Kansas Department of Health and Environment
Division of Public Health

New World Screwworm Myiasis in Humans: Clinical Features and Public Health Implications

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Objectives

1. Understand the current New World Screwworm situation in North America and its local relevance.
2. Identify risk factors, clinical features, diagnosis and treatment of NWS in humans.
3. Discuss NWS prevention and case reporting in humans.
4. Outline healthcare providers' role and public health response to human NWS myiasis.

What is New World Screwworm?

- *Cochliomyia hominivorax* fly
- Myiasis: infestation and feeding by larvae
- Larvae feeds on live tissue only
- Can infect any warm-blooded animal
- Eradication through release of sterile male flies; US free from NWS since 1966
- Eradication through Panama by 2006
  - History and use of sterile insect technique: https://www.aphis.usda.gov/livestock-poultry-disease/cattle/ticks/screwworm/new-world-screwworm-story-map

Source: New World Screwworm Story Map | Animal and Plant Health Inspection Service

Resurgence of NWS

August 2022: NWS outbreak reported in Panama

July 2023: NWS outbreak reported in Costa Rica

March 2024: NWS outbreak reported in Nicaragua

September 2024: NWS outbreak reported in Honduras

October 2024: NWS outbreak reported in Guatemala

November 2024: NWS outbreak reported in Mexico

December 2024: NWS outbreaks reported in El Salvador and Belize

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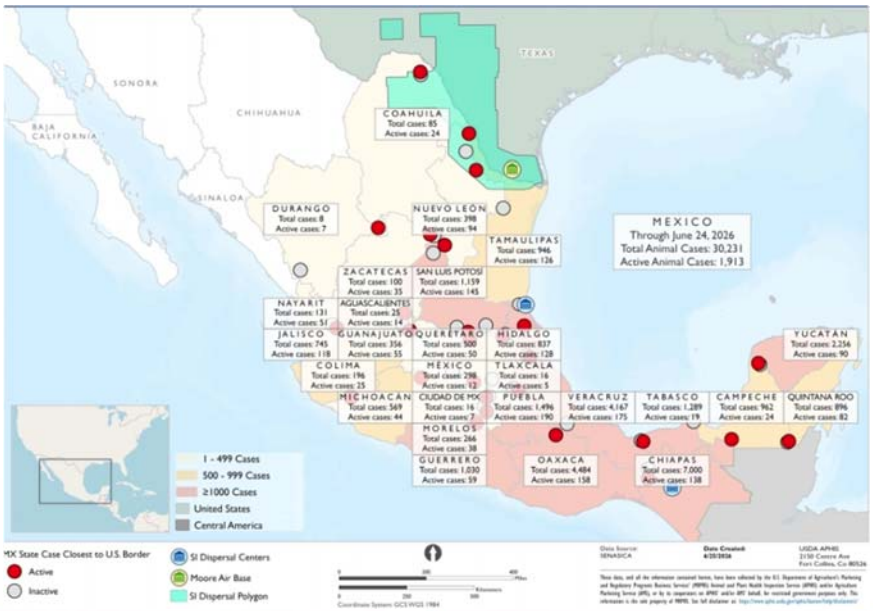
Current Status of NWS in Mexico

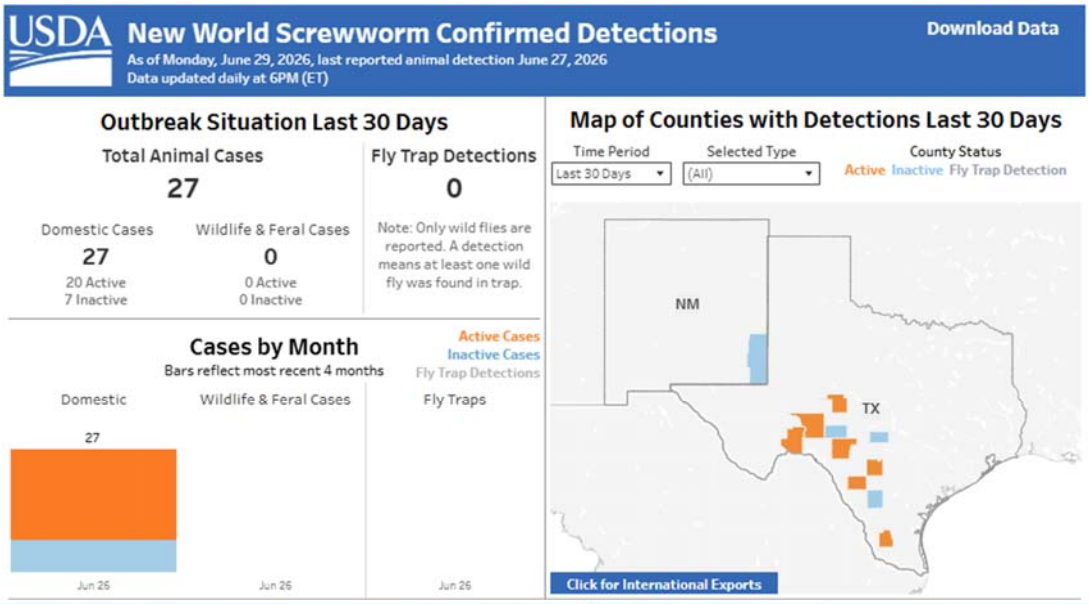


Current as of 6/25/2026. Available at https://www.aphis.usda.gov/animals/animal-health/livestock-and-poultry-disease/current-status?page=1

First Animal Detection of NWS in the US

- A case of NWS myiasis in a Texas calf was reported on June 3, 2026 by the USDA.
- This is the first detection of NWS in an animal since 2017
- Mitigation efforts, including release of sterile flies, robust animal and insect surveillance, and health checks are occurring to limit spread.

