

# Sydney Hope

Virginia Tech  
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## EDUCATION

PhD (in progress), Fish and Wildlife Conservation  
Virginia Tech  
NSF Graduate Research Fellow  
ICTAS Doctoral Scholar  
Interfaces of Global Change Fellow  
GPA = 4.0

B.S., Biology, Summa Cum Laude, May 2014  
The College of New Jersey  
Minor, Fine Arts  
GPA Overall = 3.98; GPA Science = 4.0 (19 courses)

## COMPETITIVE AWARDS

### Funding for tuition and stipend

- ◆ NSF Graduate Research Fellowship 2015-2020 (\$138,000)
- ◆ ICTAS Doctoral Scholars Award 2016-2020 (\$144,934)
- ◆ Interfaces of Global Change Fellowship 2016 (\$42,000; awarded but returned due to sufficient funding from NSF and ICTAS)

### Funding for research expenses

- ◆ Sigma Xi Ph.D. Research Award (Virginia Tech chapter), 2019 (\$1000)
- ◆ Virginia Tech GSA Graduate Research Development Program, Fall 2018 (\$1000)
- ◆ Chateaubriand Fellowship Program, 2017-2018 (€4400)
- ◆ NSF Graduate Research Opportunities Worldwide (GROW), 2017-2018 (\$5000)
- ◆ Virginia Tech GSA Graduate Research Development Program, Spring 2017 (\$1000)
- ◆ Animal Behavior Society Student Research Grant, 2017 (\$1000)
- ◆ Sigma Xi M.S. Research Award (Virginia Tech chapter), 2015 (\$1000)
- ◆ Virginia Tech GSA Graduate Research Development Program, Fall 2015 (\$750)
- ◆ Virginia Tech GSA Graduate Research Development Program, Fall 2014 (\$500)
- ◆ Sigma Xi Grant-in-Aid of Research Fall 2014, (\$700)
- ◆ National Science Foundation Research Experience for Undergraduates, Indiana University, 2013 (\$5,245)
- ◆ Mentored Undergraduate Summer Experience, The College of New Jersey, 2012 (\$2,750)

### Funding for conference travel

- ◆ AOU Student Travel Award for NAOC VI, 2016 (\$265)
- ◆ Virginia Tech GSA Travel Fund Program, Spring 2016 (\$344.86)
- ◆ Charlotte Magnum Student Support Program, SICB 2016, 2017, 2018 (free meeting hotel)
- ◆ BIO REU Travel Scholarship, 2013 (\$1,000)

### Awards and recognitions

- ◆ SICB Marlene Zuk (Division of Animal Behavior) Best Student Talk Award, 2018 (\$150)

- ◆ ICTAS Experiential Learning Grant (for K-12 Outreach); Joint award with Jacob Diamond and Jingjing Chen, 2017 (\$1500)
- ◆ SICB Division of Animal Behavior (DAB) Best Student Poster Presentation Award, 2016 (\$150)
- ◆ Joseph Vena Award for Excellence in Biology, The College of New Jersey, 2014 (\$180)

#### **Grant proposals under review**

- ◆ NSF Graduate Research Opportunities Worldwide (GROW), 2019 (\$5000)
- ◆ Company of Biologists Travelling Fellowship, 2019 (£2500)

### **PUBLICATIONS** (high school teacher mentee<sup>T</sup>; undergraduate mentee<sup>U</sup>)

5. **Hope, S. F.**, R. A. Kennamer, S. G. van Montfrans<sup>T</sup>, and W. A. Hopkins. In press. Incubation temperature and social context affect nest exodus performance of precocial ducklings. *Behavioral Ecology*. doi:10.1093/beheco/ary192
4. **Hope, S. F.**, R. A. Kennamer, I. T. Moore, and W. A. Hopkins. 2018. Incubation temperature influences the personality traits of a young precocial bird. *Journal of Experimental Zoology: Part A; Invited contribution for special issue – developmental plasticity in reptiles*. doi:10.1002/jez.2176
3. **Hope, S. F.**, S. E. DuRant, J. J. Hallagan, M. L. Beck, R. A. Kennamer, and W. A. Hopkins. 2018. Free-moving artificial eggs containing temperature loggers reveal remarkable within-clutch variance in incubation temperature. *Journal of Avian Biology*. doi:10.1111/jav.01685
2. Abolins-Abols, M., **S. F. Hope**, and E. D. Ketterson. 2016. Effect of acute stressor on reproductive behavior differs between urban and rural birds. *Ecology and Evolution* doi:10.1002/ece3.2347
1. **Hope, S. F.**, F. A. Stabile, and L. K. Butler. 2016. Urban living alters moult dynamics in a passerine. *Journal of Avian Biology* 47:304-311. *Featured Article: Editor's Choice*.

