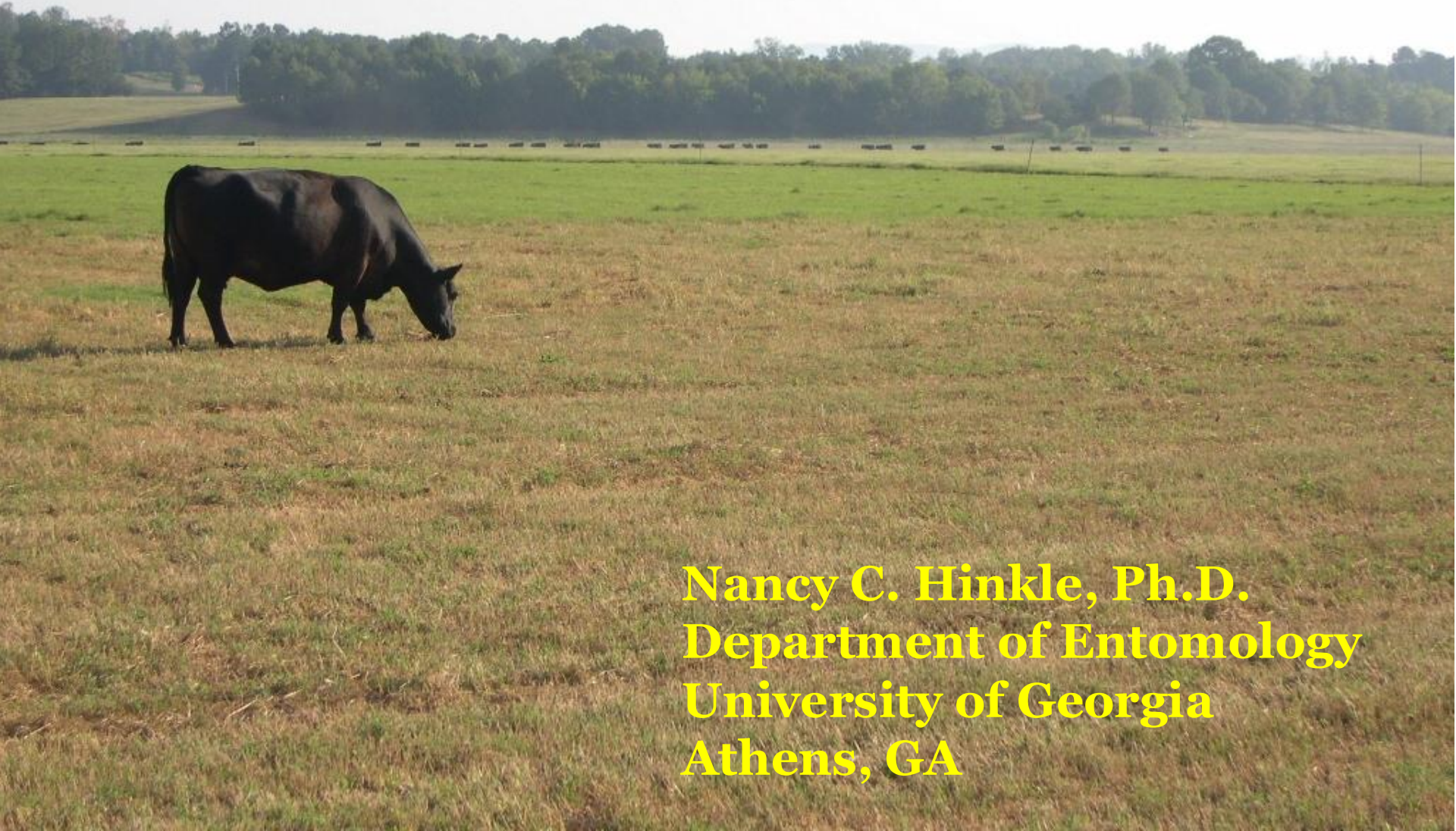


SCREWWORMS



Nancy C. Hinkle, Ph.D.
Department of Entomology
University of Georgia
Athens, GA



What is it?

