

Sam E. Apgar

The University of Connecticut
Ecology and Evolutionary Biology
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EDUCATION

The University of Connecticut, Storrs, CT 2016- Present
PhD Candidate, Ecology and Evolutionary Biology
Committee: Dr. Chris Elphick (advisor), Dr. Sarah Knutie, Dr. Tracy Rittenhouse, Dr. Morgan Tingley, and Dr. Carl Schlichting
Thesis title: Nest flooding adaptations and conservation of four sympatric tidal marsh bird species in the Northeastern USA
Expected graduation: May 2022
Cumulative GPA: 3.734/4.0

Georgetown University, Georgetown College, Washington, DC 2010- 2013
Bachelor of Science Degree: Environmental Biology
Cumulative GPA: 3.475/4.0

Duke University, The Organization for Tropical Studies, Costa Rica 2011
Semester abroad with course credits transferred to Bachelor of Science Degree at Georgetown University
Cumulative GPA for semester: 3.85/4.0

Gettysburg College, Gettysburg, Pennsylvania 2009- 2010
Courses toward Bachelor of Science Degree: Environmental Science
Credits transferred to Georgetown University
Cumulative GPA: 3.88/4.0

GRANTS, FELLOWSHIPS, AWARDS, SCHOLARSHIPS

-----	PEO Chapter AD Nomination for PEO Scholar Award	2020
\$7,147.43	UConn EEB Demi Fellowship	2020
\$1,493.00	UConn EEB Zoology Award	2020
\$1,000.00	UConn Doctoral Student Travel Fellowship	2020
\$2,000.00	UConn Doctoral Dissertation Fellowship	2020
-----	UConn SET Teaching Excellence Award	2019
\$1,500.00	UConn EEB Zoology Award	2019
\$6,374.00	Natural Resources Conservation Academy Research Support Grant	2019
\$1,500.00	UConn EEB Zoology Award	2018
\$1,000.00	UConn EEB Zoology Award	2017
\$5,000.00	The Garden Club of America's Coastal Wetlands Scholarship	2017
-----	Partners in Flight Group Award: Investigations, SHARP	2016
-----	Georgetown University Udall Scholarship Nominee	2012
\$7,750.00	The Land Conservancy's Russell W. Meyers Award	2012
\$7,000.00 annually	Gettysburg College Founder's Scholarship	2009

CONSERVATION REPORTS AND PUBLIC WRITING

Apgar, S. 2020. Fieldwork delayed as marsh birds try to cope with rising sea level. Connecticut State of the Birds: Pandemic, Conservationists scramble in the field, the lab, and the legislature. The Connecticut Audubon Society, 5-8.

U.S. Fish and Wildlife Service. 2019. Report on the current conditions for the saltmarsh sparrow. October 2019. U.S. Fish and Wildlife Service, Northeast Region, Charlestown, RI., 108 pp.

PROFESSIONAL EXPERIENCE

Pathways Intern Jan 2017- Present

The United States Fish and Wildlife Service
Southern New England-New York Bight Coastal Program
Charlestown, RI

- Lead author for the Species Status Assessment (SSA) for the Saltmarsh Sparrow (under the Endangered Species Act)
 - Coordinated the SSA process for a core team of eight USFWS employees
 - Disseminated SSA initiation information to federal, state, and non-profit partners
 - Reviewed literature for document writing
 - Engaged in qualitative analysis of species historical, current, and future conditions
 - Wrote SSA document in collaboration with other authors (see citation below in “Conservation Reports” section)

Demography Research Technician June- Aug 2016

Saltmarsh Habitat and Avian Research Program
New London, CT

- Systematically mist-netted for Saltmarsh Sparrows and Seaside Sparrows
- Located and monitored nests and conducted vegetation surveys
- Conducted avian point count surveys and trained a new point count technician mid-season
- Entered and proofed data in Microsoft Access

Black Rail Point Count Technician Feb- June 2016

The South Carolina Department of Natural Resources
Cat Island, SC

- Conducted 12-minute-long broadcast surveys (identified all birds observed via sight or sound) and vegetation surveys
- Boat Captain: planned routes to boat-accessible point count locations and successfully navigated new waterways at night in variable tides while managing group safety needs

Acting Development Coordinator July- Dec 2015

Archbold Biological Station
Venus, FL

- Co-coordinated Archbold’s first large scale Year-End Giving campaign with director Dr. Hilary Swain, resulting in \$92,266 of year-end donations

- Coordinated the printing, packaging, and mailing of 9 different appeal letters with different combinations of 9 associated documents to 3,073 individuals
- Represented Archbold when interacting with board members and donors on giving related ventures