#### **Currently in review with PhD committee**

Hope, S. F., S. E. DuRant, J. J. Hallagan, M. L. Beck, R. A. Kennamer, and W. A. Hopkins. Within-clutch variation in egg incubation temperature: A constraint on the evolution of clutch size in precocial birds. *In prep for submission in Proc. Roy. Soc. B*

#### **In advanced stages of preparation**

Hope, S. F., C. Beunaventura<sup>U</sup>, Z. Husain, S. E. DuRant, R. A. Kennamer, C. K. Thompson, W. A. Hopkins. Effects of incubation temperature on corticosterone and thyroid hormone related gene expression in the developing brain of a precocial bird. *In prep for submission in Frontiers in Physiology. Invited contribution for special issue - developmental programming of vertebrate health and disease*.

Hope, S. F., S. E. DuRant, F. Angelier, J. J. Hallagan, I. T. Moore, R. A. Kennamer, and W. A. Hopkins. Stress-induced prolactin levels are related to behavioral resilience to nest disturbance in a precocial bird. *In prep for Hormones and Behavior*.

Hope, S. F., R. A. Kennamer, and W. A. Hopkins. Incubation temperature does not affect competitive behavior over food or heat in wood duck ducklings. *In prep for Animal Behaviour*.

Grimaudo<sup>U</sup>, A., S. F. Hope, S. E. DuRant, R. A. Kennamer, J. J. Hallagan, and W. A. Hopkins. Sources of variation in night incubation behavior in wood ducks (*Aix sponsa*). *In prep for Journal of Avian Biology*.

## RESEARCH TRAINING

Fall 2014- present

### Graduate Research Assistant (Virginia Tech)

Advisor: Dr. Bill Hopkins

- ◆ **Research focus:** Investigating how external factors (i.e., weather, clutch size, disturbance) influence egg temperature in natural bird nests, and how the early developmental environment (i.e., incubation temperature) affects the behavior, competitive ability and physiology (i.e., hormone levels, gene expression, growth rate) of juvenile birds after hatch.
- ◆ **Field work:** Maintain/monitor >80 wood duck nest boxes in 12 ephemeral wetlands; handling, morphometrics, blood collection of wood ducks (adults and ducklings) and tree swallows; assemble and install artificial egg temperature loggers in nest boxes; collection of eggs.
- ◆ **Captive animal work:** Egg incubation; egg candling; husbandry of >100 wood duck ducklings simultaneously (feeding, cleaning) in cages and aviary rooms; development and planning of duckling behavioral trials; analysis of animal behavior through videos; blood collection.
- ◆ **Lab work:** Radioimmunoassay for corticosterone; DNA extraction; qPCR; extraction of animal tissue (brain, heart, liver, spleen); cryostat; immunocytochemistry.
- ◆ **Computer skills:** R statistical software; management and analysis of large amounts of temperature data; Rhythm/RAVEN to determine incubation behavior; iButtons; HOBOWare; Audacity.
- ◆ **Leadership skills:** Supervising 11 undergraduates and 2 high school teachers; teamwork; conceiving ideas for research projects; planning and organizing daily tasks and goals.

Fall 2016- present

### Interfaces of Global Change Fellow (Virginia Tech)

- ◆ Interdisciplinary Graduate Education Program
- ◆ Teaches graduate students about multiple aspects of global change research, including science policy, sustainability, and communication.
- ◆ Includes courses, seminars, and graduate student organization.

Fall 2016- present

### ICTAS Doctoral Scholar (Virginia Tech)

- ◆ Doctoral Program (competitive) awarded by the Institute for Critical Technology and Applied Science.
- ◆ The Institute is dedicated to research that enhances the quality of human life and preservation of resources.

