Note from the President’s Corner

Fellow Indiana Academy of Science Members,

Thank you all for your participation at the Annual Meeting despite the unfavorable weather. I hope you will join me in thanking our Executive Director, Delores Brown and her office for another successful and well-organized meeting. As you noticed, we made a few changes to the order of business by moving some activities from the afternoon to early morning, and it all went smoothly. Special thanks also go to Dean Weisman and his group of student volunteers for their invaluable help and to Section Chairs and Vice-chairs for managing activities in their respective sections. The generosity of our sponsors, Eli Lilly and Company, W. K. Kellogg Foundation, Indiana University, Citizens Energy Group, and White River State Park is also acknowledged and appreciated.

Overall, we had a well-packed day with an interesting collection of hot-topics, workshops, and poster presentations in addition to our regular oral sessions. We counted more than 400 participants which included a good number of undergraduate and graduate students who presented their research. Congratulations, students for taking part in this important scientific event! I encourage you to remain engaged in Academy activities and to continue to work with dedication and perseverance.

The Academy thanks Meteorologist Daniel McCarthy of the National Weather Service Forecast Office in Indianapolis for his enjoyable, informative, and educational luncheon presentation. Also at the luncheon, the Academy formally recognized several members for their professional accomplishments and dedication to the Academy. Dr. John Castrale was awarded the Distinguished Scholar Award, Dr. Rebecca Dolan was awarded the Distinguished Service Award, and Dr. Bruce Kingsbury, Dr. Jennifer Kowalski, Dr. Jordan Marshall, and Dr. Eric Rubenstein were named 2018 Academy Fellows.

At the meeting, I had the honor of passing the gavel to President-elect Dr. Alice Long Heikens from Franklin College.
Dr. Heikens will assume the President’s role in June and will work with the Council and the membership to share her vision for the future of the Academy.

It has been an honor and a truly rewarding experience to serve as Academy President this past year. I am grateful to Academy members who provided feedback and suggestions and to everybody for participation in Academy events, not only at the Annual Meeting, but also in events throughout the year. Please make sure to visit our website at https://www.indianaacademyofscience.org for updates and to find Academy activities that need your participation. You can also find or request contact information to follow up on your topics of interest. In particular, keep in mind that the main purpose of Workshops and Panel Discussions is to promote and stimulate sustained discussions.

Please mark your calendars for the 134th Annual Academy Meeting which will take place on March 30, 2019 at the JW Marriott in Indianapolis. I look forward to seeing you all then, if not before.

Enjoy your summer!

Respectfully yours,

Horia

Horia I Petrache, Ph.D.
President
Indiana Academy of Science

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**It’s summertime! Students are getting out of school and parents are looking for summer programs!**

Health & Science Innovations, Inc. is excited to roll out our two summer programs, **Young Innovators Quest (YiQ)** and IDEAA. We still have open spots for both of our programs and are looking for passionate students interested in STEM and medical fields. There are also scholarships available for both programs! If you know any student or family that could benefit from our programs, the link to apply can be found below! More information about each program can be found by clicking on the program picture to access the flyer!

Find out more information about Health & Science Innovations, Inc., links and registration to our programs, and what we do from our website: [http://healthandscienceinnovations.org/](http://healthandscienceinnovations.org/)
From the Executive Director

Academy Members,

As we continue to enjoy these wonderful weather days, I hope you will take this opportunity to reflect on the 133rd Annual Academy Meeting and all that it was able to provide for you. It was a great day in Indiana for sure, despite the challenging weather. Over 400 individuals joined us for a whole day dedicated to SCIENCE. Select images from that day are in this edition of the Academy Newsletter. Several of the attendees and presenters have followed up to let us know how happy they were to have participated this year. Please plan now to attend the 134th Annual Academy Meeting next year, March 30, 2019 at the J.W. Marriott Hotel, in downtown Indianapolis.

With all of the great research, workshops and hot topic discussions to choose from this year, some of you may have missed the Fulbright Gant Program hot topic discussion. If you were not able to attend the Fulbright hot topic discussion this year, but remain interested, please note the following time-sensitive information:

**Fulbright US Student Program- Deadline October 9, 5PM Eastern Time**

- The Fulbright U.S. Student Program offers research, study and teaching opportunities in over 140 countries to recent graduates and graduate students.
- A network of nearly 1,600 volunteer Fulbright Program Advisers on campuses nationwide assist in the recruitment.
- More than 3,600 candidates are recommended by 157 subsections of the National Screening Committee, composed of 457 senior faculty or field of study professionals.

**Getting Started**

**Application Components:** Organized by type of award, here our website unpacks each aspect of our application.

**Country Profiles:** Organized initially by region, applicants can search for awards by country.

**Types of Awards:** Prospective applicants can search for Teaching/Research; ETA Awards; find information on the Critical Language Enhancement Award, and more.

