

Mary Leigh Morris Merrill

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EDUCATION

Doctor of Philosophy in Public Health, One Health Concentration

University of Florida, Gainesville, FL. Projected graduation date: August 2018

Master of Health Science, One Health Concentration

University of Florida, Gainesville, FL. December 2013, GPA: 4.0

Bachelor of Science, Mathematics

Mississippi State University, Starkville, MS. August 2012, Cum Laude

RECENT EMPLOYMENT

Graduate Assistant, Department of Environmental & Global Health, College of Public Health & Health Professions, University of Florida, Gainesville, FL. August 2014 – Present

- Conducting dissertation research focused on non-native, invasive wild pigs and vector-borne pathogens of humans and cattle in South-Central Florida (described in research experience section below)

Program Assistant, One Health Center of Excellence for Research and Training, Emerging Pathogens Institute, University of Florida, Gainesville, FL. August 2013 – July 2014

- Coordinated cooperative agreements with fourteen international institutions, including institutions in China, Nigeria, Romania, Mongolia, and Sweden
- Arranged itineraries and logistics for visiting international public health researchers
- With team, conducted One Health graduate certificate program for 30+ international health professionals
- Responsible for Institutional Review Board documents, which were developed and maintained to protect the rights and welfare of human research subjects of One Health Center research projects
- Managed study data, staff training records, and fiscal documents
- Contributed to multiple research manuscripts and grant proposals

RESEARCH EXPERIENCE

Dissertation Research, MacArthur Agro-Ecology Research Center, Lake Placid, FL. May 2015 – Present

- Collaborating on the below projects with an interdisciplinary team of wildlife disease ecologists, entomologists, molecular biologists, and ranch managers.
 1. Determine the prevalence of bluetongue virus and epizootic hemorrhagic disease virus infection in beef cattle as well as investigate potential effects on cattle production
 2. Study the ecology of tick species, and their associated pathogenic bacteria, in the environment and on wild pigs
 3. Examine the composition of and explore temporal changes in the diet of wild pigs, focusing on implications for native plant and animal species
- Conducting fieldwork including rodent and wild pig trapping and sample collection, sample collection from domestic cattle, and environmental surveillance for ticks
- Conducting laboratory work such as tick species identification, extraction of RNA and DNA from biological samples, and qPCRs for detection of pathogenic viral and bacterial nucleic acids
- Developing grant proposals to fund additional research, and create manuscripts to report research findings

Master of Health Science Capstone Internship, Everglades National Park (EVER), FL. May - August 2013

- Designed and implemented a park-wide mosquito and arbovirus surveillance study with a team from Yale University and University of Miami, in cooperation with EVER and NPS staff
- Collected more than 90,000 mosquitoes from five diverse habitats within EVER in order to determine significant factors affecting mosquito abundance and species distribution
- Developed white paper detailing study methods, results and conclusions for NPS internal distribution

Research Technician, Global Pathogens Laboratory, Emerging Pathogens Institute, University of Florida, Gainesville, FL. January - May 2013

- Enrolled human subjects with influenza-like-illness in study to compare accuracy of diagnostic kits
- Shadowed human subject enrollment in zoonotic disease study to determine the presence of caprine arthritis encephalitis virus antibodies in humans who frequently handle goats or ingest goat products

Volunteer, Center for Environmental and Human Toxicology, University of Florida, Gainesville, FL. January – May 2013

- Assisted in study to determine the pathway of carbon nanotubes when ingested by fathead minnows
- Studied the effects of proteins on infrared fluorescence of carbon nanotubes

Volunteer, Aquatic Pathobiology Laboratory, University of Florida, Gainesville, FL. November - December 2012

- Developed mathematical model for determining area of oyster beds surveyed
- Assessed and recorded oyster size and health

SERVICE & PROFESSIONAL SOCIETIES

Co-Editor, One Health Newsletter, Emerging Pathogens Institute, Gainesville, FL. December 2013 – January 2017

Led a team of interdisciplinary health professionals to produce the quarterly newsletter that has an international distribution via the Emerging Pathogens Institute website (epi.ufl.edu/onehealth) as well as the One Health Initiative website (onehealthinitiative.com)

Member, Society for Vector Ecology

Member, Entomological Society of America

PUBLICATIONS

Merrill MM, Boughton RK, Lord CC, Sayler KA, Wight B, Anderson WM, Wisely SM. (Submitted). Wild pigs as sentinels for hard ticks: a case study from south-central Florida.

Merrill MM, Lord CC, Turner EL, Boughton RK, Hernández FA, and Wisely SM. (2016). Ixodid ticks on feral swine and other mammals in south-central Florida. *Proceedings of the 27th Vertebrate Pest Conference*.

Gray GC, Anderson BD, LaBeaud AD, Heraud JM, Fèvre EM, Andriamandimby SF, Cook EA, Dahir S, de Glanville WA, Heil GL, Khan SU, Muiruri S, Olive M-M, Thomas LF, Merrill HR, **Merrill MM**, & Richt JA. (2015). Seroepidemiological Study of Interepidemic Rift Valley Fever Virus Infection Among Persons with Intense Ruminant Exposure in Madagascar and Kenya. *The American Journal of Tropical Medicine and Hygiene*, 93(6): 1364-70.

