An Old Enemy Returns

Enzo R. Campagnolo

A retired veterinarian reflects on the 2023–2026 reemergence of New World screwworm, from foreign animal disease training exercises decades ago to the 2026 outbreak in South Texas, USA. Correcting common misconceptions about the parasite, he argues that eradication is a maintenance obligation, not a permanent achievement, requiring sustained investment and cooperation.

When I trained as a field veterinarian, sterile insect technique was already ancient history—winner's history. Screwworm eradication was held up as public health's great underappreciated triumph. In my years working in foreign animal disease preparedness for the United States government, I never expected to watch that triumph come apart.

I first encountered New World screwworm (*Cochliomyia hominivorax*) not on a farm but in a foreign animal disease training binder as one of the exotic-pest scenarios we veterinarians were drilled on, decades removed from any local transmission. The premise felt almost academic: a continentwide eradicated parasite, held at bay by a sterile-fly barrier on a distant isthmus (*1*), included as a lesson in vigilance rather than likelihood. That the scenario would become real in my lifetime, in the middle of a ranching county in South Texas, USA, is not something those exercises prepared me to expect.

Some corrections are owed here, because precision matters even in a personal reflection. *C. hominivorax* larvae consume only living tissue, never dead; every infestation is an active parasitism of a living host, not an infection. A female fly deposits 200–400 eggs per clutch at a wound margin or mucosal surface and can repeat that every 3–4 days for several weeks) Figure 1). A single growing lesion is likely to draw in additional screwworm flies and other opportunistic myiasis species, compounding the damage (*1*,*2*) (Figure 2). Cattle carry the heaviest epidemiologic burden, but the fly is not host-specific beyond warm-blooded vertebrate. Dogs make up a meaningful share of the current outbreak's animal cases reported in Mexico, ranking second only to cattle (*3*). Wildlife—Florida Key deer in 2016–2017, feral swine in South America in 2026—sustain transmission in places no treatment program can reach. Humans are as legitimate a host as any other warm-blooded animal, not an incidental one, although exposure risk concentrates among outdoor workers and persons with open wounds or limited access to care, and outcome severity depends on infestation site and treatment access (*4*).

The reemergence traces to Panama in 2023, when detections inside the historic barrier zone climbed sharply and spread north through every Central America country and into Mexico by late 2024 (*5*,*6*). I have stopped trying to hold a precise case count in my head; any figure I fix on the page will be out of date before readers see it, an uncomfortable adjustment for someone who spent a career insisting on precise numbers. What has not changed, and is unlikely to by the time this essay appears, is the trajectory: the counts have climbed steadily across the region since 2023, not receded, and each revised tally has arrived higher than the last. In the United States, animal cases have accumulated across South Texas counties and entered New Mexico, affecting cattle, sheep, a goat, and a dog (*6*,*7*); a single travel-associated human case, unrelated to local transmission, was confirmed in a Maryland resident in 2025 (*5*). No locally acquired human case has occurred in the United States as of August 2026 (*5*). This outbreak is not the parasite's first reappearance north of Panama in 60 years, despite some early reporting; travel-associated detections and the 2016–2017 Florida Keys outbreak punctuated the interval. It is, however, the first sustained multinational reestablishment since eradication, which likely reflects agricultural expansion into former barrier-zone habitat, cross-border animal movement (including trafficking, which regional reports increasingly implicate), and reduced continuity of surveillance funding (*6*).

Watching from outside the agencies I once served, what strikes me most is how narrow the public framing of this outbreak has been. US Department

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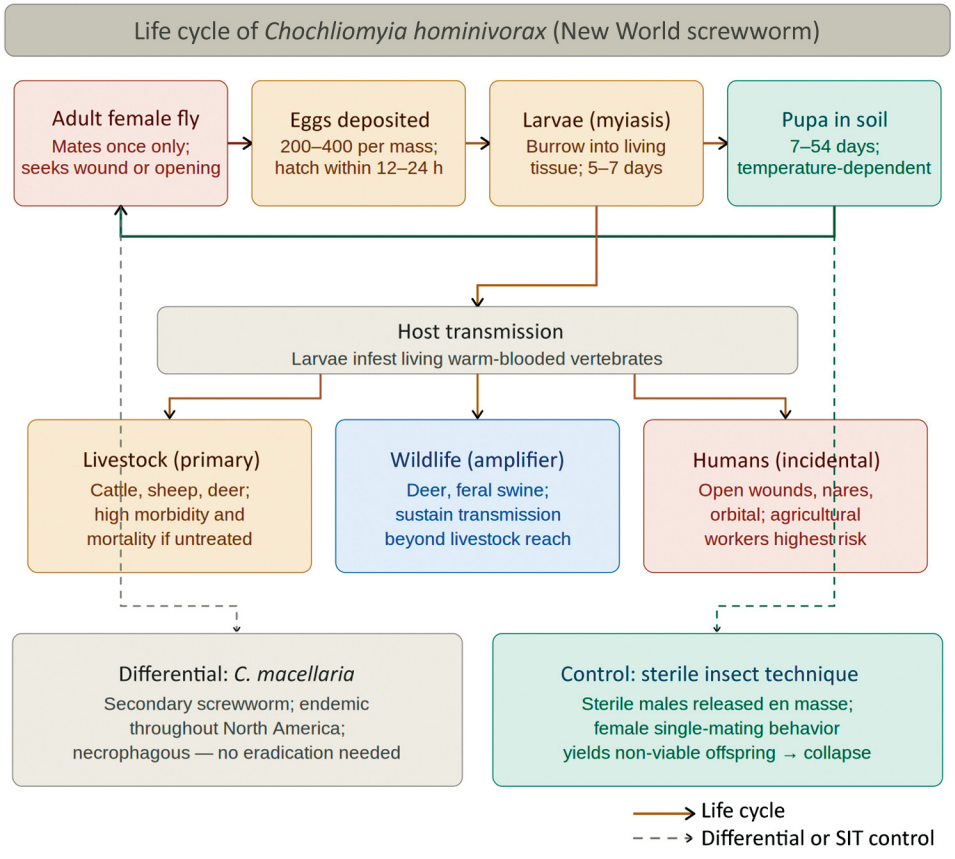


