Ashley C. Kennedy

PERSONAL INFORMATION

Present Position:
Tick Biologist
Delaware Department of Natural Resources and Environmental Control
Division of Fish and Wildlife, Mosquito Control Section
Newark, DE 19702

Email: ashley.kennedy@delaware.gov
Phone: 703.307.4041

EDUCATION

University of Delaware, Newark, DE
Ph.D., Entomology & Wildlife Ecology, Summer 2019
Dissertation: Examining breeding bird diets to improve avian conservation efforts
Advisor: Douglas Tallamy

University of Delaware, Newark, DE
M.S., Entomology, Winter 2013
Thesis: Systematics of the planthopper genus *Caenodelphax* (Hemiptera: Fulgoroidea: Delphacidae) and description of the new genus *Flavoclypeus*
Advisor: Charles Bartlett

Johns Hopkins University, Baltimore, MD
B.A., Psychological and Brain Sciences, Winter 2008
Minor: Environmental Earth Sciences
Thesis: Size and sex effects on dominance hierarchy formation in orphaned vervet monkeys, *Chlorocebus pygerythrus*
Study Abroad: Centre for Wildlife Management Studies, Kimana, Kenya, Spring 2007
Advisors: Rachel Piferi (major), Katalin Szlavecz (minor)

EMPLOYMENT

Delaware Department of Natural Resources and Environmental Control (DNREC)
Division of Fish and Wildlife, Mosquito Control Section, Newark, DE
Tick Biologist, May 2020-Present
• Manage the state's tick and tick-borne pathogen surveillance program, conducting active (i.e., dragging, mammal-trapping) and passive (via submissions from vet clinics and other participants) surveillance; educate public about tick-associated threats
• Collaborate with other institutions on tick-related projects

Oak Ridge Institute for Science and Education (ORISE)
Tick-Borne Disease Laboratory, U.S. Army Public Health Center, APG-S, MD
Postdoctoral Fellow, July 2019-May 2020

• Identified ticks from across the United States and isolated tick DNA.
• Assisted in writing technical bulletins and academic papers.

Department of Entomology and Wildlife Ecology, University of Delaware, Newark, DE
Graduate Research Assistant, April 2015-May 2019
• Investigated bird-insect food webs of North American breeding birds.
• Instructed "Medical, Veterinary, & Forensic Entomology" course (Fall 2018).

Delaware Statewide Ecological Extinction Task Force, Dover, DE
Task Force Assistant, July 2017-December 2017
• Wrote the minutes for each task force meeting.
• Wrote the final report to the Governor and the General Assembly.

DNREC: Delaware Division of Fish & Wildlife: Mosquito Control Section, Newark, DE.
Seasonal Taxonomist, May-September 2014
• Identified mosquito samples from across the state to monitor for potential public health threats.

Delaware Nature Society, Hockessin, DE
Teacher Naturalist, January 2013-May 2015
• Led educational programs for all ages, with a focus on insects, geology, wetlands, and ecology.
• Led the Young Naturalists Club for children ages 8-12.

Department of Entomology and Wildlife Ecology, University of Delaware, Newark, DE
Graduate Research Assistant, April 2010-January 2013
• Completed a systematic revision of a segregate of the polyphyletic planthopper genus *Delphacodes* using morphological and molecular techniques.
• Described four new genera of planthoppers: *Meristopsis*, *Flavoclypeus*, *Lamaxa*, and *Xamala*.
• Served as teaching assistant for "Medical, Veterinary, & Forensic Entomology" course (Fall 2012).

Smithsonian Environmental Research Center, Smithsonian Institution, Edgewater, MD
Environmental Education Intern, March-November 2009
• Designed and implemented curricula on Chesapeake Bay ecology for students of all ages.

PUBLICATIONS

R.M. Nadolny, **A.C. Kennedy**, J.M. Rodgers, Z.T. Vincent, H. Cornman, S.A. Haynes, C. Casal, R.G . Robbins, A.L. Richards, J. Jiang, and C.M. Farris. 2021. *Carios kelleyi* (Cooley and Kohls) (Acari: Ixodida: Argasidae) infected with rickettsial agents documented infesting housing in Kansas, U.S.A. In review. *Journal of Medical Entomology*.

A.C. Kennedy and C.R. Bartlett. April 2021. On the generic placement and synonymy for *Delphacodes guianensis* Muir 1919 (Hemiptera: Fulgoroidea: Delphacidae). *Entomological News* 129 (5).