Spring-Summer 2018

### Visiting Graduate Student (Centre d'Etudes Biologique de Chizé (CEBC), France)

Advisor: Dr. Frédéric Angelier

- ◆ **Research focus:** Conducted two studies 1) to investigate the influence of urbanization on parental incubation behavior and incubation temperature in great tits (field study) and 2) to investigate whether prolactin mediates parental behavior in wood ducks (lab work).
- ◆ **Field work:** Monitoring >100 nest boxes in the Chizé Forest and the city of Niort; creation and installation of 3D-printed artificial egg temperature loggers in nests; capturing adult birds at nest box; morphometrics of adults and nestlings; blood collection of adults and nestlings.
- ◆ **Lab work:** Radioimmunoassay for prolactin; DNA extraction; qPCR to measure telomere length.
- ◆ **Skills:** International collaboration; French (conversational proficiency); 3D-printing (including creation of 3D model on computer); teamwork and supervising undergraduates and Master's students.

Fall 2012-Spring 2014

### Independent Research in Biology (The College of New Jersey)

Advisor: Dr. Luke Butler

- ◆ **Research focus:** Conducted two studies 1) to investigate whether molt phenology of Carolina chickadees varies among years or is related to urbanization and 2) to investigate whether habitat and weather influences nesting phenology.
- ◆ **Field work:** Construction, installation, and monitoring of >100 nest boxes; passerine mist-netting; avian morphometrics.
- ◆ **Skills:** Compiling and analyzing large databases of a multi-year field study; training new lab students; conceiving and carrying out independent research project; teamwork; JMP statistical software.

Summer 2013

### NSF Research Experience for Undergraduates (Indiana University)

Mentor: Dr. Ellen Ketterson

- ◆ **Research focus:** Conducted two studies to investigate 1) the effects of acute stress on aggressive behavior and 2) to investigate the interaction between stress and reproductive hormones in songbird populations living in city and mountain habitats in California.
- ◆ **Field work:** Avian territory mapping; nest-searching; passerine mist-netting (active and passive); capture of birds using Potter traps; simulated territory intrusion behavioral assay on wild birds; avian morphometrics and blood collection.
- ◆ **Skills:** R statistical software; fieldwork in remote conditions (camp-site); manuscript preparation; teamwork; creation of independent research project.

Summer 2012

### Mentored Undergraduate Summer Experience (The College of New Jersey)

Advisor: Dr. Luke Butler

- ◆ **Research focus:** To investigate the relationship among urbanization, climate, and the physiology of songbirds (Carolina chickadee).
- ◆ **Field work:** Passerine mist-netting; bird morphometrics; field work in heavily vegetated forests and urban settings.
- ◆ **Skills:** Data management; JMP statistical software; manuscript preparation; teamwork; training new lab members.

Summer 2011

**Natural History of the Galápagos Islands and Ecuador (course; The College of New Jersey)**

- ◆ Immersive two-week field experience in the Galapagos Islands and mainland Ecuador.
- ◆ Studied the natural history of the Galápagos and the mechanisms of evolution during the spring semester.

**PROFESSIONAL RESEARCH PRESENTATIONS**

**Oral Presentations** (*presenter\**; *high school teacher mentee<sup>T</sup>*)

Hope, S. F.\*; S. E. DuRant, F. Angelier, J. J. Hallagan, I. T. Moore, R. A. Kennamer, W. A. Hopkins. Incubation behavior is related to prolactin and egg temperature in a wild bird. Society for Integrative and Comparative Biology, Tampa, FL, January 2019.

Hope, S. F.\*; R. Kennamer, S. van Montfrans, W. Hopkins. Incubation temperature and social context affect nest exodus in a precocial bird. Centre d'Etudes Biologique de Chize seminar series, May 9, 2018, Villiers-en-Bois, France.

Hope, S. F.\*; R. Kennamer, S. van Montfrans, W. Hopkins. Incubation temperature and social context affect nest exodus in a precocial bird. Society for Integrative and Comparative Biology, San Francisco CA, January 2018. *Marlene Zuk Best Student Talk (Division of Animal Behavior) winner.*

Hope, S. F.\*; S. E. DuRant, J. J. Hallagan, M. L. Beck, R. A. Kennamer, W. A. Hopkins. The effect of clutch size on incubation behavior and within-nest egg temperature variation. Society for Integrative and Comparative Biology, New Orleans LA, January 2017.

Van Montfrans, S. G.\*<sup>T</sup>, S. F. Hope, W. A. Hopkins. The effects of incubation temperature on nest exodus performance within a social context in wood duck ducklings. Summer Research Symposium, NSF Research Experience for Teachers, Virginia Tech, July 2016.

