

Maina Handmaker

PhD Student | University of South Carolina

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mainahandmaker.com

EDUCATION

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| 2020-present | University of South Carolina , Columbia, South Carolina
PhD Student, Senner Lab, Department of Biological Sciences - Ecology Concentration
Advisor: Dr. Nathan Senner
National Science Foundation Graduate Research Fellow |
| 2007-2011 | Bowdoin College , Brunswick, Maine
B.A. Environmental Studies and Visual Arts |

WORK EXPERIENCE

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| 2017-2020 | Communications Specialist and Program Associate
Western Hemisphere Shorebird Reserve Network (WHSRN), Shorebird Recovery Program, Manomet, Inc.
<i>Designed and managed WHSRN website, newsletter, and site partner outreach and support in English and Spanish; assisted Shorebird Habitat Management Division with workshops, outreach, and publications.</i> |
| 2010-2016 | Field Crew, Greenhouse Manager, and Farmers' Market Manager
Six River Farm , Bowdoinham, Maine |

RESEARCH EXPERIENCE

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| 2020-present | PhD Research
<i>Studying the role nocturnal roosts play in the stopover ecology and migratory performance of Atlantic Flyway Whimbrel (Numenius phaeopus). Conducting nocturnal ground counts, trapping and banding birds, deploying PinPoint GPS transmitters, coordinating fieldwork logistics, leading study design, managing survey and tracking data, analyzing and mapping movement tracks, building movement models and conducting statistical analyses to understand stopover ecology, behavior, and habitat selection.</i> |
| 2020 | Shorebird Technician , South Carolina Department of Natural Resources (SCDNR)
<i>Analyzed Whimbrel count data and deployed first GPS PinPoint tag on a southbound Whimbrel as pilot study for graduate research project. Designed and coded figures in R, began manuscript about largest known Whimbrel nocturnal roost in Western Hemisphere. Assisted Felicia Sanders (SCDNR) and Dr. Adam Smith (USFWS) with post-processing of Ruddy Turnstone nanotag data, literature review, and drafting manuscript for publication.</i> |
| 2017 | Co-lead Bander and Education Coordinator , Manomet, Inc.
<i>Monitored 50 mist nets 5 days a week with 3 other banders; extracted, banded, aged and sexed passerines and near-passerines. Coordinated education and outreach programming. Taught hands-on demonstrations about bird-banding and bird migration for school groups.</i> |
| 2016 | Migration Monitoring Assistant , Thunder Cape Bird Observatory
<i>Operated mist-nets, hawk nets, ground traps, and Heligoland traps. Extracted, banded, and measured biometrics, including nighttime protocol to band Northern Saw-Whet Owls.</i> |

GRANTS, FELLOWSHIPS, AND RECOGNITIONS

- 2022 **American Ornithological Society**
Travel Award to attend 2022 Annual Meeting in San Juan, Puerto Rico (\$500)
- American Ornithological Society**
Hesse Research Award - PI (\$2,420)
- National Fish and Wildlife Foundation**
Atlantic Flyway Shorebird Initiative Grant - Co-PI (\$90,000)
- 2021 **Association of Field Ornithologists**
E. Alexander Bergstrom Memorial Research Award - PI (\$1,476)
- Georgia Ornithological Society**
Bill Terrell Graduate Research Grant - PI (\$7,500)
- 2020 **NSF Graduate Research Fellowship (\$138,000)**
- National Fish and Wildlife Foundation**
Atlantic Flyway Shorebird Initiative Grant - Co-PI (\$84,418)
- Carolina Bird Club Research Grant - PI (\$7,500)**
- 2011 **Lydia Bell Award for Initiative in Public Service, Bowdoin College**
- Community Service Award in Environmental Studies, Bowdoin College**

SCIENTIFIC PUBLICATIONS

- 2021 Sanders, F., **M. Handmaker**, A.S. Johnson & N.R. Senner. Nocturnal roost on South Carolina coast supports nearly half of Atlantic coast population of Hudsonian Whimbrel *Numenius hudsonicus* during northward migration. *Wader Study* 128(2): 117-124.
- 2019 Kamm MD, Lloyd-Evans TL, **Handmaker M**, Reed JM. A half-century of changes in migratory landbird numbers along coastal Massachusetts. *PLoS ONE* 14(9): e0222232.

