New World Screwworm Myiasis



Ventral view of a New World screwworm larva, highlighting the mandibles on the anterior end of the body.



The New World screwworm flies have orange eyes, a metallic blue or green body, and three darker-shaded stripes along their backs. *Image courtesy of Denise Bonilla, U.S. Department of Agriculture.*



New World screwworm infestation in Key deer during the 2016 outbreak in the Florida Keys. *Image courtesy of Samantha Gibbs, U. S. Fish and Wildlife Service.*

CAUSE FOR CONCERN

<u>New World screwworm (NWS) myiasis (larva infestation)</u> is typically a disease of livestock but can also affect other animals and humans. Despite being <u>eradicated</u> from the United States and Central America since 2006, several countries in Central America are reporting animal and human cases of NWS.

NWS poses a dangerous and significant agricultural, economic, and public health threat to livestock, wildlife, pets, and in rare cases, people. Another incursion into the United States could cost millions of dollars from livestock losses, trade embargoes, and eradication work. New World Screwworm (usda.gov)

SIGNS & SYMPTOMS

The screwworm flies are attracted to and lay their eggs on and in open wounds and mucous membranes. Wounds as small as a tick bite may attract female flies to feed.

How to detect an NSW infestation

- Screwworm infestations are very painful.
- Larvae may be visible in open wounds, surgical sites, or mucus membranes in people who are experiencing an NWS infestation.
- Egg masses may be around or in the wound; larvae may be visible by the third day of infestation.
- Because they feed on live flesh, NWS larvae may burrow deep into wounds or openings. This is different from other species of maggots that may appear around the outer surface of the wound.
- Secondary infection may occur in an NWS-infested wound.

REMOVE & REPORT

- Conduct a thorough exam. Keep in mind lesions and larvae may be inside the mouth, nose, and ears.
- Physically remove all larvae from infested tissue.
- Place all larvae into a leak-proof container of 70% ethanol or other alcohol, enough to fully submerge the larva.
 This will kill and preserve the larvae for either specimen submission, image capture, or disposal.
- Provide appropriate wound care to affected areas, including covering wounds.
- There are no FDA-approved treatments for NWS infestation.
- Contact dpdx@cdc.gov to submit images of larvae for telediagnosis.
- Providers should consult with the Ministry of Health or local health authority for guidance on reporting suspected human cases of New World screwworm. Ministries of Health can also provide guidance for proper larvae preservation for confirmatory diagnosis and/or disposal.

