The Society for Integrative & Comparative Biology

SICB Newsletter

Spring 2017 Issue

Division of Comparative Physiology & Biochemistry

Contents

DCPB Officers & Representatives

Inna Sokolova
Chair 2016-2018

Kimberly Hammond
Chair-Elect 2017-2018

Stephen Secor
Past Chair 2016-2018

Robin Warne
Secretary 2016-2018

Wes Dowd
Program Officer 2017-2019

Catherine Dayger
Student/Postdoc Representative 2015-2018

Message from the DCPB Chair

Inna Sokolova, Chair.DCPB@sicb.org

Inna Sokolova, University of Rostock-Germany

Warmest greetings from the Baltic shores! I hope you are enjoying the spring, which has also made its tentative appearance in northern Germany, as the days grow longer and crocuses and snowdrops begin to bloom. It is, however, still colder than was January in New Orleans where the magic of the "Big Easy" and the allure of comparative and integrative biology have combined to produce a very dynamic and successful meeting – the largest SICB meeting ever with over 2341 attendees and 1971 submitted abstracts. The Division of Comparative Physiology and Biochemistry (DCBP) had a strong presence at SICB 2017 including:

- 88 oral presentations in 15 sessions covering a diversity of physiology topics such as energetics and metabolism, thermal physiology, water and ion homeostasis, and digestive, stress, respiratory, and reproductive physiology,
- 105 posters in physiologically-themed poster sessions,
- 191 abstracts with DCPB as the primary division affiliation (with ~40% of abstracts contributed by students),
- 72 entrants in the DCPB Best Student paper competition.

I would like to extend my sincerest thanks to our current and incoming Program Officers, Jason Podrabsky and Wes Dowd, for their hard work on selecting the abstracts for the presentations and creating the scientific program that contributed to the meeting's outstanding diversity and scientific quality.

DCPB also sponsored four symposia at the New Orleans meeting including "Indirect Effects of Global Change: from Physiological and Behavioral Mechanisms to Ecological Consequences" organized by Alex Gunderson, Jonathon Stillman & Brian Tsukimura, "The Ecology of Exercise: Mechanisms Underlying Individual Variation in Movement Behavior, Activity or Performance" organized by Tony Williams, Shaun Killen & Ryan Calsbeek, "Evolutionary Impacts of Seasonality" organized by Caroline Williams & Gregory Ragland, and "With a Little Help from My Friends: Microbial Partners in Integrative and Comparative Biology" organized by Kevin Kohl and Denise Dearing. The symposia were very well attended, and I am

looking forward to seeing the symposium papers published in *Integrative and Comparative Biology* (ICB). I would also like to encourage DCPB members to consider developing more special symposia for the upcoming meetings. They serve as an excellent platform for focused discussions on important topics in comparative biology, a great way to network with colleagues who share your interests and scientific passions, develop new collaborations and to keep the Society's main publication outlet healthy and thriving. If you need more reasons, consider that the symposia papers are the staple of the ICB, which in turn is a major source of income for the SICB, helping us to keep the annual meetings' costs as low as they have been for these past years. If you have an idea for a symposium for the 2019 or later meetings, please contact Wes Dowd or me to discuss further details.

The long-standing tradition of excellence of the plenary George Bartholomew Award lectures sponsored by DCPB was continued in 2017 by this year's **George Bartholomew Award recipient, Dr. Michael Sheriff**, Assistant Professor at Pennsylvania State University, where he continues his current research, supported by NSF, and explores the role of maternal stress in lizards for regulating behavioral and ecological responses to invasive species. Michael's talk on "Integrating physiology, behavior, and ecology to understand the mechanisms that regulate and limit animal populations" was a great example of quintessentially integrative research and showed how taking laboratory-based physiology into the real world provides new insights into the ways that organisms function in their native environments and challenge the textbook dogmas. Michael's work bridges physiology, behavior, and ecology to understand the drivers that shape individual characteristics of animals and through that impact their populations and communities, using examples of animals almost pole-to-pole – from Arctic ground squirrels and snowshoe hares to fence lizards in Alabama. Dr. Sheriff was selected from a highly competitive pool of nominees by the selection committee, composed of Adam Summers (Chair), Alison Sweeney, Marty Martin, Stacey Combes, and Robert Cox. DCPB thanks the committee for their service, and also extends sincere thanks to John Lighton and Robin Turner of Sable Systems International for their continued generous support of the George Bartholomew Award.