A.C. Kennedy and E. Marshall**.** January 2021. Lone star ticks (*Amblyomma americanum*): an emerging threat in Delaware. *Delaware Journal of Public Health*

A.C. Kennedy, H.B. White, III, and D.W. Tallamy. July 2019. Predation of dragonfly nymphs by passerines. *Northeastern Naturalist* 26(3): 21-26.

A.C. Kennedy. June 2019. *Storeria dekayi* (Dekay's Brown snake) Predation. *Herpetological Review* 50(2): 404-405.

Pimsler, M., Krell, R., Alleyne, M., Anderson, T., **Kennedy, A.**, and T. Durham. March 2019. Science policy begins at home: Grassroots advocacy at the state and local level. *Annals of the Entomological Society of America* 112(2):79-84.

A.C. Kennedy, J.R. Golec, G. Savoy-Burke, and A.B. Mitchell. September 2018. Increasing honey bees' (Hymenoptera: Apidae) access to varied, high-quality forage. *American Entomologist* 64(3):167.

C.R. Bartlett and **A.C. Kennedy**. June 2018. A review of New World *Malaxa* (Hemiptera: Fulgoroidea: Delphacidae). *Zootaxa* 4441(3):511-528.

A.C. Kennedy and C.R. Bartlett. September 2015. An unusual morphotype of *Caenodelphax teapae* (Fowler) (Hemiptera: Fulgoroidea: Delphacidae). *Entomological News* 125(3):224-227.

A.C. Kennedy and C.R. Bartlett. January 2014. Systematics of *Caenodelphax* Fennah (Hemiptera: Fulgoroidea: Delphacidae) and description of the new genus *Flavoclypeus*. *Transactions of the American Entomological Society* 140:17-65.

A.C. Kennedy, C.R. Bartlett, S.W. Wilson. June 2012. An annotated checklist of the delphacid planthoppers (Hemiptera: Delphacidae) of Florida with the description of three new species and the new genus *Meristopsis*. *Florida Entomologist* 95(2):394-420.

CONFERENCE PRESENTATIONS

March 2021. Talk: "Investigating tick-host associations in Delaware." Invited speaker in "Take a Walk on the Wild Side: Exploring the Intersection of Wildlife and Entomology" symposium. 91st Annual Meeting of the Entomological Society of America Eastern Branch (virtual).

March 2021. Talk: "Public Health Entomology: Career opportunities in government." Invited speaker in "Exploring the Diversity of Entomologists' Careers: A symposium and networking opportunity." 91st Annual Meeting of the Entomological Society of America Eastern Branch (virtual).

February 2021. Talk: "Results from the first two years of tick surveillance in Delaware." 46th Annual Meeting of the Mid-Atlantic Mosquito Control Association (virtual).

November 2020. Talk: “Ticks of Delaware: An updated report of the Ixodida diversity and activity in the First State.” 68th Annual Meeting of the Entomological Society of America (virtual).

March 2020. Talk: “*Babesia microti*: an emerging pathogen for military populations.” Invited speaker in “All the Things That Can Also Kill You: Lesser-Known Vectors and Pathogens Affecting Humans and Animals” symposium. Joint Meeting of the Entomological Society of America Eastern & Southeastern Branches. Atlanta, GA. (*Canceled due to COVID-19).*

March 2020. R.M. Nadolny (presenting author) and A.C. Kennedy. Talk: “Babesiosis: An emerging threat for military populations.” 9th Annual Mid-Atlantic Tick Summit. Laurel, MD.

March 2020. Poster: Hot Ticks in the City: Six human pathogens detected in NYC tick surveillance, 2014-2015. 9th Annual Mid-Atlantic Tick Summit. Laurel, MD.

November 2019. Talk: If you plant it, they will come: How to make your yard a “field of dreams” for caterpillars and the birds that eat them. 67th Annual Meeting of the Entomological Society of America. St. Louis, MO.

March 2019. Talk: What the “insect apocalypse” means for you and your yard. 90th Annual Meeting of the Entomological Society of America Eastern Branch. Blacksburg, VA.

March 2019. Poster: Predation of dragonfly larvae by passerines. 90th Annual Meeting of the Entomological Society of America Eastern Branch. Blacksburg, VA.

