

Screwworm in Key Deer: Questions & Answers



1. What is a screwworm?

New World screwworms (*Cochliomyia hominivorax*) are fly larvae (maggots) that can infest livestock and other warm-blooded animals, including people. They most often enter an animal through an open wound or, in the case of newborns, the navel. They feed on the animal's living flesh and, if not treated, infestations can be fatal. Visit www.FreshFromFlorida.com/Screwworm for more screwworm information.

2. Where did the screwworms come from?

While New World screwworm has not been widely present in the United States since the 1960s, it is still found in most of South America and in five Caribbean countries. It is currently unknown how screwworm made its way to the lower Florida Keys.

3. Where have screwworms been found in the Florida Keys?

As of October 14, 2016, animals infested with screwworms have only been confirmed on Big Pine and No Name Keys. Additional islands are being monitored for the presence of screwworms.

4. What attracts the screwworm?

The female screwworm fly is attracted to open wounds on warm-blooded animals. She lays her eggs on the wound and when the eggs hatch (in as little as 12 hours) the larvae (maggots aka "screwworms" due to their appearance) start eating living tissue. More and more female screwworm flies are attracted to this site by the smell and the infestation of the wound site can magnify quickly.



Key Deer infested with screwworm

5. When did screwworms begin infesting the Key Deer?

In mid-August there was an increase in the number of sick Key Deer being reported to the Key Deer Hotline. Responders began noting large, maggot-infested wounds on sick or injured deer to which they were responding. Maggots were submitted to experts at the University of Florida for identification, and on September 30, the maggots were confirmed as New World screwworm. After analyzing mortality information, we identified four cases from July that could have been early signs of this issue, based on descriptions of the deer.

6. What can the public do if they see a Key Deer showing symptoms of screwworm infection?

The local public should call the "Key Deer Hotline" at the Florida Fish and Wildlife Commission (FWC) dispatch center by dialing **1-305-470-6863** then pressing the number "7" when prompted. The same dispatch center can be reached by dialing (888) 404-FWCC (4922) toll-free.

7. What happens after I call the Key Deer Hotline?

Once a call is received, the Hotline operator (a professional FWC dispatch officer) immediately contacts Refuge law enforcement or biological program staff, who are on-call 24 hours a day to respond to deer calls. FWC dispatch forwards information on the location, any known status of a key deer, as well as contact information for the caller to the responder. Refuge staff respond as quickly as possible. FWC, USDA and Monroe County Law Enforcement Officers are also assisting in the response effort. Responders will attempt to locate the reported deer, given the information provided through the dispatch. The responder may contact the caller if a deer cannot be located, or if further information is needed. Once a deer has been located, a health assessment is conducted to determine the extent of injuries and screwworm infestation that may be present. If the injury or infestation is deemed to be treatable, the responder will attempt to treat on-site and release the animal. If the injury or screwworm infestation has progressed beyond treatment and it is determined the animal will likely perish on its own or appears to be in severe pain or distress, the animal is humanely euthanized to prevent further suffering. Information collected on the injury or infestation is evaluated by Refuge biologists and others to continually monitor the health of the herd.



Refuge staff evaluating a key deer

8. Can screwworms in the wild be controlled?

Yes. Screwworms have previously been successfully eradicated in the United States (including Florida), and some South American and Caribbean nations by use of the sterile insect technique. This technique entails releasing sterile male screwworm flies in affected areas. These male flies are NOT genetically modified, they are irradiated to render them infertile. Since the female screwworm fly only mates once before death, if she mates with a sterile male, she will lay eggs but none of her eggs will hatch.

9. What should I do if I think I or my pet has screwworm?

If you see fly eggs or maggots in and around a wound on your skin, consult your physician immediately. If you see fly eggs or maggots in and around a wound on your pet's skin, consult your veterinarian immediately. This disease is completely treatable if diagnosed early. You may also contact **1-800-HELP-FLA** (1-800-435-7352) if you have questions regarding infestation of **domestic animals**. Do not transport a pet suspected of being infested with screw worm outside the lower Keys; this will prevent possible further spread of the fly.



10. Will the Refuge have to be closed to the public because of screwworm?

Closing the refuge will not be necessary at this time due to the low risk to humans and well-cared for pets.

11. Have other native federally listed mammals that live on the Refuge (such as the Key Largo woodrat, Lower Keys marsh rabbit and silver rice rat) been affected by screwworm?

To date, no other wildlife species besides Key deer have been reported or detected with screw worm infestations, however any warm-blooded animal with a wound in which the flies might enter and lay eggs could become infested. If you see a wild animal with maggot-infested wounds, please call the Key Deer Hotline.

Screwworm fly and maggots

12. Why are most of the infested Key Deer male?

All ages and sexes of key deer may become infested with screwworm if they have an exposed flesh wound. Because the male deer are currently in rut (mating season) and fighting with one another, they are at higher risk of screwworm infestation as they tend to get head and shoulder wounds from antler clashes. Cases in males will most likely diminish when the mating season has finished. However, we may see the number of affected Key deer increase again when the fawning season begins as screwworms will readily infest the navels of newborns and are attracted to the secretions associated with the birthing process.

13. Could this outbreak wipe out the Key Deer?

The screwworm infestation could have severe impacts on the Key deer population. Key deer are found on 22 different islands, and we are cautiously optimistic that although populations on Big Pine and No Name have been impacted, the eradication of the screwworm through sterile fly release will prevent an endangered species emergency.

14. Why aren't the sick deer being rehabilitated?

Unfortunately, rehabilitation is not an option in most Key Deer infestation cases due to the severity of the maggot infestation; these animals must be put down for welfare reasons. In those few cases of screw worm infestation that are not severe yet, darting or capturing the deer in order to place them in captivity and begin a course of treatment would be extremely stressful for the animals, and may result in mortality of those individual deer.

We are evaluating the use of treatment methods such as avermectins with assistance from wildlife veterinarians and endangered species wildlife biologists to ensure that all options for prevention and treatment are considered, while minimizing potential impacts to the many other wildlife species and the environment at the Refuge. Although a human emotional dilemma, the public should not attempt treatment of Key deer irrespective of personal motive or background. It is against federal law for a member of the public to administer drugs or insecticides to an endangered species. Also, there are federal regulatory requirements associated with wild animals, federal lands, and endangered species that limit how much intervention is permitted. Service efforts are currently focused on supporting the lead response agencies in implementing a fly eradication program to thwart the continued impact on Key deer.

15. What can you do to help?

There are a number of things you can do to help. Help us spread the word about this infestation. **Report any suspected infected Key deer to the Key Deer Hotline (305-470-6863, ext 7).** **Please drive carefully**, Key deer are in the middle of the rut (mating season), and driven by hormones and instinct, they are interacting by fighting, mating and generally running around without much concern for traffic. **Please do not feed Key deer.** Attracting large numbers to feeding stations can lead to fights between deer, causing wounds that are susceptible to screwworm. Deer congregating in groups may also promote the spread of this infestation and other diseases. **It is unlawful to feed Key deer.**