Michael Sheriff, 2017 Bartholomew Award Winner

DCPB also continues to be a strong supporter of SICB's culture of involvement of young researchers (including students and postdocs) in the Society's activities. The meeting in New Orleans had outstanding student participation rates and many excellent posters and talks presented by the next-generation scientists, with a new record number of submissions (72) for the annual competition for the Best Student Presentation. By tradition, DCPB names the Best Student Presentation award in the honor and memory of an eminent comparative physiologist or biochemist who has recently passed away. This year's award is named in honor of Prof. Otto Kinne, a distinguished marine ecophysiologist known for his groundbreaking work on physiological mechanisms of salinity and temperature adaptations and osmoregulation in aquatic organisms. He was also among the first researchers in the field of ecophysiology to investigate the role of non-genetic heritable maternal effects in environmental adaptations long before the term 'epigenetics' became a buzzword. The Otto Kinne Award for the Best Student Oral Presentation was awarded to **Julia Gauberg** for her talk on "Effect of ion-poor water on region-specific paracellular permeability properties of rainbow trout skin." The Otto Kinne Award for the Best Student Poster Presentation went to **Jonathan Perelmuter** for his presentation on "Dopaminergic modulation of hearing in the plainfin midshipman fish." Second place and honorable mentions went to **Eric Armstrong** for his talk entitled, "Symbiont photosynthesis in giant clams is strongly promoted by host H+-transport," and to **Reynolds Kirby** for the poster, "Changes in cardiac mitochondrial bioenergetics after 24h of crude oil exposure in sub-adult mahi-mahi (*Coryphaena hippurus*)." Prof. Kinne, who was passionate about scientific communication and a strong supporter of young scientific talent, would have greatly enjoyed the research and the presentations of these students. On behalf of DCBP, I congratulate the winners on this honor and thank them, as well as other students who participat-

ed in the competition, for the excellent contributions to the scientific program of the SICB. I am also grateful to Valentina Di Santo for coordinating the judging of the student presentations and for completing this formidable work with outstanding efficiency, as well as to all DCPB members who volunteered as judges for this competition.

Last but not least, I would like to thank DCPB Secretary, Robin Warne, for his outstanding job on coordinating the DCPB's business and keeping everyone organized and on track, DCPB's Chair-Elect Kim Hammond for her support of the Division and for standing in for me on those occasions when my overseas travel interfered with my ability to participate in SICB's business meeting, our outgoing and incoming Program Officers, Jason Podrabsky and Wes Dowd, for organizing this meeting's scientific program, and Catherine Dayger for her service as the Division's representative to the Student/Postdoctoral Affairs Committee (SPDAC) and our liaison to the new generation of SICB's scientists. My personal heartfelt thanks also go to our Past Chair Stephen Secor for his help and unwavering willingness to share his great accumulated knowledge on all things DCPB.

I thank you for your continuing support of SICB and DCPB, and look forward to seeing you in San Francisco! If you have any ideas, suggestions, or questions, please contact me at Chair.DCPB@sicb.org.

Message from the DCPB's Best Student Presentation Judging Coordinator

Valentina Di Santo, vdisanto@fas.harvard.edu

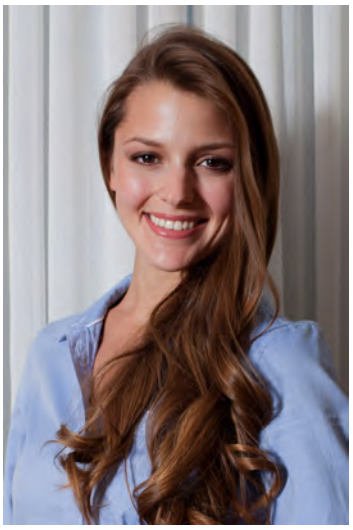
Valentina Di Santo, Harvard University

This year 72 students presented their research for the Best Student Presentation competition. Forty judges volunteered to assess student presentations and each student was evaluated by up to 3 judges. This year's award, named after Prof. Dr. Otto Kinne, was awarded to **Julia Gauberg** (York University) for best student oral presentation, and to **Jonathan Perelmuter** (The City University of New York) for best student poster presentation. Congratulations to the winners for their outstanding presentations, described in more detail below, and to all the students who participated in the competition.

