

# HUNTER SEABOLT, MSc

912-312-1723 | mhseabolt@gmail.com | 2924 Clairmont Rd NE, Atlanta, GA 30329

**SUMMARY** Multi-disciplinary systematic biologist specializing in phylogenetics and bioinformatics with 5 years hands-on experience in the molecular biology lab. Interested in data science, development of new analytical tools for molecular data, next-generation sequencing technologies, integration of biological collections with new research technology.

**HIGHLIGHTS**

- Phylogenetic analyses
- Bioinformatics
- NGS DNA Sequencing
- Comparative Genomics
- Population Genetics
- Biogeography
- Natural History
- Biological Collections
- Bayesian statistics
- Multi-disciplinary

## RESEARCH EXPERIENCE

**Sept 2016 – present** **ORISE Research Fellow**  
**CENTERS FOR DISEASE CONTROL AND PREVENTION** – Atlanta, GA

- Molecular Epidemiology Lab, specializing in *Cryptosporidium* sequence typing
- Protocol/pipeline development and support for CryptoNet (to be integrated with PulseNet) for nationwide *Cryptosporidium* surveillance
- Sanger and Illumina-based DNA Sequencing

**May 2016 – June 2016** **Seasonal Field Entomologist** – St. Paul, MN  
**MINNESOTA DEPT OF NATURAL RESOURCES**

- Part of Minnesota Biological Survey's Grassland Bee Project
- Preparation of field locations
- Specimen collection and processing
- Collection of both bees and flowering plants

**Jan 2014 – May 2016** **Research Assistant**  
**US NATIONAL TICK COLLECTION** – Statesboro, GA

- DNA isolation and amplification
- Developing/optimizing PCR protocols
- Phylogenetic analyses using PAUP\*, PHYML, MrBayes, BEAST, RASP software packages
- Development of morphological database
- Management and lab supply maintenance
- Collection and archive digitization

## PROFESSIONAL SOCIETY AFFILIATIONS

- Society of Systematic Biologists
- Botanical Society of America
- American Society of Plant Taxonomists
- Entomological Society of America

## SKILLS

### PHYLOGENETIC ANALYSES

- Bayesian methods
- Maximum likelihood
- Maximum parsimony
- Molecular Clock methods
- Dispersal /Vicariance reconstruction
- Comparative Phylogenomics

### PROGRAMMING LANGUAGES

- Perl 5
- Python 3 (Anaconda)
- Ruby
- R
- SQL

### MOLECULAR LABORATORY

- DNA isolation
- PCR
- Electrophoresis
- Primer design
- Sequence preparation
- Sanger-based DNA Sequencing
- Illumina platform NGS
- Restriction Fragment Length Polymorphism (RFLP)

### BIOINFORMATICS SOFTWARE

- CLC Genomics Workbench
- BioNumerics
- Geneious

## RESEARCH EXPERIENCE (cont.)

**Aug 2012 – May 2013 Research Assistant**

**ARMSTRONG STATE UNIVERSITY** – Savannah, GA

- DNA isolation
- PCR amplification
- Gel electrophoresis
- Morphological data collection
- Developed first database for AASU herbarium collection

## EDUCATION

**2016**

**Master of Science** – Systematic Biology

**Georgia Southern University**, Statesboro, GA

**Thesis:** Biogeographical Patterns in the Hard-Tick Genus *Amblyomma* (Acari: Ixodidae)

**2013**

**Bachelor of Science** – Biology

**Armstrong State University**, Savannah, GA

- Dean's List
- Recipient of Parkersburg Garden Club Scholarship

## PEER-REVIEWED PUBLICATIONS

**2016**

Link-Pérez MA, **Seabolt MH**, Ledford C, Ludwig T, & Sessa EB. 2016. Lectotypification of *Adiantopsis alata* Prantl (Pteridaceae) and descriptions of new palmate taxa from the Guyana Shield. *Systematic Botany* 41(4): 906-918.

Durden LA, Blanco M, and **Seabolt MH**. 2017. Two New Species of Sucking Lice (Phthiraptera: Anoplura: Polyplacidae) from Endangered, Hibernating Lemurs (Primates: Cheirogaleidae). *Journal of Medical Entomology*, in press.

**Seabolt MH**, Durden LA, and Beati L. New records of ticks (Acari: Ixodoidea) from the Area de Conservación Guanacaste, Costa Rica with additional records from the US National Tick Collection. Manuscript in prep.

## CONFERENCE PRESENTATIONS

**2015**

**Seabolt MH**, Beati L, Durden LA, Klompen JSH.

“Biogeographical patterns in the hard-tick genus *Amblyomma* Koch (Acari: Ixodidae)”. Entomological Society of America (ESA) conference 2015, Minneapolis, MN.

**Seabolt MH**, Beati L, Durden LA, Klompen JSH. “The systematics of the hard tick genus *Amblyomma* Koch

(Acari: Ixodidae)”.  
Georgia

Entomological

Society (GES)

conference 2015,

Jekyll Island, GA.

## BIOLOGICAL COLLECTIONS

### **HERBARIA**

- Field Collection
- Pressing, mounting
- Specimen Repair, Maintenance

### **ENTOMOLOGY**

- Field Collection
- Pinning, spreading
- Repair, Maintenance
- Slide Mounting

### **DATABASING**

- Specify
- FileMaker Pro
- MS Excel

**CONFERENCE PRESENTATIONS (cont.)**

- 2014**            **Seabolt MH & Beati L.** “Assessing mitochondrial 12S ribosomal DNA gene sequences as phylogenetic markers for the study of the systematics of *Amblyomma* Koch (Acari: Ixodidae)” Southeastern Evolution and Ecology Conference (SEEC) 2014, Georgia Southern University, Statesboro, GA.
- Seabolt MH & Beati L.** “Mitochondrial 12S ribosomal DNA gene sequences as an informative phylogenetic marker for systematic analysis of the subgenera of the tick genus *Amblyomma* Koch (Acari: Ixodidae)” Georgia Entomological Society (GES) Conference 2014, Valdosta, GA.
- 2012**            **Seabolt MH & Link-Pérez MA,** “Assessing and Expanding the AASU Herbarium” AASU Student Scholars Symposium, Armstrong Atlantic State University, Savannah, GA, 2012