Figure 1. Life cycle of *Cochliomyia hominivorax* and One Health transmission pathways. Solid arrows indicate the obligate parasite life cycle and host transmission. Dashed arrows indicate differential diagnosis of *C. macellaria*, which requires laboratory identification, and intervention for control of *C. hominivorax*. SIT, sterile insect technique.

of Agriculture leads the response, with support from Centers for Disease Control and Prevention, but forestry and wildlife agencies, border security, and community-health and agricultural-regulatory partners are doing essential work: monitoring deer and feral-hog populations no one can treat in the field, screening cross-border livestock movement, and reaching rural households where an infested pet might be the first sign of trouble. Sterile-fly production is necessary but not sufficient, and its own targets remain a work in progress: the US Department of Agriculture's planned Texas facility aims to eventually produce up to 300 million sterile flies weekly, in addition to ≈100 million each from Panama and Mexico, against an estimated 500 million needed to push the pest back to the Darien Gap (*8*). Wound prevention, prompt

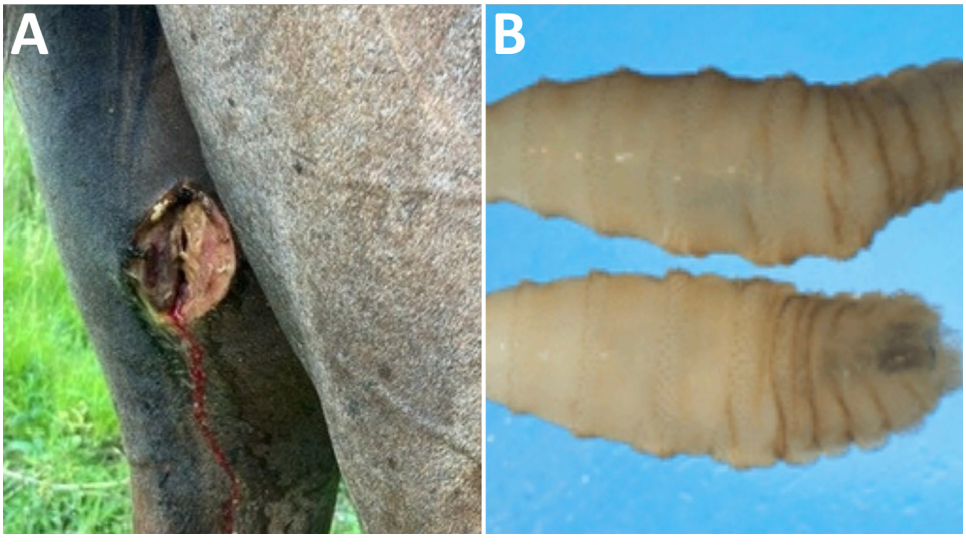


Figure 2. New World screwworm (*Cochliomyia hominivorax)* myiasis and larval morphology. A) Limb wound myiasis in a large ungulate. The characteristic serosanguineous expanding wound is visible, with early larval activity at wound margins. B) Third-instar *C. hominivorax* larvae. Segmented morphology and pigmented dorsal tracheal trunks are used for species identification. Source: US Department of Agriculture Animal and Plant Health Inspection Service.

veterinary and medical care, and shifting of wound-generating husbandry practices to cooler, fly-quiet seasons all matter in the interval before that capacity comes fully online.

My working life spanned the tail end of screwworm's confinement to memory. I trained for a threat I was told was theoretical. Colleagues still in public health and animal health are now living its return in real time, with less institutional muscle memory than the generation that built the original barrier. If 3 years of watching this unfold has taught me one thing, it is that eradication is a maintenance obligation, not an accomplishment to file away. The tools that beat screwworm once still work. Whether we sustain the effort, the cross-border cooperation, and the workforce expertise to use them again, before this incursion outgrows the capacity built to answer it, is the real question this outbreak is asking.

The author is retired from federal service and this article is not a product of, and was not cleared through, any federal agency.

During preparation of this work, the author used ChatGPT 5.5 (https://chatgpt.com), an AI assistant, for language editing (grammar, spelling) and manuscript formatting. The author reviewed and edited all content and verified all factual claims and takes full responsibility for the accuracy and integrity of the work. No AI tool is listed as a co-author.

About the Author

Dr. Campagnolo is a retired veterinary epidemiologist with extensive experience in international animal disease preparedness and public health, now an independent researcher. His primary research interests are transboundary animal disease preparedness, veterinary public health, and One Health epidemiology.

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