

DR. PAUL M. NOLAN

Professor of Animal Behavior
Director, Biology Graduate Programs
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Research Adjunct Professorships:
Graduate Program in Marine Biology, and
Graduate Program in Environmental Studies
The University of Charleston
Charleston, SC, 29424

Education

Postdoctoral Research Associate, Arizona State University, Tempe, AZ Aug. 2004-2005
Studied development & signal content of ornamental traits in zebra finches & house finches.

Postdoctoral Fellow, Auburn University, Auburn, AL Feb. 2003-Aug. 2004

- 1) Studied behavioral ecology and evolutionary biology of king penguins and macaroni penguins in the French Austral and Antarctic Territories.
- 2) Studied dynamics of host/parasite co-evolution in house finch/*Mycoplasma gallisepticum*.

Ph.D. in Zoology, Auburn University; Auburn, AL 2002.

M.Sci. in Avian Sciences, The University of California, Davis; Davis, CA 1993.

B.Sci. in Environmental Resource Management, The Pennsylvania State University; University Park, PA 1987.

Teaching Awards

- 2012 Faculty Spotlight Award for Excellence in Teaching and Scholarship, The Citadel.
- 2002-03 Departmental Teaching Award for Outstanding Non-tenure track Instructor.
- 1999-00 Departmental Outstanding Graduate Teaching Asst. Award (Biological Sciences).
- 1998-99 Dean's Award for Outstanding Graduate Teaching Assistant.
- 1997-98 Departmental Outstanding Graduate Teaching Asst. Award (Zoology/Wildlife).

Academic Honors

- 2022 Nominated for status as an Elective Member, American Ornithological Society.
- 2016 & 17 Invited Member, Panel of Experts at Avian Conservation Center's ZugunruheFest.
- 2014 Keynote Speaker for the Annual Banquet of Sigma Xi's Charleston Chapter.
- 2014 Began duties as an Associate Editor for *The Auk: Ornithological Advances*.
- 2013-14 Full-year Research Sabbatical awarded by The Citadel.
- 2013 Nominated for election to Cooper Ornithological Society's Board of Directors.
- 2010 External Examiner for 12-chapter dissertation from the University of Auckland.
- 2008 Charleston Chapter Delegate to national Sigma Xi meeting.
- 2004 Honorary membership in Sigma Xi, the Scientific Research Honor Society.
- 2003-04 Invited Scientist, French National Center for Scientific Research, to study
& 2001-02 penguins in the French Austral and Antarctic Territories.
- 2002 Chosen as Graduation Marshal for the Graduate School at Commencement.
- 2002 Inducted into Phi Kappa Phi Honor Society.
- 2001 & 02 Auburn Graduate Research Forum, Second Place Prize for Oral Presentation.
- 2001 Dean's Award for Excellence in Research, College of Science & Mathematics.
- 2000-01 Merriwether Fellow (one of four at Auburn University).
- 2000 Arant Award for Outstanding Graduate Student, Dept. of Biological Sciences.
- 1998-02 Auburn University Presidential Fellow.
- 1998-99 List of Top 10 Ph.D. students, Auburn Univ.; Grad. Dean's Award for Excellence.

- 1982 National Merit-based Scholarship (four year; \$10,000); Purolator Courier Corp.

Teaching Appointments

- 8/18-Present *Professor* Department of Biology, The Citadel, Charleston, SC
- Teach lecture/labs for General Biology I & II, Intro. To Biology I & II, Vertebrate Natural History (grad. & undergraduate courses), Ornithology (grad. & undergraduate courses), Animal Behavior (grad. & undergraduate courses), Birds of the Lowcountry (undergraduate only), & Behavioral Ecology.
 - Maintain research program involving active undergraduate/graduate participation.
 - Serve on departmental, school-wide, and university-wide committees.
 - Devise and implement program assessments.
 - Direct graduate programs: MA in Biology, Environmental Science Certificate, & Accelerated Master of Biology.
 - Perform extensive STEM community outreach for groups from K-12 to Seniors.
- 10/07-Present *Research Adjunct Professorships* Graduate Programs in Marine Biology, and in Environmental Studies, The University of Charleston, Charleston, SC.
- Supervised Marine Biology Master's work of Jessica Karan.
 - Supervised an Honors College undergraduate student, Caitlin Black.
 - Supervised MES students: Jennifer McCarthy Tyrrell, Sarah Latshaw, Katie Williams, Brittany Fournet, and Christopher Brown.
 - Served on multiple graduate committees.
 - Taught a 4-credit course: "Ecology, Biodiversity, & Conservation Biology."
- 8/12-8/18 *Associate Professor* Department of Biology, The Citadel, Charleston, SC
- Taught lecture/labs for General Biology I & II, Intro. To Biology I, Vertebrate Natural History (grad. & undergraduate courses), Ornithology (grad. & undergraduate courses), & Animal Behavior (grad. & undergraduate courses).
 - Maintained research program involving active undergraduate/graduate participation.
 - Served on departmental, school-wide, and university-wide committees.
 - Devised and implemented program assessments.
 - Directed graduate programs: MA in Biology, Environmental Science Certificate, & Accelerated Master of Biology.
 - Performed extensive STEM community outreach for groups from K-12 to Seniors.
- 8/06-8/12 *Assistant Professor* Department of Biology, The Citadel, Charleston, SC
- Taught lecture/labs for General Biology I & II, Intro. To Biology I & II, Vertebrate Natural History (grad. & undergraduate courses), Ornithology (grad. & undergraduate courses), & Animal Behavior (grad. & undergraduate courses).
 - Maintained research program involving undergraduate/graduate participation.
 - Served on departmental, school-wide, and university-wide committees.
- 8/05-8/06 *Visiting Assistant Professor* Dept. of Biology, Ithaca College, Ithaca, NY
- Coordinated & taught lecture/labs for Fundamentals of Biology, an introduction to cellular and systems level biology for physical- & occupational-therapy students.
 - Coordinated activities of four Assistant Lab Instructors; developed WebCT page.
 - Taught lecture course for non-majors course, Essentials of Biology.

Courses Taught at Ithaca College

- Spring 2006: Fundamentals of Biology (for Physical- or Occupational-Therapy majors)
Fundamentals of Biology Laboratory (3 sections)
- Fall 2005: Essentials of Biology (non-science majors)
Fundamentals of Biology Laboratory (3 sections)

- 8/02-5/03 *Instructor* Dept. of Biological Sciences, Auburn University, AL
- Taught lecture and labs for Introduction to Biology, a non-science majors course.
 - Committee member selecting textbooks for non-science majors Biology series.

Courses Taught at Auburn University

- Spring 2003: Introduction to Biology (non-science majors)
- Fall 2002: Introduction to Biology
Introduction to Biology Laboratory (3 sections)

- 1/96-8/02 *Graduate Teaching Assistant* Dept. of Biological Sciences, Auburn Univ., AL
- Taught undergraduate labs including Principles of Ecology, General Biology, Animal Biology, Perspectives in Biology, and Human Biology.
 - Developed a graduate-level course, "Foundations of Behavior & Evolution".
- 4/92-4/93 *Graduate Teaching & Research Assistant* Dept. of Avian Sciences, Univ. of California, Davis, & Caobanal Ranch, Guatemala, C.A.
- Served as teaching assistant for Introduction to Poultry Science.
 - Designed & conducted study of cockatiel (*Nymphicus hallandicus*) vocal development.
- 1/92-3/92
- Studied vocal development in yellow-naped amazons (*Amazona auropalliata*).
 - Conducted population censuses; searched for and measured nests and chicks.
- 8/89-12/89 *Animal Keeper Intern* Wildlife Rehab. Clinic, The Conservancy, Naples, FL
- Gave presentations on wildlife natural history to community groups.
 - Fed and cared for injured wildlife, maintained animal enclosures.
- 6/88-9/88 *Natural History Interpreter* Tetlin National Wildlife Refuge, Tok, AK
- Interpreted natural history films for groups of up to 60 people.
 - Researched, designed & wrote a pamphlet outlining local fishing sites.

Other Positions and Employment

- 12/94-6/95 *GIS Analyst* Remote Sensing Laboratory, Smithsonian Institution, National Zoo, Conservation & Research Center, Front Royal, VA. (NZIP-CRC)
- Admin. of a grant program, & taught lab exercise in GIS use to grant recipients.
 - Performed data capture, database development and map composition using PC Arc/Info; digitized documents; developed innovative uses of software.
- Bioacoustics Analyst*, NZP-CRC
- 6/95-12/95
- Researched, designed & conducted experiments; wrote proposals & publications.
- 9/94-11/94
- Performed computer analysis of birdsong; prepared results for publication.
- 4/94-7/94 *Field Research Assistant* Hawaiian Crow Recovery Project, USFWS, Hawaii
- Designed & implemented studies of Hawaiian Crow vocal behavior.

- Observed & recorded nesting behavior; described mosquito habitat.
- 9/93-4/94 *Laboratory Technician* Endocrine Research Lab., NZP-CRC
 - Extracted hormones from ursine fecal samples, determined metabolite composition through HPLC, quantified hormone levels by radioimmunoassay.
 - Prepared & presented slide shows, led tours of the CRC.
- 8/93-9/93 *Field Research Assistant* White-tailed deer impact study, NZP-CRC
 - Radio telemetry of wood thrush; confirmed location by GPS; analyzed habitat.
- 7/92-8/92 & 5/93-8/93 *Field Research Assistant* Kentucky Warbler Project, NZP-CRC
 - Monitored reproduction using mistnets, radio telemetry, & song playback.
 - Collected blood, fecal and feather samples; took morphological measurements; recorded vocalizations; designed playback experiments.
- 1/91-8/91 *Junior Research Assistant*, Endocrine Research Lab., NZP-CRC
 - Ran experiments observing and manipulating mate choice in pintail ducks.
 - Measured hormones using ether extractions, celite chromatography and RIAs.
- 7/90-8/90 *Research Technician*, Endocrine Research Lab., NZP-CRC
 - Extracted hormones from fecal samples of yellow baboons; entered/analyzed data.
- 1/90-6/90 & 1/89-6/89 *Nest Guardian* US Fish & Wildlife Service, Patuxent Wildlife Research Center, Puerto Rico Research Station, Palmer, PR
 - Observed & recorded Puerto Rican Parrot behavior; censused population.
 - Assisted in training of volunteers.
- 6/89-8/89 *Biological Technician* USDA Forest Service, Clarion, PA
 - Performed forest inventory, cruised timber.