Screwworm





Flies laying eggs, maggots feeding, destroying tissue and attracting more flies

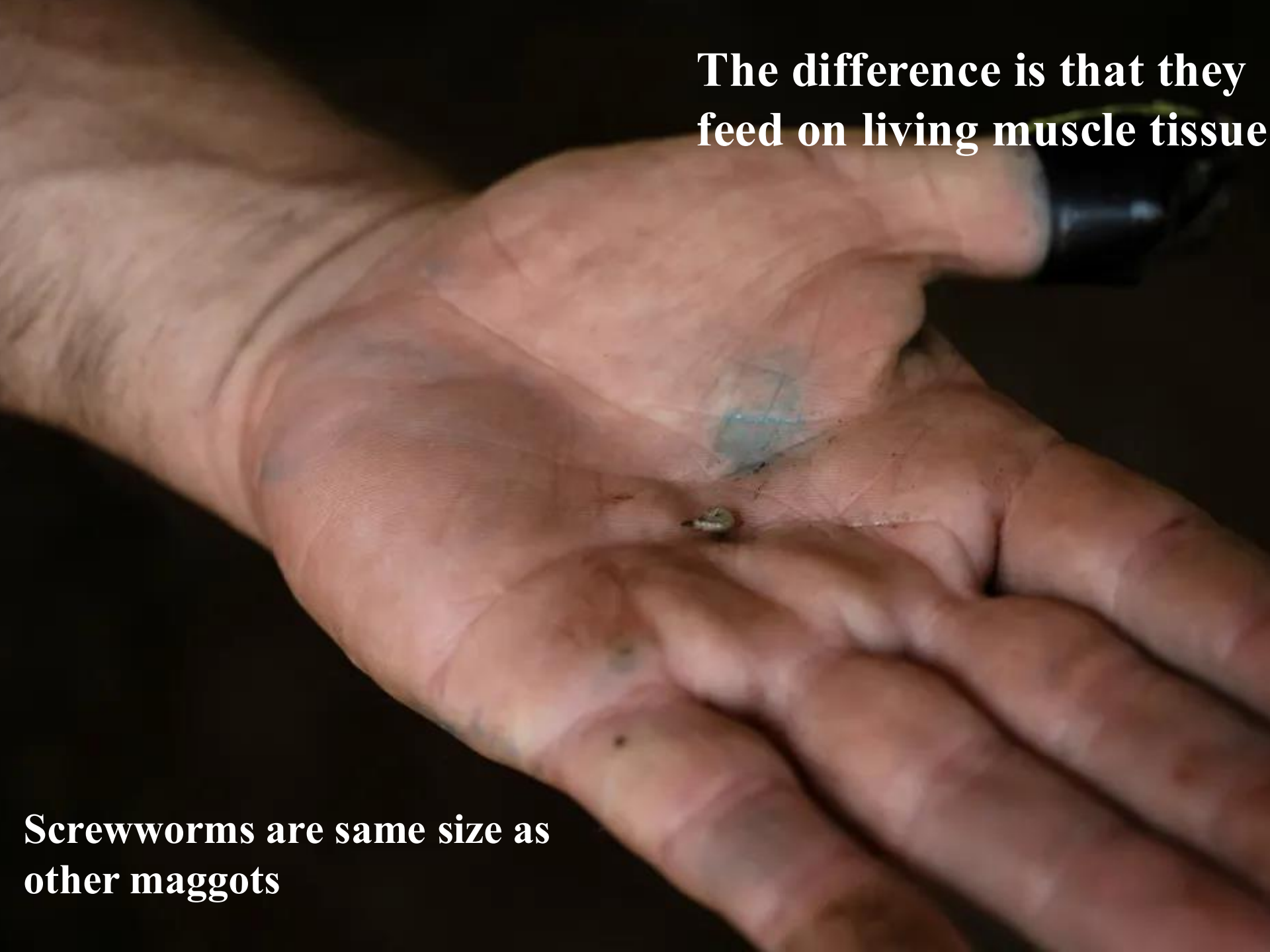


Cochliomyia hominivorax larva
“screwworm”

Why is it called “screwworm”?



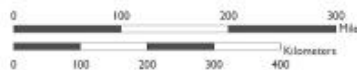
**The difference is that they
feed on living muscle tissue**



