

ELECTRON MICROSCOPY UNIT



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Head of Unit

WORK OF THE UNIT

The Electron Microscopy Unit was instrumental in assisting various interested persons to benefit from its facilities and services during the 2013/2014 academic year. Researchers on and off the Mona Campus, Graduate – Undergraduate – and High School students received research results, training, exposure and understanding of scanning and transmission electron microscopy, optical microscopy (OM) and macrophotography. The main investigations done and services provided are listed in Table 1.

Table1. Main investigations done during the 2013/2014 academic year.

Specimen	Technique	Institution
Bacteria	OM	Dept. of Basic Medical Sciences (Biochemistry)
Cacao flower	OM	Dept. of Life Sciences
Digitizing analog slides	MP	Dept. of Life Sciences
Fish Larvae	OM	Dept. of Life Sciences
Foraminifera	OM	Dept. of Geography & Geology
Frog	MP	Dept. of Life Sciences
Grains of minerals	OM	Dept. of Geography & Geology
Larvae and adults of insects	MP	Dept. of Life Sciences (2 different students)
Orchid Flowers	MP	Private Researcher, off-campus
Ostracod samples	OM	Dept. of Geography & Geology
Rat knee joint	OM	Dept. of Basic Medical Sciences (Pharmacology)
Rock sections	OM	Dept. of Geography & Geology (27 different students)
Sections of plant and animal tissue	OM	Mico Teachers College
Setting up of optical microscope and advising on imaging system	OM	Dept. of Life Sciences

Electron Microscopy Unit

Laboratory sessions were conducted in Electron Microscopy and OM in the graduate course Research Methods "C60M" from the Department of Chemistry and the undergraduate course Virology "Biol3404", which included lectures on negative staining of viruses. Dr. Wolf contributed to the graduate course Research Methods for Biologists "BL60E" from the Department of Life Sciences, the undergraduate course Research Skills and Practices "Biol 2401" from the Department of Life Sciences and the course Forensic Chemistry "FSCI6502" from the Department of Basic Medical Sciences, which all involved lectures and laboratories on Microscopy and Digital imaging. On Research Days, tours through the Electron Microscopy Unit were conducted.

Dr. Wolf was President of the Natural History Society of Jamaica until March 2014 and serves on the executive board of the Society since then.

RESEARCH IN PROGRESS

Gamete structure and development in insects, using various microscopic techniques.

The collaboration with Protozoologists from the University of Salzburg (Austria) on Ciliates in tank bromeliads and with Zoologists at the University of Leipzig (Germany) on the morphology and development of Jamaican Onychophora (velvet worms) continue.

REFEREED PUBLICATION

Foissner, W., **Wolf, K.W.**, Kumar, S., Kuidong, X. and Quintela-Alonso, P. (2014). Five new Spathidiids (Ciliophora: Haptoria) from caribbean tank bromeliads. *Acta Protozoologica* 53:159-194 ([http://www.ejournals.eu/Acta-Protozoologica/Tom-53\(2014\)/Numer-2/art/2768/](http://www.ejournals.eu/Acta-Protozoologica/Tom-53(2014)/Numer-2/art/2768/))

NON-REFEREED PUBLICATION

De Sena Oliveira, I., Lüter, C., **Wolf, K.W.**, Mayer, G. (2014). On the evolutionary changes in the integument of the Onychophoran *Plicatoperipatus*

jamaicensis (Peripatidae). Abstract Volume of the 15th Annual Meeting of the Society of Biological Systematics in Dresden (Germany) March 24 – 27, 2014, p 87. (http://www.senckenberg.de/files/content/forschung/abteilung/tierkunde/biodivevo2014_program_and_abstracts.pdf)