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KATIE GOULDER

EDUCATION

Bachelor of Arts in Biology

Minors in Environmental Studies
and Anthropology
Kenyon College
Graduated Cum Laude (GPA 3.60)
2012-2016

PUBLICATIONS

Montello, M.A., **Goulder, K.D.**,
Pisciotta, R.P., & MacFarlane,
W.J. 2022. Historical Trends
in New York State Cold-
Stunned Sea Turtle Stranding-
to-Release: 1998-2019.
*Chelonian Conservation and
Biology*, 21(1).

PRESENTATIONS

"RNAi mediated knockdown
of KAATI and measurement of
surface area in the *Manduca
 sexta midgut*." Poster presented
at the 2014 Society of Integrative
and Comparative Biology
Conference in Austin, TX.

WORK EXPERIENCE

2021

Seasonal Wetland Technician

 Dover, DE

Delaware Department of Natural Resources & Environmental Control

- Collected vegetation, soil, water quality and buffer data for the National Wetland Condition Assessment (NWCA) in tidal and non-tidal wetlands throughout Delaware.
- Assisted with pre- and post-restoration tidal wetland monitoring and biomass collection.
- Identified wetland plant, animal, and macroinvertebrate species, both native and invasive, to determine beneficial use of non-tidal streams.
- Installed a 160ft living shoreline along the Lewes-Rehoboth Canal.
- Contributed to technical reports and identified hydrological influences of assessment areas and surrounding buffers on ArcGIS.

2019-2021

Biologist II

 Riverhead, NY

New York Marine Rescue Center

- Rescued and rehabilitated sea turtle and pinniped species and responded to calls about stranded cetaceans in New York State.
- Performed physicals, blood draws and administered subcutaneous fluids as well as intramuscular, oral, and eye medications to sea turtle and pinniped patients.
- Performed post-mortem exams and necropsy, including tissue sample preservation, of sea turtles.
- Trained and supervised interns and volunteers in daily operations and husbandry.
- Developed and delivered educational outreach programs and created media for fundraising campaigns.

2018-2019

Marine Mammal and Sea Turtle Clinical Intern

 Quincy, MA

New England Aquarium

- Assisted in the clinical rehabilitation of cold stunned Kemp's ridley, loggerhead, and green sea turtles.
- Performed intake and regularly scheduled exams on turtles to determine areas of concern and provided care for wounds and other external abnormalities.
- Performed medical testing and treatments including drawing blood, administered subcutaneous fluids as well as intramuscular, oral, and eye medications as prescribed by staff veterinarians.
- Assisted in specialized treatments, such as tracheal washes, nebulization, and laser therapy.

COMPUTER SKILLS

- ArcGIS Pro
- Survey123
- ImageJ
- R
- Adobe Photoshop
- Microsoft Excel
- Microsoft Access
- Microsoft Word
- Microsoft PowerPoint

FIELD SKILLS

- Trimble Geo7x
- GPS Navigation
- Trailing
- ATV/UTV
- Wildlife Survey and Monitoring
- Vegetation, Water Quality, and Soil Sampling
- Satellite, PIT, and Flipper Tagging
- Cage Trapping, Mist-Netting, and Banding Birds
- Marine Mammal Rescue and Rehabilitation

LABORATORY SKILLS

- Blood and Plasma Analysis
(VetLyte, VetTest, Idexx VetStat Electrolyte, and Blood Gas Analyzer)
- Sea Turtle Necropsy
- Tank Maintenance and Water Quality Assessment
- Sectioning, Staining, and Photographing Slides
- Biomass Sorting
- Data Entry and Quality Assurance
- Statistical Analysis
- Technical Writing

WORK EXPERIENCE (CONT.)