Post-Baccalaureate Intern

Jan- Sept 2015

Archbold Biological Station, Avian Ecology Program
Venus, FL

- Nest searched, nest checked, fledgling checked, territory mapped, completed monthly censuses for individuals of the federally threatened Florida Scrub-Jay
- Trapping, banding, and bleeding adults and nestlings
- Conducted project on variance of vigilance coordination across habitat types in the Florida Scrub-Jay
- Conducted surveys of pre-selected oak trees to determine stem count, height, and acorn count

Volunteer Bird Bander

Sept- Nov 2014

The New Jersey Meadowlands Commission Migratory Bird Banding Project
Harrier Meadow and Disposal Road, North Arlington, NJ

- Extracted from mist-nets, handled, banded, aged, sexed migratory birds

New Jersey Avian Point Count Technician and Crew Leader

Apr- Aug 2014

Saltmarsh Habitat and Avian Research Program
Edwin B. Forsythe National Wildlife Refuge, NJ

- Led a small team that conducted avian point count (identified all birds observed via sight or sound) and vegetation surveys via boat or car in salt marshes across coastal south NJ
- Mapped daily point count trips based upon tides, wind, other weather parameters, and feasibility
- Entered survey data, updated excel spread sheets, and Google Earth files to denote progress

Research Technician

Oct- Dec 2013

Shark Bay Dolphin Project
Monkey Mia, Western Australia

- Conducted surveys on wild dolphin population (*Tursiops* sp.), identified individuals and their behaviors, transcribed survey data
- Drove boat during dolphin behavioral surveys and blood sample procurement

SKILLS

Avian research:

Mist-net extraction: ~600 individuals, ~58 species

Banding/handling: ~450 individuals, ~53 species

Potter trap extraction: 20 individuals, 1 species

Other banding tasks: sexing, aging, pit-tag placement, blood and sperm sample extraction, fecal sample procurement, measuring morphological features for adults and nestlings

Other research techniques: point count navigation, point count surveys via sight and sound, nest searching and monitoring, territory mapping, experience maintaining and collecting data from MOTUS wildlife tracking towers.

Other field-related skills:

Navigation to point count locations using hand-held GPS

Vegetation surveys: quadrat, line transect, closest individual in tidal marshes and Florida scrub habitats
4wd vehicle operation in mud, water, and sand conditions

Boater's Safety Certificate achieved in NJ: 2014

Extensive boating experience navigating tidal waters in Western Australia, New Jersey, and South Carolina during day and night

Writing, editing, and submitting numerous federal, state, and university permits

Submitting end of year reports

Managing budgets

Computing skills:

R statistical computing and graphing environment

Basic Microsoft Access

Basic ArcGIS

Other skills:

Proficiency in Spanish

OUTREACH AND SERVICE TO SCIENCE

Long-term service:

Undergraduate mentorship, UConn, Storrs, CT 2017- Present

- Mentored student who received intra-mural Summer Undergraduate Research Funding (**\$3,957**) from UConn to complete independent study project
- Oversaw undergraduate student independent study in the Elphick lab: **17 students**
- Enabled and oversaw undergraduate assistance in dissertation field data collection: **7 students**

Skype a Scientist, Storrs, CT 2017- Present

- Communicating via Skype with science classrooms around the world (3-5 sessions/year)

Natural Resources Conservation Academy Mentor, Storrs, CT July- Dec 2019

- Mentored a high school student in field work and the creation of a poster project on incubation time and nest age in tidal marsh sparrows

Amity Science Research Program Mentor, Woodbridge, CT Sep- Jan 2018

- Mentored a high school student in creating a research proposal and executing a research project on tidal marsh bird nest flooding behavior

UConn EEB Graduate Student Association, Treasurer and executive officer 2019- Present

- Managed incoming funds (sales of EEB merchandise, donations) and outgoing funds (reimbursements for events)
- Applied for funding from the UConn Graduate Student Senate each year to host annual events
- Planned and organized annual Graduate Research Symposium and other events with board

UConn EEB Graduate Student Association, Welcome Committee Chair 2018- 2020

- Hosted welcome events for new EEB graduate students

UConn EEB Graduate Research Symposium Co-host 2018, 2019

Participation in individual outreach events:

Lutz Nature Camp, Manchester, CT, virtual tidal marsh bird presentation 2020
Mystery Scientist, YouTube video creation for educational module 2019
The Children's Museum, West Hartford, CT, presentations on tidal marsh ecology 2019
UConn Science Salon Jr., UConn, Storrs, CT, hands on science event for children 2018
UConn BioBlitz, Greenwich, CT 2017