November 2018. Talk: What bluebirds eat: Examining insect prey preferences of the Eastern Bluebird (*Sialia sialis*). 66th Annual Meeting of the Entomological Society of America. Vancouver, Canada.

November 2018. Poster: Comparing carotenoid content across arthropod groups to improve understanding of bird-arthropod food webs. 66th Annual Meeting of the Entomological Society of America. Vancouver, Canada.

August 2018. Talk: What do birds eat? Examining insect prey preferences of North American breeding birds. 103rd Annual Meeting of the Ecological Society of America. New Orleans, LA.

April 2018. Talk: What bluebirds eat: Quantifying carotenoid levels across insect groups to improve understanding of bird-insect food webs. 8th Annual Graduate Research Forum. Newark, DE.

April 2018. Poster: Science communication to policymakers: Winning political allies for insect science. Entomological Society of America International Branch Virtual Symposium.

March 2018. Talk: What bluebirds eat: Arthropods of importance in the diet of Eastern Bluebirds (*Sialia sialis*) in Delaware. 89th Annual Meeting of the Entomological Society of America Eastern Branch. Annapolis, MD.

March 2018. Talk: What do birds eat? Examining bird-insect food webs to improve avian conservation efforts. 3rd Annual Delaware Environmental Institute Graduate Research Symposium. Newark, DE.

November 2017. Talk: Quantifying carotenoid levels across insect groups to improve understanding of bird-insect food webs. 65th Annual Meeting of the Entomological Society of America. Denver, CO.

September 2017. Poster: What do birds eat? Examining bird dietary choices to improve avian conservation efforts. The Wildlife Society Maryland-Delaware Chapter Meeting. Columbia, MD.

April 2017. Talk: Entomology Outreach 101: How to combat entomophobia and win allies for insect conservation. 7th Annual Graduate Research Forum, Newark, DE.

March 2017. Poster: A review of New World *Malaxa* (Hemiptera: Fulgoroidea: Delphacidae). 88th Annual Meeting of the Entomological Society of America Eastern Branch. Newport, RI.

May 2016. Poster: What do birds eat? Examining bird dietary choices to improve avian conservation efforts. University of Delaware College of Agriculture and Natural Resources Research Symposium. Newark, DE.

April 2016. Talk: What do birds eat? Examining bird dietary choices to improve avian conservation efforts. 6th Annual University of Delaware Graduate Research Forum. Newark, DE.

January 2016. Talk: What do birds eat? Investigating insect prey preferences and their consequences in North American breeding birds. 2nd Annual Northeast Plant, Pest, and Soils Conference. Philadelphia, PA.

November 2014. Poster: Quantifying insect prey preferences of North American breeding birds across mesic and xeric environments. 62nd Annual Meeting of the Entomological Society of America. Portland, OR.

March 2013. Talk: Systematics of *Caenodelphax* Fennah (Hemiptera: Fulgoroidea: Delphacidae). 84th Annual Meeting of the Entomological Society of America Eastern Branch. Lancaster, PA.

January 2013. Talk: Systematics of the planthopper genus *Caenodelphax* Fennah. University of Delaware Department of Entomology and Wildlife Ecology Seminar Series (Thesis Defense Presentation). Newark, DE.

May 2012. Talk: Three new planthopper species (Hemiptera: Fulgoroidea: Delphacidae) and a new genus from Florida. 2nd Annual University of Delaware Graduate Student Forum. Newark, DE.

March 2012. Poster: Three new planthopper species (Hemiptera: Fulgoroidea: Delphacidae) and a new genus from Florida. 83rd Annual Meeting of the Entomological Society of America Eastern Branch. Hartford, CT.

November 2011. Talk: A revision of *Caenodelphax* to include species misallocated to the polyphyletic genus *Delphacodes*. 59th Annual Meeting of the Entomological Society of America. Reno, NV.

December 2010: Poster: A revision of *Caenodelphax* to include species misallocated to the polyphyletic genus *Delphacodes*. 58th Annual Meeting of the Entomological Society of America. San Diego, CA.

June 2010. Poster: A revision of *Caenodelphax* Fennah (Hemiptera: Fulgoroidea: Delphacidae) to include species misallocated to *Delphacodes* Fieber. 13th International Auchenorrhyncha Congress. Vaison-la-Romaine, France.

RECENT INVITED TALKS

February 2021. Tick Talk: A timely discussion of ticks and tick-borne pathogens of West Virginia. USDA Appalachian Fruit Research Station (webinar).

