



ENTFACT-613

HORSEHAIR WORMS

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The adult stage of the horsehair worm, also known as the Gordian worm, can be found in cisterns, livestock watering troughs, or puddles on the ground or plant foliage. They are not parasites of humans, livestock or pets, although this is often the first suspicion when a worm is found.

Horsehair worms are free-living as adults, but the immature stages are internal parasites of grasshoppers, crickets, and some beetles. The worms mate in water, and the female lays her eggs in long gelatinous strings. An egg mass contains up to several million eggs. Depending on water temperature, the eggs hatch in two weeks to three months.

The activities of these microscopic larvae are not completely understood. Within 24 hours after hatching, the larva is thought to form a protective covering or cyst and remain on vegetation near the water's edge. When the water level drops and the exposed vegetation is eaten by a grasshopper or cricket, the protective covering dissolves to release the larva. The larva bores through the gut wall into the body cavity of the host where it digests and absorbs the surrounding tissue as a source of food. When the worm is fully developed, or nearly so, and the host falls in water or is wetted, the worm breaks through the body wall of the host and becomes free-living.

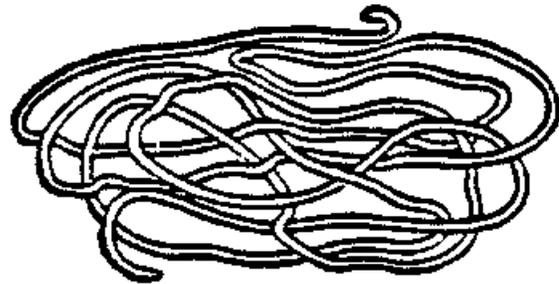
In the spring, the worms can be found tangled together in masses of 10 or more individuals. These observations have led to a variety of common names and beliefs about the worms. The horsehair worms can be attributed to their horsehair-like appearance, but in the days when the spontaneous generation theory was still seriously considered, some people believed the worms were formed from horsehairs that fell in water. The name cabbage hairworm is used in some localities because of the frequency with which the worms are found in the water that collects in cabbage leaves.

Horsehair worms were grouped with the Nematoda, or roundworms, which includes pinworms, ascari, Trichina, soybean cyst nematode, and others. They now have been classed in a group by themselves, called

Nematomorpha. The Nematomorpha resemble nematodes in general structure, but are very long and thin; four inches to two feet in length and 1/80 to 1/10 inch wide. Males are smaller than the females. Color ranges from yellowish to tan to brown to black. There are about 80 known species of hairworms.

Horsehair Worm

The name horsehair worms refers to their habit of tangling in masses or knots. According to Greek legend, King Gordius of Phrygia tied a complicated knot that an oracle foretold would only be untied by the future ruler of Asia. Alexander the Great was unable to untie the horsehair knot, so he cut it apart with his sword. Although biologists have partially untied the mystery of these knotty worms, certain aspects of their biology are still controversial.



A HORSEHAIR WORM