This year the DCPB student presentation awards were named in honor of Dr. Otto Kinne (1923-2015). Dr. Kinne was a prolific researcher in marine ecophysiology renowned for his work on physiological mechanisms of osmoregulation and temperature adaptations in aquatic animals. He was also the founder of the Inter-Research Institute and Publication House, as well as the founder of numerous scientific journals including *Marine Ecology Progress Series* and *Diseases of Aquatic Organisms*. In 1992 he also created the Otto Kinne Foundation (OKF), which strived to provide financial support to promising young scientists in eastern European countries. These endeavors sought to moderate the difficulties faced by scientists in Eastern Europe and Asia, in particular India. Throughout his career, Dr. Kinne advanced science and the pursuit of knowledge. While his personal contributions will be missed, his legacy lives on in the many institutions and publications he founded. Greater details can be found in the memoriam by V. Smetacek (2015) *Marine Ecology Progress Series* 528:1-6 (article link).

The Otto Kinne Award for Best Student Oral Presentation

Julia Gauberg, York University



Effect of ion-poor water on region-specific paracellular permeability properties of rainbow trout skin.

Skin is the main component of the vertebrate integumentary system, and its primary function is to act as a protective barrier. Due to its crucial role as a barrier tissue, the basic structure of vertebrate skin (e.g., epidermis, dermis) can be observed across species. By separating internal and external environments, skin can help to prevent pathogen invasion, regulate body temperature, and maintain electro-

lyte and fluid balance. Teleost fishes do not possess heavily keratinized outer layers of skin. Instead, the skin of these fishes presents an outer layer of living epithelial cells that are in direct contact with water and must deal directly with the challenges of life in an aquatic setting. For example, in freshwater (FW), teleosts possess hyperosmotic internal fluids, which leads to passive ion loss across tissues that interface with the surroundings. Yet, despite a complex structure and extensive contact with the external environment, the skin of adult FW fishes is classically regarded as a static, passive barrier to diffusional ion loss. Recent studies have shown that select tight junction (TJ) proteins alter in transcript abundance during salinity acclimation, but a broader picture of how the molecular components of the fish skin TJ complex respond to environmental change is lacking. The present study examined regional TJ protein response to environmental change (i.e., acclimation to ion-poor water, IPW) in FW rainbow trout (*Oncorhynchus mykiss*) skin. Acute and chronic treatment with IPW resulted in alterations of Cldn protein abundance in a region-specific and time-dependent manner. This study also provided a new look into an *ex vivo* technique, the Franz Cell, for measuring ion flux and paracellular permeability of fish skin. These data provide a unique look at the region-specific changes of TJ complex components in the adult fish skin and connect them to region-specific permeability properties.

The Otto Kinne Award for Best Student Poster Presentation
Jonathan Perelmuter, The City University of New York

