

M. Eric Benbow

Associate Professor at Michigan State University

East Lansing, MI, US

Insect - Microbe interactions in aquatic ecology, forensics, and human health.

Biography

As a community ecologist, Benbow is studying how complex communities (e.g., aquatic insects or microbes) change, are distributed and can be used in various applications in medicine, disease and environmental management. Within entomology and aquatic ecology, his lab asks three general questions: 1) Is insect fitness influenced by the community of microbes living in or on them?; 2) What are the ecological interactions of insects with the microbial communities associated with their food resources?; and, 3) How can this information be used to inform resources management, human health and forensics? With a joint appointment in the College of Osteopathic Medicine, his lab seeks to answer these insect-microbe questions for translation into human health applications in addition to environmental health. Given the rich history of research in insect-microbe interactions that has focused on vectoring pathogens and co-evolved symbionts, coupled with the advanced ability to identify culturable and non-culturable bacteria using high throughput sequencing, a new generation of inquiry into the importance of the insect microbiome and their interactions in nature has tremendous potential for insect science. His research has recently been funded by the National Science Foundation, United State Forest Service and the National Institute of Justice, with previous funding received from the National Institutes of Health and United State Geological Survey.

Industry Expertise

Education/Learning, Research, Renewables and Environmental, Biotechnology

Areas of Expertise

Forensic Sciences, Infectious Disease Ecology, Aquatic Entomology, Aquatic Ecology, Microbial Ecology

Education

University of Dayton

Ph.D. Aquatic Biology

University of Dayton

B.S. Biology

Accomplishments

Platinum Award

For DVD entitled "Forensic entomology: collection and preservation of entomological evidence for court."

Telly Award

For DVD entitled "Forensic entomology: collection and preservation of entomological evidence for court."

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