

Rachael W. Herman

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EDUCATION

PhD in Ecology and Evolution 2017---Present
Stony Brook University, Stony Brook, NY

M.S. in Oceanography and Coastal Sciences 2014---2016
Louisiana State University, Baton Rouge, LA

Thesis: Investigating species- and population-level foraging variation and individual specialization in *Pygoscelis* penguins using stable isotope analysis (Advisors: Drs. Michael Polito, Kenneth Rose, and Kenchan Maiti)

B.S. in Biology, Magna Cum Laude with Departmental Honors in Biology 2005---2009
University of Massachusetts, Amherst, MA

Honors Thesis: Tail autotomy and its effects on locomotion in the Northern Dusky Salamander (*Desmognathus fuscus*) (Advisors: Drs. Duncan Irschick and Jeff Podos)

RESEARCH EXPERIENCE

Principle Investigator July 2016 --- Present
Museum of Zoology, University of Michigan; Ann Arbor, MI

- Conducting a range-wide phylogeographic study of Wedge-tailed Shearwaters to reconstruct population history and assess population structure and divergence between breeding areas. Responsible for pursuing and acquiring funding, conducting DNA extractions on modern genetic samples and toe pads from museum specimens, and assembling and analyzing genome-wide genetic datasets.

Research Assistant July 2017 --- Aug. 2017
Museum of Zoology, University of Michigan; Kyrgyzstan

- Participated in museum collecting expedition in Kyrgyzstan to survey avian diversity across the country, collect genetic samples, and collect museum specimens. (PI: M.G. Harvey)

Research Technician Aug. 2016 --- Aug. 2017
Museum of Zoology, University of Michigan; Ann Arbor, MI

- Assisting with a long-term study on the relationship between seasonal migration and dispersal and its influence on speciation in boreal forest birds. Responsible for all lab work, including subsampling avian tissues and conducting DNA extractions (PI: B. Winger)

Graduate Research Assistant Aug. 2014 --- Aug. 2016
Louisiana State University; Baton Rouge, LA

- Assessed the variation in foraging strategies in populations of *Pygoscelis* penguins throughout the Scotia Arc to detect trends due to spatial differences in oceanic productivity and trophic composition. Examined the presence and degree of individual foraging specialization using bulk stable isotope analysis.

Research Coordinator Jan. 2014 --- July 2014
San Diego Zoo Institute for Conservation Research; Camp Pendleton, CA

- Supervised a team of research associates monitoring the resident and breeding populations of western Snowy Plover and California Least Tern at coastal sites in Marine Corps Base Camp Pendleton.

Responsible for tern and plover nest searching and productivity monitoring, behavioral observations, disturbance and predation assessment and documentation, managing and analyzing data.

Avian Field Technician/GS-05

Apr. 2013 --- Sept. 2013

Alaska Maritime National Wildlife Refuge; Buldir, AK

- Monitored survival, productivity and diet of auklets, puffins, kittiwakes, murre, storm-petrels, and gulls. Conducted population counts of breeding kittiwakes, murre, gulls, and cormorants. Managed and analyzed data, compiled report.

Avian Research Technician

Jan. 2013 --- Apr. 2013

Deakin University; Gabo Island, Victoria Australia

- Monitored reproduction and foraging ecology of Short-tailed Shearwaters. Configured GLS, GPS and Accelerometer data-loggers and package/seal for deployment. Attached data-loggers to adult shearwaters; retrieved data-loggers and downloaded/compiled data. Banded and collected morphometric data on adult birds and chicks (PI: M. Berlincourt)

Sanctuary Manager of Penikese Island

May 2012 --- Aug. 2012

Massachusetts Division of Fish and Wildlife; Buzzards Bay MA

- Managed a remote field camp monitoring breeding populations of endangered Roseate Terns and Common Terns; supervised interns and scheduled field season. Monitored nest chronology and productivity of terns. Conducted predator management in and around tern colony.

Biological Field technician

Aug. 2011 --- Apr. 2012

US Fish and Wildlife Service; Laysan Island HI

- Monitored reproduction and survival of Laysan Albatross and Black-footed Albatross. Conducted transect surveys and island wide censuses of breeding albatross. Surveyed and monitored the phenology of breeding seabird populations. Propagated and out-planted native and endangered plant species; controlled for invasive plant species.

PUBLICATIONS and TECHNICAL REPORTS

Borowicz A, McDowall P, Youngflesh C, Sayre-McCord T, Clucas G, **Herman R**, Forrest S, Rider M, Schwaller M, Hart T, Jenouvrier S, Polito M, Singh H, and Lynch HJ. *Scientific Reports* 8. Multi-modal survey of Adélie penguin mega-colonies reveals the Danger Islands as a seabird hotspot.