Publication reviews:

Wilson Journal of Ornithology, reviewer 2020

TEACHING EXPERIENCE

Instructor of Record:

UConn, Storrs, CT

EEB 3894: Reading and Communicating Ecology and Evolutionary Biology Spring 2020

- Co-taught an 11-student seminar on communicating science (primarily scientists communicating to other scientists via publications and scientific talks)
- Changed format to fully online halfway through the semester due to the COVID-19 pandemic

Teaching Assistant:

UConn, Storrs, CT

EEB 4260: Ornithology, Dr. Margaret Rubega 2020
EEB 4261: Ornithology Laboratory, Dr. Margaret Rubega 2018, 2020
EEB 2208: Introduction to Conservation Biology, Dr. Chris Elphick 2019
BIOL 1102: Foundations of Biology, Dr. Adam Fry 2017, 2020
EEB 2244: General Ecology, 2016, 2018, 2019
Dr. Peter Turchin, Dr. Eldridge Adams, Dr. Miranda Davis

- **Guest lecture on Conservation Biology**

PROFESSIONAL MEMBERSHIPS

Association of Field Ornithologists, *Ethics Committee*
American Ornithological Society
Wilson Ornithological Society

PRESENTATIONS

Invited presentations:

- Apgar, S.** 2020. Tidal marsh bird conservation. Southeastern Vermont Audubon Society, Brattleboro, VT.
- Apgar, S.** and CS. Elphick. 2018. Tidal marsh bird nesting adaptations and consequences as sea levels rise. Southeastern Vermont Audubon Society, Brattleboro, VT.
- Apgar, S.** 2018. Tidal marsh bird nesting adaptations and consequences as sea levels rise. Soil and Water Conservation Society, Southern New England Chapter, Wakefield, RI.
- Apgar, S.** 2017. Mechanisms of specialist tidal marsh bird persistence or extinction as sea levels rise. The Garden Club of America Zone I Annual Meeting, Little Compton, RI.

Conference presentations:

- Apgar, S.** and CS. Elphick. 2020. Behavioral flexibility of tidal marsh birds in response to nest flooding. North American Ornithological Conference. Virtual Poster format.
- Apgar, S.** and CS. Elphick. 2019. Tidal marsh bird behavioral plasticity in response to nest flooding events. Joint Meeting Wilson Ornithological Society/Association for Field Ornithologists, Cape May, NJ.
- Apgar, S.** and CS. Elphick. 2019. Tidal marsh bird behavioral plasticity in response to nest flooding events. Northeast Conference on Fish and Wildlife, Groton, CT.
- Apgar, S.** and CS. Elphick. 2019. Tidal marsh bird behavioral plasticity in response to nest flooding events. Connecticut Conference on Natural Resources, Storrs, CT.

Other public presentations:

- Apgar, S.** 2019. 3D Printing: a tool to address ecological problems. EEB Graduate Student Symposium, Storrs, CT.
- Apgar, S.** 2018. Field work fun and fails in an ecosystem that smells like rotten eggs. EEB Tuesday Evening Seminar, Storrs, CT.
- Apgar, S.** 2018. Behavioral specialization across a gradient of disturbance-prone habitat specialists. EEB Graduate Student Symposium, Storrs, CT.
- Apgar, S.** and R. Bowman. 2017. Florida Scrub-Jay social coordination in overgrown habitats: managing safe and selfish needs. EEB Graduate Student Symposium, Storrs, CT.
- Apgar, S.** 2015. Florida Scrub-Jay social coordination in overgrown habitats: managing safe and selfish needs. Archbold Biological Station, Venus, FL.
- Apgar, S.** and R. Bowman. 2015. Florida Scrub-Jay natural history and long-term research. Florida Gulf Coast University Wildlife Club, Ft. Myers, FL.

MEDIA COVERAGE OF RESEARCH

- Gorman, James. 17 Sep. 2018. Saltmarsh Sparrows fight to keep their heads above water. The New York Times. <https://www.nytimes.com/2018/09/17/science/saltmarsh-sparrow-extinction.html>
- Dunavin, Davis. 13. Sep. 2016. Saltmarsh Sparrow could be a victim of sea level rise. WSHU Public Radio (NPR). <https://www.wshu.org/post/saltmarsh-sparrow-could-be-victim-sea-level-rise#stream/0>

Furfaro, Hannah. 23 Aug. 2016. The Saltmarsh Sparrow is creeping dangerously close to extinction. National Audubon Society. <https://www.audubon.org/news/the-saltmarsh-sparrow-creeping-dangerously-close-extinction>