Health & Medicine | Jun 20, 2026 | 9 min read | By Bryan White

The Continued Screwworm Resurgence: Causes, Countermeasures, and Consequences

Biology * Public Health * Economics

Introduction: The 2026 Domestic Resurgence of Cochliomyia hominivorax

The New World screwworm (Cochliomyia hominivorax) is an obligate calliphorid ectoparasite whose larvae feed on the living tissue of warm-blooded hosts, causing fatal myiasis[1][2]. Pioneered in the 1950s by Edward Knipling and Raymond Bushland, the Sterile Insect Technique (SIT) -- flooding wild populations with radiation-sterilized males to exploit female monandry -- eradicated the fly from the United States by 1966 (save for a contained 2016-2017 Florida Key deer outbreak) and anchored a biological barrier at the Dari n Gap[3][4].

In 2023, pandemic sterile fly deficits, illicit cattle movements, and warmer winter minimums breached the Dari n Gap[6][7]. On June 3, 2026, C. hominivorax was confirmed in a calf in Zavala County, Texas -- the first U.S. livestock detection in over 50 years[5][8]. The incursion strikes a U.S. beef supply already at record prices after drought-driven herd liquidation reduced cattle inventories to 1950s levels, while prompting intermittent U.S.-Mexico border closures and a 21-day Canadian ban on Texas livestock[5][7][10].

Entomological Profile, Thermal Thresholds, and the Dari n Gap Breach

Accurate epidemiological surveillance differentiates C. hominivorax from the necrophagous secondary screwworm (C. macellaria)[11]. Adult C. hominivorax display a shorter central thoracic stripe, dark fronto-orbital setulae, and a brown female basicosta, while third-instar larvae (up to 18 mm) show darkly pigmented dorsal tracheal trunks across two posterior segments and three straight spiracular slits inside a dark peritreme[4][11]. Guided by the odorant coreceptor gene (Orco) to wound semiochemicals, females deposit 200-400 eggs that hatch in 12-24 hours; larvae feed for 5-7 days before pupating in soil[1][2][6][12]. Optimal emergence occurs near 81.5 deg F (30-70 percent humidity), while pupation halts below 58 deg F, soil below 46 deg F is lethal, and adult reproduction ceases above 110 deg F[12][15].

Since 2023, over 185,000 animal cases and 2,100 human cases have occurred across Central America and Mexico, with clusters in Tamaulipas, Nuevo Le n, and Coahuila advancing within 42-96 miles of Texas[7][20]. After the June 3 Zavala County index case, the CDC activated a Level 3 emergency center alongside a USDA-TAHC Incident Command[8]. By June 19, 2026, 12 U.S. cases (11 active, 1 inactive) were confirmed across cattle, goats, sheep, and a dog in Lea County, New Mexico, spanning 400+ miles[9][19][20].

| State | | County | | Host Species | | Current Status | | Epidemiological Notes |

| Texas | | Zavala | | Bovine (Calf) | | Active | | Index case; umbilical infestation detected June 3[8]. |

| Texas | | Zavala | | Bovine (Calf) | | Active | | Second detection; located 5.6 miles from index case[10]. |

| Texas | | La Salle | | Bovine (Calf) | | Active | | Proximate to established surveillance zone[10]. |

| Texas | | Edwards | | Bovine (Calf) | | Active | | Indicates northern movement away from border[21]. |

| Texas | | Edwards | | Caprine (Goat) | | Active | | Demonstrates cross-species vulnerability in rural settings[21]. |

| Texas | | Gillespie | | Caprine (Goat) | | Active | | Located approximately 162 miles from index case[19]. |

| Texas | | Sutton | | Ovine (Sheep) | | Inactive | | Confirmed June 12; officially classified as inactive[9]. |

| Texas | | Sutton | | Caprine (Goat) | | Active | | Confirmed June 13[21]. |

| Texas | | Tom Green | | Bovine (Calf) | | Active | | Confirmed June 12; signifies spread into west-central Texas[21]. |

| Texas | | La Salle | | Bovine (Calf) | | Active | | Third detection in La Salle county area[21]. |

| Texas | | Zavala | | Bovine (Calf) | | Active | | Additional detection within initial quarantine boundary[21]. |