January 2021. What the "insect apocalypse" means for you and your yard. Delaware Nature Society Habitat Stewards (webinar).

December 2020. Understanding bird-insect food webs as part of avian conservation. Baird Ornithological Club (webinar).

October 2020. Birds, ticks, and tick-borne pathogens of Virginia. Hampton Roads Bird Club (webinar).

September 2020. Understanding birds' diets as part of avian conservation. Osher Lifelong Learning Institute (webinar).

July 2020. Ticks of the Mid-Atlantic. District of Columbia Department of Transportation Urban Forestry Division (webinar).

July 2020. Ticks of Delaware. Delaware Master Gardeners (webinar).

June 2020. Asian Longhorned Tick in the United States. Food & Drug Administration Center for Veterinary Medicine seminar series (webinar).

May 2020. Insect Apocalypse. Bucks County Birders (webinar).

February 2020. What the 'insect apocalypse' means for you, your yard, and the birds. Delaware Valley Ornithological Club. Philadelphia, PA.

February 2020. What the “insect apocalypse” means for you and your yard. 5th Annual Darwin Day. Lewes, DE.

January 2020. Living Materials: What the “insect apocalypse” means for you and your yard. University of Pennsylvania Laboratory for Research on the Structure of Matter Science Café. Philadelphia, PA.

December 2019. Living Materials: What the “insect apocalypse” means for you and your yard. University of Pennsylvania Laboratory for Research on the Structure of Matter Science Café. Wilmington, DE.

September 2019. How we discovered what birds eat and why we needed to know. 1st Annual Frontiers in Ornithology Youth Symposium. Hockessin, DE.

June 2019. Tick Talk: A timely discussion of ticks and the pathogens they carry. Arden Scholars Gild. Arden, DE.

June 2019. Exploring insect biodiversity in birds’ diets. Virginia Working Landscapes, Smithsonian Conservation Biology Institute. Front Royal, VA.

April 2019. What Do Birds Eat? Exploring insect biodiversity in birds’ diets. American Entomological Society meeting. Philadelphia, PA.

April 2019. Exploring insect biodiversity in North American birds’ diets. USDA Appalachian Fruit Research Station. Kearneysville, WV.

March 2019. What Do Birds Eat? Investigating birds’ insect prey preferences to improve avian conservation efforts. Audubon Society of Northern Virginia. Arlington, VA.

February 2019. Investigating birds’ insect prey preferences to improve avian conservation efforts. Audubon Society of Martin County. Stuart, FL.

February 2019. What Do Birds Eat? Understanding the diets of North American breeding birds. Delaware Nature Society Habitat Stewards meeting. Hockessin, DE.

January 2019. What Do Birds Eat? Biodiversity for Birds. Caroline County Bird Club. Denton, MD.

January 2019. What Do Birds Eat? Investigating birds’ insect prey preferences to improve avian conservation efforts. Rockingham County Bird Club. Rockingham, VA.

December 2018. What Do Birds Eat? Understanding the diets of North American breeding birds. 4th Annual Friends of Mason Neck State Park “Swanfall”. Lorton, VA.

September 2018. What Do Birds Eat? Bug-O-Rama, Hershey Gardens. Hershey, PA.

August 2018. What bluebirds eat: Examining the diet of Eastern Bluebirds (*Sialia sialis*) at Mt. Cuba. Mt. Cuba Center, Hockessin, DE.

September 2017. What do birds eat? Examining bird-insect food webs to improve avian conservation efforts. Eastern Shore Bird Club General Meeting. Onancock, VA.

May 2017. What do birds eat? Examining bird-insect food webs to improve avian conservation efforts. Joint Meeting of the Williamsburg Bird Club and Virginia Master Naturalists. Williamsburg, VA.

February 2017. What do birds eat? Examining bird dietary choices to improve avian conservation efforts. Northern Virginia Bird Club General Meeting. Arlington, VA.

November 2016. What do birds eat? Examining bird dietary choices to improve avian conservation efforts. Hampton Roads Bird Club General Meeting. Hampton Roads, VA.

September 2016. Examining bird-insect food webs to improve avian conservation efforts. 25th International Congress of Entomology. Orlando, FL.

April 2016. What do birds eat? Examining bird dietary choices to improve avian conservation efforts. The Wildlife Society (University of Delaware Chapter) Spring Retreat. Newark, DE.

