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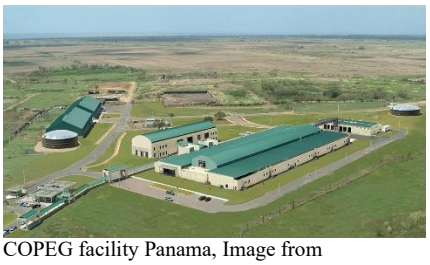
NEW WORLD SCREWWORM THREAT

WHAT IS THE NEW WORLD SCREWWORM?

The New World screwworm (*Cochliomyia hominivorax*) is a flesh-eating fly larva (maggot) that infests open wounds in warm-blooded animals, feeding on live tissue and enlarging the wound. If left untreated, infestations (myiasis) can be fatal to animals. Adult screwworm flies are about the size of a common housefly or slightly larger. They have orange eyes, a metallic blue or green body, and three dark stripes along their upper back.

Photo: APHIS-USDA

The fly that produces these maggots was eradicated from the United States in the 1960s through the successful release of sterile male flies. Female flies only mate once in their lifetime, so a mating with a sterile male will result in no offspring. The eradication campaign was able to eliminate the fly not only from the United States, but also from Central America through the isthmus of Panama. A United States Department of Agriculture facility in Panama, called COPEG (Panama-United States Commission for the Eradication and Prevention of Screwworm) produces and releases approximately 100 million sterilized screwworm flies every week. For the last 60 years, this process has kept the pest largely contained in the South American continent. Flies or infested animals are occasionally found north of the eradication barrier at the southern end of Panama, but these incursions are usually quickly eradicated through targeted release of sterile male flies. There was a brief re-introduction in the Florida Keys in 2016, and while the infestation was eliminated within a few months, it led to the killing or euthanasia of 14% of the population of endangered Florida Key deer underlining the devastation that this pest is capable of triggering. The eradication of New World screwworm from the United States has been an exceptionally successful federal program resulting in an estimated $2.8 billion in annual economic benefits to the USA. While the effect of screwworm on wildlife is not well studied, the navel cord of newborn animals is a common site for screwworm maggot infestation with mortality of deer fawns reported to be high in areas where screwworm are present.



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COPEG facility Panama, Image from https://entomologytoday.org/copeg

WHAT HAS CHANGED?

Unfortunately, starting in 2023 the screwworm fly escaped the Panama quarantine zone penetrating northward into Central America and subsequently reaching southern Mexio (states of Oaxaca and Veracruz) by November of 2024. Flies usually disperse only a few kilometers to find a host but may travel 10-25 km or even further in some conditions, including by human transport of infested animals. In response to the threat posed by accidental import of animals infested with screwworm, U.S. Secretary of Agriculture, Brooke L. Rollins, suspended imports of cattle and other live animals from Mexico. In addition, a fruit fly production facility in Mexico will be refurbished to produce additional sterile New World Screwworm flies and a bill has been introduced in Congress to build a new sterile fly facility replacing the original screwworm production facility in Texas that was instrumental in the early US screwworm eradication program during the 1960s; however, if approved, the new facility may not be operational for several years. The National Cattlemen's Beef Association (NCBA) is strongly in favor of such a facility and is working to secure additional funding to combat the pest.

WHAT TO LOOK FOR

We do not yet have reports of reintroduction of screwworm into the United States, but it is extremely important to report any suspicious cases immediately. All warm-blooded animals including humans are susceptible, but cattle are a common target. Larvae are often deposited in the navel of newborn calves, wounds from dehorning, any other open sores, or body openings (mouth, nose, anus, vulva). Affected animals may separate from the herd, appear very irritated and display head shaking. Maggots may be seen in the wounds. Please alert your veterinarian and/or the California Department of Food and Agriculture if you suspect a case of screwworm infestation.

The sooner it can be detected, the sooner it can be eradicated. A spread through the United States livestock herds would be tremendously costly and cause a lot of animal suffering.

References

Update on USDA Efforts to Fight New World Screwworm
NCBA Pushes for Domestic Sterile Fly Facility
USDA APHIS New World Screwworm
New World Screwworm – Historical Economic Impact
New World Screwworm Outbreak in Central America and Mexico