**Screwworms are same size as
other maggots**



Scale: 1:10,000,000



Data Source:
COPEG

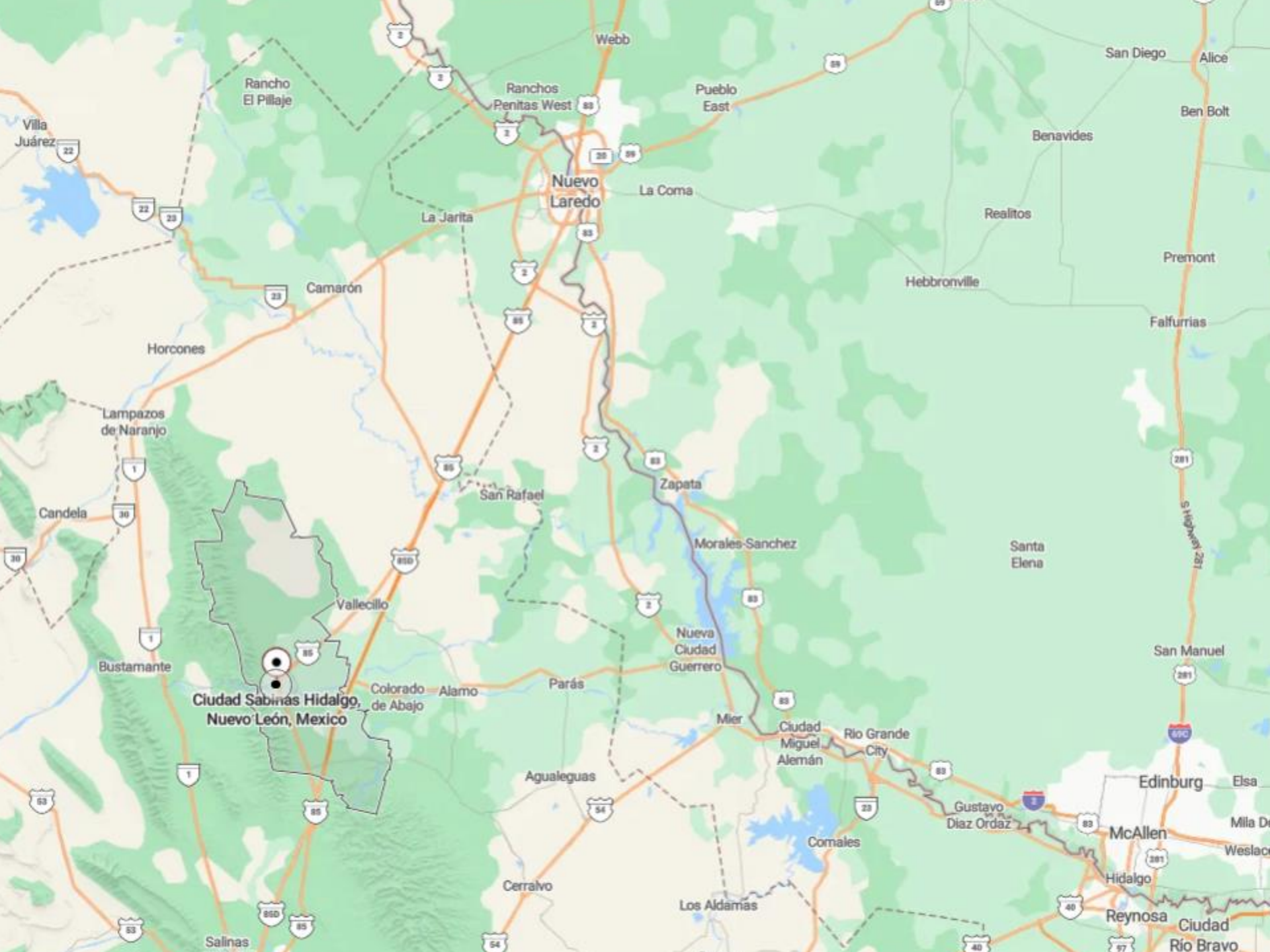
Date Created:
3/7/2025

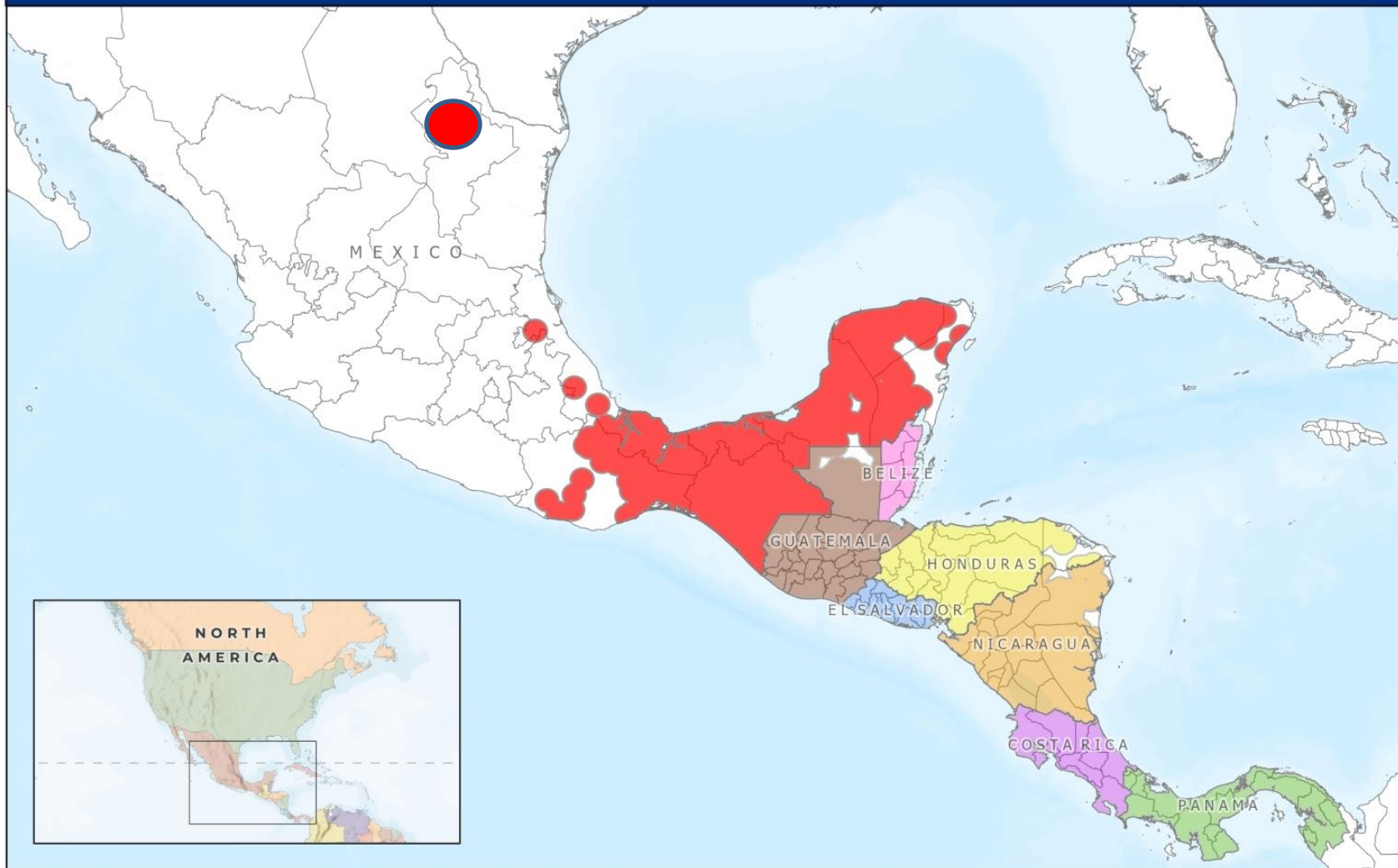
USDA, APHIS, EMB
4700 River Rd.
Riverdale, MD 20737

Detection data updates weekly.