January 2016. What do birds eat? Examining bird dietary choices to improve avian conservation efforts. Delmarva Ornithological Society General Meeting. Hockessin, DE.

January 2016. Investigating insect prey preferences and their consequences in North American breeding birds. Smithsonian Environmental Research Center Alumni Symposium. Edgewater, MD.

October 2014. Insect prey preferences of North American breeding birds. 91st Annual Meeting of the Entomological Society of Pennsylvania. Harrisburg, PA.

THESIS & DISSERTATION RESEARCH

Thesis Title (MS): Systematics of the planthopper genus *Caenodelphax* (Hemiptera: Fulgoroidea: Delphacidae) and description of the new genus *Flavoclypeus*

Abstract: Delphacid planthoppers (Hemiptera: Fulgoromorpha: Delphacidae) are of worldwide economic interest as crop pests and vectors of plant diseases. Despite their importance, much of their evolutionary history remains poorly understood and many genera need revision. *Delphacodes* Fieber, 1866 once included more than 136 species, including many New World species, but was redescribed with a more limited definition, reducing it to only 10 western Palearctic species. This left the majority of *Delphacodes* species *incertae sedis*, in need of reassignment to other genera. K.G.A. Hamilton (2002) hypothesized that 10 New World *Delphacodes* species belong to *Caenodelphax* Fennah, 1965. This project undertook an investigation of Hamilton's hypothesis by examining a subset of 13 *Delphacodes* and 4 *Caenodelphax* species with reference to morphological phylogenetic analyses to determine their

evolutionary relationships. Phylogenetic analyses using maximum parsimony did not support Hamilton's hypothesis, and instead suggested that eight ingroup species belong in a separate, new genus. *Caenodelphax* is hereby redescribed as a monotypic taxon; eight species are transferred to the new genus, *Flavoclypeus*, and two species are synonymized.

Dissertation Title (PhD): Examining breeding bird diets to improve avian conservation efforts
Abstract: Improving our understanding of birds' diets is vital to avian conservation efforts. Once we know which arthropod groups are most important to birds and why, we will be better prepared to manage landscapes to facilitate bird conservation by planting the host plants those arthropods need for their survival and reproduction. Four projects were conducted to investigate the arthropod composition of bird diets. Over three breeding seasons, cameras were stationed at Eastern Bluebird (*Sialia sialis*) nest boxes in Delaware to record photographs of bluebirds bringing food to their nestlings. Thirty-eight bluebird broods were monitored from hatching until fledging; identification of over 7,000 arthropod prey from photos taken at the nests indicate that the most common prey taxa are Lepidoptera, Orthoptera, and Araneae. Prey choice tests using 24 bluebird pairs were then conducted to assess bluebirds' insect prey preferences, indicating that waxworm caterpillars are preferred over mealworms, crickets, cabbage looper caterpillars, and stink bugs. Additionally, a community science project was launched to solicit contributions of photos of North American birds eating arthropod prey. Approximately 6,500 photos of bird-arthropod interactions, representing about 320 North American bird species, were contributed by community scientists and the arthropod prey were identified to lowest possible taxonomic level. Having determined which arthropod groups are the best-represented and most preferred in birds' diets, the next step was to identify what makes those groups important to birds. Levels of carotenoids (lutein, zeaxanthin, beta-cryptoxanthin, beta-carotene, and alpha-carotene) were quantified and compared across insect groups. Carotenoids play an important role in boosting the immune system, promoting healthy development, and in determining birds' plumage coloration, important in mate selection. Carotenoid analyses revealed that caterpillars (Lepidoptera) have higher levels of carotenoids than other examined invertebrate groups (Hemiptera, Coleoptera, Hymenoptera: Apocrita, and Araneae). Birds' preferences for certain arthropod groups could be influenced by carotenoid content. The results of this research suggest that managing landscapes in ways that promote the abundance of green, hairless caterpillars (e.g., Geometridae and Noctuidae) should improve resources required by breeding North American birds.

