

President and Publisher
Dennis Francis

Editorial Page Editor
Lucy Young-Oda

lyoungoda@staradvertiser.com
808-529-4831

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Rat lungworm is here to stay, and public must be educated

By **Claire Panosian Dunavan,**
Vernon Ansdell
and **Robert Cowie**

Rat lungworm is here to stay. This undeniable truth has important repercussions for the state. It also raises questions. What can be done to better protect Hawaii's residents and visitors from a parasite that sometimes wreaks terrible harm? And, for those possibly exposed, what can be done to speed their diagnosis and treatment?

Here are some basic facts. Although rat lungworm disease was first found in Asia, Hawaii today is an epicenter where some infections have led to meningitis, paralysis, coma and death. Long-term, life-changing disability is another tragic outcome of the globalizing, food-borne invader that currently threatens not just Hawaii, but multiple regions in six continents.

Admittedly, diagnosing an infection due to the roundworm *angiostrongylus cantonensis* can be chal-

lenging. Soon after it enters a human host — in some cases, by the unwitting consumption of tiny snails and slugs contaminating unwashed produce; in others, especially toddlers, by eating an infected snail or slug — patients often have confusing symptoms. But even after microscopic worms reach the brain, the diagnosis can still be dangerously delayed because no one performs a spinal tap.

Consider the case of a social worker from Seattle who visited the Big Island in December 2021. Never guessing that a brain-invading parasite could contaminate local produce, Julie Packard ate salads and a veggie wrap during her eight-day stay, then developed burning pains and a rash followed by dramatically altered vision and balance. Sadly, another five weeks passed before a specialist at the University of Washington finally obtained spinal fluid that was strongly positive for *A. cantonensis* DNA. Twelve months later, despite extensive treatment, Julie

ISLAND VOICES

Claire Panosian Dunavan is an infectious diseases specialist at UCLA and producer of "Accidental Host — The Story of Rat Lungworm Disease," Vernon Ansdell, center, is a tropical medicine specialist at the University of Hawaii John A. Burns School of Medicine, and Robert Cowie is a biologist at UH-Manoa; Ansdell and Cowie are on the Hawaii Governor's Joint Task Force on Rat Lungworm Disease.



still has persisting symptoms.

In contrast, just last month, an 11-year-old boy was diagnosed with rat lungworm meningitis in Oregon after contracting the infection near Hilo. In his case, however, his parents were aware of the disease and pushed for immediate testing. Once the patient's spinal fluid showed telling abnormalities, appropriate treatment was started and a specimen sent to Hawaii for confirmatory tests. This patient is

now on the mend.

We believe that Hawaii needs far more education around rat lungworm disease. This means providing clear, up-to-date information — not just to residents but to unsuspecting tourists. Nonetheless, on a recent visit to the Honolulu airport, one of us found only a single, fleeting message in the interisland terminal and no such messages at baggage claim areas serving flights from the mainland.

Incomplete data is another concern. For example, did rat lungworm infections truly decline after COVID-19 struck Hawaii, or did overworked hospitals, clinics and providers simply not detect or report them?

Either way, in 2023, the time has come for more school-based education; informational flyers in airports, clinics and emergency rooms; earlier testing of possibly infected patients; ready availability of currently recommended treatments; and additional research on the true extent of infection both in animals and humans in high-risk locales.

Last but not least, what can the Hawaii Tourism Authority do to deliver relevant facts about *A. cantonensis* to Hawaii's millions of visitors before they ever set foot in the state?

On air: "Accidental Host — The Story of Rat Lungworm Disease" airs on PBS Hawaii this Thursday at 8:30 p.m. and on Sunday at 1 p.m.