Current Status of NWS in the United States



Current as of 6/30/2026. Available at https://www.aphis.usda.gov/animals/animal-health/livestock-and-poultry-disease/current-status/us-confirmed-cases-new-world

New World Screwworm in Humans

- As of June 22nd, there have been 2,175 human cases reported from Mexico and Central America.

- One travel-associated case in the US in 2025
  - A case of NWS myiasis was reported in a Maryland resident with recent travel to El Salvador
  - Case was treated and fully recovered
  - USDA conducting targeted surveillance of affected area

Screwworm Myiasis in Humans

- NWS is an obligate parasite that consumes and damages healthy, living tissue.
- Humans can also be affected with facultative myiasis, in which fly larvae feed on dead tissue.
  - Much more common in the U.S.
  - Often associated with people who are bedridden or unable to clean themselves or protect sores and wounds

Typical furuncular myiasis lesion on the face of a patient.

Francesconi F & Lupi O. *Myiasis*. Clinical Microbiology Reviews. 2012 Jan;25(1):79-105. doi: 10.1128/CMR.00010-11

Clinical Features

- Visible larvae on wounds, eyes, nose, mouth, and other body orifices, ears
- Rapidly progressive, painful lesions
- Foul-smelling discharge from wounds
- Sensation of movement in wounds
- Extensive tissue invasion and destruction
- Secondary bacterial infection may result in systemic illness

Bot fly larvae on the left, NWS larvae on the right.
Image courtesy of Mark Fox, DPDx

Risk Factors

- Open sores or wounds
- Bleeding or open sores
- Skin or sinus cancer
- Spend a lot of time outdoors
- People experiencing homelessness
- Physical or mental incapacitation

Myiasis due to *C. hominivorax* in a B lymphoma patient. Shown is a large ulcer filled with larvae.

Francesconi F & Lupi O. *Myiasis*. Clinical Microbiology Reviews. 2012 Jan;25(1):79-105. doi: 10.1128/CMR.00010-11

Diagnosis

- Healthcare providers should report suspect cases of NWS myiasis to KDHE immediately - 1-877-427-7317, option 5
- For suspected human cases, diagnostic assistance is available through CDC
- Confirmatory identification is key
  - Save ~10 larvae in a separate container for diagnostic submission
- Remove all larvae and place in 70% ethanol
  - Submerge the larvae in ethanol, which will kill them and preserve them for identification

Images courtesy of Mark Fox, CDC

Treatment

- Remove and kill all visible larvae do NOT throw in the trash or on the ground
  - Failure to properly dispose of larvae can result in local fly population
- Check linens and patient clothing for fallen maggots
- Reexamine lesions in 1-2 days
- Treat secondary bacterial infections if present

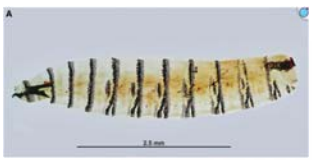
Larval primary screwworm. CDC

Sept 2023: Date of onset

1/12/2024: Presented for culture

1/14/2024: Culture +

Feb 2024: Follow-up visit



[Case Report: Re-Emergence of Cochliomyia hominivorax in Costa Rica: Report of a Human Myiasis Case 23 Years after Elimination - PMC]

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NWS Prevention

- Keep open wounds clean and covered
- Prevent insect bites, especially when visiting tropical areas
- Wear loose-fitting long-sleeved shirts and pants
- Apply an EPA-registered insect repellent to all exposed skin
- Treat clothing and gear with 0.5% permethrin
- Sleep indoors or in a room with screens
- Use a bed net or screened tent when sleeping outdoors

Recommendations for Healthcare Providers

- Consider NWS infestation in people who:
  - Recently traveled to an endemic or outbreak area
  - Have visible larvae in wound or mucous membranes
  - Destruction of healthy tissue
- Many morphologically similar species of flies can cause myiasis. Submitting larvae is critical for correct identification!
- Early recognition and proper treatment and disposal are critical.
- Report suspect cases of NWS myiasis to KDHE immediately

Countries where NWS is endemic or active

Endemic Regions

- Cuba
- Haiti
- Dominican Republic
- South American countries (including but not limited to Brazil, Colombia, Venezuela, Ecuador, Peru, Bolivia, & Paraguay)

Regions with Recent Spread or Active Cases (2023–2026)

- Panama
- Costa Rica
- Nicaragua
- Honduras

Guatemala Texas
Belize
El Salvador
Mexico

Additional Resources

- Unified government website hub: www.screwworm.gov
- CDC's general webpage on NWS: https://www.cdc.gov/new-world-screwworm/about/index.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fmyiasis%2Fabout-new-world-screwworm-myiasis%2Findex.html
- Training for HCPs: https://www.cdc.gov/coca/hcp/trainings/resurgence-new-world-screwworm.html
- Resource for HCPs: https://www.cdc.gov/new-world-screwworm/hcp/clinical-overview/index.html

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Thank you! Questions?

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