**Eligibility Requirements:** Note, these are general- each award will have specific eligibility parameters.

**Videos and Tutorials:** Including archived webinars, virtual advising videos, and more.

**Fulbright Blog:** Written and video posts about Fulbrighters.

**Fulbright Directory:** Fulbright US Student Grantees and Alumni

**Contact Information:** Including the regional team email addresses.

The website where this information can be found is [https://www.cies.org/application-guidelines](https://www.cies.org/application-guidelines)

Enjoy your summer!

Delores
Highlights of the 133\textsuperscript{nd} Annual Meeting of the Indiana Academy of Science

Keynote Speaker Daniel McCarthy

Plenary Speaker
President Horia Petrache

Paper Sessions
Highlights of the 133\textsuperscript{nd} Annual Meeting of the Indiana Academy of Science

Poster Session

Dr. Rebecca Dolan Receiving the Distinguished Service Award

Dr. John Castrale Receiving the Distinguished Scholar Award
2018 Indiana Academy of Science Awards

The Indiana Academy of Science recognizes individuals who have exhibited extraordinary loyalty and effort to the Academy and to Science. Currently, the Indiana Academy of Science bestows awards in three categories: The Distinguished Scholar Award is bestowed upon individuals who have been recognized by the Academy as having an exceptional record of scholarship. The Distinguished Service Award is bestowed upon individuals who have been recognized as having supported the Academy through service exceeding any normal expectation. A Fellow is a member of the Academy (minimum of 5 years) who has demonstrated service to the Academy and to the advancement of science in Indiana, service to education in science, and achievements in scientific research. Nature of service to the Academy includes attending Indiana Academy of Science meetings, presenting papers at meetings, publishing in the Proceedings, serving as an officer, as a section or committee chair, as a committee member, and/or playing a role in organizing Academy activities. The following individuals were presented these high honors reflecting their exceptional scholarship and service to the Academy at the 2016 Annual Indiana Academy of Science Meeting:

Distinguished Scholar Award

Dr. John Castrale is a Wildlife Biologist with the Indiana Division of Fish and Wildlife. Since 2015, he has been under contract to monitor, manage, and band peregrine falcons and to conduct bat surveys. Previously, Dr. Castrale had a long and distinguished career as a Nongame Wildlife Biologist, Indiana Division of Fish and Wildlife, a position from which he retired in 2014. In that position, he had statewide responsibilities for programs dealing with nongame and endangered birds. Primary projects included restoration of peregrine falcons, bald eagles and osprey; management of least terns, black terns and sandhill cranes; surveys of barn owls, loggerhead shrikes, and colonial waterbirds; and completion and publication of the Indiana Breeding Bird Atlas. He was also state coordinator for the USGS Breeding Bird Survey and state contact for national and regional bird conservation plans.

Dr. Castrale holds a Ph.D. in Zoology from Brigham Young University, Provo, UT, with major in Wildlife and Range Resources. His dissertation research focused on the ecology of passerine birds and small mammals in managed sagebrush-grasslands. John grew up in Evansville, Indiana, and attended Indiana University for a year before transferring to Purdue and receiving a B.S. in Wildlife Science. He pursued graduate work at West Virginia University where he studied the ecology of mourning doves in South Carolina. He has authored or co-authored over 70 scientific publications and reports, the majority of which are from the research that he conducted during his 33 years of service with IDNR. In addition to his numerous publications, John has volunteered his time and expertise by educating hundreds of school children and college students, and he has given numerous newspaper and television interviews during the course of his career.

The name, John Castrale, is synonymous with the recovery efforts by the Indiana Department of Natural Resources (IDNR) to bring back breeding populations of Bald Eagles and Peregrine Falcons to Indiana as both species were extirpated from the state. In recognition of his work, John received the Sagamore of the Wabash award by Governor Mike Pence on February 29, 2016, for his lifetime achievement as a
nongame wildlife biologist. The Sagamore of the Wabash is the “Official State Award of Indiana” given to those who have rendered a distinguished service to the state or to the governor. Other awards include: Lifetime Conservationist Award from the Sassafras Audubon Society, Hoosier Wildlife Award from the Indiana Chapter of the Wildlife Society, DNR Staff Person of the year from the Indiana Wildlife Federation, and Biologist of the year from Indiana Division of Fish and Wildlife, to name a few. Dr. Castrale has been a long and active supporter of the Academy. He was named a Fellow of the Academy in 1998 and has been Section Chair of Zoology, and served on the Biological Survey Committee. He has published regularly in the Proceedings of the Indiana Academy of Science. Dr. John Castrale is a premier example of a distinguished scholar based on his research record and educational and service efforts to the State of Indiana and we are honored to bestow upon him the Indiana Academy of Science Distinguished Scholar Award.