POPULAR SCIENCE PUBLICATIONS AND MEDIA

- 2018 Iglecia, M. & **M. Handmaker**. [*Whimbrels on the Wing*](#). Esri StoryMap. Publication of the Manomet Shorebird Recovery Program.
- 2017 **Handmaker, M.** [*Journey of a Semipalmated Sandpiper*](#). Esri StoryMap. Publication of the Western Hemisphere Shorebird Reserve Network (WHSRN).
**Recognized by Esri one of 18 Favorite Community-Produced Story Maps of 2017, out of 250,000*

INVITED TALKS AND WORKSHOPS

- 2021 **Discovery at Deveau Bank: Learning from the largest known Whimbrel nocturnal roost** - Guest speaker, Broome County Naturalists' Club, Vestal, New York (Virtual)

- 2020 | **“Comunicaciones efectivas para el Proyecto de Aves Playeras Migratorias”**
Invited virtual workshop on effective communication strategies for partners of the Migratory Shorebird Project. Delivered in Spanish and co-facilitated with WHSRN Assistant Director Laura Chamberlin and biologist Diana Eusse of Asociación Calidris.

PRESENTATIONS AT SCIENTIFIC MEETINGS

- 2021 | **Handmaker, M.**, F. Sanders, A.S. Johnson & N.R. Senner. *Nocturnal roost on South Carolina coast supports nearly half of Atlantic coast population of Hudsonian Whimbrel* *Numenius hudsonicus* during northward migration. International Wader Study Group Conference. (Virtual)
- 2021 | **Handmaker, M.**, F. Sanders, A.S. Johnson & N.R. Senner. *Nocturnal roost on South Carolina coast supports nearly half of Atlantic coast population of Hudsonian Whimbrel* *Numenius phaeopus* during northward migration. American Ornithological Society Annual Meeting. (Virtual)

TEACHING AND OUTREACH

- 2021 - present | **Skype a Scientist**
Regular volunteer scientist participant; virtually connect with classrooms to answer student questions about ecology, bird migration, field biology research, and conservation. Lesson planning and content adapted for different age groups from kindergarten to middle school. Recent teaching sessions include:
Columbus School for Girls, 2nd Grade - Columbus, Ohio
Magic City Acceptance Academy, 7th Grade - Homewood, Alabama
St. Paul Academy, Kindergarten science classes - St. Paul, Minnesota
Mar Vista Elementary School, 4th Grade - Aptos, California
- 2017 | **Lead Educator, Manomet Banding Lab**
Coordinated weekly education and outreach programming for local school groups, from elementary to college age students. Led bird banding demonstrations and lessons on bird migration, long-term data collection, and the impacts of climate change on songbird populations.
- 2016 | **Teaching Assistant, University of California Education Abroad Program**
Assisted with field instruction and logistics for undergraduates enrolled in Tropical Biology and Conservation study abroad program based in Monteverde, Costa Rica. Led students in bird observation and identification in cloud forest, tropical dry forest, mangrove, and lowland tropical rainforest habitats.

PROFESSIONAL SERVICE AND MENTORING

- 2021-present | **Graduate Fellowship Peer Mentor**, University of South Carolina. Advise graduate students applying for the NSF GRFP. Provide general application guidance and detailed written feedback on research plans and personal statements.
- 2020-present | **Student Affairs Committee, American Ornithological Society**. Member of Monthly Series Subcommittee. Plan virtual panel discussions, webinars, and social events to create community and offer professional development opportunities for students in ornithology.

RELEVANT COURSEWORK

2021	Experimental Design and Analysis - Dr. Nathan Senner, University of South Carolina Marine Data Science in R - Dr. Erin Meyer-Gutbrod, University of South Carolina (Audited) Approaches and Applications in Species Distribution Modeling and Mapping - Dr. John Kupfer, University of South Carolina Google Earth Engine for Ecology and Conservation - Organization for Tropical Studies (virtual)
2020	Applied Statistics I - Dr. Tracey Gunter, University of South Carolina Life-history Strategies - Dr. Carol Boggs, University of South Carolina
2018	Ecology - Dr. Patricia Jones, Bowdoin College. (Audited)
2011	Ornithology - Dr. Nathaniel Wheelwright, Bowdoin College.
2010	Behavioral Ecology – Dr. Nathaniel Wheelwright, Bowdoin College. (Audited)

SOFTWARE EXPERIENCE

R Studio, Microsoft Office Suite, Google Docs, Slack, Quickbase, Wordpress, ArcGIS StoryMaps, Adobe Creative Suite, Zotero

LANGUAGES

English (native speaker), Spanish (proficient)