Wang T, Wang M, Shu B, Chen XQ, Luo L, Wang JY, Cen YZ, Anderson BD, **Merrill MM**, Merrill HR, Lu JH. (2015) Evaluation of inapparent dengue infections during an outbreak in Southern China. *PLoS Negl Trop Dis.*, 9(3).

Russell KL, Baker CI, Hansen C, Poland GA, Ryan MAK, **Merrill MM**, & Gray GC (2015). Lack of effectiveness of the 23-valent polysaccharide pneumococcal vaccine in reducing all-cause pneumonias among healthy young military recruits: a randomized, double-blind, placebo-controlled trial. *Vaccine*, 33(9): 1182-7.

Zhou P, Hong M, **Merrill MM**, He H, Sun L, & Zhang G. (2014). Serological report of influenza A (H7N9) infections among pigs in Southern China. *BMC veterinary research*, 10: 203.

Elbadry MA, **Merrill MM**, Ma MM, Ma MJ, Lu JH, Cao WC, & Gray GC. (2014). China's great wall, Israel's Bar Lev Line, and passive infectious disease surveillance. *Military Medical Research*, 1: 15.

PRESENTATIONS, POSTERS, & ABSTRACTS

Mary M. Merrill, Raoul K. Boughton, Cynthia C. Lord, Katherine A. Sayler, Bethany Wight, Wesley M. Anderson, and Samantha M. Wisely, Wild pigs as sentinels for hard ticks: a case study from south-central Florida. Poster presented at the 10th Annual Emerging Pathogens Institute Research Day. 2018 February 15; Gainesville, FL.

Mary M. Merrill, Raoul K. Boughton, Katherine A. Sayler, Cynthia C. Lord, and Samantha M. Wisely, Comparison of Ixodid tick collection methods: dragging vs. surveys of feral swine in south-central Florida. Poster presented at the 17th Wildlife Damage Management Conference. 2017 February 26 - March 1; Orange Beach, AL.

Mary M. Merrill, Raoul K. Boughton, Katherine A. Sayler, Cynthia C. Lord, and Samantha M. Wisely, Comparison of Ixodid tick collection methods: dragging vs. surveys of feral swine in south-central Florida. Poster presented at the 9th Annual Emerging Pathogens Institute Research Day. 2017 February 23; Gainesville, FL.

Mary M. Merrill, Raoul K. Boughton, Katherine A. Sayler, Felipe Hernandez, Courtney A. Bounds, Shannon P. Moore, Cynthia C. Lord, and Samantha M. Wisely. The role of feral swine in production diseases of cattle in south-central Florida. Poster presented at the Wild Pig Conference. 2016 April 17-20; Myrtle Beach, SC.

M. M. Merrill, R. K. Boughton, K. A. Sayler, F. Hernandez, C. A. Bounds, S. P. Moore, C. C. Lord, S. M. Wisely. The role of feral swine in the emergence of neglected pathogens of cattle in Florida. Poster presented at the 27th Vertebrate Pest Conference. 2016 March 7-10; Newport Beach, CA.

M. M. Merrill, K. A. Sayler, R. K. Boughton, S. P. Moore, C. C. Lord, and S. M. Wisely. Tick-borne pathogens of cattle and wildlife in south-central Florida. Poster presented at the 8th Annual Emerging Pathogens Institute Research Day. 2016 February 18; Gainesville, FL.

M. M. Merrill, K. A. Sayler, R. K. Boughton, C.C. Lord, and S. M. Wisely. Shared ticks and tick-borne pathogens of cattle and wildlife in South Central Florida. Poster session presented at the 46th Annual Society for Vector Ecology Conference. 2015 September 30; Albuquerque, NM.

D. Fish, R. B. Tesh, D. Wong, C. Savit, **M. M. Merrill**, H. Guzman, A. P. Travassos de Rosa, W. Qualls, J. Beier, H. Cooley. Trouble in Paradise? Mosquitoes and Mosquito-Borne Arboviruses of Everglades National Park, Florida. Late breaker abstract included in the 63rd Annual Meeting of the American Society of Tropical Medicine & Hygiene. 2014 November 5; New Orleans, LA.

H. R. Merrill and **M. M. Merrill**. An Introduction to R Statistical Package. Invited lecture at Zhongshan Center for Disease Control. 2014 September 3; Zhongshan, Guangdong, China.

S. Bhandary, H. R. Merrill, **M. M. Merrill**, W. A. Qualls, C. Savit, N. West, D. Wong, D. Fish. Pilot Mosquito Surveillance Study within Everglades National Park. Poster session presented at the 6th Annual Emerging Pathogens Institute Research Day. 2014 February 20; Gainesville, FL.

TEACHING EXPERIENCE

Instructor, An Introduction to R Statistical Package (joint workshop with Hunter R. Merrill), Sun Yat-Sen University, Guangzhou, Guangdong, China. August 28-29 and September 1-3, 2014

- 5-day workshop introducing the R language to approximately 80 attendees, including public health and biostatistics students as well as many visiting health professionals

Discussion facilitator, An Introduction to One Health Problem Solving, Univ. of Florida, Gainesville, FL. May 14, 2014

- Introduced the topic of food safety, animal health, and HACCP standards through video and short lecture, then led the class of international health professionals in a discussion of animal health and safety practices throughout the world and how these influence human health

AWARDS & FUNDING

College of Public Health and Health Professions Graduate Student Fellowship 2014-2018
2016 Vertebrate Pest Conference Travel Award