Dopaminergic Modulation of Hearing in the Plainfin Midshipman Fish

Although dopamine has been identified as an efferent neuromodulator in the rodent peripheral auditory system, its functional role in audition related to adaptive behaviors is unknown, and similar investigations have not been conducted in anamniotes. Our lab has identified dopaminergic innervation in the inner ear of the plainfin midshipman (*Porichthys notatus*), a marine teleost that utilizes vocal signals for seasonal reproduction. Females undergo a hormone-dependent enhancement of hearing during the summer reproductive season that coincides with a reduction in the dopaminergic input to the ear, suggesting that dopamine has an inhibitory effect on inner ear physiology. We therefore tested the hypothesis that dopamine would reduce the auditory sensitivity of the saccule, the main organ of hearing in midshipman. Auditory evoked potentials of saccular hair cells were recorded in the presence of dopamine and receptor agonists. Dopamine and a D2 receptor agonist (quinpirole) inhibited auditory evoked responses by raising thresholds (i.e., decreasing auditory sensitivity), but a D1 receptor agonist (SKF-38393) had no effect. Furthermore, a D2 receptor antagonist (sulpiride) blocked the inhibitory action of dopamine. Our results suggest that seasonal changes in dopaminergic tone may be an important mechanism that contributes to the seasonal plasticity of auditory sensitivity reported for the midshipman. This is the first demonstration of dopaminergic modulation of inner-ear auditory sensitivity in an anamniote and raises the possibility that dopamine may be a conserved modulator of peripheral auditory processing across vertebrates.

Call for Nominations from the Chair of the Bartholomew Award Committee
Adam Summers, University of Washington

Nominations for this year's Bartholomew Award are **due on August 24, 2017**. This award recognizes integrative research in biochemistry, physiology, functional morphology and related fields and offers the awardee a fantastic opportunity to communicate this research via a large lecture at each SICB conference. We encourage nominations of individuals from under-represented groups in science, including women.

Instructions for Bartholomew Award Nominations:
Eligible candidates are those who have completed their doctorate within the past seven years and who are members of SICB. Candidates for this award may apply themselves or they may be nominated; all candidates will be evaluated equally. Applicants should submit a short description of their work, selected reprints, and curriculum vitae to Dr. Adam Summers, the Chair of the Award Committee. Three letters of recommendation should be solicited from colleagues who know of the nominee's work. Nominators must arrange for these same materials to be sent to Dr. Summers (fishguy@uw.edu). The person chosen as the recipient of this award will be invited to present

a special address at the 2018 SICB Meeting in San Francisco. In addition to a cash prize, the recipient will be reimbursed for expenses incurred to attend the meeting. Greater details can be found at http://www.sicb.org/membership/awards.php3#bart

Message from the DCPB Program Officer
Wes Dowd, DPO.DCPB@sicb.org

Wes Dowd, Loyola Marymount University

New Orleans 2017
New Orleans was a great, albeit surprisingly cold, venue for SICB 2017. Our Division sponsored slightly over 10% of the oral sessions. DCPB also co-sponsored four excellent symposia in New Orleans that were well attended and well received. These symposia should make compelling additions to this year's issues of *Integrative and Comparative Biology*:

Indirect effects of global change: From physiological and behavioral mechanisms to ecological consequences

The ecology of exercise: Mechanisms underlying individual variation in movement behavior, activity, or performance

Evolutionary impacts of seasonality

With a little help from my friends: Microbial partners in integrative and comparative biology

This year's recipient of the Division's Bartholomew Award, Michael Sheriff of Penn State University, shared his work combining organismal physiology and population ecology in a lecture titled "Integrating physiology, behavior, and ecology to understand the mechanisms that regulate and limit animal populations." Nominations for the Bartholomew Award are due on August 24, 2017, but it is never too early to think about nominating someone for this prestigious honor (http://www.sicb.org/membership/awards.php3#bart).

Among student members, Julia Gauberg of York University (Canada) received this year's Otto Kinne Award for best oral presentation, and Jonathan Perelmuter of CUNY Graduate Center received the Otto Kinne Award for best poster presentation. Student members, stay tuned over the summer months for new guidelines and requirements for competing for the Division's Best Student Presentation awards.

Finally, a big thank you to everyone who chaired a session or judged Best Student Presentation entrants in New Orleans. The Division will continue to call on all of you to keep making our corner of the SICB meeting a success.