| New Mexico | | Lea | | Canine (Dog) | | Active | | Eunice resident; initially reported via Andrews Co., TX vet[19]. |

| State | | Host Species | | Date Confirmed | | Approximate Distance to U.S. Border | | Status |

| Nuevo Le n | | Bovine (Calf) | | Jun. 10, 2026 | | ~42 miles | | Active[7][20] |

| Coahuila | | Bovine (Adult) | | Jun. 10, 2026 | | ~69 miles | | Active[7][20] |

| Tamaulipas | | Bovine (Calf) | | Jun. 10, 2026 | | ~85 miles | | Active[7][20] |

| Nuevo Le n | | Feline (Cat) | | Jun. 10, 2026 | | ~87 miles | | Active[7][20] |

| Tamaulipas | | Bovine (Adult) | | Jun. 12, 2026 | | ~91 miles | | Active[7][20] |

| Nuevo Le n | | Canine (Dog) | | Jun. 11, 2026 | | ~96 miles | | Active[7][20] |

Extensive Rangeland Surveillance, Clinical Myiasis, and Quarantines

Visual herd inspection across the Southwest is complicated by vast ranching scales -- 45 percent of Zavala County farms and 41 percent of Kinney County farms exceed 1,000 acres -- and abundant white-tailed deer and feral hog reservoirs[3][10]. Clinically, larvae use curved mouth hooks and proteolytic enzymes to excavate cavernous subdermal lesions; untreated hosts die of toxemia or secondary sepsis within 7-14 days[1][2][22]. Given the public health risk of human myiasis, CDC guidelines advise 0.5 percent permethrin clothing treatment, surgical debridement, and larval preservation in 70 percent ethanol[1][16][22]. FDA emergency authorizations cover systemic nitenpyram and conditional lotilaner (Credelio

Quattro) for dogs alongside 20 km (12.5-mile) livestock quarantine zones[8][13][20].

| Jurisdiction | | Restriction Policy | | Rationale |

| Texas | | 20 km internal quarantine zones | | Contains local spread; requires health certificate for movement[8]. |

| New Mexico | | 12.5-mile infested zone | | Established around the Lea County canine detection[19][20]. |

| Michigan | | Import permit and vet inspection | | Pre-transport verification for animals moving from adjacent states[23]. |

| Pennsylvania | | Quarantine/Inspection order | | Limits susceptible livestock imports to protect local farms[9]. |

| Louisiana | | Transit prohibition | | Bans animals that physically transited through an infested zone[20]. |

| Canada | | Temporary 21-day ban | | Prevents entry of livestock/horses that resided in Texas[5]. |

Sterile Insect Scaling, Transgenic Male-Only Strains, and CRISPR Olfactory Disruption

To scale SIT suppression beyond the 100M weekly sterile flies at Panama's COPEG plant, the USDA funded $21M to restore 100M weekly output in Metapa, Mexico, activated sterile-fly dispersal operations at Moore Air Base in Edinburg, Texas -- supplemented by a domestic sterile fly production facility now under construction there with planned initial capacity of 100M flies/week expanding to 300M flies/week -- and backed $105M across 40 projects testing electron-beam and X-ray sterilization[4][18][20]. Meanwhile, Texas officials urged deployment of the Screwworm Adult Suppression System (SWASS) -- pairing SwormLure attractants with adulticide baits -- for immediate knockdown ahead of SIT population genetics collapse[9][25][26].

Because classical irradiation causes somatic damage and wastes half of colony diet on females, "SIT 2.0" applies genetic engineering via transgenic male-only strain FL12-56[27]. Using sex-specific splicing from transformer and doublesex, female transcripts express a tetracycline-repressible transcription activator (tTA) among cellular transcription factors; withholding tetracycline during release rearing causes 100 percent female pupal lethality, doubling male output[24][27][28]. Supported by a trio-binned 455.6 Mb genome assembly (five autosomes, two sex chromosomes), researchers also use CRISPR-Cas9 to knock out the olfactory coreceptor Orco -- blinding females to wound odors -- and disrupt sex-determination targets such as femaleless alongside RNAi suppression of reproductive gene expression[14][29][30].