Teaching Overview at The Citadel

Summer 2022	Fundamentals of Biology Fundamentals of Biology Laboratory Graduate Research (Dynasty Heyward; Biol 611. One credit.)
Spring 2022	Animal Behavior Foundations of Biology Laboratory (two sections)
Fall 2021	Foundations of Biology Laboratory Foundations of Biology lecture Introduction Biology II Laboratory (two sections) Graduate Research (Peter Bergeson) Undergraduate Research (Hannah Dion) Undergraduate Research (Hunter Page)
Spring 2021	General Biology II (two sections) Introduction to Biology Laboratory I
Fall 2020	Introduction to Biology Laboratory II (two sections) Behavioral Ecology, graduate level
Summer I 2020	General Biology I <i>Online</i> General Biology Laboratory I <i>Online</i>
Spring 2020	General Biology II

	Vertebrate Natural History
	HONR 400 (Guided Research; Hannah Dion. Three credits)
	Avian Biology & Mgmt. (Nathan Platt; Biol 610. Four credits)
Fall 2019	General Biology I
	Introduction to Biology Laboratory II
	Senior Seminar
	Birds of the Lowcountry (Biol 412)
	Graduate Research (Nathan Platt; Biol 611-82. Three credits.)
	Laboratory Methods in Biology (Biol 605 Colin Martin)
Spring 2019	General Biology II
	Introduction to Biology Laboratory I (two sections)
	Graduate Research (Megan Cummings; Biol 611-84. Three credits.)
	Graduate Research (Jessica Farst; Biol 611-81. One credit.)
	Graduate Research (Nathan Platt; Biol 611-85. One credit.)
Fall 2018	General Biology I
	Introduction to Biology Laboratory II (two sections)
Summer 2018	General Biology I
	General Biology Laboratory I
Spring 2018	General Biology I (two sections)
	General Biology Laboratory II (two sections)
Fall 2017	General Biology I (two sections)
	Introduction to Biology Laboratory I
Summer II 2017	General Biology II
	General Biology II Laboratory
Maymester 2017	Graduate Research (Brogin Van Skoik; Biol 611)
Spring 2017	General Biology II
	General Biology II Laboratory (three sections)
Fall 2016	Introduction to Biology I
	Vertebrate Natural History (Graduate level)
	Vertebrate Natural History Laboratory (Graduate level)
Summer I 2016	General Biology I
	General Biology I Laboratory
Spring 2016	Animal Behavior
	Animal Behavior Laboratory
	General Biology II
Fall 2015	Introduction to Biology I
	Introduction to Biology I Laboratory
	General Biology I Laboratory
Summer II 2015	General Biology II
	General Biology II Laboratory
Spring 2015:	Ornithology (graduate-level evening course)
	Ornithology Laboratory (graduate-level Saturday course)
	Ornithology (undergraduate)
	Ornithology Laboratory (undergraduate)
Fall 2014	Introduction to Biology I (two sections)
	Introduction to Biology I Laboratory
Summer I 2014	General Biology I
	General Biology I Laboratory

Summer II 2013	General Biology II General Biology II Laboratory
Summer I 2013	General Biology I General Biology I Laboratory
Spring 2013	Vertebrate Natural History Vertebrate Natural History Laboratory General Biology II Undergraduate Research (Mark Pierce; Biol 320)
Fall 2012	Introduction to Biology I Introduction to Biology I Laboratory Graduate Research (Sarah Diaz, Pamela Corwin, Katie Story; Biol 611)
Summer I 2012	General Biology I General Biology I Laboratory Graduate Research (Sarah Diaz, Pamela Corwin, Katie Story; Biol 611)
Spring 2012	Ornithology (graduate-level evening course) Ornithology Laboratory (graduate-level Saturday course) Animal Behavior Animal Behavior Laboratory Graduate Research (Sarah Harper Diaz; Biol 611) Bachelor's Essay (Honors Thesis of Caitlin Black; Biol 499 at CofC)
Fall 2011	Introduction to Biology I Introduction to Biology I Laboratory (2 sections) Undergraduate Research (Zane Newton; Biol 320) Bachelor's Essay (Honors Thesis of Caitlin Black; Biol 499 at CofC)
Summer I 2011	General Biology I General Biology I Laboratory
Spring 2011:	Ornithology Ornithology Laboratory Graduate Research (Pamela Corwin; Biol 611)
Fall 2010	Introduction to Biology I Introduction to Biology I Laboratory (3 sections) Graduate Research (Pamela Corwin; Biol 611)
Summer II 2010	General Biology II General Biology II Laboratory Graduate Research (Pamela Corwin; Biol 611)
Summer I 2010	General Biology I General Biology I Laboratory Graduate Research (Pamela Corwin; Biol 611)
Spring 2010:	Vertebrate Natural History Vertebrate Natural History Laboratory General Biology I
Fall 2009:	Introduction to Biology I Introduction to Biology I Laboratory (2 sections) Undergraduate Research (Preston Payne; Biol 320)
Summer I 2009	General Biology I General Biology I Laboratory
Maymester 2009	Graduate Research (Jonathan Sticca; Biol 611)
Spring 2009:	Animal Behavior

Animal Behavior Laboratory
 General Biology II
 Ecology, Biodiversity, & Conservation Biology (at CofC)
 Graduate Research (David Carter & Jonathan Sticca; Biol 611)

Fall 2008: Introduction to Biology I
 Introduction to Biology I Laboratory (2 sections)

Summer II 2008: General Biology II
 General Biology II Laboratory
 Graduate Research (Amanda Aguirre; Biol 611)

Summer I 2008: General Biology I
 General Biology I Laboratory

Maymester 2008 Undergraduate Research (Christopher Trostle; Biol 320)

Spring 2008: Ornithology (graduate-level evening course)
 Ornithology Laboratory (graduate-level evening course)
 Ornithology (undergraduate)
 Ornithology Laboratory (undergraduate)
 Undergraduate Research (Holly Maslowski; Biol 320)

Fall 2007: Introduction to Biology I
 Introduction to Biology I Laboratory (2 sections)

Summer I 2007: General Biology I
 General Biology I Laboratory

Spring 2007: Animal Behavior
 Animal Behavior Laboratory
 General Biology II

Fall 2006: General Biology I
 Vertebrate Natural History
 Vertebrate Natural History Laboratory

Graduate Mentorships

Research Advisor for Peter Bergeson, Citadel Biology graduate student

Research Advisor for Nathan Platt, Citadel Biology graduate student

Nathan was named Outstanding Graduate Student in the School of Science & Mathematics, May 2020.

Major Professor for Jessica Karan at Univ. of Charleston, Graduate Program in Marine Biology

Research Advisor for Megan Cummings, Citadel Biology graduate student

Research Advisor for Jessica Farst, Citadel Biology graduate student

Research Advisor for Brogin Van Skoik, Citadel Biology graduate student

Media Coverage (hyperlinks): [Newspaper](#), [Newspaper](#)

Graduate committee member for Benjamin Weiss at College of Charleston, MES Program

Major Professor for Christopher Brown at College of Charleston, MES Program

Major Professor for Brittany Fournet at College of Charleston, MES Program

Brittany was named Outstanding MES Graduate Student, December 2015

Graduate committee member for Brian Jarusik at College of Charleston, MES Program

Research Advisor for Pamela Corwin, Citadel Biology graduate student

Pamela won the SC Wildlife Federation Scholarship, February 2012

Media Coverage (hyperlinks): [Television](#), [Newspaper](#)

Research Advisor for Katie Wooten Story, Citadel Biology graduate student

Research Advisor for Sarah Diaz, Citadel Biology graduate student
Internship Advisor for Kathleen Williams at College of Charleston, MES Program
Academic Advisor for Jennifer McCarthy Tyrrell at College of Charleston
Major Professor for Sarah Latshaw at College of Charleston, MES Program

Sarah was named **Outstanding MES Graduate Student, December 2011**

Media Coverage: [Newspaper](#), [Blog](#)

Graduate committee member for Kathleen Clancy at College of Charleston
Co-Mentored graduate research by Heather Burke, Citadel Biology graduate student
Co-Mentored graduate research by Angela Robinson, Citadel Biology graduate student
Mentored graduate research by Jonathan Sticca, Citadel Biology graduate student
Mentored graduate research by Amanda Aguirre, Citadel Biology graduate student
Mentored graduate research by David Carter, Citadel Biology graduate student

Teaching Intern Mentorships for MUSC Ph.D. Candidates

Ryan Kelly (2015)	Ashley Fortress (2010)
James Small (2014)	David Perry (2009)
Marie Lockhart (2012)	Kevin Francis (2008)
Suzanne Parks (2011)	Nathan Pruett (2007)

Undergraduate Research Mentorships

Citadel Cadets

Hunter Page	Cris Musselwhite	Stephen Smilak
Hannah Dion (Outstanding Biology Freshman 2019 & Sophomore 2020)	Preston Payne	Andrew Hancox (Co-mentor)
Mark Pierce	Raymond Kessler	Ronald Willis (Co-mentor)
Zane Newton	Paulo Gonzalez	Alex Anderson (Co-mentor)
	Holly Maslowski	
	Christopher Trostle	

College of Charleston Undergraduates

Caitlin Black, Honors Program senior at College of Charleston
Kennon Todd, senior at College of Charleston
Alexandra Landers, senior at College of Charleston
William Lemon, senior at College of Charleston

Peer-Reviewed Publications

Books, and Book-length Test Files

8. John Alcock, Linda Green, **Paul Nolan**, and Dustin Rubenstein (authorship assigned alphabetically). 2018. Test Bank to accompany *Animal Behavior*, Eleventh Edition. Sinauer Assoc. Inc., Sunderland, MA.
7. Johnson, Kristy and **Paul M. Nolan**. 2016. *Biological Weapons: Recognizing, Understanding, and Responding to the Threat*. 425 pp. Wiley & Sons.
6. **Paul M. Nolan**. 2016. Test Bank for *Biological Weapons: Recognizing, Understanding, and Responding to the Threat*. 217 pp.
5. Aukema *et al.* 2014. *Principles of Life (2nd ed.) – Online Test Bank*. Sinauer Assoc. Inc., Sunderland, MA.