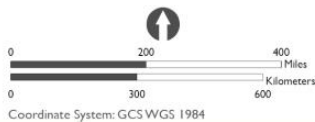
Coordinate System: GCS WGS 1984

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Detections by Country



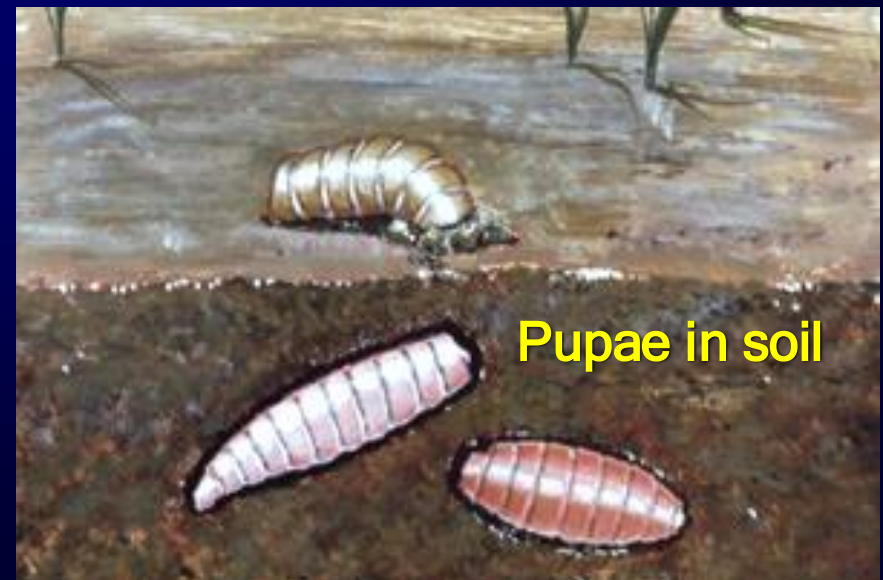
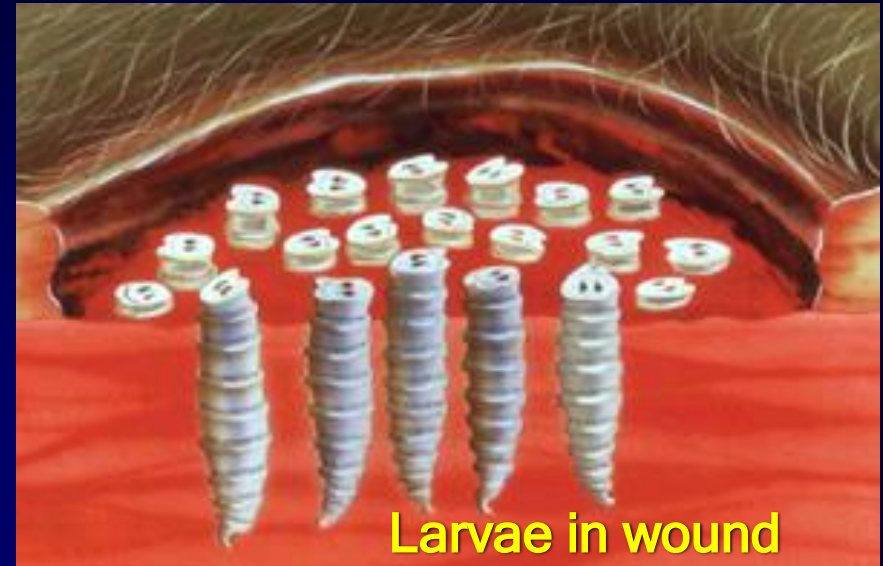
Data Source:
COPEG

Date Created:
8/28/2025

USDA APHIS
2150 Centre Ave
Fort Collins, Co 80526

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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