Distinguished Service Award

Dr. Rebecca Dolan is the Director of the Friesner Herbarium of Butler University. Rebecca grew up in the suburbs of Detroit always loving to look at plants and liking them even better when she knew their names and understood their biology. She earned an undergraduate degree from the University of Michigan and a PhD from the University of Georgia, both in Botany. For 30 years, Dr. Dolan has been the Director of the Friesner Herbarium. Dr. Dolan was instrumental in securing funding to build a digital collection of the Herbarium’s 45,000 Indiana specimens, resulting in the Indiana Plant Atlas. She has also done research on plant demography, taxonomy, conservation and restoration ecology in Carolina Bays in South Carolina, serpentine rock outcrops in California, Florida scrub and Midwestern prairies. Rebecca was a charter member and past-president of the Indiana Native Plant and Wildflower Society (INPAWS).

Most recently, Dr. Dolan has been exploring urban flora in Indianapolis. Rebecca is interested in understanding how urban environments filter regional flora and to what extent cities across the globe share spontaneous flora. She collaborates with colleagues in Butler University’s Center for Urban Ecology and also through the National Science Foundation sponsored UrBioNet Research Coordination Network. She is managing Editor for the new journal Urban Naturalist. Rebecca is the author of over 25 scientific articles on restoration ecology, urban botany and genetics of rare plants.

Dr. Dolan has been a dedicated, hard-working individual for the Academy for over twenty years. Because this is an award honoring service to the Academy, listed below are many of her contributions to the Academy over the years:

- President-Elect in 1997, President in 1998, and Immediate Past President in 1999
- Fellow of the Academy since 1999
- Chair, Plant Systematic and Biodiversity Section, 1994, 2012
- Editorial Board of the Proceedings, 1998 – present
- Received 3 Indiana Academy of Science grants
- Has made 15 presentations at the Annual Meeting of the Indiana Academy of Science and mentored students for presentations
- Published 5 times in the Proceedings of the Indiana Academy of Science
- Organizer for the first Indy Urban Bioblitz

One of Rebecca’s most important contributions was as part of an ad-hoc committee that lead the efforts to reorganize the Academy resulting in the establishment of a full-time, permanent position of Executive Director. Dr. Rebecca
Dolan represents the highest dedication to service within the Indiana Academy of Science and we are honored to confer the Distinguished Service Award upon her.

Fellow Awards

**Dr. Bruce Kingsbury** is Professor of Biology and Associate Dean of the College of Arts and Sciences at Indiana University–Purdue University Fort Wayne (IPFW). He obtained his B.A. from Pomona College, M.S. from San Diego State University, and Ph.D. from the University of California Riverside. Dr. Kingsbury’s areas of research include wildlife ecology, behavior, and conservation. Kingsbury and his graduate students have been involved in numerous empirical and applied studies throughout the Midwestern United States on snakes, turtles, amphibians, birds, and mammals and he is considered an expert on several imperiled species. He is the founder and Director of the IPFW Environmental Resources Center (ERC). The mission of the ERC is to promote the understanding and conservation of natural resources in the region, including not only wildlife, but also other topics such as natural landscapes and water quality.

Bruce Kingsbury has a long history with the Academy since his arrival in Indiana. He has served as Chair of the Ecology section, been a member of the Biodiversity and Natural Areas Committee, and helped organize the Bioblitz at Eagle Marsh near Fort Wayne. He has published in the *Proceedings*, and he and his students have given numerous talks at the annual meetings over the years. Most recently, he was nominated for President of the Academy. His research has led to a book (in press) about Indiana reptiles and amphibians, as well as an invited contributor to several other books. He has collaborated with many other Academy members on numerous projects.

**Dr. Jennifer Kowalski** is Associate Professor of Biology, Department of Biological Sciences, Butler University, Indianapolis, Indiana. Dr. Kowalski (Jen) has been a very active member of the Academy since joining in 2009 when she first joined the Butler University faculty from a prestigious Ph.D. program at Harvard Medical School. Her area of expertise, Cell and Developmental Biology has resulted in numerous awards and honors. In her short time as an IAS member, she has been awarded three Senior Research Grants from the Academy, including a $2500.00 grant for 2017-2018 for “Investigation of neuromuscular signaling control by the SUMO conjugating enzyme, UBC-9”. Jen has served as Chair and Vice-Chair of the Cell Biology section and has attended every Academy Annual Meeting since arriving in Indianapolis. Jen’s research and expertise has led her to make several presentations at the annual IAS meetings. In addition, Dr. Kowalski is an excellent student mentor and many of her students have presented their work at the Indiana Academy of Science Annual Meeting.
Dr. Jordan Marshall is Associate Professor, Department of Biology, Indiana University-Purdue University Fort Wayne. Dr. Marshall earned his B.S. in Natural Resources and Environmental Management at Ball State University, his M.S. in Forestry at Michigan Technological University, and his Ph.D. in Natural Resources at The University of Tennessee. Jordan is a terrestrial ecologist with research interests in plant biogeography, community composition and structure, and invasive species impacts and management. As a member of the Academy since 2010, Jordan has mentored numerous graduate and undergraduate students in presenting at the Annual Meeting, publishing in the Proceedings, and receiving Senior Research Grants from the Academy. Jordan participated in the Eagle Marsh BioBlitz, has reviewed several manuscripts for the Proceedings, is currently serving as the Botany Section vice-chair, and will serve as Chair beginning in June 2018.