2018

Daytime Sea Turtle Intern

Sanibel, FL

Sanibel Captiva Conservation Foundation

- Conducted daily patrols to locate and process Kemp's ridley, loggerhead, and green sea turtle nests on 18 miles of beach on Sanibel and Captiva Islands.
- Recorded nesting data and performed nest inventories 3 days after hatching to determine hatch and emergence success of each nest. Maintained records using *seaturtle.org*, an international sea turtle database.
- Operated a 24-hour hotline for strandings during the 2018 Red Tide Event.
- Performed necropsies as part of a SCCF Marine Lab study on the modes of infection of brevetoxicosis.

2017-2018

Rescue & Rehabilitation Intern

Quincy, MA

New England Aquarium

- Rehabilitated cold-stunned and injured juvenile Kemp's ridley, loggerhead, and green sea turtles.
- Evaluated the behavior and health of the turtles while swimming and prepared and fed prescribed diets.
- Assisted during clinical treatments and injections.
- Maintained records of water quality, daily food intake, swim charts, and treatment sheets for each of the hundreds of individual turtles that were brought to the facility.

2017

Sea Turtle Intern

Edisto Island, SC

South Carolina Department of Natural Resources

- Located, recorded, protected, and inventoried loggerhead sea turtle nests in the Botany Bay Plantation Wildlife Management Area.
- Conducted daily patrols to locate and process nests and evaluated the risk of excessive wash overs and scarp destruction.
- Collected genetic samples from nests to identify the individual female and determine the number of unique nesting females on the island.
- Recorded nesting data and performed nest inventories after hatching to determine hatch and emergence success of each nest.

2015

Environmental Education & Animal Behavior Intern

Philadelphia, PA

Philadelphia Zoo

- Lead educational programs on specific species, interpreting animal behavior, and on the Zoo's conservation efforts.
- Collected behavioral data on the Zoo's two cheetahs and performed frog call surveys from recordings in the Zoo's collections.
- Completed an ethogram of the Zoo's polar bears to determine how each individual was using the exhibit and provided suggestions on how to design more effective enrichment for the animals. Presented this research to zoo personnel and to the public.

CERTIFICATIONS AND TRAINING

- 2020** 24 Hour HAZWOPER
- 2020** FEMA Introduction to Incident Command System, ICS-100
- 2017** FWS Off-Road Utility Vehicle Safety Training (ORUV) ATV/UTV
- 2016** Red Cross AED/CPR
- 2016** Red Cross Wilderness First Aid

COURSEWORK

- Genetic Analysis
- Animal Behavior
- Animal Physiology
- Ecology Lab
- Restoration Ecology

WORK EXPERIENCE (CONT.)

2015

Research Assistant **Kenyon College**

 Gambier, OH

- Conducted research with Professor Robert Mauck to determine how dominance affected the foraging behavior of Carolina Chickadees.
 - Developed protocols to determine dominance. This included cataloging the displacement of the subordinate bird by the dominant bird at the feeders.
 - Cage trapped and mist-netted chickadees. Banded and bled birds in the field.
 - Analyzed data from banded birds using Microsoft Excel and R.
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2015

Summer Science Scholar in Biology **Kenyon College**

 Gambier, OH

- Conducted research with Professor Harry Itagaki on how the midgut morphology of *Manduca sexta* changes during growth.
 - Sectioned preserved samples using a microtome, stained slides to view cell structure, photographed each cross section, and stitched images together using Photoshop. Calculated midgut surface area using ImageJ to then determine metabolic scaling.
 - Presented findings at the Society of Integrative and Comparative Biology Conference in Austin, TX, 2014.
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HONORS AND AWARDS

Distinction on Biology Senior Comprehensive Exercise (2016)

- Awarded by the Kenyon College Biology Department. Exercise was based on a focal paper and included a critique, placement of the article in a larger biological context, and a proposal of three future experiments. Focal paper: Putman, N.F., Mansfield, K.L. (2015) Direct Evidence of Swimming Demonstrates Active Dispersal in the Sea Turtle "Lost Years". *Current Biology* 25:1221-1227.