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About Our Cover

Nematode Expelling an Egg

This living female nematode, shown at 400× magnification, was identified as a member of the genus *Thelastoma*. She is expelling one of the several mature eggs from her body. This nematode was extracted from the digestive tract of a living millipede taken from soil samples collected from around Brevard County, Florida. The millipede, *Anadenobolus monilicornis* or the bumblebee millipede, was about 8 cm long when it was dissected and likely fully mature.

Nematodes are extremely common as parasites of animals and plants, and they are very common in millipede digestive tracts. The nematode eggs are picked up in the soil by the feeding millipedes, and the nematodes develop inside the millipede digestive tract. But the relationship with millipedes appears to be commensal, although the research is scant. What is known is that the nematodes are usually specific to their host species.

The extraction of nematodes from the millipede gut is one of many activities that make up the two-week animal diversity lab in the Fundamentals of Biology course taught by Ron Vanderveer at Eastern Florida State College in Melbourne, Florida. After reading an article in the April 2019 issue of *The American Biology Teacher*, by Ernest Bernard and Gary Phillips of the University of Tennessee at Knoxville, on nematode biology, classification, and the technique for extracting them from millipedes, Vanderveer added the nematode activity to his own course. He finds that having students search for nematodes in the digestive tract of millipedes is a valuable hands-on activity that emphasizes the microbiotic world and provides a great experience using the microscope to view living specimens.

This image was a direct result of one of the student lab sessions. As students dissect and search for nematodes in the gut of their millipedes, Vanderveer also looks for them on the classroom photo microscope, showing results on the projector as well as taking pictures of the organisms found.

The photo was taken at 400× magnification with a Moticam Pro S5 Plus camera mounted on a Motic Panthera U model light microscope using the Motic digital camera software to capture the image.

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