



Topic: Boring and fascinating: An integrative approach to studying microscopic marine animals

Date: Friday, 09 May 2025

Time: 10:00

Zoom: <https://zoom.us/j/98406382325?pwd=a1RD Sdn3YZbFjrJNPxU3CledKQo3JB.1>

Meeting ID: 984 0638 2325 | **Passcode:** FQ2017



Mildred Johnson

Doctoral candidate,
University of Vienna
Senior Technologist, UNAM

ABOUT THE PRESENTATION

This presentation will introduce the listener to microscopic marine critters, specifically those with boring capabilities. Boring organisms are bioeroders that drill into substrates, e.g. shells, with a lifecycle mostly confined to where they settle. This lifestyle spans across many taxa, each with unique body forms. Special emphasis will be on bryozoans, commonly referred to as moss animals. Since the discovery of boring bryozoans in the 1800s, new families, genera and species were described, mostly in the absence of internal morphological characters. This created confusion, misidentifications and flawed phylogenetic inferences. Our integrative taxonomic approach consisting of modern and traditional techniques revealed the form, function and evolutionary history of these animals.

The first DNA sequence data of boring bryozoans was generated, revealing convergent evolution of the boring lifestyle. The discovery of five new boring bryozoan species, a new family and genus was supported by morphological characters as well as DNA barcoding. In addition, advanced

microscopy and modern 3D visualization tools showed characters not previously recognized in different groups.

ABOUT THE PRESENTER

Mildred Johnson is a Senior Technologist and Staff Development Fellow. She has submitted her PhD thesis 'The life cycle and systematics of the boring ctenostome bryozoan families Immergentiidae and Spathiporidae' at the University of Vienna. The work was funded by the Austrian Science Fund (FWF), granted to Privatdozent Mag. Dr. Thomas Schwaha. Mildred holds a BSc. in Environmental Biology and Molecular and Physiological Biology from UNAM and a MSc. in Environmental Management from Christian Albrechts Universität zu Kiel. Her interests are Aquatic Ecology, Environmental Education, Climate Science and Zoology.

For any enquiries and RSVP please contact:

Prof John KE Mfunne, Chair, Seminar and Capacity Enhancement Committee, Department of Environmental Science, at jmfunne@unam.na or +264-61-2063743