Butler, L. K.\*; S. Hope, F. Stabile, and M. Ouellette. Warmer spring temperatures predict earlier summer molt in a songbird. Society for Integrative and Comparative Biology, Austin TX, January 2014.

Hope, S.\*; and F. Stabile\*. Molt phenology of the Carolina Chickadee: effects of habitat and spring temperature. 8th Meeting of the Northeast Workshop on Comparative Physiology, September 2012 (\*co-presenters).

**Poster Presentations** (*presenter\**; *undergraduate mentee<sup>U</sup>*; *high school teacher mentee<sup>T</sup>*)

Grimaudo, A.\*<sup>U</sup>, S. Hope, S. DuRant, R. Kennamer, J. Hallagan, W. Hopkins. Plasticity of nocturnal incubation behavior in wood ducks (*Aix sponsa*). Summer Research Symposium, Summer Undergraduate Research Fellowship, Virginia Tech, July 2017.

Van Montfrans, S. G.<sup>T</sup>, S. F. Hope\*, W. A. Hopkins. Exploratory behavior depends on social context but is not related to food acquisition in wood ducks. Summer Research Symposium, NSF Research Experience for Teachers, Virginia Tech, July 2017.

Hope, S. F.\*, S. E. DuRant, R. A. Kennamer, W. A. Hopkins. Implications of a changing climate for avian incubation and early development. Interfaces of Global Change Symposium, Virginia Tech VA, April 2017.

Hope, S. F.\*, S. E. DuRant, R. A. Kennamer, W. A. Hopkins. Effects of incubation temperature on waterfowl fitness: a social-ecological perspective. Institute for Critical Technology and Applied Science Symposium, Virginia Tech VA, April 2017.

Hope, S. F.\*, M. L. Beck, R. A. Kennamer, W. A. Hopkins. The effect of incubation temperature on Wood Duck duckling behavior. North American Ornithological Conference VI, Washington DC, August 2016.

Hope, S. F.\*, M. L. Beck, R. A. Kennamer, W. A. Hopkins. The effect of incubation temperature on Wood Duck duckling behavior. Sigma Xi Research Award Reception, Virginia Tech, April 2016.

Hope, S. F.\*, M. L. Beck, R. A. Kennamer, W. A. Hopkins. The effect of incubation temperature on Wood Duck duckling behavior. Society for Integrative and Comparative Biology, Portland OR, January 2016, *Best Student Poster (Division of Animal Behavior) winner*.

Lowe, A. L.\*<sup>T</sup>, S. F. Hope, W. A. Hopkins. Effects of incubation temperature on calling behavior in wood ducklings. Summer Research Symposium, Research Experience for Teachers, Virginia Tech, July 2015.

Hope, S. F.\*, M. Abolins-Abols, and E. D. Ketterson. Stress affects the behavior of urban and montane populations differently. Society for Integrative and Comparative Biology, Austin TX, January 2014.

Hope, S.\*, F. Stabile, and L. K. Butler. Songbird molt dynamics in fragmented and urbanized landscapes. Wilson Ornithological Society, 125<sup>th</sup> Annual Meeting, William and Mary, March 2013.

F. Stabile\*, S. Hope, and L. K. Butler. Age contrasts in the timing of body molt in the Carolina Chickadee. Wilson Ornithological Society, 125<sup>th</sup> Annual Meeting, William and Mary, March 2013.

## **PUBLISHED ONLINE DATA SETS**

Hope SF, Kennamer RA, van Montfrans SG, Hopkins WA (2018) Data from: Incubation temperature and social context affect the nest exodus of precocial ducklings. Dryad Digital Repository. doi:10.5061/dryad.h3j360r

Hope SF, DuRant SE, Hallagan JJ, Beck ML, Kennamer RA, Hopkins WA (2018) Data from: Free-moving artificial eggs containing temperature loggers reveal remarkable within-clutch variance in incubation temperature. Dryad Digital Repository. doi:10.5061/dryad.pj3133r

Hope SF, Stabile FA, Butler LK (2015) Data from: Urban living alters moult dynamics in a passerine. Dryad Digital Repository. doi:10.5061/dryad.hp0vd