Return to San Francisco: Mark your calendars now for January 3-7, 2018, for the Society's return to this very popular venue. The trend of record-setting SICB attendance and abstract numbers is very likely to continue. More information will be distributed over summer and fall regarding reservations and abstract submission. There will be 11 symposia at SICB 2018 (see http://www.sicb.org/meetings/2018/symposia/index.php), of which the Division has co-sponsored three that were particularly eye-catching:

Inside the black box: the mitochondrial basis of life-history variation and animal performance (Organizers: Karine Salin & Wendy Hood)

Behavioral and physiological adaptation to urban environments (Organizers: Jenny Ouyang & Davide Dominoni)

Understanding the evolution of endocrine system variation through large-scale comparative analyses (Organizers: Maren Vitousek, Jerry Husak, & Michele Johnson)

Please feel free to contact the relevant organizers if you are interested in presenting in the complementary session to a symposium.

Submit a Symposium Proposal for Tampa 2019: The Division is looking for your outstanding ideas for symposium proposals for Tampa. All 11 proposals for the 2018 meeting were accepted by the SICB

Program Committee, and the Society is keen to sustain this vital part of the annual meeting and of ICB. Let's keep the streak of strong DCPB symposia alive. The official call for symposia for the 2019 meeting has gone out, and applications are **due August 24, 2017**. Symposia that look to define emerging concepts or major advances in a field, are integrative across disciplines, and include a diversity of speakers (in terms of speaker gender, background, and academic rank) are more likely to gain broad support within SICB and with funding agencies such as NSF. Feel free to contact me at the email address above with ideas for symposia or with questions. Society Program Officer Rick Blob (programofficer@sicb.org) is also very helpful in formulating ideas and discussing the process. I already have a preliminary list of symposium ideas from discussions in New Orleans, and I'll be contacting those individuals to expand these "nuggets" into full-blown proposals soon. There also was talk at the 2017 Division business meeting of creating a "symposium wall," which would basically be an opportunity to throw up ideas and see what sticks within the Division. If you have thoughts on this or any other creative way to encourage symposium submissions from DCPB, please reach out to me. Student and postdoc members are also encouraged to take part in organizing a symposium; it is a great way to increase the visibility of your work and to network.

One of the criteria for submitting a symposium proposal is that you agree to seek external funding to help support the attendance of your speakers. Society-wide conversations are ongoing regarding how to facilitate this process, for example by sharing past examples of successful NSF symposium proposals.

Message from the DCPB Student/Postdoctoral Affairs Committee Representative

Catherine Dayger, cdayger@pdx.edu

Catherine Dayger, Portland State University

It's been a few months now since the Annual meeting in New Orleans. Not only was the SICB meeting stimulating and thought-provoking, visiting New Orleans was a fantastic treat. I greatly enjoyed getting to spend some time getting to know New Orleans, with it's remarkable history and culture and food and people. I can't wait to return.

This year SICB supported an outreach event where student and post-doc members of SICB traveled to New Orleans-area schools to present a hands-on, interactive activity on what it's like to be a scientist. The event was organized by Glenna Clifton and Kari Taylor-Burt from Harvard University and reached over 1200 students over two days. I was thrilled to participate and had a ton of fun, with the help of Jen Carr from Tufts University, talking with 4 classes of 7th graders. What a great way to talk about our science with a new audience and share some of the work scientists do! I know Jen and I were impressed with the students' fun and thoughtful participation. I thank Kari and Glenna for the huge amount of work they put in to pull off such an ambitious and successful event. Thanks also to SICB for providing financial support to make it happen.

You may have already heard that, as of November 2016, SICB has adopted a Meeting Code of Conduct. A code of conduct is an important step to establish the standard of behavior we should all expect to portray when attending SICB meetings, and I applaud the Executive Committee for developing the Code. The Code of Conduct also outlines reporting procedures should a meeting attendee need to make a complaint. If you haven't already read the Code, you can do so here. If you have any questions, thoughts or concerns, especially if you have a way to make the Code even better, please contact Zen Faulkes at zen.faulkes@utrgv.edu.

Perhaps the Federal transition has introduced some uncertainty into your mind, as it has mine. I've been encouraged by seeing pictures of my colleagues with hashtags like #actuallivingscientist and #dresslikeagirl and #ScienceMarch. I encourage you to try searching those hashtags to get a glimpse of all the voices of scientists affirming the important work scientists DO and cool and motivating people scientists ARE. On that note, I am also proud to see that SICB, along with 58 other organizations, signed on to a letter from the American Institute for Biological Sciences urging President Trump to make scientific research and education a priority.