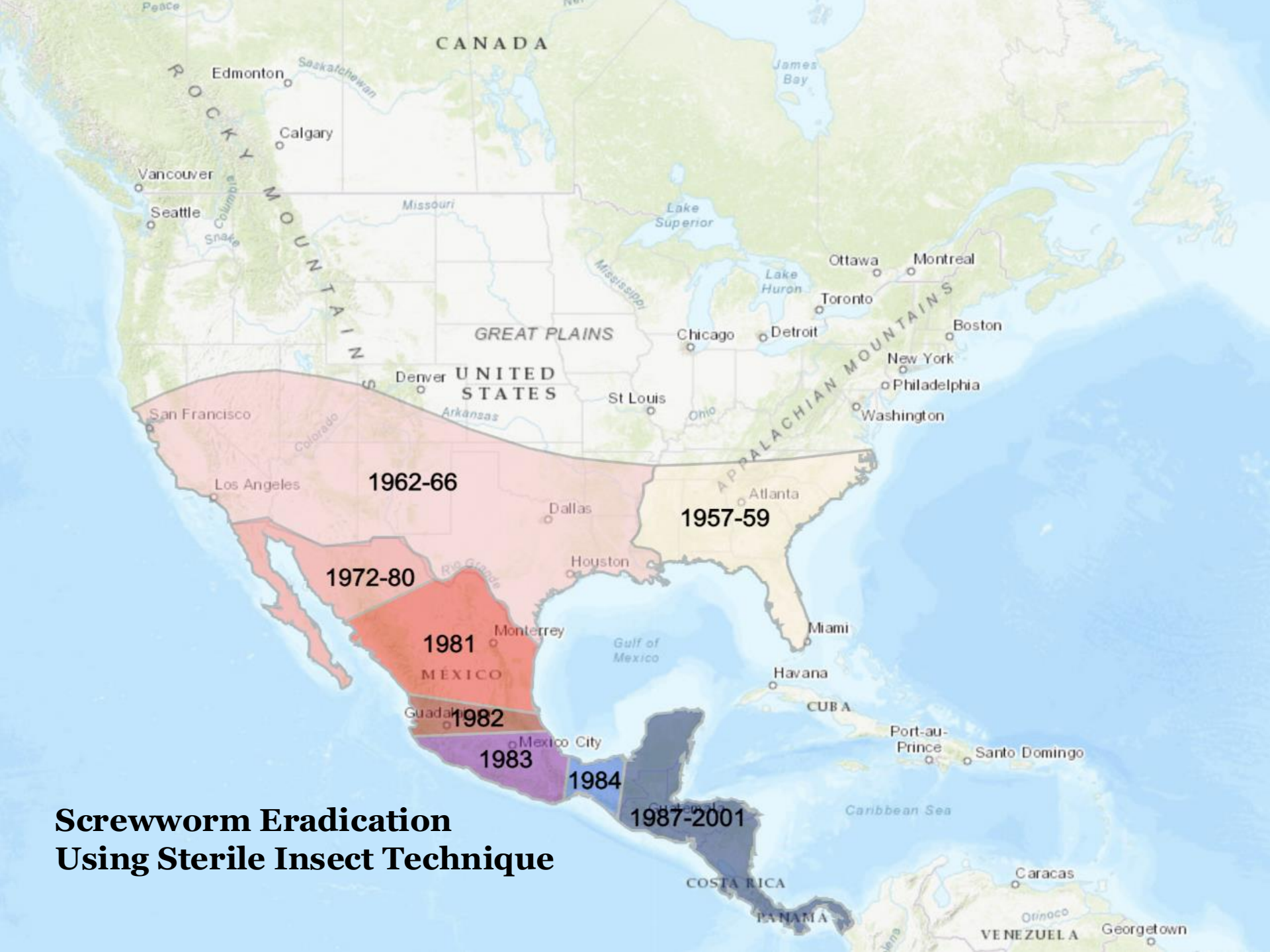
**Feral cat trapped,
euthanized for
screwworm
infestation. Maggots
in ear canal**



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!