Dr. Eric Meyer Rubenstein earned a BS in Molecular Biology with minors in religion and philosophy in 2002 at Grove City College. He earned his PhD in Biochemistry and Molecular Genetics in 2008 at the University of Pittsburgh School, of Medicine, where he investigated mechanisms of glucose sensing. He completed postdoctoral research in the Department of Molecular Biophysics and Biochemistry at Yale University, where he studied protein quality. Currently an Associate Professor in the Biology Department at Ball State University, Dr. Rubenstein continues to investigate conserved mechanisms of protein quality control in the model organism Saccharomyces cerevisiae (budding yeast). Discoveries made by students in his lab have implications for several human diseases, including neurodegenerative conditions and cholesterol-related pathologies. He joined the Academy in August 2012 and was vice chair of the Cell Biology Section in 2015-16 and chair of that section in 2016-17. He served as an Editorial Board member for the Proceedings in 2016-17. He was awarded an IAS Senior Research Grant in 2013-14. Dr. Rubenstein has co-authored with students fourteen presentations at annual meetings of the Academy from 2014 to 2017.

**Procedure for Nomination of Individuals for Awards**

The Awards Committee of the Indiana Academy of Science accepts nominations any time of the year. However, to be considered for awards at the next annual meeting, nominations must be received by **October 15, 2018**. Nominations must be submitted online to the Deposit Box found on the Academy website at Member Center > DocumentSharing > Deposit Box > Awards. You must be logged in with your membership login information to be able to do this. Forms for Nominations for Distinguished Scholar and Distinguished Service Awards and the Recommendation Forms for Fellow may be found at [http://www.indianaacademyofscience.org/The-Academy/Awards-and-Fellows.aspx](http://www.indianaacademyofscience.org/The-Academy/Awards-and-Fellows.aspx), follow the link to obtain each form.

Please direct questions to Marcia Moore, Chair of Awards Committee at: awards@indianaacademyofscience.org
THE 45TH NATURAL AREAS CONFERENCE: Building Resilience: The Future of Natural Areas

October 23-25, 2018 Indiana Memorial Union, Indiana University Bloomington, Indiana
Supporting Professionals Protecting Nature
https://www.naturalareas.org/conference.php

This annual event is three days of symposia, oral sessions, poster presentations, social networking events, and field workshops, all aimed at bringing cutting-edge and emerging land management strategies to natural areas professionals.

Featured Speakers: Closing Plenary speakers will be former Director of the National Park Service, Jonathan Jarvis, and Dr. Gary E. Machlis. Former Director Jarvis and Dr. Machlis are the co-authors of The Future of Conservation: A Chart for Rough Water. Professor Scott Russell Sanders, award winning author of A Conservationist Manifesto and Stone Country: Then & Now, is the keynote speaker.

Student Programming and Opportunities: Programming and networking events are offered for students and young professionals. Student scholarships are available for those who qualify, and there is a student poster and presentation competition with cash awards.

National and regional coverage: Sessions will cover a variety of regions and climates—but will also offer strategies appropriate for Indiana’s varied natural areas and land management challenges, such as fragmented landscapes, the legacy of decades of logging & farming, and the role of private land conservation.

Field Workshops: Several outings to local natural areas are planned to offer on-the-ground observation of the best local land management strategies.

Andromeda Movement

The Andromeda Movement supports Indiana students pursuing exciting careers in the field of space exploration. Visit the website, https://www.andromedamovement.org/apply, to apply for scholarships. June 30, 2018 deadline for applications.
Note from the Editor
Please forward items for inclusion in the next newsletter to me at dbjanutolo@anderson.edu by September 1, 2018

39th Annual Indiana Water Resources Association Symposium
“Ensuring a Sustainable Water Future for Indiana” Bloomington, IN June 27-29, 2018
http://www.iwra.info/

The Geological Society of America 130th Annual Meeting, Indianapolis, Indiana
Nov 4-7, 2018
http://community.geosociety.org/gsa2018/home

Academy Council Officers for 2018

President: Alice Long Heikens
President –Elect Vanessa Quinn
Immediate Past President Horia Petrache
Secretary Jessique Ghezzi
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