## **SCHOLARLY ONLINE PUBLICATIONS**

Hope, S. 2013. "Calidris maritima" (On-line), Animal Diversity Web.  
[http://animaldiversity.ummz.umich.edu/accounts/Calidris\\_maritima/](http://animaldiversity.ummz.umich.edu/accounts/Calidris_maritima/)

Hope, S. 2014. "Podiceps cristatus" (On-line), Animal Diversity Web.  
[http://animaldiversity.ummz.umich.edu/accounts/Podiceps\\_cristatus/](http://animaldiversity.ummz.umich.edu/accounts/Podiceps_cristatus/)

## MENTORING

**Facilitated Learning for Developing Graduate Experiences (FLeDGE) Mentor**, mentor for undergraduate researcher, Alex Grimaudo, through his senior research thesis, Summer 2017 – Spring 2018.

Project title: *Nocturnal Incubation in Wood Ducks (Aix sponsa)*

**SURF (Summer Undergraduate Research Fellowship) Mentor**, for Alex Grimaudo; full-time 10-week immersive research experience, May-July 2017.

Project title: *The effects of clutch size and ambient temperature on Wood Duck night incubation behavior*

**NSF Research Experience for Teachers (RET) Mentor (3 years)**, program designed to guide local Virginia high school teachers through a 6-week summer research experience, culminating with a professional-level research paper and presentation.

- ◆ **Schuyler van Montfrans** (William Fleming HS):  
Project title (2017): *The effects of incubation temperature on exploratory behavior and food acquisition in wood duck ducklings*  
Project title (2016): *The effects of incubation temperature on nest exodus performance within a social context in wood duck ducklings*
- ◆ **Alicia Lowe** (Franklin County HS):  
Project title (2015): *The effects of incubation temperature on calling behavior in wood duck ducklings*

### **Supervisor for Undergraduate Student Researchers (Virginia Tech)**

- ◆ Clara Frazier (Spring 2017 – Spring 2018; earned class credits)
- ◆ Tom McCabe (Spring 2017 – Spring 2018; recipient of a Global Change Center Undergraduate Research Grant, 2018, \$1000)
- ◆ Alexander Grimaudo (Spring 2016 – Spring 2018; earned class credits; SURF program; FLeDGE program)
- ◆ John Connock (Spring 2016 – Summer 2017)
- ◆ Caitlyn Herron (Spring 2016)
- ◆ Gretchen Goeke Dee (Spring 2016)
- ◆ Jessica Fitzpatrick (Spring 2016)
- ◆ Mary Catherine Douglas (Spring 2015, Work Study program)
- ◆ Kayla Tugan (Spring 2015 – Fall 2016)
- ◆ Amanda Rhyne (Spring 2015 – Fall 2016; earned class credits)
- ◆ Emma Lustig (Spring 2015 – Fall 2016)

### **Supervisor for Undergraduate/Master's Student Researchers (CEBC, France)**

- ◆ Chloé Cornic (Master's student; Spring – Summer 2018)
- ◆ Julie Leturmy (Master's student; Spring – Summer 2018)
- ◆ Claire Stark (Undergraduate student; Spring – Summer 2018)

## TEACHING

**Brookdale College Math/Science Workshop Instructor (2 years)**, “What Do Scientists Do?”; led a workshop for K-12 teachers discussing how to bring scientific questioning into the classroom, while meeting school standards, Brookdale College, New Jersey, December 2017 and 2018.

**Guest Lecturer**, NR 1234: First Year Experience for the College of Natural Resources and Environment, taught by Serena Ciparis; gave a presentation about my research, my path to becoming a scientist, and advice for undergraduates to a class of ~80 freshmen, November 2017.

**Guest Lecturer**, ENGL 4824: Science Writing, co-taught by Cassandra Hockman and Leonard Grant, Virginia Tech; shared my research with undergraduate students (mostly English majors) and gave them a tour of the aviary on campus, February 2017.

