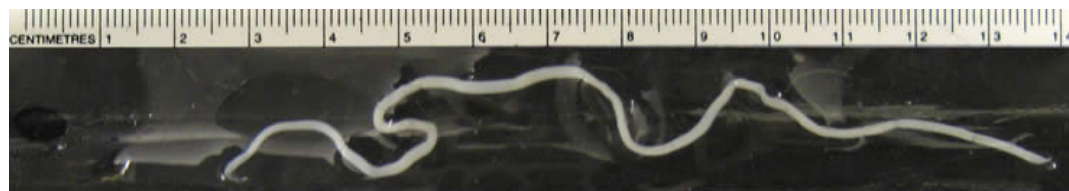


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Cornellians find new worm infecting US cats

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When Cornell veterinarians found half-foot-long worms living in their feline patients, they wondered if they'd spotted something new. Cornell scientists identified the mystery worms as *Dracunculus insignis*, which had never before been seen in cats. Published in the *Journal of Feline Medicine and Surgery* in February 2014, their findings document the first proof that this raccoon parasite can infect cats.

The female *Dracunculus insignis* worm can reach 30 cm long and must emerge from its host to lay larvae. It forms a blister-like projection in an extremity, such as a leg, from which it slowly emerges over the course of days to deposit its young into the water. Dr. Jennifer Pongratz '99 found one of the female worms in a Mass cat and Dr. Sara Sanders '98 found several in a cat in N.Y. They sent samples to Cornell's Animal Health Diagnostic Center and the lab of Professor of Parasitology Dr. Dwight Bowman, which both suspected *Dracunculus*.

"The problem is you can't tell the exact species by looking at female worms," said Dr. Araceli Lucio-Forster, researcher in Bowman's lab and the paper's lead author. "You need males to tell the species because only they have distinct characteristics, such as different shapes of tail protrusions, to tell one from another."

Bowman's lab collaborated with *Dracunculus* experts at the Centers for Disease Control (CDC) to study sections of the worms in detail and conduct molecular analyses to confirm the identification.

Worms in the *Dracunculus* genus are well known in human medicine. *Dracunculus insignis*' sister worm, the waterborne Guinea worm (*Dracunculus medinensis*), infected millions of humans around the world until eradication efforts beginning in the 1980s removed it from all but four countries; through the remarkable efforts by the Carter Foundation and CDC only a total of 148 cases were reported in people in 2013.



Other *Dracunculus* worms infect a host of other mammals—*D. insignis* mainly infects raccoons and other wild mammals, though Bowman’s predecessor Cornell parasitologist Dr. Jay Georgi and others had also seen it rarely in dogs. It does not infect humans.

“The cats that contracted the worms likely ingested the parasites by drinking unfiltered water or hunting frogs,” said Lucio-Forster.

It takes a year from the time a mammal ingests the worm until the females are ready to migrate to an extremity and start the cycle anew.

While the worms do little direct harm beyond creating shallow ulcers in the skin, secondary infections and painful inflammatory responses may result from the worm’s emergence from the host. There are no drugs to treat *Dracunculus insignis* infection— the worms must be removed surgically.

“Although rare in cats, this worm may be common in wildlife and the only way to protect animals from it is to keep them from drinking unfiltered water and from hunting—in other words, keep them indoors,” said Lucio-Forster.

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