

SCREW WORMS



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Why is it called “screwworm”?



Legless, so use ‘ridges’ to crawl.

Screwworm

Egg batch





**Ear tags, navels, castrating, dehorning,
branding, fighting wounds**









Cochliomyia hominivorax larva
“screwworm”



**The difference is that they
feed on living muscle tissue**

**Screwworms are same size
as other maggots**



Symptoms of Screwworm Infestation

Irritated and Depressed Behavior

Loss of Appetite

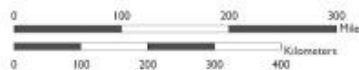
Head Shaking

Smell of Decaying Flesh

Maggots in Wounds



Scale: 1:10,000,000



Data Source:
COPEG

Date Created:
3/7/2025

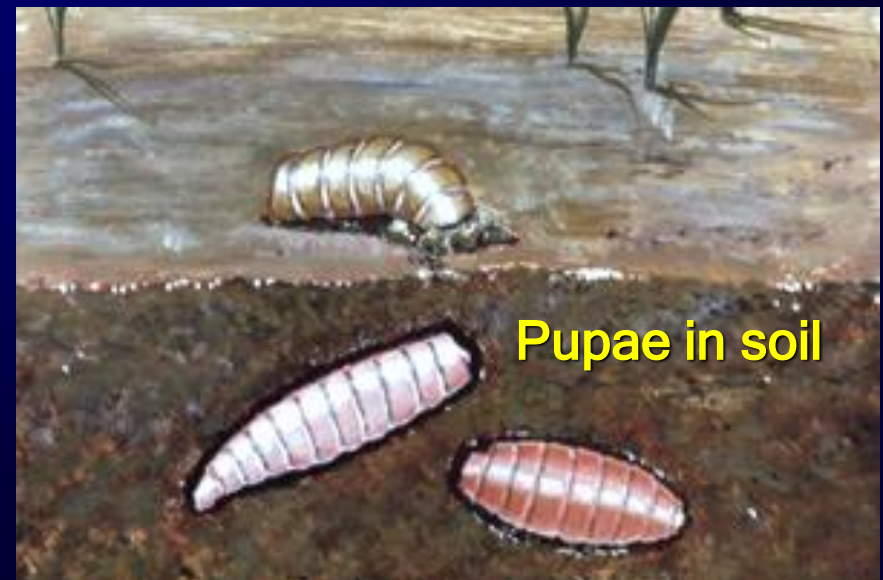
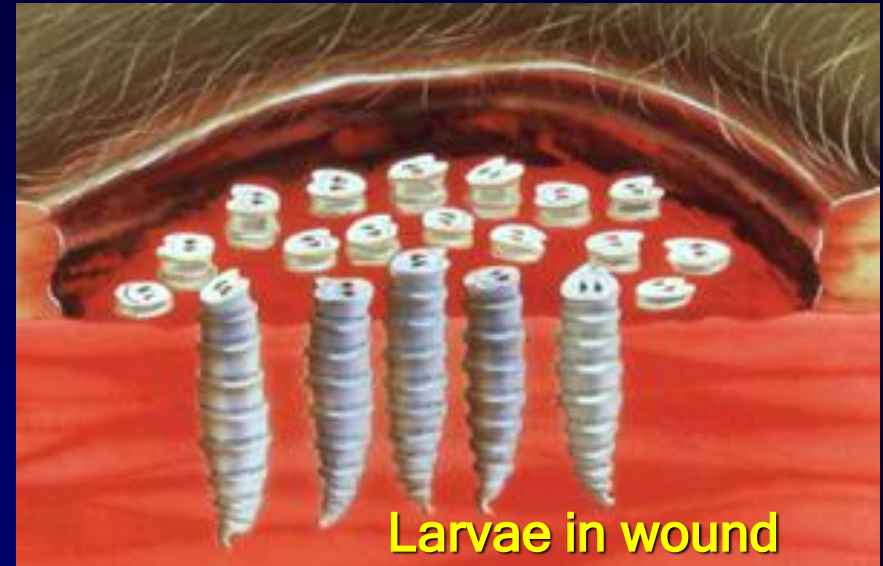
USDA, APHIS, EMB
4700 River Rd.
Riverdale, MD 20737

Detection data updates weekly.