## OUTREACH

### **K-12 Classroom presentations (8 presentations)**

- ◆ **Howell Middle School North**, New Jersey, presented to the entire 8<sup>th</sup> grade (~400 students) about my research and helped them develop questions, hypotheses, and predictions for their own projects involving pill bug behavior, December 2018.
- ◆ **Blacksburg High School**, Virginia, presented my research and led a pill bug activity with two AP Environmental Science classes (~20 students each). This was part of a group visit with two other graduate students from Virginia Tech (Jacob Diamond and Jingjing Chen). The goal of our visit was to expose students to diverse research areas (landscapes, wildfires, animal behavior) and help them develop their own questions and hypotheses. This was funded through ICTAS at Virginia Tech, December 2017.
- ◆ **William Fleming High School**, Virginia, presented my research to an AP Biology class (10 students) and helped them develop questions, hypotheses, and methods for an independent pill bug behavior lab. This was funded through ICTAS at Virginia Tech, November 2017.
- ◆ **Howell Middle School North**, New Jersey, presented to two 8<sup>th</sup> grade classes (~40 students) about my research and helped them develop questions, hypotheses, and predictions for their own projects involving pill bug behavior, November 2017.
- ◆ **Howell Middle School North**, New Jersey, presented to two 8<sup>th</sup> grade classrooms about my research and helped them develop questions, hypotheses, and predictions for their own projects involving incubating chicken eggs, January 2017.
- ◆ **Franklin County High School**, Virginia, presented to a large group of high school students (9<sup>th</sup>-12<sup>th</sup> grade) about my graduate research and life as a graduate student, November 2016.
- ◆ **Howell Middle School North**, New Jersey, used my graduate research to explain a real-life example of the scientific method to two 8<sup>th</sup> grade science classes, June 2016.
- ◆ **Howell Memorial Middle School**, New Jersey, presented to two 8<sup>th</sup> grade science classes about my research experiences and alternative job opportunities in science, June 2014.

### **Virginia Science Festival (4 years)**

- ◆ **“Life of Birds: Form and Function”** – presented to all ages about bird diversity and conservation. Children learned about the significance of nests through ‘Build Your Own Nest’ activity, October 2014.



- ◆ **“Interfaces of Global Change”** – presented to all ages about how humans are changing the environment and how to lessen your impact. Children learned how ecosystem changes can eventually lead to collapse by playing a box-stacking game
- *October 2016*: helped plan and execute
- *November 2017*: organized activity as IGC outreach chair; expanded upon previous year by creating a ‘scavenger hunt’ page to encourage children to visit all of the Global Change Center affiliated booths
- *October 2018*: helped plan and execute

**Virginia Tech Aviary Outreach Tours (7 tours)**, led and/or assisted with outreach tours at the Virginia Tech Aviary. This includes presenting a summary of all on-going and previous research projects conducted there, highlighting the significance of research and the benefits of the new facility on campus, poster presentations of research, and a tour of the facility.

- ◆ The Official Aviary Grand Opening (August 2015)
- ◆ Visit by Congressman Morgan Griffith (May 2016)
- ◆ Virginia Tech University Studies advisors (May 2016)
- ◆ Virginia Tech Admissions and Career Services advisors (July 2016)
- ◆ New Virginia Tech clinical veterinarian (July 2016)
- ◆ CNRE 25<sup>th</sup> Anniversary Celebration (September 2017)
- ◆ Virginia General Assembly (House of Delegates and Senators of Agriculture Chesapeake and Natural Resources) and other invited guests, including General Assembly staff and Virginia Tech Government Relations staff (40 guests in total; October 2018)

**Summer Camp Speaker**, Christiansburg, VA, Aquatic Center, spoke to children ages 6-11 about my research and led an activity for the theme week of “Animal Planet”, July 2017.

**Science Fair Volunteer**, Gilbert Linkous Elementary School, Blacksburg, VA, helped run a “Dress Like a Scientist” photo booth for students, March 2017.

**Activity Leader**, developed and helped lead demonstrations of different wildlife field techniques for Governor’s School high school students visiting Virginia Tech, March 2017.

**Blacksburg Nature Center**, helped organize and participated in a day of activities designed to teach children about local invasive species in Virginia, December 2014.

## PROFESSIONAL SERVICE

**Judge for SICB Best Student Talk Award**, Division of Animal Behavior, January 2019.

**DAB (Department of Animal Behavior) Student Representative for the SICB Student/Postdoctoral Affairs Committee**, 2018-2021.

### Reviewer

- ◆ Journal of Avian Biology (April 2017, March 2018)
- ◆ The Wilson Journal of Ornithology (August 2018)
- ◆ Physiology & Behavior (November 2018, January 2019)

**Mentor**, GRFP Prep Class, Virginia Tech, Fall 2018.

**Panel Member**, NSF GRFP prep class, Virginia Tech, September 2017 and 2018

**The Wildlife Society Mentor**, mentored undergraduate member of the Wildlife Society at Virginia Tech (Melissa Skirkanich) through a TWS mentoring program designed to introduce students to research, answer questions, and give advice about current and future goals, October 2016 – Fall 2018.