RESEARCH SUPPORT

University of Delaware Graduate and Professional Education Summer Doctoral Fellowship, April 2017. "Quantifying carotenoid levels of different insect groups to improve understanding of bird-insect food webs." $3,000.00

University of Delaware Center for the Study of Diversity Graduate Research Grant, January 2013. "Enabling Natural History Outreach to Underserved Audiences." $503.56

University of Delaware Professional Development Award for Graduate Students, November 2011. "Proposal to Attend the Entomological Society of America Annual Meeting in Reno, Nevada." $400.00

University of Delaware Global Research Award for Graduate Students, July 2011. "A revision of the planthopper genus *Caenodelphax* to include species misallocated to *Delphacodes*: Proposal to join a multidisciplinary expedition to Costa Rica to collect specimens and learn essential field techniques." $1,200.00

University of Delaware Professional Development Award for Graduate Students, December 2010. "Proposal to Attend the Entomological Society of America Annual Meeting in San Diego, California." $400.00

NON-THESIS RESEARCH AND EXTENSION EXPERIENCE

The Global Challenge of Vector-Borne Diseases and How to Control Them. London School of Hygiene and Tropical Medicine (online). October 2020.

Vector Biology Boot Camp. Northeast Regional Center for Excellence in Vector-Borne Diseases (online). May 2020.

Tropical Parasitology: Protozoans, Worms, Vectors, and Human Diseases. Duke University and Kilimanjaro Christian Medical University College (online). February 2020.

Integrated Tick Management. Cornell University (online). March 2019.

University of Delaware Entomology Departmental Outreach Club. Facilitates educational outreach programs at more than 30 participating institutions for a wide variety of audiences, ranging from summer camps, scout troops, and schools, to nursing homes, public festivals, and juvenile detention centers. Newark, DE. 2010-2019.

Delaware Nature Society Naturalist Certification Series. Included classes on mammalogy, ornithology, herpetology, entomology, aquatic ecology, terrestrial ecology, and botany. Ashland Nature Center, Hockessin, DE. March-September 2017.

Cornell University Urban Environmental Education. Online professional development course on different approaches for social and environmental change in cities. March 2015.

New Jersey School of Conservation Forensic Entomology Workshop. Included field, lab, and classroom components regarding insect colonization in different stages of decomposition. Montclair State University, Branchville, NJ. June-July 2013.

61st Annual Summer Acarology Program: Medical and Veterinary Acarology. Included review and identification of ticks and other mites associated with humans and domestic animals and the diseases they vector. Ohio State University, Columbus, OH. June-July 2012.

Microscopy and Imaging Workshop. Included overview of microscopy and digital imaging techniques. Smithsonian Museum Conservation Institute, Suitland, MD. May 2010.

PROFESSIONAL SOCIETY MEMBERSHIP & COMMITTEE SERVICE

Entomological Society of America
- Member, 2010-Present
- Eastern Branch President-Elect, 2021-2022
- Science Policy Fellow Class of 2017
- Eastern Branch Representative to the Student Affairs Committee, 2012-2018
- Eastern Branch Student Affairs Committee Chair, 2016-2018
- Student Liaison to the International Affairs Committee, 2013-2014
- Student Liaison to the Diversity and Inclusion Committee, 2016-2019
- Early Career Professional Teaching Award Committee, 2017-2019
- Lunch & Learn Workshop Organizer (National Meeting): "Science Policy 101 for the Entomologist" 2017
- Symposium Organizer (Eastern Branch): "Advancing Entomology through Science Communication" 2018
- Panelist: "Advocate for Your Publications" Lunch & Learn Workshop, 2019
- Moderator: Entomology Advocacy Week "Vector-Borne Diseases" webinar, 2020
- Student Volunteer at National Meetings, 2011, 2016
- Student Volunteer at Eastern Branch Meetings, 2012, 2013, 2014, 2015, 2017

American Entomological Society
- Member, 2015-Present
- Student Representative to the Governing Board, 2017-2020
- Member At-Large, 2020
- Corresponding Secretary, 2021-Present

Ecological Society of America
- Member, 2017-Present
- Panelist: "Advice from Graduate Students about Navigating and Surviving Grad School" Workshop, 2017

Graduate Women in Science
- Member, 2012

University of Delaware Graduate Student Government
- Senator, Department of Entomology and Wildlife Ecology, 2010-2012, 2015-2017
- Sustainability Committee, Member, 2010-2012, 2015-2018

Delaware State Senate Statewide Ecological Extinction Task Force
- Task Force Assistant, 2017

Delaware Native Species Commission
- University of Delaware Representative, 2018-2019
- Delaware Ornithological Society Representative, 2019-2020

TEACHING EXPERIENCE

General Zoology. Department of Biology, Hampton University. “Birds, ticks, and tick-borne pathogens of Virginia.” Guest Lecturer, Fall 2020.