Coordinate System: GCS WGS 1984

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New World screwworm life cycle



New World screwworm damage to livestock



Cattle



Cattle



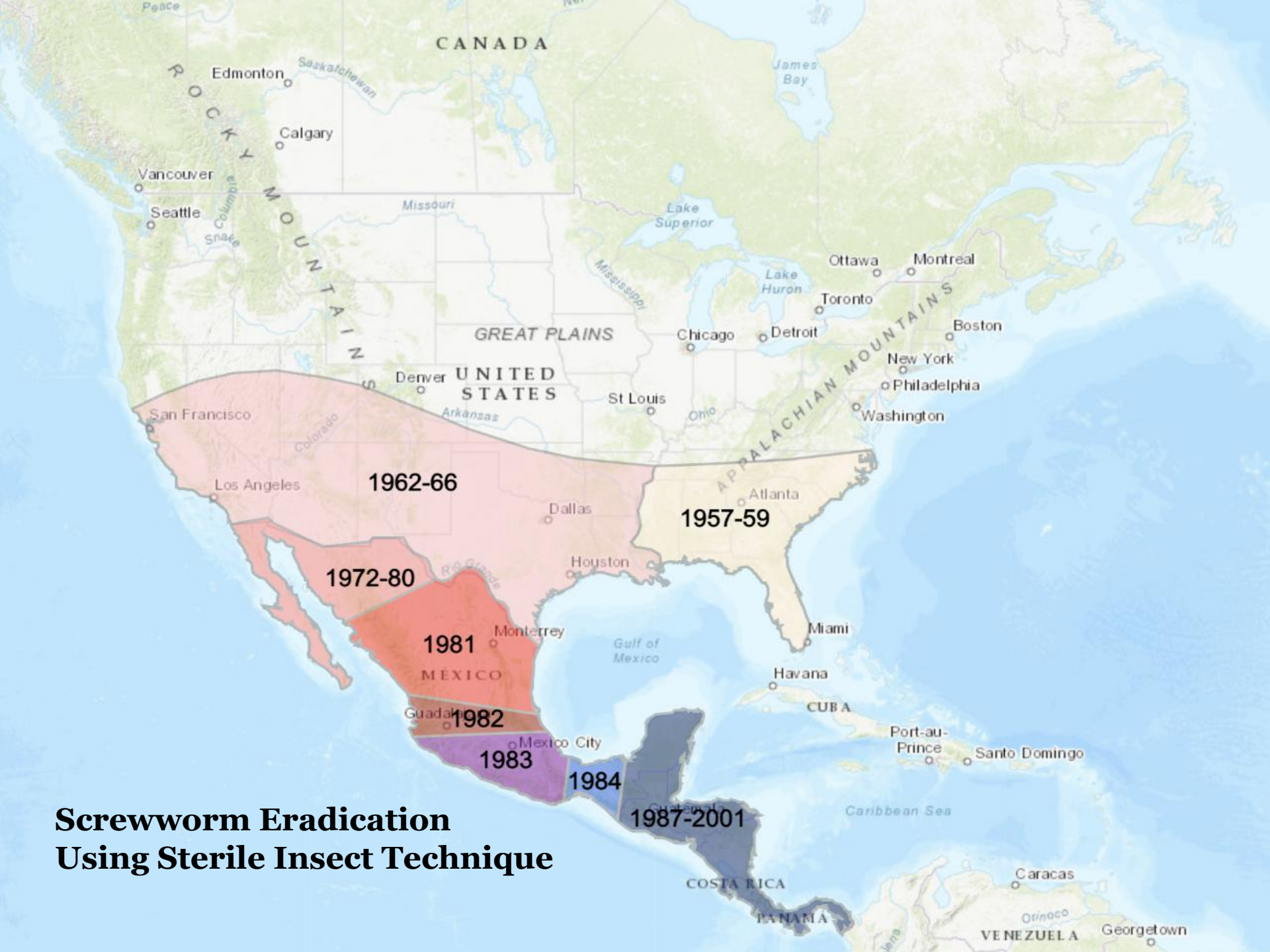
Swine



Sheep



Without human intervention, animals will not survive screwworm infestation



Screwworm Eradication Using Sterile Insect Technique





Screwworm larvae raised in USDA facility