Screwworm Eradication Using Sterile Insect Technique

NWS SIT Eradication History

Central American Eradication History







Screwworm larvae raised in USDA facility



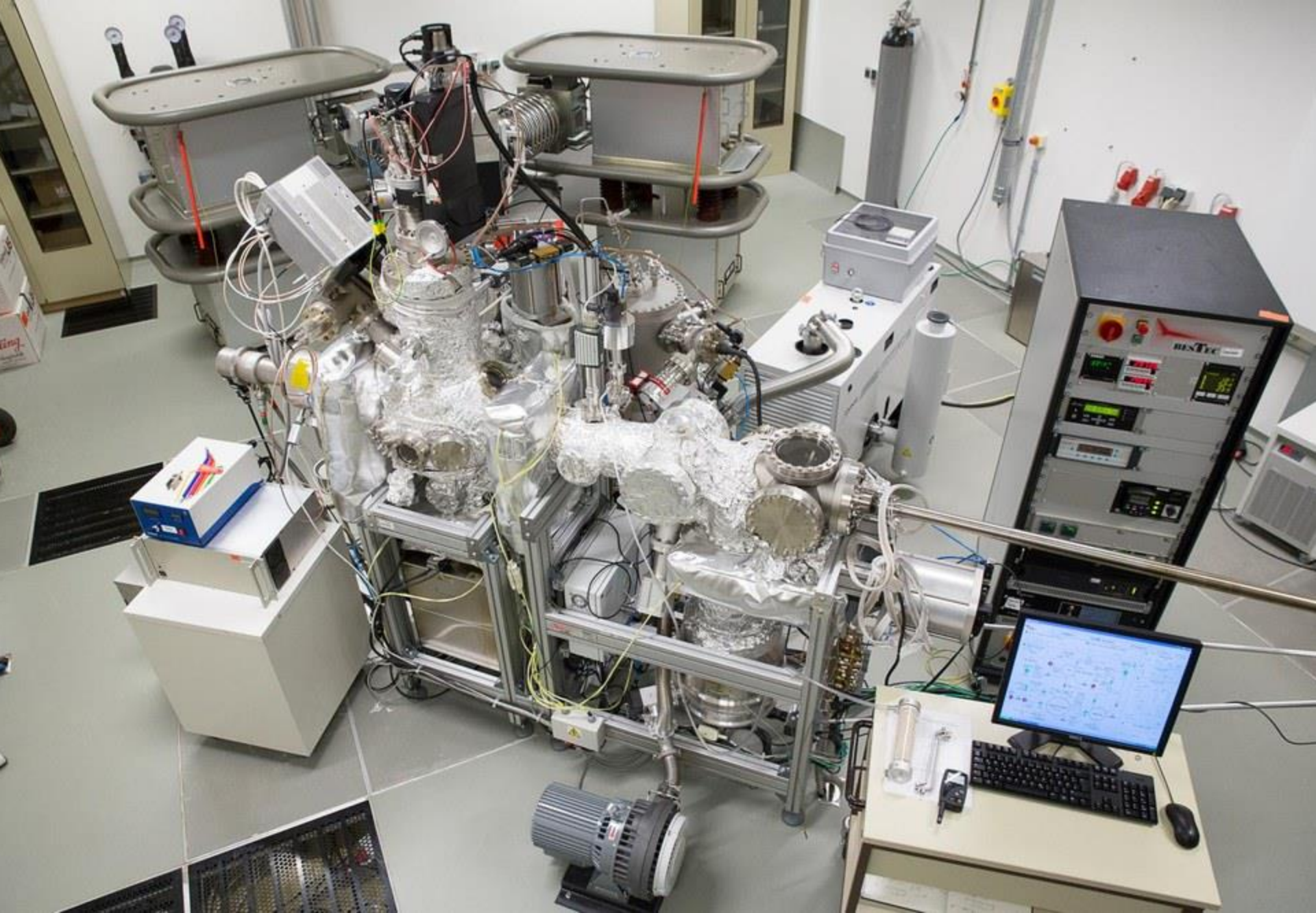




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Irradiation facility



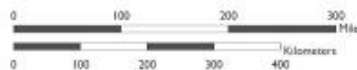
Screwworm Puparia

Aerial Drops of Sterilized Screwworm Adults





Scale: 1:10,000,000



Data Source:
COPEG

Date Created:
3/7/2025

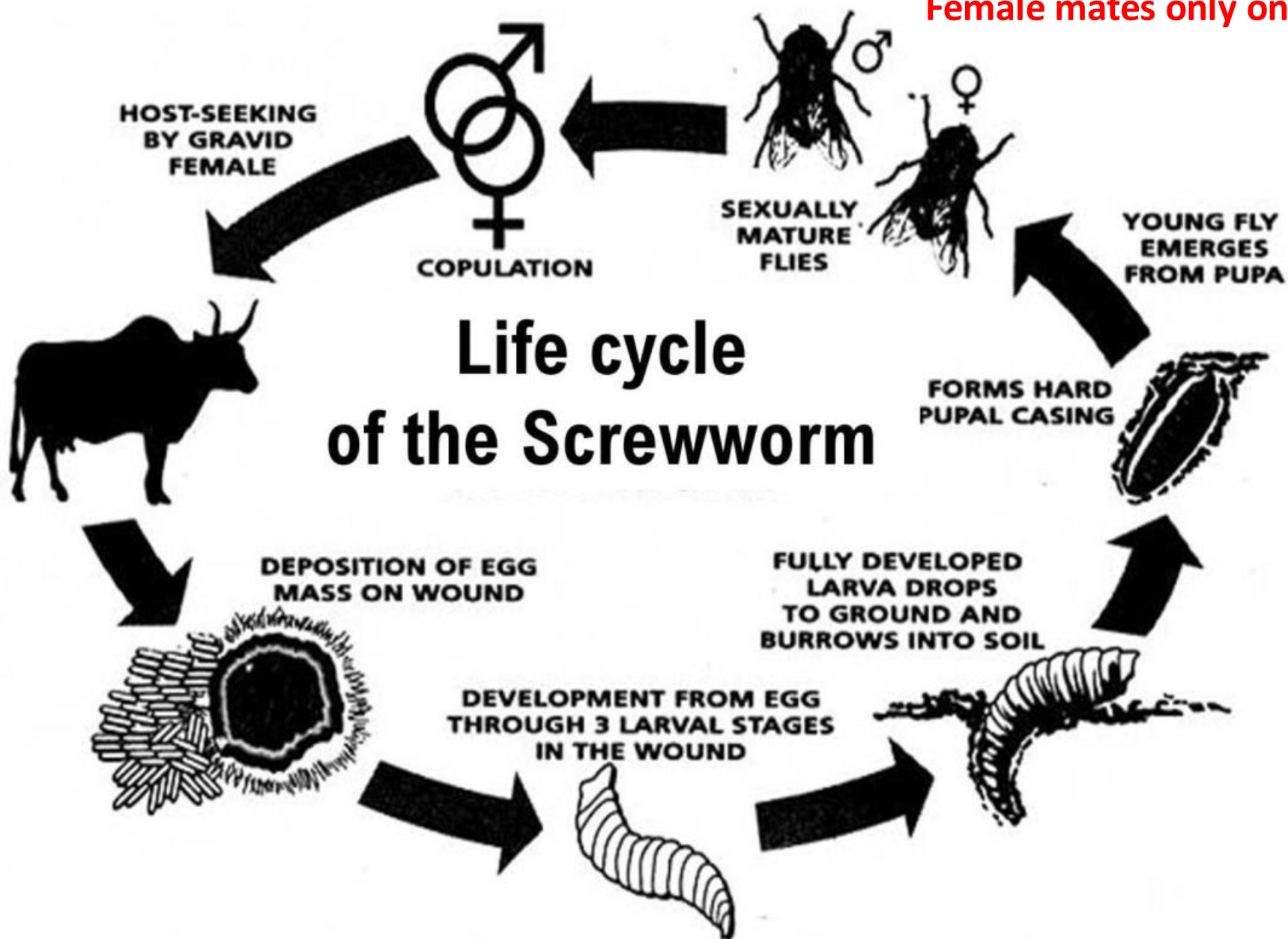
USDA, APHIS, EMB
4700 River Rd.
Riverdale, MD 20737

Detection data updates weekly.