4. Johnson, N., **Paul Nolan**, D. Darnowski, E. Bergquist, R. Shingles, G. Hurlburt, P. Molyneaux, B. McGuire, A. Burnside, C. Wetzell, N. Murray, D. Johnson, M. Safford, S. Compton, and X. Morin. 2013. *Test File to accompany 'Life: the Science of Biology (10th ed.)'*. Sinauer Assoc. Inc., Sunderland, MA. ISBN-13: 978-1-4292-5579-0.
3. Norman Johnson, **Paul Nolan**, Nicola Plowes, Paul Kuzeja, Brian Storrie, and Teri Shors. 2012. *Principles of Life – Printed Test Bank*. Sinauer Assoc. Inc., Sunderland, MA. ISBN-13: 978-1-4292-7928-4.
2. Ueckert, Catherine, Norman Johnson, **Paul Nolan**, Nicola Plowes, and Paul Kuzeja. 2011. *Test File to accompany 'Life: the Science of Biology (9th ed.)'*. Sinauer Assoc. Inc., Sunderland, MA. ISBN-13: 978-1-4292-3567-9.
1. **Nolan, Paul M.** 2002. Song and plumage color as multiple ornaments in the house finch (*Carpodacus mexicanus*). Ph.D. dissertation, Auburn University, AL.

Peer-reviewed Scholarly Papers

H-index = 28; ResearchGate Score = 29.43 (>87.5% of RG members); >1,800 citations.

33. Theresa L. Cole, Ludovic Dutoit, Nicolas Dussex, Tom Hart, Alana Alexander, Jane L. Younger, Gemma V. Clucas, María José Frugone, Yves Cherel, Richard Cuthbert, Ursula Ellenberg, Steven R. Fiddaman, Johanna Hiscock, David Houston, Pierre Jouventin, Thomas Mattern, Gary Miller, Colin Miskelly, **Paul Nolan**, Michael J. Polito, Petra Quillfeldt, Peter G. Ryan, Adrian Smith, Alan JD Tennyson, David Thompson, Barbara Wienecke, Juliana A. Vianna, Jonathan M. Waters. 2019. Receding ice drove parallel expansions in Southern Ocean penguins. *Proceedings of the National Academy of Sciences of the USA*. 116: 26690-26696 (Impact Factor 9.58). DOI: 10.1073/pnas.1904048116
32. Gemma V. Clucas, Jane L. Younger, Damian Kao, Jonathan Handley, Gary Miller, Pierre Jouventin, **Paul Nolan**, Karim Gharbi, Karen Miller and Tom Hart. 2016. Dispersal in the sub-Antarctic: King penguins show a remarkable lack of population genetic differentiation across their range. *BMC Evolutionary Biology* 16:211 (Impact Factor: 3.37). DOI: 10.1186/s12862-016-0784-z.
31. Shultz, Allison, Allan Baker, Geoffrey Hill, **Paul Nolan**, and Scott Edwards. 2016. SNPs across time and space: population genomic signatures of founder events and epizootics in the House Finch (*Haemorrhous mexicanus*). *Ecology and Evolution* 2016. 6:7475-7489. DOI: 10.1002/ece3.2444. (Impact Factor: 2.54). **Cover Photo:** <http://tinyurl.com/grw4v58>
30. Mathieu Giraudeau, **Paul M. Nolan**, Caitlin E. Black, Stevan R. Earl, Masaru Hasegawa, and Kevin J. McGraw. 2014. Song characteristics track bill morphology along a gradient of urbanization in house finches (*Haemorrhous mexicanus*). *Frontiers in Zoology* 11:83-90 (Impact Factor: 2.30).
29. Coimbra, João P., **Paul M. Nolan**, Shaun P. Collin, and Nathan S. Hart. 2012. Spatial resolving power and topographic specializations in the retinal ganglion cell layer of penguins. *Brain, Behavior and Evolution* 80:254-268 (Impact Factor: 2.89).
28. McGraw, Kevin J., **Paul M. Nolan**, and Ondi L. Crino. 2011. Carotenoids bolster immunity during moult in a wild songbird species with sexually selected plumage coloration. *The Biological Journal of the Linnaean Society* 102:560-572 (Impact Factor: 2.166).

27. **Nolan, Paul M.**, F. Stephen Dobson, Marion Nicolaus, Tim J. Karels, Kevin J. McGraw, and Pierre Jouventin. 2010. Mutual mate choice for colorful traits in king penguins. *Ethology* 116:635-644 (Impact Factor: 1.945).
26. Dobson, F. Stephen, **Paul M. Nolan**, Marion Nicolaus, Catherine Bajzak, Anne-Sophie Coquel, and Pierre Jouventin. 2008. Comparison of color and body condition between early- and late-breeding King Penguins. *Ethology* 114:925-933 (Impact Factor: 1.945).
25. Viera, Vanessa M., **Paul M. Nolan**, Steeve D. Côté, Pierre Jouventin, René Groscolas. 2008. Is territory defence related to plumage ornaments in the king penguin *Aptenodytes patagonicus*? *Ethology* 114:146-153 (Impact Factor: 1.945).
24. Jouventin, Pierre, **Paul M. Nolan**, F. Stephen Dobson, & Marion Nicolaus. 2008. Coloured patches influence pairing in king penguins. *The Ibis* 150:193-196 (Impact Factor: 2.295).
23. Nicolaus, Marion, Céline Le Bohec, **Paul M. Nolan**, Michel Gauthier-Clerc, Yvon Le Maho, Jan Komdeur, and Pierre Jouventin. 2007. Ornamental colours reveal age in the king penguin. *Polar Biology* 31:53-61 (Impact Factor: 1.445).
22. McGraw, Kevin J., Matthew B. Toomey, **Paul M. Nolan**, Nathan I. Morehouse, Melanie Massaro, and Pierre Jouventin. 2007. A description of unique fluorescent yellow pigments in penguin feathers. *Pigment Cell Research* 20:301-304 (Impact Factor: 4.29).
21. McGraw, Kevin J., Ondi L. Crino, William Medina, and **Paul M. Nolan**. 2006. Effect of dietary carotenoid supplementation on food intake and immune function in a songbird with no carotenoid coloration. *Ethology* 112:1209-1216 (Impact Factor: 1.945).
20. **Nolan, Paul M.**, Birgitta Dresp, F. Stephen Dobson, and Pierre Jouventin. 2006. Immunocompetence is signaled by ornamental color in king penguins, *Aptenodytes patagonicus*. *Evolutionary Ecology Research* 8:1325-1332 (Impact Factor: 1.507).
19. McGraw, Kevin J., **Paul M. Nolan**, and Ondi L. Crino. 2006. Carotenoid accumulation strategies for becoming a colorful house finch: analyses of plasma and liver pigments in wild molting birds. *Functional Ecology* 20:678-688 (Impact Factor: 4.65).
18. Gilbert, William, **Paul M. Nolan**, Andrew Stoehr, and Geoffrey Hill. 2005. Filial Cannibalism at a House Finch Nest. *The Wilson Bulletin* 117:413-415 (Impact Factor: 0.538).
17. Jouventin, Pierre, **Paul M. Nolan**, Jonas Örnberg, and F. Stephen Dobson. 2005. Ultraviolet beak spots in king and emperor penguins. *The Condor* 107:144-150 (Impact Factor: 1.290).
16. **Nolan, Paul M.**, Sharon R. Roberts, and Geoffrey E. Hill. 2004. Effects of *Mycoplasma gallisepticum* on reproductive success in house finches. *Avian Diseases* 48:879-885 (Impact Factor: 1.623).
15. **Nolan, Paul M.** and Geoffrey E. Hill. 2004. Female Choice for Song Characteristics in the House Finch. *Animal Behaviour* 67:403-410 (Impact Factor: 3.101).
14. McGraw, K. J., K. Wakamatsu, S. Ito, **P. M. Nolan**, P. Jouventin, F. S. Dobson, R. E. Austic, R. J. Safran, L. M. Siefferman, G. E. Hill, and R. S. Parker. 2004. "You can't always judge a plumage pigment by its color": carotenoid and melanin content of yellow- and brown-colored feathers in swallows, bluebirds, penguins, and domestic chicks. *The Condor* 106:390-395 (Impact Factor: 1.290).