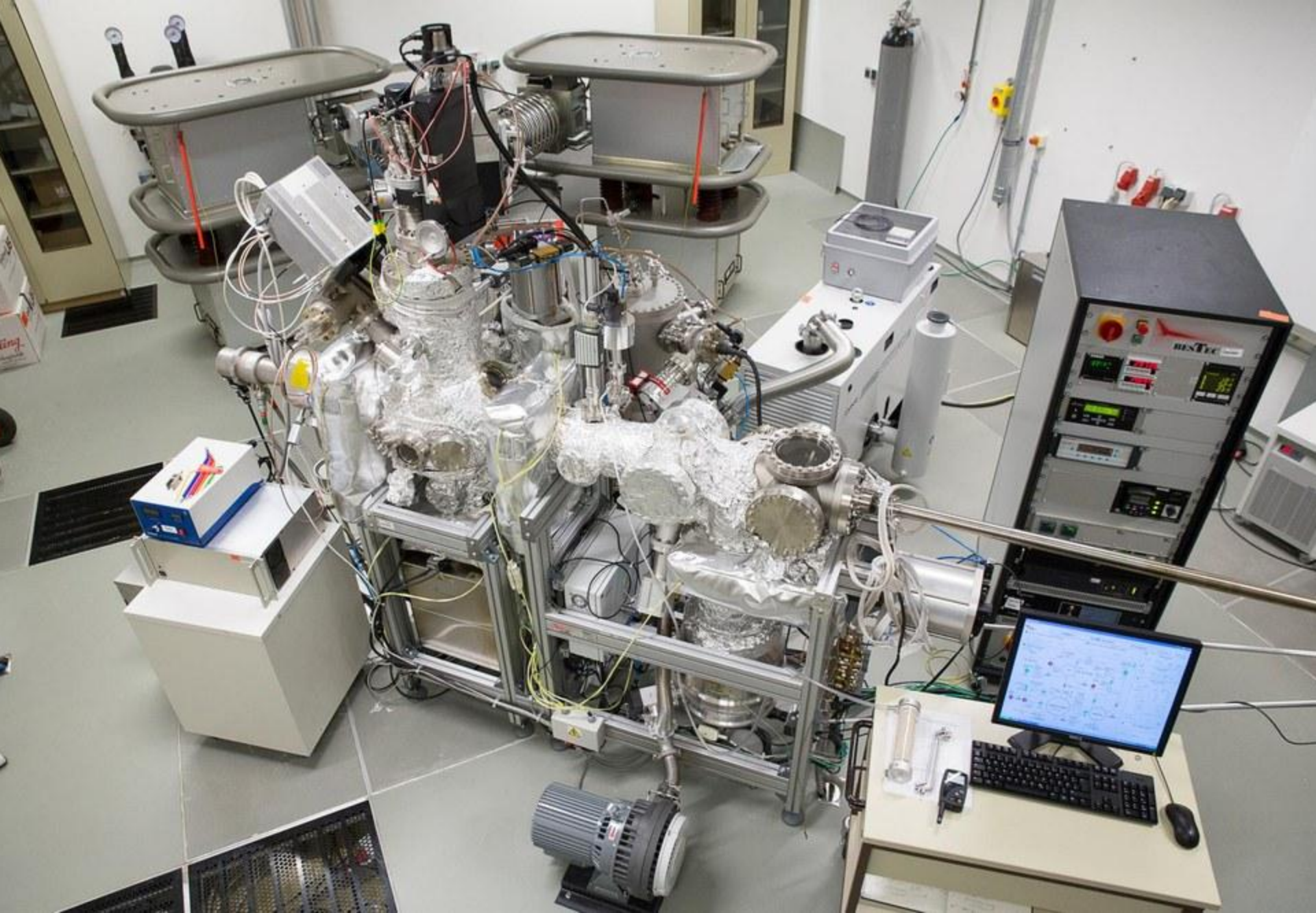




SCREWWORM ERADICATION USING THE STERILE INSECT TECHNIQUE

- Male flies from colony are **sterilized** using radiation (rendering their sperm inactive)
- Millions of sterile male flies are released by air over screwworm-infested areas
- Wild female screwworms mate with sterile males, becoming refractory to further mating

“Sterilization” refers to reproductive sterility, not to the elimination of microorganisms!