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Female mates only once



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

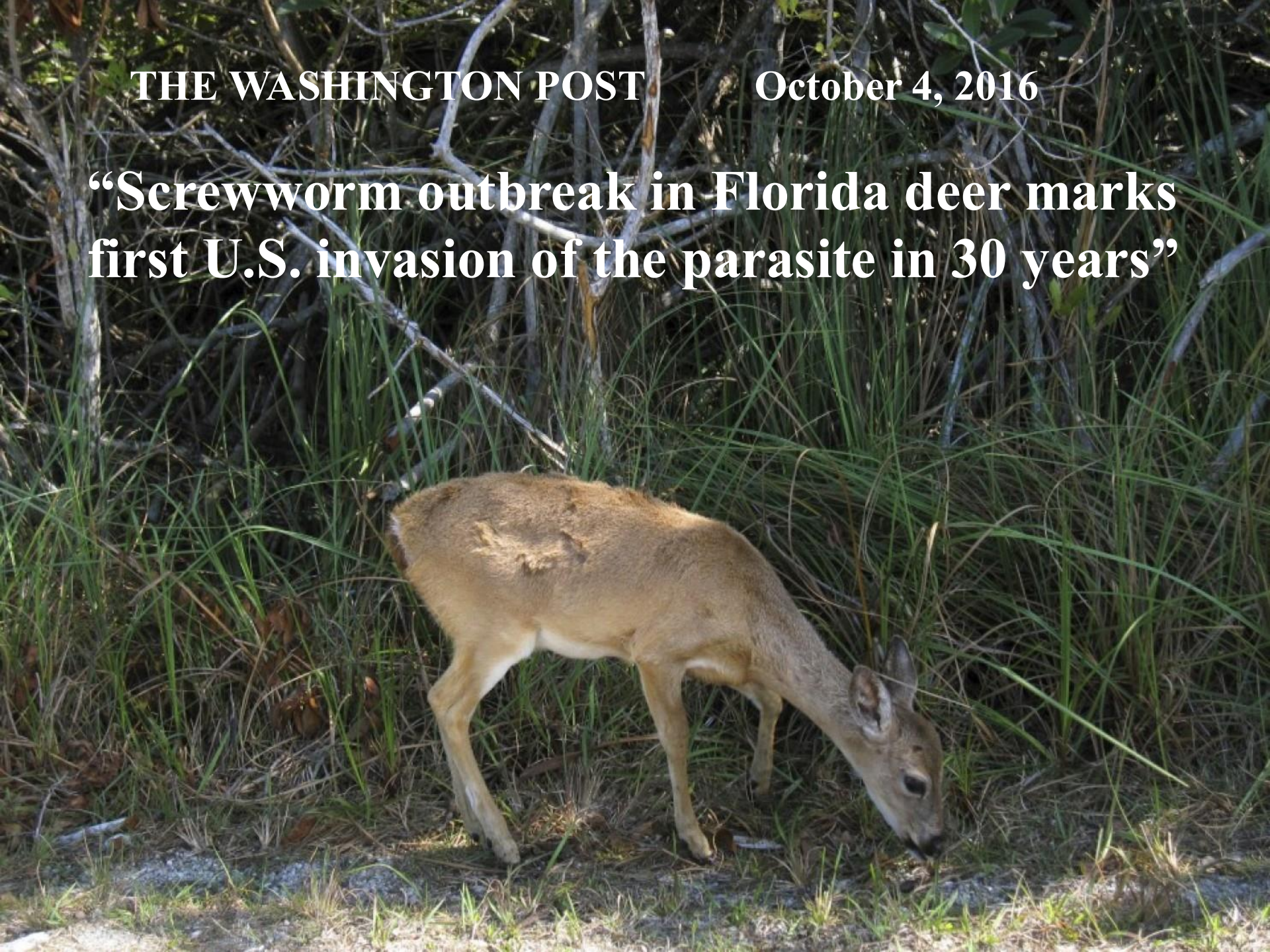
The eradication zone reached the Darien Gap in Panama and was maintained there for two decades.