13. Badyaev, Alexander V., Michelle L. Beck, Anne A. Dervan, Renée A. Duckworth, Geoffrey E. Hill, Kevin J. McGraw, **Paul M. Nolan**, and Linda A. Whittingham. 2002. Sex-biased hatching order and adaptive population divergence in a passerine bird. *Science* 295:316-318 (Impact Factor: 31.364).
12. McGraw, Kevin J., **Paul M. Nolan**, Andrew M. Stoehr, and Geoffrey E. Hill. 2001. Intersexual differences in age-specific parental effort in the house finch (*Carpodacus mexicanus*). *Etologia* 9:35-41 (Impact Factor: 0.871).
11. **Nolan, Paul M.**, Andrew M. Stoehr, Geoffrey E. Hill, and Kevin J. McGraw. 2001. The number of provisioning visits by house finches predicts the mass of food delivered. *The Condor* 103:851-855 (Impact Factor: 1.290).
10. Stoehr, Andrew M., K. J. McGraw, **P. M. Nolan**, and G. E. Hill. 2001. Parental care in relation to brood size in the house finch. *J. Field Ornithol.* 72:412-418 (Impact Factor: 0.849).
9. McGraw, Kevin J., Andrew M. Stoehr, **Paul M. Nolan**, and Geoffrey E. Hill. 2001. Plumage redness predicts breeding onset and reproductive success in the house finch: a validation of Darwin's theory. *Journal of Avian Biology* 32(1): 90-95 (Impact Factor: 2.31).
8. Roberts, S. R., **P. M. Nolan**, L. H. Lauerman, L.-Q. Li, and G. E. Hill. 2001. Characterization of the mycoplasmal conjunctivitis epidemic in a southeastern house finch (*Carpodacus mexicanus*) population. *Journal of Wildlife Diseases* 37:82-88 (Impact Factor: 1.415).
7. Roberts, Sharon R., **Paul M. Nolan** and Geoffrey E. Hill. 2001. Characterization of *Mycoplasma gallisepticum* infection in captive house finches (*Carpodacus mexicanus*) in 1998. *Avian Diseases* 45: 70-75 (Impact Factor: 1.623).
6. Badyaev, Alex V., Geoffrey E. Hill, Andrew M. Stoehr, **Paul M. Nolan**, and Kevin J. McGraw. 2000. The evolution of sexual dimorphism in the house finch: II. Population divergence in relation to local selection. *Evolution* 54:2134-2144 (Impact Factor: 5.659).
5. **Nolan, Paul M.**, Renée A. Duckworth, Geoffrey E. Hill, and Sharon R. Roberts. 2000. Maintenance of a captive flock of house finches free of infection by *Mycoplasma gallisepticum*. *Avian Diseases* 44: 948-952 (Impact Factor: 1.623).
4. Stoehr, Andrew M., **Paul M. Nolan**, Geoffrey E. Hill, and Kevin J. McGraw. 2000. Nest mites (*Pellonyssus reedi*) and the reproductive biology of the house finch (*Carpodacus mexicanus*). *The Canadian Journal of Zoology* 78: 2126-2133 (Impact Factor: 1.196).
3. Hill, Geoffrey E., **Paul M. Nolan** and Andrew M. Stoehr. 1999. Pairing success relative to plumage redness and pigment symmetry: temporal and geographic constancy. *Behavioral Ecology* 10:48-53 (Impact Factor: 2.926).
2. **Nolan, Paul M.**, Geoffrey E. Hill and Andrew M. Stoehr. 1998. Sex, size, and plumage redness predict house finch survival in an epidemic. *Proceedings, Royal Society of London, Series B* 265:961-965 (Impact Factor: 5.064).
1. Sorenson, Lisa G., **Paul M. Nolan**, Andrea M. Brown, Scott R. Derrickson and Steven L. Monfort. 1997. Hormonal dynamics during mate choice in the northern pintail: a test of the 'challenge' hypothesis. *Animal Behaviour* 54:1117-1133 (Impact Factor: 3.10).

Non-Reviewed Articles

6. Sarah A. Latshaw and **Paul M. Nolan**. 2012. Building for the Buntings. Brochure for the Kiawah Conservancy. Archived at: www.kiawahconservancy.org/PaintedBuntingGuide.pdf.
5. **Paul M. Nolan**. Feb. 2007. Penguin research captures professor's attention. Citadel home web page. Archived at: http://externalaffairs.citadel.edu/penguin_research.
4. **Paul M. Nolan**. Nov. 2000. Mycoplasmal Conjunctivitis among Breeding House Finches. *Flicker Flashes*, from Birmingham Audubon Society.
3. Gary Mullen, Renee Anderson, and **Paul M. Nolan**. 1999. Tick paralysis in wild birds: A cyclic phenomenon. *Highlights of Agricultural Research*, 46(4):19-20.
2. K. L. Joyner, N. de Berger, E. H. Lopez, A. Brice & **Paul Nolan**. 1992. Health Parameters of Wild Psittacines in Guatemala: A Preliminary Report. Proc. of the Annual Conf., Assoc. of Avian Veterinarians.
1. Doug M. Muchoney, Rose A. Z. Meier, **Paul M. Nolan** and Francisca Saavedra. 1995. Final Report for The Smokehole Bioreserve GIS. Submitted to The WV Nature Conservancy, on file at Remote Sensing Lab of the Smithsonian Institution's NZP-CRC.

Presentations at National & International Conferences (*student co-author)

- Jessica Karan* and **Paul M. Nolan**. Captive populations as a tool for wildlife research: Non-invasive methods assess the stress hormones and health of gentoo penguins. Association of Zoos and Aquariums Annual Conference, New Orleans, LA. Sept. 2019.
- Cole TL*, Dutoit L, Dussex N, Hart T, Alexander A, Younger JL, Clucas GV, Frugone MJ, Cherel Y, Cuthbert R, Ellenberg U, Fiddaman S, Houston D, Jouventin P, Mattern T, Miller G, Miskelly C, **Nolan P**, Polito M, Quillfeldt P, Ryan P, Smith A, Tennyson AJD, Thompson D, Wienecke B, Vianna J, Waters JM. Contrasting demographic histories between widespread and endemic penguin taxa. 10th International Penguin Congress. Dunedin, New Zealand. Aug. 2019.
- Jessica Karan* and **Paul M. Nolan**. Captive populations as a tool for wildlife research: Non-invasive methods assess the stress hormones and health of gentoo penguins. 56th Annual Conference of the Animal Behavior Society and the 36th International Ethological Conference. Chicago, IL. July 2019.
- Cole TL*, Hart T, Dussex N, Dutoit L, Younger JL, Clucas GV, Frugone MJ, Cherel Y, Cuthbert R, Ellenberg U, Fiddaman S, Houston D, Mattern T, Miller G, Miskelly C, **Nolan P**, Quillfeldt P, Ryan P, Smith A, Tennyson AJD, Thompson D, Wienecke B, Vianna J, Waters JM. Receding ice drove rapid expansions in eight Southern Ocean penguins. Genetics Society of Australasia. Melbourne, Australia. June/July 2019.
- Theresa L. Cole*, Tom Hart, Nicolas Dussex, Maria José Frugone, Ludovic Dutoit, Jane L. Younger, Gemma V. Clucas, Yves Cherel, Richard Cuthbert, Ursula Ellenberg, Steven Fiddaman, David Houston, Thomas Mattern, Gary Miller, Colin Miskelly, **Paul Nolan**, Petra Quillfeldt, Peter G. Ryan, Adrian Smith, Alan J. Tennyson, David Thompson, Barbara Wienecke, Juliana Vianna, Jonathan M. Waters. Contrasting demographic histories between widespread and endemic penguin taxa. Society for Molecular Biology and Evolution. Manchester, England, UK. March 2019.

Paul M. Nolan, *Brogin Van Skoik, and Tom Hart. Non-invasive monitoring of penguin colony health. Society for Integrative and Comparative Biology, San Francisco, CA. January 2018.

*Brogin Van Skoik, Tom Hart and Paul M. Nolan. Dynamic color in a black-and-white world: Penguin beak spots as biosentinels in the Antarctic. American Ornithological Society and Society of Canadian Ornithologists Joint Meeting, East Lansing, MI. August 2017.

*Brittany Fournet and Paul M. Nolan. Human impact on least terns at highly- vs. lightly-disturbed sites. American Ornithological Society and Society of Canadian Ornithologists Joint Meeting, East Lansing, MI. August 2017.

*Andrew Downs and **Paul M. Nolan**. Height and Perceived Masculinity/Femininity of Facial Features. International Society for Behavioral Ecology, Exeter, UK. August 2016.

*Sarah H. Diaz and **Paul M. Nolan**. Can a coastal public greenway serve as an urban habitat oasis for migrating birds? Animal Behavior Society, Anchorage, AK. June 2015.

*A.J. Shultz, N. Backström, Q. Zhang, A.J. Baker, G.E. Hill, **P.M. Nolan**, and S.V. Edwards. Signatures of pathogen-mediated selection using genome-wide diachronic comparisons in the House Finch. Conférences Jacques Monod, CNRS, Roscoff, France. Sept. 2014.

*Allison J. Shultz, Allan J. Baker, Geoffrey Hill, **Paul M. Nolan**, and Scott Edwards. Phylogeography and signatures of pathogen-mediated selection using genome-wide diachronic comparisons in the House Finch (*Haemorrhous mexicanus*). Society for the Study of Evolution, Snowbird, UT. June 2013.

Paul M. Nolan, *Caitlin E. Black, Mathieu Giraudeau, and Kevin J. McGraw. Song of adult house finches varies along a rural-to-urban gradient. International Society for Behavioral Ecology, Lund, Sweden. August 2012.

*Caitlin E. Black, **Paul M. Nolan**, Kevin J. McGraw, and Mathieu Giraudeau. Development of bird song along an urban to rural gradient. International Society for Behavioral Ecology, Lund, Sweden. August 2012.

*Caitlin E. Black, Mathieu Giraudeau, Kevin J. McGraw, and **Paul M. Nolan**. Bird song behavior along an urban-to-rural gradient. Annual meeting of the Society for Integrative & Comparative Biology, Charleston, SC. January 2012.

Caitlin won the best student poster award for this presentation

*Sarah A. Latshaw, **Paul M. Nolan**, and John A. Gerwin. Using the habitat preferences of painted buntings (*Passerina ciris*) to guide restoration initiatives on a developing barrier island in South Carolina. Annual meeting of the Ecological Society of America, Austin, TX, August 2011.