Irradiation facility



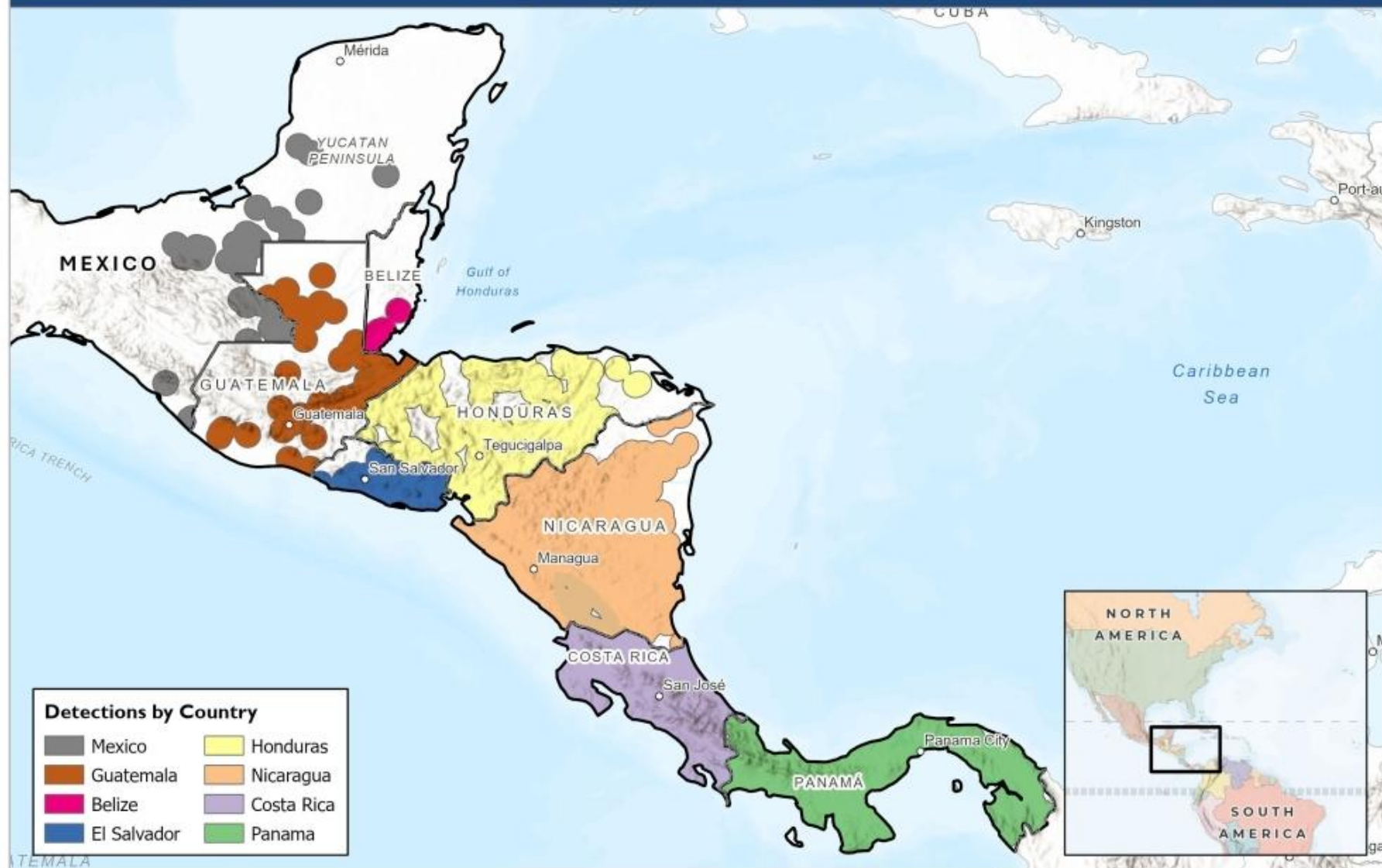
Screwworm Puparia

Aerial Drops of Sterilized Screwworm Adults

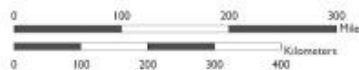




Plane Releasing Screwworms



Scale: 1:10,000,000



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The remarkable success of SIT (sterile insect technique) against the New World Screwworm is one of the great success stories in animal parasitology.

The eradication zone reached the Darien Gap in Panama and was maintained there for two decades.



THE WASHINGTON POST

October 4, 2016

**“Screwworm outbreak in Florida deer marks
first U.S. invasion of the parasite in 30 years”**











**Screwworm-infested
deer in
'gory condition'**



Screwworms Responsible for Deaths of 133 Endangered Key Deer











WITHDRAWAL PERIODS AND RESIDUE WARNINGS

Cattle must not be slaughtered for human consumption within 98 days of treatment. Not for use in female dairy cattle 20 months of age or older, including dry dairy cows; use in these cattle may cause drug residues in milk and/or calves born to these cows or heifers. Not for use in beef calves less