Finally, as always, I want to remind students and post-docs of the excellent list of grants and fellowships that the committee curates on the SICB website at http://www.sicb.org/grants/externalgrants.php. You can log in with your last name and member number and find all sorts of opportunities.

Facebook page: https://www.facebook.com/sicbspdac
Twitter account: @SICB_SPDAC
SICB Student-Postdoc Awards & Grants: www.sicb.org/students/

Message from the DCPB Secretary
Robin Warne, Secretary.DCPB@sicb.org

Robin Warne, Southern Illinois University

Thanks to everyone who helped make the 2017 New Orleans meeting a great success! In particular, much thanks to Valentina Di Santo for taking over the duties of DCPB Student Presentation Judging Coordinator. She did a wonderful job while learning on the fly.

There were 70+ student entries in the competition, and it is no small feat to organize the judging of these presentations. I would also like to sincerely thank the many DCPB members who volunteered to serve as judges for the competition – we really appreciate your time and dedication to the DCPB.

This will, however, be the last year with this judging format. During the 2017 business meeting, the DCPB members who were present voted for the DCPB Executive Committee to develop a session of presentations (both oral and poster) devoted to the DCPB Student Presentation competition. Towards this end, students who wish to present during these sessions will be asked to submit a cover letter or detailed abstract when they register for future meetings. Please stay tuned for future announcements about this revised process.

We are also pleased to welcome aboard Kim Hammond as the DCPB Chair-Elect. She will begin her two-year term as Chair beginning in 2018.

Elections for our Divisional Secretary, to replace me when my term ends in 2018, will take place later this spring. The new Secretary will serve a two-year term beginning at the conclusion of the 2018 meeting. We have two excellent candidates for the position: Dr. Marshall McCue and Dr. Matt Gifford. Ballots will be issued in May, so keep an eye out for the SICB Election email and please vote! On behalf of the DCPB, I sincerely thank these outstanding candidates for their willingness to serve our division.

If there is anything you would like to discuss or some news you would like announced to the DCPB membership, please don't hesitate to contact me at Secretary.DCPB@sicb.org. If you would like to see your research highlighted on the SICB website, please send me a research picture, title for the picture/research, and a brief (1-3 sentences) description of your research via email. Examples can be found here.

Thanks to all of our members for your continued support of the DCPB – I look forward to seeing you all again in San Francisco!

To access the Minutes of the DCPB Business Meeting held in New Orleans on 5 Jan 2017, click here.

The Society for Integrative & Comparative Biology

SICB Newsletter

Spring 2017 Issue

Candidates for DCPB Secretary

Matt Gifford, University of Central Arkansas, Candidate for DCPB Secretary

Matt Gifford
Current Position: Assistant Professor, Department of Biology, University of Central Arkansas, Conway, AR.

Education: B.S., Biology, Avila College, Kansas City, MO (1999); M.S., Biology, University of Texas at Tyler, Tyler, TX (2002); Ph.D., Ecology, Evolution, and Population Biology, Washington University in St. Louis, St. Louis, MO (2008); Postdoc, Bell Museum of Natural History, Department of Fisheries, Wildlife, and Conservation Biology, University of Minnesota (2008-2009).

Professional Experience: Assistant Professor, Department of Biology, University of Arkansas at Little Rock (2010-2014); Assistant Professor of Biology, University of Central Arkansas (2014-present).

SICB Activities: Member since 2006; Judge for Best Student Presentations (DCPB and DEE); 20 total oral and poster presentations at SICB (13 of which by mentored students).

Other Memberships: American Society of Ichthyologists and Herpetologists; Society for the Study of Amphibians and Reptiles; Herpetologists' League.

Research Interests: Research in my laboratory is broad, but generally focuses on two interrelated themes: (1) understanding the influence of spatial and temporal environmental variation on physiological function, and (2) exploring the fitness consequences of functional variation. We integrate diverse methodological approaches including behavior, respiratory physiology, endocrinology, biochemistry, and physical performance in field- and lab-based projects. We typically focus our studies on reptiles and amphibians, but recent work has included crustaceans and insects. Our current research explores how maternal effects and incubation conditions influence physiological phenotypes in hatchling lizards and potential life history/energy allocation consequences through ontogeny.