Conclusion: Rebuilding Continental Biosecurity

The 2026 resurgence of Cochliomyia hominivorax across the American Southwest underscores the vulnerability of extensive rangelands, wildlife reservoirs, and integrated cattle markets. Containing and eradicating the outbreak requires combining strict movement quarantines and SWASS suppression with expanding Moore Air

Base sterile fly capacity and biotechnology innovations including FL12-56 male-only releases and CRISPR genetic control.[8][18][24]

Updates... (Nov 22, 2026): Earlier text incorrectly stated that a 300M-fly/week sterile production plant at Moore Air Base in Edinburg, Texas had already been completed; while sterile-fly dispersal operations began at Moore Air Base in June 2026[20], construction of the domestic production facility remains underway (reaching a mid-November 2026 construction milestone), designed for initial output of 100 million sterile flies per week expanding to 300 million per week[18]. As of November 20, 2026, cumulative USDA-confirmed U.S. animal detections rose to 153 cases (75 active; 151 domestic and 2 wildlife or feral) across 42 counties in 3 states alongside 7 fly-trap detections[17], while Central America and Mexico exceeded 209,400 animal cases and 2,900 human cases per the November 18, 2026 CDC update[16], with the Texas Animal Health Commission enforcing Infested Zone movement restrictions[8] and federal and state agencies having released more than 1.7 billion sterile flies[18]. Also standardized exact publication dates across all 30 cited sources.

References & Primary Sources

* Centers for Disease Control and Prevention (CDC). (2026, August 27). Clinical Overview of New World Screwworm, https://www.cdc.gov/new-world-screwworm/hcp/clinical-overview/index.html

* Swiger, S. (2025, September 5). New World Screwworm - Integumentary System - Merck Veterinary Manual, https://www.merckvetmanual.com/integumentary-system/flies/new-world-screwworm

* Clayton, C. (2026, June 16). USDA Officials Highlight Wildlife Threat as They Press to Curb New World Screwworm Cases. DTN/The Progressive Farmer, https://www.dtnpf.com/agriculture/web/ag/columns/washington-insider/article/2026/06/16/usda-officials-highlight-wildlife

* LSU AgCenter. (2026, July 30). Cochliomyia hominivorax, New World Screwworm Fly (Diptera: Calliphoridae), https://www.lsuagcenter.com/articles/page1775058458668

* Simpson, S., & Garcia, B. (2026, June 4). Screwworm is in Texas. Here is what to know. The Texas Tribune, https://www.texastribune.org/2026/06/04/screwworm-texas-united-states/

* McBride, J. (2026, June 17). What You Need to Know About Screwworm - UConn Today - University of Connecticut, https://today.uconn.edu/2026/06/what-you-need-to-know-about-screwworm/

* Centers for Disease Control and Prevention (CDC). (2026, January 23). New World Screwworm: Outbreak Moves into Northern Mexico (HAN Health Advisory 00526). U.S. Department of Health and Human Services, https://www.cdc.gov/han/php/notices/han00526.html

* Texas Animal Health Commission (TAHC). (2026, October 1). New World Screwworm Emergency Information & Infested Zones, https://www.tahc.texas.gov/emergency/nws.html

* Yang, M. (2026, June 16). US screwworm cases rise as outbreak spreads beyond initial contamination zones. The Guardian,

https://www.theguardian.com/us-news/2026/jun/16/screwworm-cases-rise-outbreak-spreads

* American Farm Bureau Federation. (2026, June 9). First U.S. Cases of New World Screwworm Detected | Market Intel, https://www.fb.org/market-intel/first-u-s-cases-of-new-world-screwworm-detected

* Centers for Disease Control and Prevention (CDC). (2025, September 10). DPDx: New World Screwworm (Cochliomyia hominivorax) Myiasis Laboratory Identification. U.S. Department of Health and Human Services, https://www.cdc.gov/dpdx/newworldscrewwormmyiasis/index.html

* Penn State Extension. (2025, October 24). Understanding the New World Screwworm - Biology, Identification, and Prevention, https://extension.psu.edu/understanding-the-new-world-screwworm-biology-identification-and-prevention

* Companion Animal Parasite Council (CAPC). (2026, November 12). Cochliomyia hominivorax, https://capcvet.org/guidelines/cochliomyia-hominivorax/