*Alexander B. Anderson, **Paul M. Nolan**, and Kristy Y. Johnson. Does corticosterone correlate with exposure to West Nile virus in House Finches? Joint Meeting of the AFO/WOS/COS, Kearney, NE; March 2011.

Alex won the best student poster award for this presentation

Paul M. Nolan and John E. Weinstein. Assessing Avian Use of Stormwater Detention Ponds in a Coastal Environment. International Society for Behavioral Ecology, Perth, Australia; September 2010.

*Charles P. Payne, **Paul M. Nolan**, *Michael Graves and Kristy Y. Johnson. Ptilochronology

relates to West Nile virus seropositivity in House Finches. Annual Meeting of the Animal Behavior Society, Williamsburg, VA; July 2010.

Paul M. Nolan, *Michael Graves, and Kristy Y. Johnson. Demographic and seasonal patterns of West Nile virus seropositivity in house finches. North America Ornithological Congress, San Diego, CA, Feb., 2010.

*Sarah A. Latshaw, **Paul M. Nolan**, and John A. Gerwin. Habitat Preferences of Painted Buntings (*Passerina ciris*) on a Barrier Island. North America Ornithological Congress, San Diego, CA, Feb., 2010.

Paul M. Nolan, *Holly D. Maslowski, and Alix G. Darden. Possible signal content of ornamental traits in rockhopper penguins, *Eudyptes chrysocome*. Annual Meeting of the Animal Behavior Society, Pirenopolis, Brazil; June 2009.

Paul M. Nolan, *Holly D. Maslowski, and Alix G. Darden. Possible roles of ornamental traits in rockhopper penguins, *Eudyptes chrysocome*. Joint Meeting of the COS/SCO/AOU, San Diego, CA; February 2009.

*Holly D. Maslowski, **Paul M. Nolan**, and Alix G. Darden. Relative signal contents of integumentary colors in rockhopper penguins, *Eudyptes chrysocome*. Sigma Xi Annual Meeting & Student Research Conference, Washington, DC; November 2008.

*Holly D. Maslowski, **Paul M. Nolan**, and Alix G. Darden. Feather plumes may be sexually selected in rockhopper penguins, *Eudyptes chrysocome*. International Society for Behavioral Ecology, Ithaca, NY; August 2008.

Paul M. Nolan, M. Nicolaus, F. Stephen Dobson, and P. Jouventin. Ornamental colors as quality indicators in king penguins. 6th Int'l Penguin Conf., Hobart, Australia; Sept., 2007.

Paul M. Nolan, M. Nicolaus, C. Bajzak, A.-S. Coquel, B. Dresp, and P. Jouventin. Ornamental colors signal sex, health, and breeding status in king penguins, *Aptenodytes patagonicus*. Society for Integrative & Comparative Biology, Phoenix, AZ; Jan. 2007.

Paul M. Nolan, M. Nicolaus, C. Bajzak, A.-S. Coquel, B. Dresp, and P. Jouventin. Ornamental colors signal sex, health, and breeding status in king penguins, *Aptenodytes patagonicus*. International Society for Behavioral Ecology, Tours, France; July 2006.

Pizzi, R., McGraw, K., **Nolan, P.**, Gibbons, M. Novel plumage pigments, novel prey species antioxidants and immuno-modulators: implications for captive penguin nutrition. 4th European Zoo Nutrition Conference, Leipzig. Jan. 2005.

Paul M. Nolan, P. Jouventin, and F. Stephen Dobson. Plumage color predicts immune response in king penguins. Society for Integrative & Comparative Biology, San Diego, CA; Jan. 2005

Paul M. Nolan, Pierre Jouventin, F. Stephen Dobson, and Marion Nicolaus. Sexually selected plumage patches in king penguins. 5th Int'l Penguin Conf., Ushuaia, Argentina; Sept., 2004.

Paul M. Nolan, Pierre Jouventin, F. Stephen Dobson, and Marion Nicolaus. The influence of colored plumage patches on pairing in King Penguins. International Society for Behavioral Ecology, Jyväskylä, Finland; July, 2004.

Paul M. Nolan, P. Jouventin, F. S. Dobson, & M. Nicolaus. Mate choice for colored plumage patches in male and female king penguins. Animal Behav. Soc., Oaxaca, Mexico; 6/2004.

- Pierre Jouventin, **Paul M. Nolan**, and Stephen Dobson. Biological significance of ornaments in penguins. 2nd European Conference on Avian Colour Vision and Coloration, Paris, France; October, 2003.
- Paul M. Nolan** and Geoffrey E. Hill. Female choice for song characteristics in the House Finch. International Ethological Conference, Florianopolis, Brazil; August, 2003.
- K. J. McGraw, M. Nogare, **P. M. Nolan**, F. S. Dobson, and P. Jouventin. New plumage pigments in parrots and penguins. American Ornithologists' Union, Urbana-Champaign, IL; August, 2003.
- Paul M. Nolan**. Female choice for song characteristics in the House Finch. Animal Behavior Society, Boise, ID; July, 2003.
- Nathan S. Hart and **Paul M. Nolan**. Retinal ganglion cell topography in the king penguin. Australian Neuroscience Society Conference, Adelaide, Australia; January, 2003.
- Paul M. Nolan** and Geoffrey E. Hill. Female choice for song characteristics in the House Finch. North American Ornithological Conference, New Orleans, LA; September, 2002.
- Kristy L. Farmer, **Paul M. Nolan**, Geoffrey E. Hill, and Sharon R. Roberts. Estrogen may play an immunoprotective role in female House Finches exposed to *Mycoplasma gallisepticum*. North American Ornithological Conference, New Orleans, LA; September, 2002.
- Paul M. Nolan** and Geoffrey E. Hill. Song is an honest indicator in the House Finch. International Ornithological Congress, Beijing, China; August, 2002.
- Paul M. Nolan** and Geoffrey E. Hill. Female choice for song characteristics in the House Finch. International Society for Behavioral Ecology, Montreal, Canada; July, 2002.
- Paul M. Nolan**, Sharon R. Roberts, and Geoffrey E. Hill. Effects of an epidemic of *Mycoplasma gallisepticum* on reproductive success in house finches. Society for Conservation Biology, Hilo, HI; July 2001.
- Paul M. Nolan** and Geoffrey E. Hill. Song is an honest signal in the house finch. The Animal Behavior Society, Corvallis, OR; July 2001.
- Paul M. Nolan**, Kevin J. McGraw, Andrew M. Stoehr, Sharon R. Roberts, Geoffrey E. Hill, & Michael C. Wooten. Sex ratio fluctuations & facultative sex ratio adjustment following an epidemic. International Society for Behavioral Ecology, Zurich, Switzerland; August, 2000.
- Sharon R. Roberts, **Paul M. Nolan**, and Geoffrey E. Hill. Evidence of increased resistance to infection with *Mycoplasma gallisepticum* in the eastern house finch (*Carpodacus mexicanus*). The 2nd Intl. Conf. on Emerging Infectious Diseases, Atlanta, GA; July, 2000.
- Paul M. Nolan**, Kevin J. McGraw, Andrew M. Stoehr, Sharon R. Roberts, Geoffrey E. Hill, & Michael C. Wooten. Sex ratio fluctuations & facultative sex ratio adjustment following an epidemic. Society for Conservation Biology, Missoula MT; June, 2000.
- Paul M. Nolan**, Kevin J. McGraw, Andrew M. Stoehr, Anne A. Ford, Geoffrey E. Hill and Michael C. Wooten. Facultative sex ratio adjustment following an epidemic. The Animal Behavior Society, Lewisburg, PA; June, 1999.
- Andrew. M. Stoehr, Kevin J. McGraw, **Paul M. Nolan** and Geoffrey E. Hill. Parental care and brood size in house finches. The Animal Behavior Society, Lewisburg, PA; June, 1999.

P. M. Nolan, G. E. Hill, & A. M. Stoehr. Sex, size, & plumage redness predict house finch survival in 2 epidemics. 10th Annual Frontiers of Science Symposium, Irvine CA.; 11/1998.

Paul M. Nolan, Amy Dreibelbis, James Welden, Lan-Qing Li, Lloyd H. Lauerman, Geoffrey E. Hill, & Sharon Roberts. Characterization of the 1998 *Mycoplasma gallisepticum* epizootic in the house finch population in Auburn, AL. Joint Meeting, SE & South Central Branches of the American Society for Microbiology, Montgomery, AL; Oct. 1998.

Paul M. Nolan, Geoffrey E. Hill, & Andrew M. Stoehr. Sex, size, and plumage redness predict house finch survival in two epidemics. Int'l Soc. for Behav. Ecol., Monterey, CA; 8/1998.

Paul M. Nolan and Geoffrey E. Hill. Inverse ornamentation in house finches: song vs. plumage color. Animal Behavior Society, Carbondale, IL; July, 1998.

Mullen, Gary R., **Paul M. Nolan**, and Andrew M. Stoehr. Impact of *Pellonyssus reedi* (Acari: Macronyssidae) on the house finch (*Carpodacus mexicanus*). Entomological Society of America, Nashville, TN; December, 1997.

Paul M. Nolan, Geoffrey E. Hill, & Andrew M. Stoehr. Sex, size, and plumage redness predict house finch survival in an epidemic. Animal Behavior Society, College Park, MD; 6/1997.

Presentations at Regional & Local Conferences (*student co-author)

Peter Bergeson, **Paul Nolan**, and Melissa Hughes. Behavioral interactions and signaling via water currents in snapping shrimp. Citadel Student Excellence Day Forum, Charleston, SC. April 2022.

Nathan C. Platt and **Paul M. Nolan**. Comparative passerine population changes in response to anthropogenic noise caused by urbanization. The Citadel Academy of Science and Mathematics Online Awards Ceremony. Charleston, SC. May 2020.

Jessica Karan* (only one author allowed). Determining Correlates with Gentoo Penguin Health Using Captive Populations. Marine Biology Graduate Student Research Colloquium, Charleston, SC. Oct. 2019.

