290

Thank you for any gift you provide to help support the department's activities.

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## Alumni Updates

We love to hear from our graduates. If you have information you would like to share involving your professional or personal life, please send it Sondra Meyers ([sdm7944@louisiana.edu](mailto:sdm7944@louisiana.edu)). Please be sure to include information on your year of graduation and degree. We welcome participation by alumni of both our undergraduate and graduate programs!

### Hiring?

We maintain an email list of recent grads searching for positions, and have contact with current students. If you have a position or internship announcement appropriate for biology majors that you would like us to distribute to these groups, please send it to me ([Leberg@louisiana.edu](mailto:Leberg@louisiana.edu)) as an email attachment. Likewise, if you are a recent graduate, let me know if you would like to be added to our email list.

## **Record Number of 100 Undergraduates Earn Biology Degrees**

Aithal, Vikas Arehole  
Ardoin, Alexis  
Badon, Jack  
Baker, Autumn Kate  
Barry, Preston Robert  
Bergeron, Logan Michael  
Broussard, Jency  
Bruce, Meghan  
Cassidy, James Patrick  
Castelblanco-Esteban, Jasabe Sarai  
Champagne, Kristin Ann  
Charles-Jones, Yolanda  
Clark, Cassie Marie  
Coker, Caitlyn  
Cook, Eleanor Anne  
Courville, Skylar  
Darby, Claire  
Dauphinet, Lexi Nicole  
Davidson, Brooke Elizabeth  
Deblieux, Paige Jordan  
Delaughter, Hannah  
Derouen, Dylan Paul  
Ducote, Claire Hebert  
Dupuis, Mackenzi Clifford  
Fazal-ur-Rehman, Fatima  
Finger, Nicole  
Flores, Marcela  
Fox, Kelsey  
Franco, Celeny  
Frederick, Kaitly  
Frith, Katie Marie  
Frugé, Matthew  
Fulmer, Rachel Marie

Griffard, Gabriel  
Griffin, Lauren  
Hall, Tiffany Nicole  
Hartmann, Arik  
Hebert, Caitlin  
Hillard, Cory  
Huffman, Gerald  
Huynh, Bao Thai  
Istre, Jamie  
Johnson, Dana Mishel  
King, Taylor Denise  
Kitchen, Blake  
Laborde, Morgan Elaine  
Lauchner, Amber Rose  
Lee, Miranda Adelene  
Leonpacher, Lauren Angelle  
Lestelle, Lillian Dupont  
Ling, Chai Hui  
Louis, Nicholas Joseph  
Loomis, Kathryn  
Lugo, Maria  
Marcel, Alyssa Catherine  
McKee, Gregory Kyler Dean  
McLeod, Jennie  
Miller, Erin Cinderella  
Moeller, Cambri Elizabeth  
Mostrom, Matilda Jonna  
Murray, Kaleb Jordan  
Musso, Emily  
Oudomrath, Adrian  
Pacetti, Derien  
Paul, Delilah  
Perkins, Wil  
Phearse, Andre

Phung, Delena Hien  
Pomeranke, Kramer  
Putnam, Gregg  
Redrick, Hayley Juliana  
Rees, George  
Reggie, Adam  
Resendez, Alexis  
Romero, Sarah  
Roy, Ashley Elizabeth  
Saucier, Leslie Catherine  
Schexnayder, Marae Lisa  
Scroggs, Jacob Dylan  
Semien, Gabrielle  
Soileau, Kelsey Elizabeth  
Stephen, Cayman  
Storey, Brandy  
Strauss, Fabian  
Ta, Tan  
Tarzetti, Cole  
Thompson, Matthew Scott  
Torres, Hayden  
Tran, Diana  
Tromblay, Alix Laya  
Victorian, Rakeitta Andrea  
Walker, Quincy  
Warren, Kaitlyn  
Watson, Antoinette  
Whiteside, Shaunda Leshea  
Williams, Catherine Julianne  
Wimmer, Miranda  
Woods, Gina Marie  
Zeringue, Alexandra

**Congratulations and best wishes to all of our 2017 graduates!**