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



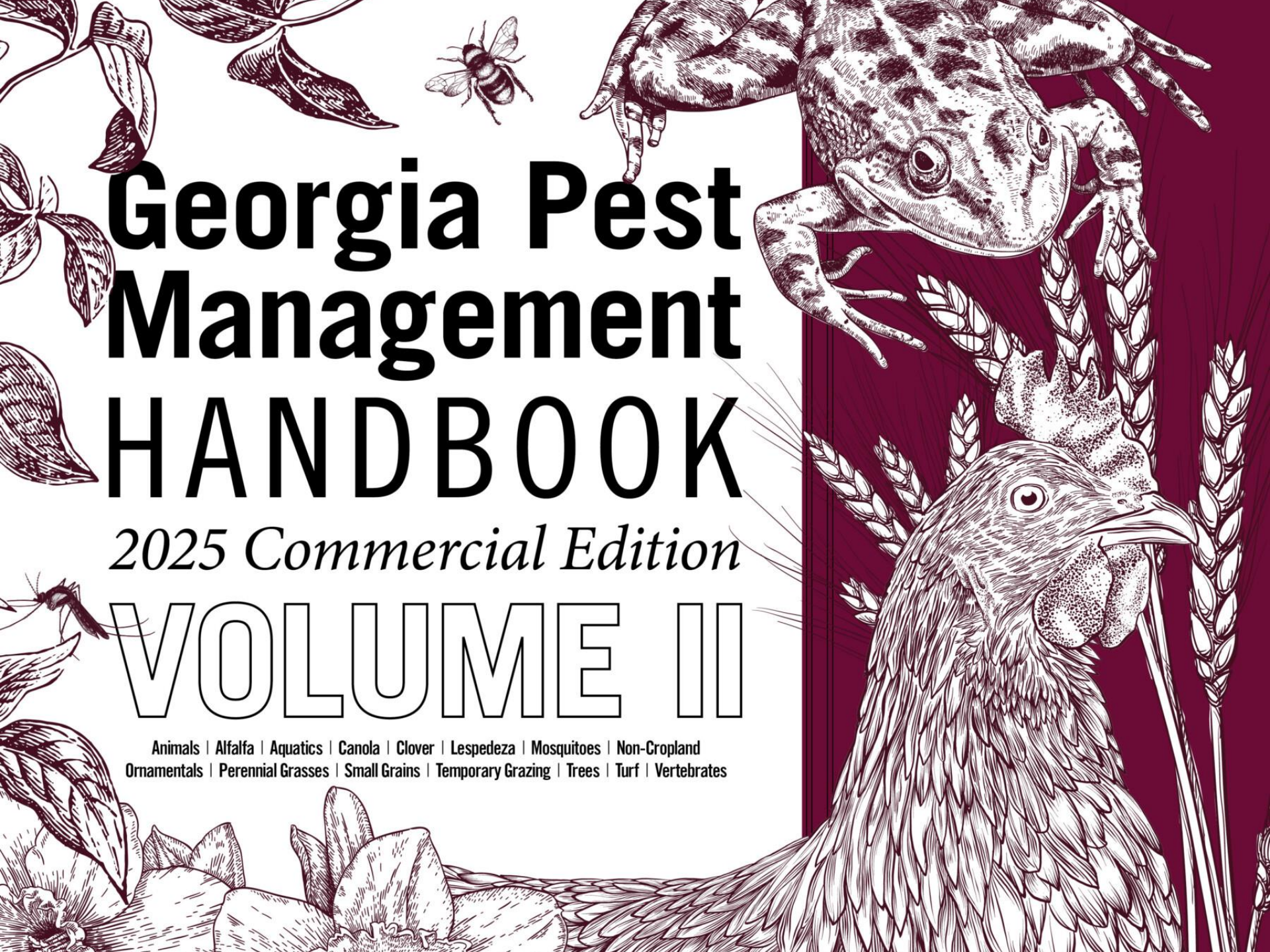






Insecticide-Application Bait Station





Georgia Pest Management HANDBOOK

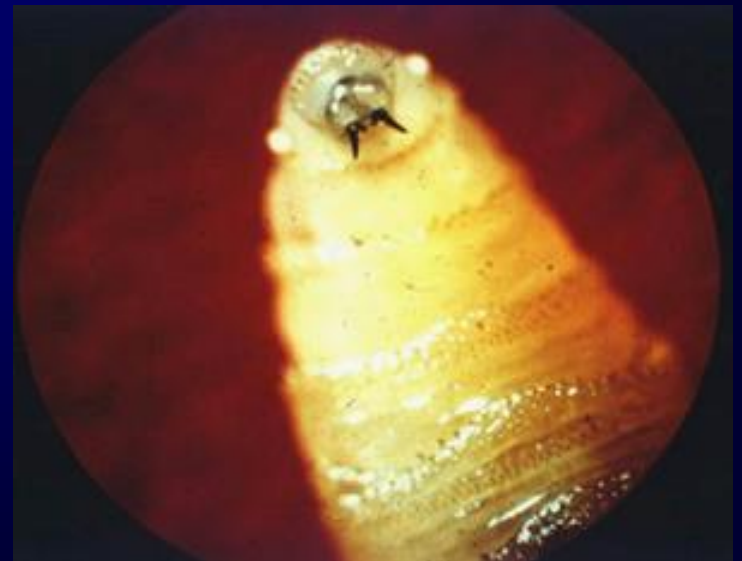
2025 Commercial Edition

VOLUME II

Animals | Alfalfa | Aquatics | Canola | Clover | Lespedeza | Mosquitoes | Non-Cropland
Ornamentals | Perennial Grasses | Small Grains | Temporary Grazing | Trees | Turf | Vertebrates

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 US livestock industry today without eradication would be >\$2 billion/yr.





Screwworms infest humans

CDC Confirms Screwworm Case in Maryland Traveler



**WESTERN
AG
NETWORK**

The logo for Western AG Network features a stylized radio tower with signal waves emanating from the top. Below the tower are silhouettes of farm animals, including a cow, a horse, and a pig, along with a small barn structure.



A

© 2008, Universidad Peruana Cayetano Heredia



Antibiotics are ineffectual against screwworms

Screwworms are not in the U.S.

Pesticides are not the solution to screwworms

The Sterile Insect Technique is the proven method

