

Screwworm

Screwworms are fly larvae (maggots) that feed on living flesh. These parasites can infect any warm-blooded animal, including humans. Screwworms can enter wounds as well as body orifices, and feed on living tissue in that area. If untreated, screwworm infestations can be fatal. Screwworm has been eradicated in the United States (U.S.), but re-introductions do occur, most commonly in imported dogs and horses. In 2016, New World screwworm infestations were detected in wild deer and pets in the Florida Keys—[successful eradication was announced in March 2017](#).

Geographic Distribution: New World screwworm, *Cochliomyia hominivorax*, is found in the Western Hemisphere, primarily in tropical areas of South America and some Caribbean Islands. Old World screwworm, *Chrysomya bezziana*, is found in warmer areas in the Eastern Hemisphere (e.g. Southeast Asia, South Asia, Africa, Persian Gulf, and Middle East).

Disease Life Cycle: Screwworm infestation begins when a female fly lays eggs on a superficial wound or orifice of a warm-blooded animal. Unlike typical maggots that feed on dead flesh, screwworms feed on living tissue. One female can deposit up to 400 eggs at a time, and up to 2,800 eggs during a 10-30 day lifespan. Eggs hatch into larvae that burrow into the wound or flesh to feed. After 5-7 days of feeding, larvae drop to the ground, burrow into the soil, and pupate. The adult screwworm fly emerges and mates after 3-5 days.

Transmission: An adult screwworm fly can travel up to 125 miles before laying eggs in a wound. Screwworms can also be transported by animals and people travelling from infested areas.

Screwworm Infestation: Female screwworm flies are attracted to all warm-blooded animals. Wounds that might become infested include those caused by:

- Tick bites,
- Castration or dehorning,
- Branding,
- Shearing, and
- Sore mouth in sheep.

In addition, screwworms can infest the navels of newborn mammals, and mucous membranes of bodily orifices, including: nostrils and sinuses, eyes, mouth, ears, vulva, anus, prepuce, and urethral fossa.

It may be difficult to visualize the screwworm maggots at the wound surface, since only the breathing tubes of the maggot are exposed. As the larvae feed on live tissue, they burrow into the tissue creating a deeper and wider wound. This deep

burrowing is a distinctive feature of screwworms; other maggots are surface feeders on dead tissue.

Clinical Signs: Infested animals may present with enlarging, draining, foul-smelling wounds and weight loss; they may isolate themselves and show signs of discomfort. Animals may die from secondary infection or toxicity in 7-14 days if not treated.

Reporting: Animal owners should report any unusual looking wounds or maggots on livestock or pets, particularly those imported from countries where screwworm flies are found or with recent history of international travel, to their local veterinarian. The veterinarian will examine, collect, and send samples of suspicious larvae to the laboratory for identification. If screwworm is suspected in a person, they should contact their physician immediately.



Samples of eggs, larvae, or flies should be placed in 70% alcohol for transportation to the diagnostic laboratory.

Control: If screwworm is diagnosed, animal health officials will quarantine the animal until daily wound care and treatments with larvicides and insecticides have successfully eliminated the screwworm larvae. The USDA and CDFA investigate cases, and determine if additional control measures, such as insecticidal treatment of the environment or sterile fly release, are warranted.

Screwworm is a foreign animal disease and must be reported to CDFA or USDA animal health officials within 24 hours of diagnosis.

Animal Health and Food Safety Services Animal Health Branch

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[CFSPH - Screwworm Myiasis](#)
[USDA APHIS - New World Screwworm Factsheet](#)

For more information, please visit:
www.cdfa.ca.gov/ah