Jessica won 2nd place in the student competition for this oral presentation

*Megan Cummings, Emily Davis, and **Paul M. Nolan**. Stress in wild vs. captive red-tailed hawks. The Citadel Academy of Science and Mathematics Awards Banquet. Charleston, SC. March 2019.

*Jessica Karan and **Paul M. Nolan**. Captive Populations as a Tool for Wildlife Research: Non-Invasive Methods Assess the Stress Hormones and Health of Gentoo Penguins. College of Charleston Graduate Research Poster Session. Charleston, SC. March 2019.

Jessica won 1st place in the student poster competition for this presentation

*Jessica Karan and **Paul M. Nolan**. Captive populations as a tool for wildlife research: Non-invasive methods assess the stress hormones and health of Gentoo penguins in vastly different environments. Marine Biology Graduate Student Research Colloquium, Charleston, SC. Oct. 2018.

Jessica won 2nd place in the student poster competition for this presentation

- *Brogin Van Skoik, Tom Hart and **Paul M. Nolan**. Dynamic color in a black-and-white world: Penguin beak spots as biosentinels in the Antarctic. Citadel Student Research Forum, Charleston, SC. March 2017.
- *Brogin Van Skoik, Tom Hart and **Paul M. Nolan**. Dynamic color in a black-and-white world: Penguin beak spots as biosentinels in the Antarctic. Marine Biology Graduate Student Research Colloquium, Charleston, SC. Sept. 2016.
- *Zack Musallam and **Paul M. Nolan**. Rare Male Advantage in Wild Type and Black-bodied *Drosophila melanogaster*. Citadel Student Research Forum, Charleston, SC. March 2016.
- *Andrew M. Downs and **Paul M. Nolan**. Height and Perceived Masculinity/Femininity of Facial Features. Citadel Student Research Forum, Charleston, SC. March 2016.
- Brittany Fournet and Paul M. Nolan. Determining impact of human disturbance on Least Tern (*Sternula antillarum*) breeding colonies along a gradient of disturbance. Marine Biology Graduate Student Research Colloquium, Charleston, SC. Nov. 2015.
- *Stephen Smilak, *Blake Carrizales, **Paul M. Nolan**, *Kevin Stewart. Preen Oil Protection Against UV Light Exposure and Bacterial Degradation in Wood Ducks. Citadel Student Research Forum, Charleston, SC. March 2015.
- *Kevin Stewart, *Leondas Cole, Audrey Poplin, **Paul Nolan**, Claudia Rocha. Analyzing the Microbiome of Urohydrosis Droppings from Vultures. Citadel Student Research Forum, Charleston, SC. March 2015.
- *Pamela Corwin and **Paul M. Nolan**. Avian community response to seasonal and successional changes along the Cooper River, South Carolina. Southeastern Estuarine Research Society, Charleston, SC. April 2013.
- *Sarah H. Diaz and **Paul M. Nolan**. Can a coastal public greenway serve as an urban habitat oasis for migrating birds? Southeastern Estuarine Research Society, Charleston, SC. April 2013.
- *Caitlin E. Black, Mathieu Giraudeau, Kevin J. McGraw, and **Paul M. Nolan**. Development of bird song along a rural-to-urban gradient. Annual meeting of the South Carolina Academy of Sciences, Aiken, SC. April 2012.
Caitlin won the best student poster award for this presentation
- *Pamela Corwin and **Paul M. Nolan**. Avian community response to seasonal and successional changes along the Cooper River, South Carolina. South Carolina Water Resources Conference, Columbia, SC, October 2012.
Pamela won the best student poster award for this presentation
- *Pamela Corwin and **Paul M. Nolan**. Avian community response to seasonal and successional changes. Annual meeting of the South Carolina branch of the American Fisheries Society, Seabrook Island, SC. February 2012.
Pamela won the best student poster award for this presentation
- *William C. Musselwhite, *Callum McCormick, **Paul M. Nolan**. A Comparison of Parasite Load and Foraging Habits in House Finches, *Carpodacus mexicanus*. Citadel Student Research Forum, Charleston, SC. March 2009.

Gary R. Mullen, Renee R. Anderson, and **Paul M. Nolan**. Cyclic pattern of avian tick paralysis caused by *Ixodes brunneus*. 74th Annual Meeting, Southeastern Branch, Entomological Society of America, Mobile, AL; February, 2000.

Paul M. Nolan, S. R. Roberts, K. Klenk, J. Welden, C. Roland, & G. E. Hill. Reduced mortality & morbidity following experimental infection of the house finch with *Mycoplasma gallisepticum* in 1998. Joint Meeting, SE & SC Branches, Am. Soc. Microbio.; Oct. 1999.

Invited talks:

- College of Charleston EVSS Core Course “Science Informing Policy” 01/2020.
- Wild Birds Unlimited, Mt. Pleasant, SC. 1/2018.
- College of Charleston MES Core Course “Science Informing Policy” 10/2017.
- Center for Birds of Prey, Awendaw, SC “What can we learn from feathers?” 9/2017. Cancelled.
- College of Charleston “Hormones and Behavior” Course (PSYC/BIOL 353), 10/2013 & 2/2016.
- Center for Creative Retirement, Charleston, SC, March 2010 & February 2016.
- College of Charleston “Marine Tetrapods” graduate course, Oct. 2015.
- Marine Biology Librarians Association Conference, Charleston, SC, May 2015.
- Grice Marine Lab Seminar Series, Charleston, SC, Jan. 2015.
- Robert Lunz Group chapter of The Sierra Club, Charleston, SC, Dec. 2014.
- Friends of the Daniel Library lecture series, Charleston, SC, Sept. 2014.
- Biology Dept. Seminar Series, USC-Aiken, Aiken, SC, Sept. 2014
- Charleston Natural History Soc., Charleston, SC, 3/2007, 9/2009, 2/2010, 2/2012, & 5/2013.
- College of Charleston Graduate Program, Marine Biology, Charleston, SC, Oct. 2007-2011.
- South Carolina Aquarium “Lectures at Lunch” program, Charleston, SC, Feb. 2009.
- Edisto Beach State Park, Edisto Island, SC, Jan. 2009.
- Senior Scholars Program, The Citadel, June 2008.
- Honors 300 class, The Citadel, Jan. 2008.
- International Baccalaureate class at Barry Goldwater High, Phoenix, AZ, 1/2007 & 2/2008.
- Sigma Xi, The Citadel Chapter, Charleston, SC, Nov. 2007.
- College of Charleston Biology Dept., Charleston, SC, Nov., 2006.
- Coastal Carolina University Biology Dept., Myrtle Beach, SC Nov., 2006.
- Cornell University Lab of Ornithology, Ithaca, NY Feb., 2006.

Video archive at: <http://clomedia.ornith.cornell.edu/Streams/MNS/PaulNolan.mov>

- Longview residential senior community, Ithaca, NY, Nov., 2005.
- International Baccalaureate class at Barry Goldwater High, Phoenix, AZ, 3/2005.
- The Citadel, Charleston, SC, Nov. 2005
- VA Tech, Blacksburg, VA, March 2005
- UC-Riverside, Riverside, CA, Nov. 2004
- Ithaca College, Ithaca, NY, April 2004
- University of Windsor, Windsor, Ontario, Canada, March 2004
- University of Puget Sound, Tacoma, WA, Feb. 2004
- Claremont College, Claremont College, April 2003
- Guest lectures and field demonstrations for Auburn University's Ornithology class.
- Guest lectures: Animal Biology, Natural History of Vertebrates, & Ecology classes at Auburn.
- Invited Speaker for University-wide Graduate Teaching Assistant Training Workshop, 1997.

Grants and Proposals

Funded, non-Citadel Foundation Research Grants

- Paul M. Nolan.** 2013-2014. Developing non-invasive techniques for researching the health of Antarctic and sub-Antarctic penguin colonies. Funded for a full-year sabbatical by The Citadel and for \$24,000+ by Quark Expeditions and The University of Oxford with in-kind support.
- Paul M. Nolan,** Caitlin E. Black, and Melissa Hughes. 2011. Major Academic Year Support grant from the Office of Undergraduate Research and Creative Activities at the College of Charleston. Funded for \$3,150.
- K. J. McGraw, P. Deviche, and **Paul M. Nolan.** 2004-2005. Carotenoids, vocal performance, and the brain: An early-life nutritional and antioxidative mechanism underlying neural control of animal communication. Funded for \$8,125 by Arizona State University.
- Paul M. Nolan** and F. Stephen Dobson. 2001-2002. Facultative sex ratio adjustment by female king penguins, in response to mate quality. SGER proposal funded for \$21,000 by NSF.
- Paul M. Nolan.** 1999. Incidence of *Mycoplasma gallisepticum* infection during the house finch breeding season, & effects on reproductive success. \$1,000 from Birmingham Audubon Soc.
- Paul M. Nolan.** 1998. Complex Song as a Signal of Male Quality in House Finches (*Carpodacus mexicanus*). Proposal funded for \$750 by Auburn University Graduate School.
- Scott R. Derrickson and **Paul M. Nolan.** 1996. Qualitative and Quantitative Analyses of the Vocal Repertoire of the Endangered Hawaiian Crow. Proposal funded for \$5,000 by the Spencer Fullerton Baird Fund of the Smithsonian Institution.

