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What are Nematodes?

Where are all these worms?

Nematodes have been reported from every continent on earth and occur in deserts, swamps, the oceans, the tropics and Antarctica. Usually nematodes are invisible to all but a few specialists because most are microscopic and transparent.

How many nematodes are there?

Although estimated numbers of species are in the millions, only a few thousand have been named; almost any shovel full of soil, freshwater or marine sediment is likely to have thousands of worms including new species.

Why are nematodes important?

Most nematodes feed on bacteria, fungi, or other microscopic creatures. As such, they are a major component of soil and sediment ecosystems. One species that feeds on soil bacteria, *Caenorhabditis elegans*, has gained fame as a research model: three specialists on the biology of this worm are the 2002 recipients of the Nobel prize in medicine.

A small fraction of all nematode species are parasites of humans, livestock or agricultural crops. Consequently, these have attracted the most attention from Nematology researchers. For example, root-knot, cyst and lesion nematodes are pests of a wide variety of crops and are annually responsible for billions of dollars of crop losses. Well known animal parasites with health and economic impact include pinworms, hookworms, trichina and dog heartworm.

Certain parasitic nematodes are helpful, including those that attack insects and are used to manage some harmful insects.

Research on nematodes directly benefits humanity, greatly enhances our understanding of the Earth's biodiversity, and is an exciting challenge for our Department of Nematology.

DEPARTMENT OF NEMATOLOGY

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