Goals Statement: It is an honor to be nominated to serve SICB as the DCPB Secretary. Since my first experience at a SICB meeting as a graduate student, this organization has been my primary professional society as I progressed through my postdoc and now as a faculty member. Regular attendance at this meeting has greatly contributed to and inspired my growth as a scientist. I make an intense effort to introduce the Society to a new generation of graduate and undergraduate students, encouraging membership, contribution, and attendance at the annual meeting. I am very excited about the opportunity to serve the Society and Division as DCPB Secretary. The role of our scientific organizations has taken on renewed importance given recent national and world events. If elected as Secretary of DCPB, I will work to continue the efforts of current officers and representatives to expand membership engagement both within and outside the Society. I will actively advocate for our Division to the student and postdoc membership to facilitate their involvement, ensuring a vibrant and diverse group within the broader Society.

Marshall McCue

Marshall McCue, St. Mary's University, Candidate for DCPB Secretary

Current Position: Associate Professor, Department of Biological Sciences, St. Mary's University, San Antonio, TX.

Education: B.S. summa cum laude, Zoology, University of Florida (2001); M.S., Biology, University of California Irvine (2003); Ph.D., Biology, University of Arkansas (2008).

Professional Experience: Post-doctoral Researcher, Blaustein Institutes for Desert Research, Israel (2008-2010); Assistant Professor, Department of Biological Sciences, St. Mary's University (2010-2014); Associate Professor, Department of Biological Sciences, St. Mary's University (2014-present).

SICB Activities: Division of Comparative Physiology and Biochemistry, active member since 2001; Judge for Best Student Poster competitions; Session Chair; Bartholomew Award, two-time nominee; Symposium submission proposals for the 2013 and 2014 annual meetings; Peer reviewer for manuscripts for Integrative and Comparative Biology; authored or co-authored >20 posters/talks with students and collaborators.

Other Memberships: American Physiological Society; Comparative Nutrition Society; International Society for Respiratory Science; Society for Experimental Biology.

Research Interests: I study the physiological responses that animals employ to survive, and often thrive, in the face of the challenges posed by their respective environments. In the past few years my lab has studied environmental stressors including fasting/starvation, hypoxia, hypercapnia, and extreme temperatures, as well as physiological responses to states of elevated metabolic demands caused by digestion and exercise. My commitment to the August Krogh Principle has led me to study a variety of animals including reptiles, rodents, birds, humans, insects, bats, fishes, and amphibians (in no particular order). My laboratory is continually developing new approaches to use stable isotopes to track nutrient allocation and substrate oxidation in animals.

Goals Statement: Over the past 16 years, I have experienced the DCPB through the lens of an undergraduate student, graduate student, postdoctoral researcher, and faculty member. The mission of the DCPB, more than any other group, has always paralleled my research interests, and now I look forward to formally serving the DCPB. As an officer, I would encourage other DCPB members to attend the annual business meetings to learn more about their home Division. As secretary of the DCPB, I will faithfully and accurately record the minutes of annual business meetings and work with DCPB members to create our Divisional newsletters. A unique focus of my tenure as DCPB Secretary will be to dramatically increase the size of our Researchers Database on the SICB website. This website represents a critical portal for the press and lay public, as well as current SICB members, and therefore should highlight the important scientific contributions made by DCPB members. I will achieve this goal by reaching out to long-term members of our Division, and then encouraging younger faculty, postdocs, and graduate student members to follow their lead.

The 90th Anniversary of Physiological and Biochemical Zoology

Theodore Garland Jr., PBZ Editor in Chief

90th Anniversary of Physiological and Biochemical Zoology

Thank you to the DCPB membership for your support and service to PBZ! At PBZ, we recently implemented positive changes to the publication process.