Unfunded Research Grants

- Paul M. Nolan.** 2014. Habitat- and Seasonally-based Avian Inventory of Santee NWR, SC. \$31,443 requested from US Fish & Wildlife Service. Not funded.
- Paul M. Nolan.** 7/2012. Habitat- and Seasonally-based Avian Inventory of Santee NWR, SC. \$31,227 resubmitted by request from US Fish & Wildlife Service Santee NWR. Not funded.
- Paul M. Nolan** and Caitlin E. Black. 1/2012. Development of bird song behavior along an urban-to-rural gradient. \$2,000 requested from the Phoenix Zoo's Conservation & Science office. Not funded.
- Paul M. Nolan.** 2011. Habitat- and Seasonally-based Avian Inventory of Santee NWR, SC. \$31,665 requested from US Fish & Wildlife Service. Not funded.
- Paul M. Nolan** and John E. Weinstein. 2009. Impacts of stormwater ponds on associated avifauna, in coastal South Carolina. \$138,600 requested from SC SeaGrant. Not funded.
- Paul M. Nolan.** 2008. Encouraging habitat restoration through use of a flagship species, the Painted Bunting. \$65,659 requested from TogetherGreen. Not funded.

Non-research, non-Citadel Foundation Grants

Paul M. Nolan. 2013. “Urban Birdwatching as a ‘gateway activity’, connecting people to the outdoors.” \$3,655 requested from the US Fish & Wildlife Service’s Connecting People With Nature program. Not funded.

Paul M. Nolan. 2012. “Pre-K, K-12, Seniors: Birdwatching as a ‘gateway activity’, to the outdoors.” \$5,000 requested from TogetherGreen. Not funded.

Paul M. Nolan. 2012. “Pre-K, K-12, Seniors: Birdwatching as a ‘gateway activity’, to the outdoors.” \$6,090 requested from the US Fish & Wildlife Service’s Connecting People with Wildlife program. Not funded.

Paul M. Nolan. 2004. Funding for travel to the 5th International Penguin Conference in Ushuaia, Argentina, September, 2004. \$1,333 provided by NSF.

Paul M. Nolan. 2004 & 2006. Funding provided by NSF for Postdoctoral travel to the 10th & 11th International Behavioral Ecology Congresses in Jyväskylä, Finland and Tours, France, respectively. Total funding was \$1700.

Paul M. Nolan. 2004. Funding for travel to the 28th meeting of the Scientific Committee on Antarctic Research in Bremen, Germany, July, 2004. \$2,500 (declined) provided by NSF.

Citadel Foundation Research Grants

Paul M. Nolan. 2020-2021 Academic year. Evaluating stress of captive and wild Gentoo penguins, using non-invasive means. Funded for \$3,000.

Paul M. Nolan. 2019-2020 Academic year. Evaluating stress of captive and wild Gentoo penguins, using non-invasive means. Funded for \$3,000.

Paul M. Nolan. 2018-2019 Academic year. Interactive management of wild and captive populations, using non-invasive monitoring. Funded for \$3,000.

Paul M. Nolan. 2017-2018 Academic year. Interactive management of wild and captive populations, using non-invasive monitoring. Funded for \$3,000.

Paul M. Nolan. 2016-2017 Academic year. Ornamental color of rockhopper penguins as a potential signal of individual age. Funded for \$3,000.

Paul M. Nolan. 2015-2016 Academic year. Analysis of stress levels in nesting Adélie penguins. Funded for \$3,000.

Paul M. Nolan. 2014-2015 Academic year. Analysis of stress levels in nesting Gentoo penguins. Funded for \$3,000.

Paul M. Nolan. 2013-2014 Academic year. Developing non-invasive techniques for researching the health of Antarctic and sub-Antarctic penguin colonies. Funded for \$3,000.

Paul M. Nolan. 2012-2013 Academic year. Does degree of urbanization influence the development of bird song? Funded for \$3,000.

Paul M. Nolan. 2011-2012 Academic year. Linking avian use and contaminant load of storm water detention ponds. Funded for \$3,000.

Paul M. Nolan. 2010-11 Academic year. Impacts of stormwater ponds on associated avifauna, in coastal South Carolina. Funded for \$3,000.

Paul M. Nolan. 2009-10 Academic year. Habitat restoration using the painted bunting as a surrogate species. Funded for \$3,000.

Paul M. Nolan. 2008-09 Academic year. Fitness consequences of ornamental traits in little blue penguins, *Eudyptula minor*. Funded for \$2,580.

Paul M. Nolan. 2007-08 Academic year. Skin colors may signal condition in gentoo penguins. Funded for \$2,993.

Paul M. Nolan. 2006-07 Academic year. Signal content of ornamental colors in rockhopper penguins. Funded for \$2,993.

Citadel Foundation Presentation/Development Grants

Presentation grants:

Society for Integrative & Comparative Biology, San Francisco, CA, Jan. 2018.

American Ornithological Society, East Lansing, MI, Aug, 2017.

Animal Behavior Society, Anchorage, AK, June, 2015.

International Society for Behavioral Ecology, Lund, Sweden, Aug. 2012.

International Society for Behavioral Ecology, Perth, Australia, Sept. 2010.

International Society for Behavioral Ecology, Ithaca, NY, Aug. 2008.

6th International Penguin Conference, Hobart, Australia, Sep. 2007.

Society for Integrative & Comparative Biology, Phoenix, AZ, Jan. 2007.

Development Grants:

International Society for Behavioral Ecology, Minneapolis, MN, August 2018.

International Penguin Conference, Cape Town, South Africa, Sept. 2016.

Behavioral Ecology Symposia, New York, NY, July/August 2014.

Conservation of the crested penguins, Bristol, UK, Sept. 2013.

Conservation Biology in Animal Behavior, Boulder, CO, August 2013.

The Impacts of Developmental Plasticity on Evolutionary Innovation and Diversification and Novel methods for the Analysis of Animal Movement: spatial and temporal structure across scale, Charleston, SC, Jan. 2012.

Integrating Nutritional and Behavioral Ecology: Recent Insights and Future Directions. Perth, Australia, Sept. 2010.

Behavioral Endocrinology: An Integrative Approach, Pirenopolis, Brazil, June 2009.

Iridescence: more than meets the eye. Tempe, AZ, Feb. 2008.

Tips from the top: Teaching Animal Behavior Workshop, Burlington, VT, July 2007.

Student Travel Grants:

Travel with Cadet Alex Anderson to present a poster at the 2011 Cooper Ornithological Soc. meeting in Kearney, NE. Funded for \$1,660.

Travel with Cadet Preston Payne to present a poster at the 2010 Animal Behavior Society meeting in Williamsburg, VA. Funded for \$2,398.

Travel with Cadet Holly Maslowski to present a poster at the Sigma Xi 2008 annual meeting in Washington, DC. Funded for \$1,776.

Board Member Travel Grants:

2010 meeting, Cooper Ornithological Society, as Chair of the Mewaldt-King Student Research Award Committee. Funded for \$1,194.

2009 meeting, Cooper Ornithological Society, as Chair of the Mewaldt-King Student Research Award Committee. Funded for \$1,100.

Bowers Award Travel Grant: American Ornithological Society, East Lansing, MI. 2017. Funded for \$2300, including travel of graduate student Brogin Van Skoik.

Workshops and Professional Development Activities

Campus-based workshops

- 1) Using video in Powerpoint
- 2) Adding audio to Powerpoint presentations
- 3) 15 passenger van driver's safety course
- 4) HTML Basics
- 5) Dreamweaver I
- 6) Dreamweaver II
- 7) Blackboard I
- 8) Blackboard II
- 9) Darkness to Light
- 10) Grant Proposal Development
- 11) CitLearn Grade Center for the Face to Face Class
- 12) LSI Safety in the Lab Workshop
- 13) CyberSecurity Awareness Training
- 14) Canvas Fundamentals
- 15) Canvas-based Assessments
- 16) Zoom fundamentals
- 17) Slips, Trips, and Falls
- 18) Discrimination Awareness in the Workplace
- 19) Hazard Communication: Right to Understand (GHS)
- 20) FERPA: Confidentiality of Records
- 21) Title IX and Sexual Harassment Prevention for Employees
- 22) Sexual Harassment: Staff-to-Staff
- 23) Camps on Campus: Keeping Minors Safe
- 24) Clery Act Overview

Off-campus professional development activities

- FBI Academic Biosecurity Workshop, North Charleston, SC, Oct. 2018.
Shorebird/Seabird Workshop, Ft. Johnson, Charleston, SC, April 2016.
"Conservation Behavior Workshop", Anchorage, AK, June 2015.
"Conservation of the crested penguins", Bristol, UK, Sept. 2013.
"Conservation Biology in Animal Behavior", Boulder, CO, August 2013.
"The Impacts of Developmental Plasticity on Evolutionary Innovation and Diversification and Novel methods for the Analysis of Animal Movement: spatial and temporal structure across scale", Charleston, SC, Jan. 2012.
"Integrating Nutritional and Behavioral Ecology: Recent Insights and Future Directions". Perth, Australia, Sept. 2010.
"Behavioral Endocrinology: An Integrative Approach", Pirenopolis, Brazil, June 2009.
"Iridescence: more than meets the eye". Tempe, AZ, Feb. 2008.
"Tips from the top: Teaching Animal Behavior Workshop", Burlington, VT, July 2007.

Professional licensure or certification

- Awarded Master Bander Permits by the Federal Bird Banding Laboratory and by the State of South Carolina, 2007.
Awarded Import Permit by USDA APHIS. 2007-present.

Professional Memberships

Animal Behavior Society

Sigma Xi

Service to The Citadel

Awards Committee 2018-Present.

Director, MA in Biology Program, 2016-Present.

Director, Graduate Certificate in Environmental Science, 2016-Present.

Director, Accelerated Master of Biology Program, 2016-Present.

Citadel Graduate Committee 2016-Present.

Undergraduate Curriculum & Instruction Committee 2014-Present.

Member, School of Science & Math committee developing a research poster rubric, 2015-16.

Global Initiatives Committee, The Citadel, 2010-2013.

Faculty Development Committee, The Citadel, 2009-2013.

Undergraduate Admissions Committee, The Citadel, 2007-2009.

Provost's International Education Study Group member, The Citadel, 2007-2008.

Strategic Planning Subcommittee of Committee on Computer Services, The Citadel, 2007-08.