than 2 months of age, dairy calves, and veal calves. A withdrawal period has not been established for this product in pre-ruminating calves. Approved only as a single topical dose in cattle. Repeated treatments may result in violative residues in edible tissues.

The cover features several detailed line drawings. In the top left, there are leaves and a small insect. In the top center, a bee is shown. In the top right, a large, spotted frog is depicted. In the bottom left, there are more leaves and a small insect. In the bottom right, a large, detailed illustration of a bird, possibly a quail or similar ground-dwelling bird, is shown. The background is a solid dark red color.

Georgia Pest Management HANDBOOK

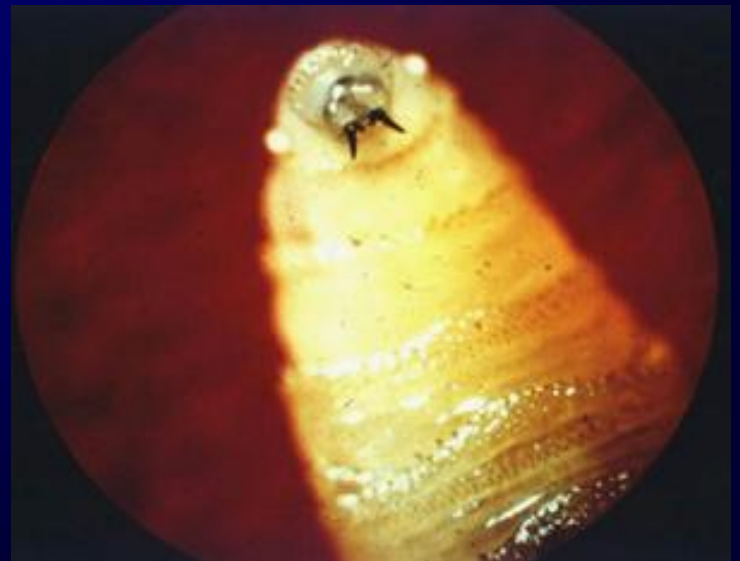
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New World screwworms
Cochliomyia hominivorax
(Diptera: Calliphoridae)

In the 1970's, it was reported that the NWS caused cattle deaths in excess of \$300 million/yr in Texas alone, and it has been estimated that the annual losses to the Texas livestock industry today without eradication would be >\$2 billion/yr.