Herman, R.W., Valls, F.C., Hart, T., Petry, M.V., Trivelpiece, W.Z. and Polito, MJ (2017). Seasonal consistency and individual variation in foraging strategies differ among and within *Pygoscelis* penguin species in the Antarctic Peninsula region. *Marine Biology*, 164(5):115.

Herman, R.W. T. Hart, J. Handley, J. Hinke and M.J. Polito. (*In prep*). Geographic variation in the degree of individual specialization in Gentoo Penguins (*Pygoscelis papua*) populations throughout the Scotia Arc.

Herman, R.W., Harvey MG, Dittman, D. (*In prep*). Genomic variation in a widespread pelagic seabird reveals divergence and population structure.

Kohley, C.R. and **R.W. Herman**. 2013. Biological monitoring at Buldir Island, Alaska in 2013. U.S. Fish and Wildl. Serv. Rep., AMNWR 2013/09. Homer, Alaska.

Herman, R., K. DeMoranville, and C.S. Mostello. 2012. Penikese Island Tern Restoration Project. Published report. Massachusetts Division of Fish and Wildlife.

Herman, R. J. Henningsen and D.J. Irschick. Tail autotomy and its effects on locomotion in the Northern Dusky Salamander. 2009 (Honors Thesis)

FIRST-AUTHORED PRESENTATIONS

August 2016, North American Ornithological Conference 2016, Washington DC

Herman, R., M. Polito. *Individual specialists, population generalists and Gentoo penguin foraging ecology across the Scotia Arc* (talk)

February 2016, Ocean Sciences Meeting, New Orleans, Louisiana

Herman, R., M. Polito. *Individual specialists, population generalists and Gentoo penguin foraging ecology across the Scotia Arc during a time of rapid environmental change* (poster)

February 2016, 43rd Pacific Seabird Group Conference, Turtle Bay, Hawaii

Herman, R., M. Polito. *Individual specialists, population generalists and Gentoo penguin foraging ecology across the Scotia Arc during a time of rapid environmental change* (talk)

October 2015, Second World Seabird conference at Cape Town, South Africa

Herman, R., M. Polito. *Jack of all Trades or Master of Some? Individual specialists, population generalists and Gentoo penguin foraging ecology across the Scotia Arc during a time of rapid environmental change* (talk)

March 2015, Graduate Student Symposium at Dauphin Island Sea Lab

Herman, R., M. Polito. *Jack of all Trades or Master of Some? Individual specialists, population generalists and Gentoo penguin foraging ecology across the Scotia Arc during a time of rapid environmental change* (talk)

ACADEMIC ACHIEVEMENTS and AWARDS

- STRIDE Fellowship, Stony Brook University, 2018 (\$34,200)
- Recruitment Fellowship, Stony Brook University, 2017 (\$2000)
- American Ornithological Union Travel Award, 2016 (\$300)
- 2nd place for best student oral paper/presentation, Pacific Seabird Group, 2016
- Pacific Seabird Group Student Travel Award, 2016 (\$500)
- Department of Oceanography and Coastal Sciences Travel Award, 2015 (\$250)
- Graduate Student Travel Award, Louisiana State University, 2015 (\$300)
- Graduate Student Symposium Travel Award, 2015 (\$100)
- Undergraduate Student Travel Award, University of Massachusetts, 2009 (\$300)
- Graduate Research Assistantship, Louisiana State University, 2014 (\$20,000/year + tuition waver)
- Commonwealth College Honors Scholar with great distinction (University of Massachusetts, 2009)
- John and Abigail Adams Scholarship – awarded full undergraduate tuition waiver (2005-2009)

TEACHING, SERVICE, and OUTREACH

- Graduate teaching assistant: Bio 321-Bioinformatics (2017), Bio 201-Fundamentals of Biology (current)
- Trained and supervised undergraduate students in museum research and genetic laboratory techniques at University of Michigan (2016)
- Presented on seabird research and fieldwork opportunities to the University of Michigan undergraduate ornithology class (2016)
- Presented on research and fieldwork in Antarctica to the Louisiana State University biological oceanography class (2015, 2016)
- Conducted outreach and gave oral presentations to passengers on Antarctic tour ships about research in the Antarctic and threats to marine ecosystems (2014, 2017/18)
- Reviewer for *Scientific Reports* (2017-present)