Other Service to The Citadel

Work closely with the Office of Communication and Marketing to provide photographs, copy, and additional information needed to promote original research being done at The Citadel.

Examples of media exposure outcomes: [web page](#), [web page](#), [youtube](#), [youtube](#), [newspaper](#), or [television](#).

Worked with Dr. Michael Livingston, Citadel English Dept., to create and manage a writing competition among Citadel freshmen in English 101.

Presentations to: CASTLE, The Citadel, Nov. 2009.

Senior Scholars Program, The Citadel, June 2008.

CASTLE, The Citadel, April 2008.

CAC Luncheon, The Citadel, March 2008.

Sigma Xi, The Citadel Chapter, Charleston, SC, Nov. 2007.

Service to The School of Science & Mathematics, and the Biology Department

Chair, Skanchy Award Committee, 2022, Member 2015-16.

Member, Biology Department Equipment Committee, The Citadel, 2011-12, 2014, 2017-Present.

Member, Biology Dept. Tenure & Promotion Committee, 2013-Present.

Chair, Bowers Award Committee, 2019 & 2022; member since 2014.

Guide recruitment visits for potential students, 2006-Present.

General Education Reform Committee of the Biology Department, 2018-2019.

Citadel Undergraduate Research Experience (CURE) Committee 2014-2016.

Outside Reader, 3rd-year review of Dr. Richard Robinson, Dept. of Math. & Computer Sci. 2018.

Member, Physiologist Search Committee. 2017-18.

Chair, Search Committee for Nursing Dept. Faculty Member #1. 2016-17.

Member, Search Committee for Diversity Fellowship Faculty Member. 2016-17.

Recruit STEM Scholars, Fall 2016.

Member, Biology Instructor Search Committee, 2014-15.

School of Science & Mathematics Faculty Grants Committee 2014-15.

Member, Biology Department Curriculum Review Committee, The Citadel, 2011-12.

Member, Biology Department Head Search Committee, The Citadel, 2010.

Chair, Microbiologist Search Committee, The Citadel, 2008.

Service to Students

Advising Responsibilities

- Research Advisor for Citadel Biology undergraduate and Citadel graduate students.
- Currently serve as academic advisor to ~16 graduate Biology majors.
- Graduate Research Advisor for College of Charleston Marine Biology graduate student Jessica Karan, 2017-Present.
- Graduate Research Advisor for Citadel Biology graduate student Megan Cummings, 2019.
- Graduate Research Advisor for Citadel Biology graduate student Jessica Farst, 2019.
- Graduate Research Advisor for Citadel Biology graduate student Brogin Van Skoik, 2016-2017.
- Graduate Thesis Advisor for MES graduate student Christopher Brown at C of C; 8/2015-2016.
- Graduate Thesis Advisor for MES graduate student Brittany Fournet at C of C; 8/2013-12/2015.
- Graduate Research Advisor for Pamela Corwin, Katie Story, and Sarah Diaz, Citadel Biology students.
- Graduate Internship Advisor for Katie Williams and Jennifer McCarthy Tyrrell, MES graduate students at C of C.
- Advisor for Bachelor's Essay research of Honors student Caitlin Black at C of C.
- Graduate Thesis advisor for MES graduate student Sarah Latshaw at C of C; 8/2008-8/2011.
 - Helped my graduate student apply successfully for a prestigious \$120,000 Graduate Research Fellowship from the National Science Foundation, Spring 2009.
 - Arranged MES-level, College-level, and media recognition of my student's award.
- Served on graduate committees for Kathleen Clancy and Brian Jarusik at C of C.

Other Service to Students

- Judge, Pumpkin Carving competition among STEM freshmen, Nov. 2018 & 2021.
- Judge, Gingerbread House competition among STEM freshmen, Dec. 2017 & 2018.
- Departmental representative for Discover The Citadel, April, 2016.
- Organized service-learning projects annually for sophomore leadership class, 2011-13.
- Organized a service-learning opportunity for five cadets, with Charleston Audubon, 10/2009.
- Organized a service-learning opportunity for five cadets, with Charleston Audubon, 10/2008.
- Write numerous letters of reference, and 'white slips' for Outstanding Academic Performance; edit cover letters and application essays; provide leads on jobs/internships.

Service as a Judge

MES Graduate Assistantship proposals, July 2011 & 2012.

Citadel Undergraduate Research Conference, March 2010.

Student posters at Sigma Xi national meeting, Washington, DC, 2008.

Pinewood Prep High School Science Fair, Jan. 2008.

Academic Magnet High School Science Fair, North Charleston, SC, 2007.

Intel's International Science and Engineering Fair, 2005.

GELSS graduate research forum, Arizona State University, 2005.

STEM Outreach Activities

- Led "Wine & Warblers" fundraising nature walks for SC Audubon, 2008, 2010-2019.
- Program Chair, Charleston Audubon & Natural History Society, 2014-2021.
- Social Media Chair, Charleston Audubon & Natural History Society, 2012-2021.

- Led (and found funding for) 27 Kids Alive summer campers' trip to SC Aquarium, July 2018.
- Led STEM activity (Bird Bingo) for the Charleston Chapter of 4-H, Nov. 2017.
- Led STEM activity (Bird Bingo) for 4 campus visits by Dorchester County Schools, 2016.
- Led 40 Ashley Hall 7th-grade students on all-day trip to McAlhany Nature Preserve, 11/2015.
- Taught three sessions on avian biology to inner-city students, through "Creatures around Charleston Camp", July 2015.
- Led 11 undergraduates on "Birds, Bikes, & Brews" birdwatching trip, April, 2015.
- Led 45 Ashley Hall 7th-grade students on all-day trip to McAlhany Nature Preserve, 4/2015.
- Led SC Junior Academy of Sciences Field Trip, Nov. 2014.
- Led 42 Ashley Hall 7th-grade students on all-day trip to McAlhany Nature Preserve, 10/2014.
- President, Charleston Audubon & Natural History Society, 2009-2014.
- Led 20 K-12 students from Title I schools on a field trip to the SC Aquarium during the Charleston, SC YWCA summer camp "Explore!"
- Co-Taught four Ecology demonstrations for elementary-school and middle school students through STEM Center. The Citadel, Spring 2012 & Fall 2012.
- Taught three sessions on avian biology to inner-city students, through "Kids Alive Summer Camp", July 2011.
- Co-Taught two Ecology demonstrations for elementary-school students through Project ALERT. The Citadel, Fall 2010.
- Compiler for National Audubon Society's Christmas Bird Count, Charleston, SC, 2008 & 2009, Co-Compiler in 2010-14.
- Volunteer Copy Editor for Kiawah Nature Center's "*Nature Notes*" newsletter, 2008-2010.
- Board Member, Charleston Audubon & Natural History Society, 2007-2009, 2014-Present.
- Led beginner's bird walks with Maricopa Audubon Society, 2005.
- Volunteer official for the Science Olympiad Nature Quest Program, 1999 & 2000.
- Field demonstrations for Howard Hughes Young Scientist Program, 1996, 1997 & 1998.
- Coordinated Boy Scouts Environmental Science Merit Badge weekend campout, Aug. 1997.
- Official Tour Guide at Smithsonian Institution's Conservation & Research Center, 1991-95.
- Study Leader, Smithsonian Institution Associate's 13-day tour to Trinidad & Tobago, 1994.
- Vice President of the non-profit Sundilla Acoustic Concert Series, Auburn, AL, 1997-2004.

Service to the Discipline

Committee Memberships

Offices

- Member, Admissions Committee, Grad. Program in Marine Biol., C of C. 2020-Present.
- Member, Marine Biology Council, Grad. Program in Marine Biol., C of C. 2017-2020.
- Board Member, Charleston Natural History Society, 2007-2009 and 2014-Present.
- President, Charleston Audubon & Natural History Society, 2009-2014.
- Marine Biology Colloquium Committee, College of Charleston, 2008-2010.
- Chair, Mewaldt-King Research Grant Committee, Cooper Ornithological Society, 2007-2010.
- Chair, Animal Care & Use Committee, Avian Conservation Center, Awendaw, SC, 2007-2008.

Committees (at Auburn University)

- Served on the committee selecting new textbooks & technology for General Biology, 2003.
- Served on the Seminar Committee for the Dept. of Biological Sciences, 1999-2002.
- Student Representative to Search Committee for Marine Biology Faculty, 2001.

- Student Representative to Search Committee for Departmental Chair, 2000.

Peer-review

Associate Editor for *The Auk: Ornithological Advances*, the second highest-ranked Ornithology journal in the world, Jan. 2014-2020.

Review proposals for the National Science Foundation, for the National Fish & wildlife Foundation, for the MES program at the College of Charleston (2011 & 2012), and for the Cooper Ornithological Society's Mewaldt-King Research Awards, 2005, 2007-2010, 2013.

Review papers for *Animal Behaviour*, *Animal Conservation*, *Avian Conservation and Ecology*, *Behavioral Ecology*, *Behavioral Ecology & Sociobiology*, *Behaviour*, *Canadian J. of Zoology*, *Conservation Ecology*, *Ethology*, *Evolution*, *Genetica*, *J. of Avian Biology*, *Marine Ornithology*, *PLoS ONE*, *Polar Biology*, *Proc. of the Royal Society of London*, *The Auk*, *The Condor*, *The Ibis*, *Wilson Bulletin*, and *Wilson Journal of Ornithology*.

Review textbooks Krogh's '*Biology: A Guide to the Natural World*', and Sadava's '*Life: The Science of Biology*', along with separate reviews of its animations and other ancillary materials.

Advanced Training

GIS in Conservation, National Zoo-CRC, Smithsonian Institution, 5-day course.

Natural Sound Recording, Library of Natural Sounds, Cornell University, 7-day course.

Wildlife Disease Workshop, US Fish & Wildlife Service, 2-day workshop.

Can speak, read and write basic Spanish and beginning French.