Medical, Veterinary, and Forensic Entomology. Department of Entomology and Wildlife Ecology, University of Delaware. Co-instructor, Fall 2018.

Medical, Veterinary, and Forensic Entomology. Department of Entomology and Wildlife Ecology, University of Delaware. Teaching Assistant, Fall 2012.

Forensic Science. Medical Laboratory Sciences Department, University of Delaware. “Introduction to Forensic Entomology.” Guest Lecturer, Fall 2016, Spring 2017, Fall 2017, Spring 2018, Fall 2018, Spring 2019, Fall 2019.

General Zoology. Department of Biology, Hampton University. “What do birds eat? Examining bird dietary choices to improve avian conservation efforts.” Guest Lecturer, Fall 2016.

Elements of Entomology. Department of Entomology and Wildlife Ecology, University of Delaware. “Introduction to Medical Entomology.” Guest Lecturer, Fall 2011.

EDITORIAL ACTIVITIES

January 2020-present. Manuscript editor, *Northeastern Naturalist*.
September 2020, March 2021. Reviewer for Journal of Medical *Entomology*.

HONORS & AWARDS

April 2020. Became a Board Certified Entomologist (BCE) with Medical and Veterinary Entomology specialty.

November 2019. Entomological Society of America Student Certification Award for outstanding entomology students with interest in the mission of the ESA certification program ($500).

May 2019. Grand Prize recipient, University of Delaware “Words for Nerds” science communication contest, Newark, DE ($1000).

March 2019. Captain of the 1st place Entomology Games team, 90th Annual Meeting of the Entomological Society of America Eastern Branch, Blacksburg, VA ($2000).

November 2018. Finalist, Entomological Society of America “YouTube Your Entomology” video contest.

March 2018. Captain of the 1st place Entomology Games team, 89th Annual Meeting of the Entomological Society of America Eastern Branch, Annapolis, MD ($2000).

March 2018. Entomological Society of America John Henry Comstock Award for outstanding doctoral students in entomology ($100).

November 2017. Entomological Society of America Science Policy Fellowship.

May 2017. University of Delaware Graduate Student Government Community Award, Newark, DE.

March 2017. Captain of the 2nd place Entomology Games team, 88th Annual Meeting of the Entomological Society of America Eastern Branch, Newport, RI ($1000).

January 2016. Student Oral Competition 1st place award, 2nd Annual Northeast Plant, Pest, and Soils Conference, Philadelphia, PA ($200).

March 2013. Captain of the 1st place Entomology Games team, 84th Annual Meeting of the Entomological Society of America Eastern Branch, Lancaster, PA ($2000).

March 2012. Student Poster Competition 2nd place award, 83rd Annual Meeting of the Entomological Society of America Eastern Branch, Hartford, CT ($200).

OUTREACH & COMMUNICATION

August 2020-present: Weekly "Tick Talk Tuesday" posts highlighting the risks of ticks for the Delaware Department of Natural Resources and Environmental Control social media pages.

August 2020. Interviewed for "Tick Talk" video. White Clay Creek State Park, Newark, DE.

August 2019. How to Host a Congressional Visit at Your Entomological Research Facility. Entomology Today (Entomological Society of America blog).

August 2019. 15 Ways to Advocate for Entomology at the Local or State Level. Entomology Today.

October 2018. Symposium to Highlight Global Challenge of Managing Insecticide Resistance. Entomology Today.

May 2018. Entomologists Urge Action, Advocacy After 2018 March for Science. Entomology Today.

September 2017. The Ultimate Student Volunteering Cheat Sheet for Entomology 2017. Entomology Today.

REFERENCES

Thomas Moran, Program Manager
Delaware Division of Fish and Wildlife, Mosquito Control Section
Relation: Current Supervisor
Email: thomas.moran@delaware.gov

Robyn Nadolny, Biologist and Program Coordinator
Tick-Borne Disease Laboratory, Army Public Health Center
Relation: Postdoc Supervisor
Email: robyn.m.nadolny.civ@mail.mil

Douglas Tallamy, Professor
University of Delaware Department of Entomology and Wildlife Ecology
Relation: PhD Advisor
Email: dtallamy@udel.edu

Charles Bartlett, Associate Professor
University of Delaware Department of Entomology and Wildlife Ecology
Relation: MS Advisor
Email: bartlett@udel.edu