* Paulo, D. F., Junqueira, A. C. M., Arp, A. P., et al. (2021, May 31). Disruption of the odorant coreceptor Orco impairs foraging and host finding behaviors in the New World screwworm fly. Scientific Reports (PubMed 34059738), https://doi.org/10.1038/s41598-021-90649-x

* The Center for Food Security and Public Health (CFSPH), Iowa State University. (2025, May 12). Myiasis Caused by Old and New World Screwworms, https://www.cfsph.iastate.edu/Factsheets/pdfs/screwworm_myiasis.pdf

* Centers for Disease Control and Prevention (CDC). (2026, November 18). New World Screwworm Outbreak - Situation Summary, https://www.cdc.gov/new-world-screwworm/situation-summary/index.html

* GenomicEpi. (2026, November 20). U.S. New World Screwworm Tracker: Cases by County & Map, https://www.genomicepi.com/outbreaks/new-world-screwworm/

* Powell, E. / Texas Farm Bureau. (2026, November 18). New World screwworm cases increase across Texas, https://texasfarmbureau.org/new-world-screwworm-cases-increase-across-texas/

* Bautista-Alejandre, A. (2026, June 8). New World screwworm confirmed in New Mexico dog as US case count rises to 5 | dvm360, https://www.dvm360.com/view/new-world-screwworm-confirmed-in-texas-dog-as-us-case-count-rises-to-four

* Bautista-Alejandre, A. (2026, June 4). New World screwworm live updates: Tracking detections, treatment authorizations, and response efforts | dvm360, https://www.dvm360.com/view/new-world-screwworm-updates-the-latest-on-government-industry-response

* Texas Parks and Wildlife Department (TPWD). (2026, June 13). News Release: June 13, 2026: Situational Update: New World Screwworm, https://tpwd.texas.gov/newsmedia/releases/?req=20260605a

* Ohio State University Extension. (2026, June 17). USDA Confirms New World Screwworm Infestations in Texas and New Mexico | Ohio BEEF Cattle Letter, https://u.osu.edu/beef/2026/06/17/usda-confirms-new-world-screwworm-infestations-in-texas-and-new-mexico/

* CBS News Detroit. (2026, June 16). Michigan officials taking protective action after screwworm detected in U.S.,

https://www.cbsnews.com/detroit/news/michigan-taking-protective-action-screwworm-detected-u-s/

* Lowman, A. V., et al. (2025, November 18). Improving the sex-specificity of a conditional female lethal system for genetic biocontrol of the New World screwworm, Cochliomyia hominivorax. Scientific Reports, https://doi.org/10.1038/s41598-025-24434-5

* Texas Department of Agriculture (TDA). (2026, June). Commissioner Miller: First Suspected New World Screwworm Case in Texas Demands Use of All Available Tools to End Threat, https://texasagriculture.gov/News-Events/Article/11929/Commissioner-Miller-First-Suspected-New-World-Screwworm-Case-in-Tex

* Texas Department of Agriculture (TDA). (2026, June). Commissioner Sid Miller Responds to New Screwworm Detections, Demands Immediate Deployment of SWASS, https://texasagriculture.gov/News-Events/Article/11932/Commissioner-Sid-Miller-Responds-to-New-Screwworm-Detections-Dema

* Alphey, L. (2016, September 19). SIT 2.0: 21st Century genetic technology for the screwworm sterile-insect program. BMC Biology, https://doi.org/10.1186/s12915-016-0310-1

* Concha, C., Palavesam, A., Guerrero, F. D., et al. (2016, August 30). A transgenic male-only strain of the New World screwworm for an improved control program using the sterile insect technique. BMC Biology (PubMed 27576512), https://doi.org/10.1186/s12915-016-0296-8

* Hickner, P. V., Sim, S. B., Luecke, D., et al. (2026, February 28). Haplotype-resolved genome assemblies for the New World screwworm, Cochliomyia hominivorax (Diptera: Calliphoridae), using the trio binning approach. G3: Genes, Genomes, Genetics, https://doi.org/10.1093/g3journal/jkag053

* Paulo, D. F., et al. (2019, September 1). Specific Gene Disruption in the Major Livestock Pests Cochliomyia hominivorax and Lucilia cuprina Using CRISPR/Cas9. G3: Genes, Genomes, Genetics, https://doi.org/10.1534/g3.119.400544