**Communicating Science Workshop for Undergraduates, Graduate Student Facilitator**, helped run a workshop to teach undergraduate researchers how to create an effective professional research poster, July 2017.

**Graduate Student Speaker**, Virginia Tech 1872 Society Celebration, spoke about my research and presented a research poster to group of guests who had made considerable donations to the university, June 2017.

**Graduate Student Committee Member**, on the planning committee for the 25<sup>th</sup> Anniversary of the College of Natural Resources and Environment at Virginia Tech, Spring - Fall 2017.

**GUMP (Graduate-Undergraduate Mentorship Program) Mentor**, for Con-Ning Yen, an undergraduate Biological Sciences major at Virginia Tech. This program requires meetings throughout the semester to show undergraduates what graduate school is like, Spring 2017.

**Reviewer for Graduate Research Development Program applications (3 years)**, Virginia Tech Graduate Student Assembly, April 2015, April 2016, November 2017.

**Breakout Session Assistant** at the Virginia Tech Global Change Center Strategic Planning Faculty Retreat, February 2016.

#### **Graduate Student Panel Member**

- ◆ **The College of New Jersey** – answered questions about graduate school from undergraduates via skype for the Graduate Studies Club event “If/How/When to go to Graduate School”, March 2015 and April 2016.
- ◆ **Virginia Tech** – answered questions from undergraduates about applying to graduate school as part of an event held by the Department of Fish and Wildlife Conservation, October 2016.

## **PROFESSIONAL DEVELOPMENT**

- ◆ **French American Workshop**, invited participant; presented a poster and 1-minute slide presenting myself; Grenoble, France, June 2018.
- ◆ **Communicating Science Workshop**, by Sue Hassol, participant, Virginia Tech, November 2017.
- ◆ **Women in Natural Resources: Leading, Mentoring, and Connecting Conference** at Virginia Tech, participant, October 2016.
- ◆ **Mentoring Undergraduates Workshop** at Virginia Tech, participant, October 2016.
- ◆ **Alda Center Communicating Science Workshop** at Virginia Tech, participant, October 2015.

## **HONORS**

- ◆ Sigma Xi (Virginia Tech Chapter; inducted Spring 2016)
- ◆ Phi Beta Kappa (inducted Spring 2013)

- ◆ Dean's List (eight of eight semesters at The College of New Jersey)
- ◆ Phi Kappa Phi (inducted Spring 2013)
- ◆ Beta Beta Beta Biological Honor Society (inducted Spring 2013)

## PROFESSIONAL ORGANIZATIONS

- ◆ Sigma Xi – Associate member (2014 - present)
- ◆ Society of Integrative and Organismal Biology – Graduate student member (2013 - present)
- ◆ Wilson Ornithological Society – Student member (2013 - present)
- ◆ American Ornithologist Union/Society – Student member (2014 - present)
- ◆ Animal Behavior Society – Student member (2016 - present)

## LEADERSHIP POSITIONS

### VIRGINIA TECH

- ◆ **Outreach Chair**, Interfaces of Global Change Graduate Student Association (Fall 2017-Spring 2018); organized and attended various outreach events for the organization; organized Virginia Science Festival booth; started and headed a new Social Media Committee; organized graduate student visits to local classrooms; facilitated conversation between K-12 teachers and graduate students; kept an ongoing list of potential outreach opportunities
- ◆ **Webmaster**, Fish and Wildlife Conservation Graduate Student Association (Fall 2017-Spring 2018); created (using wordpress.com) and launched the first website for the organization
- ◆ **Social Chair**, Fish and Wildlife Conservation Graduate Studies Association (Fall 2015-Spring 2016)

### THE COLLEGE OF NEW JERSEY

- ◆ **Executive Board Member**, Graduate Studies Club, Department of Biology (Fall 2011-Spring 2014)
- ◆ **Peer Mentor and Tutor**, Program to Enhance Retention of Students In Science Trajectories in Biology and Chemistry (PERSIST, an NSF-funded program) (Fall 2012-Spring 2014)
- ◆ **Treasurer**, Delta Zeta (2013)
- ◆ **Peer Tutor**, Math & Science (Spring 2013-Spring 2014)