1. Preprint / Just Accepted Articles

Each accepted paper will now be made available immediately online so that it may be cited even before typesetting. The first such article can be viewed here: http://www.journals.uchicago.edu/doi/abs/10.1086%2F691690

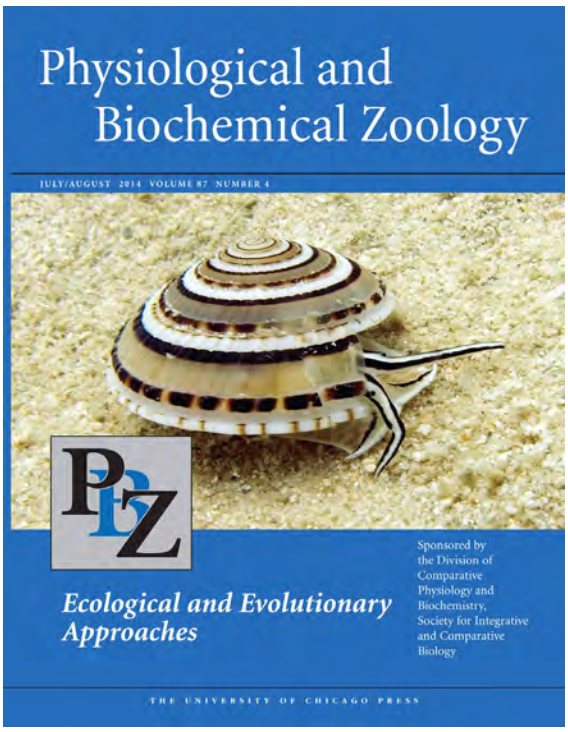
2. Electronic Articles Paginated Immediately

In the current system, papers are posted electronically under an "Ahead of Print" heading with no page numbers. The new system, beginning with the July/August 2017 issue, will assign an issue and page numbers to articles as they are posted.

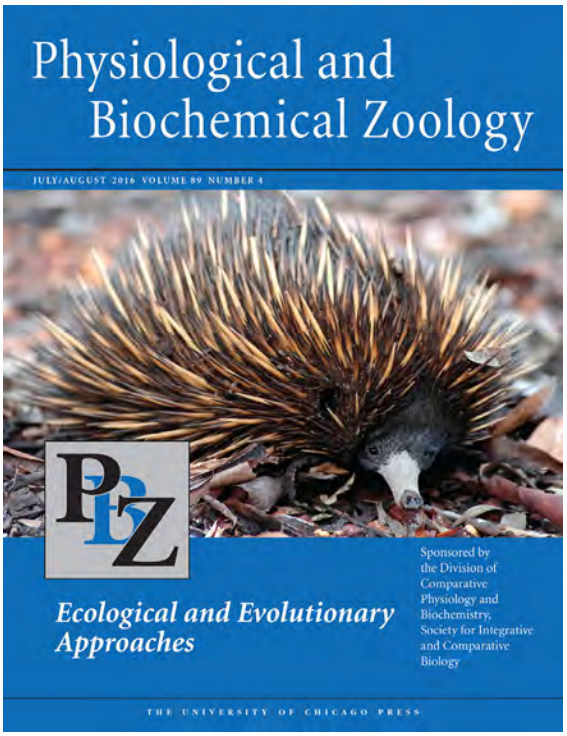
And, if you haven't already seen it, the 90th year editorial has been published—it includes a list of the Top 90 Cited Papers of all time in PZ/PBZ, and during 2017 all these papers are open access. Feel free to distribute this link to all who may be interested. The list of 90 top papers with their links is also available here: http://www.journals.uchicago.edu/journals/pbz/90th-anniversary.

Finally, please remember to submit your best work to PBZ, and encourage your colleagues to do the same.

90-1 cover: This Northern bobwhite quail, Collins virginianus, was photographed by Mark Chappell in Southern Texas.



87-4 cover: This sundial marine snail, Architectonica perspectiva, was photographed by Nick Chapman from Chaloklum Diving, at Koh Phangan, in the Gulf of Thailand.



89-4 cover: This short-beaked echidna, Tachyglossus aculeatus acanthion, was photographed by Christine Cooper at Dryandra Woodland, Western Australia.