**Screwworms
infest humans
Antibiotics are
ineffectual against
screwworms**

**CDC Confirms
Screwworm Case in
Maryland Traveler**



WESTERN
AG
NETWORK



A

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Antibiotics are ineffectual against screwworms



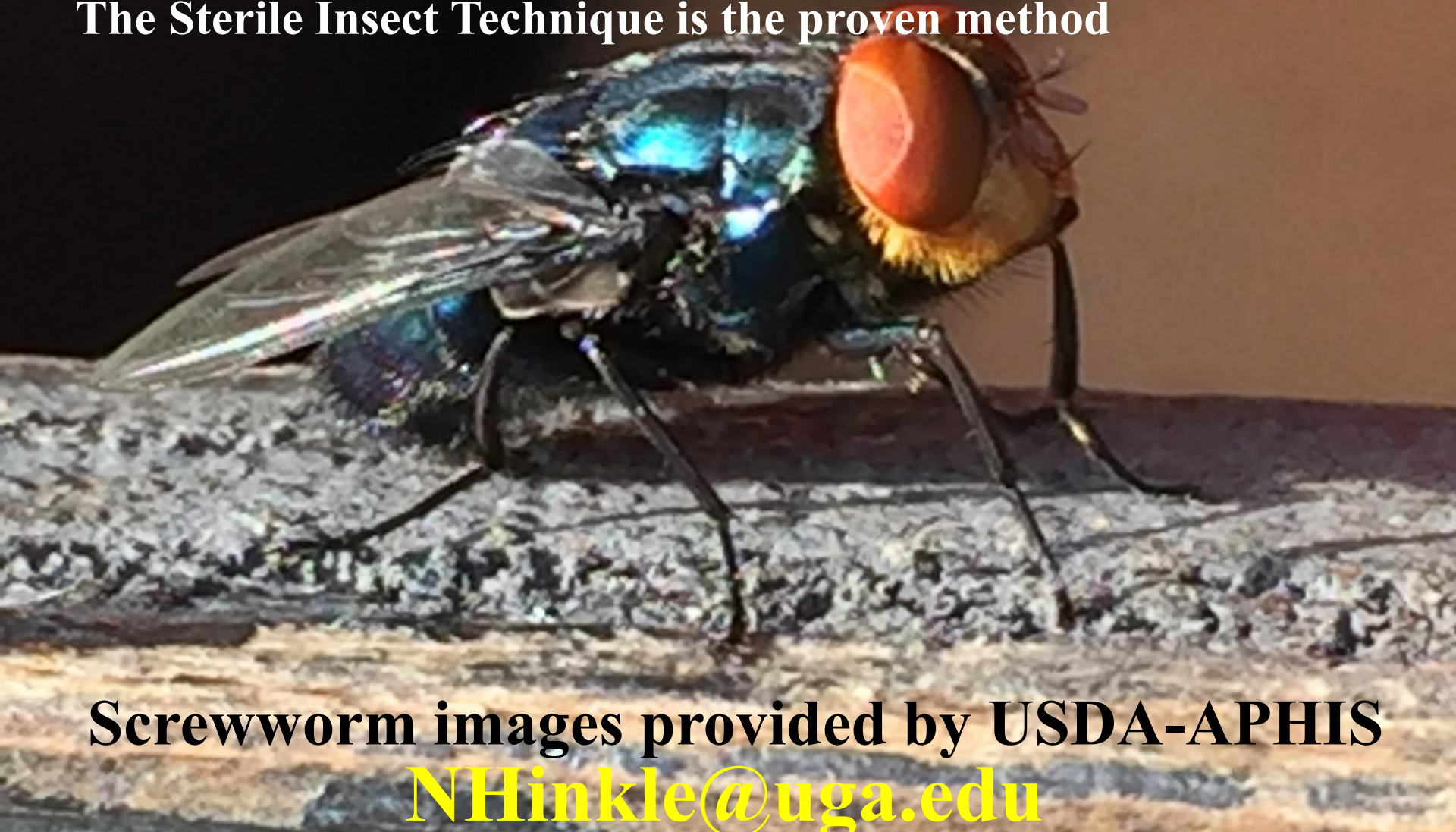
Screwworms are not in the U.S.

There is no screwworm preventative

Relationship with veterinarian will be crucial

Pesticides are not the solution to screwworms

The Sterile Insect Technique is the proven method



Screwworm images provided by USDA-APHIS
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