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## LOCAL NEWS

Posted on: Sunday, February 8, 2009

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# Disease outbreak on Big Island raising alarm among residents

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By **Diana Leone**  
Advertiser Staff Writer

The rat lungworm disease that put two Big Island residents into comas is bringing attention to an illness confirmed in only 33 cases in Hawai'i since 2001.

ADVERTISEMENT "Having a cluster of illnesses is not unusual. Having a cluster this severe is distinctly unusual," said Dr. Jon Martell, Hilo Medical Center's director of the hospital's in-house physicians.

Life-threatening comas from a disease caught by eating poorly washed backyard vegetables have "got everybody's attention," Martell said. "This is a teachable moment."

Many Puna district residents have learned in recent years that the parasite (*Angiostrongylus cantonensis*) can be ingested by eating backyard vegetables contaminated by infected slugs or snails.

The life-threatening seriousness of recent cases has:

- Spawned dozens of calls to the Big Island and state health departments;
- Changed the way a Hilo hospital approaches possible cases;
- Prompted the state Health Department to issue a warning about the disease and multiple government agencies to respond;
- Spurred dozens of Big Island residents, including a doctor and a County Council member, to seek more education, research and treatment for the disease.

In recent weeks, the two Big Island residents in comas have opened and moved their eyes, responding to friends and family.

Yet Silka Strauch, 38, and Graham McCumber, 24, still have "a long and rocky road to go," said Lyn Howe, McCumber's aunt.

Strauch has been in a coma since Dec. 8 and McCumber for several weeks. Both are at Hilo Medical Center and are being fed through tubes. Both are breathing on their own after having been on a breathing machine, friends and relatives said.



Graham McCumber, 24, and Silka Strauch, 38, are both in a Big Island hospital, comatose for weeks after contracting rat lungworm disease.

Family photos

## HOW TO HELP

Kristina Mauak is accepting donations to help the Strauch family from Germany with expenses while on the Big Island visiting their daughter, who is in a coma caused by rat lungworm disease. Reach Mauak at 808-936-9482.

## More information

For details, call the Hawai'i District Health Office Disease Investigations office: 808-933-0912, or see [www.dpd.cdc.gov/DPDx/HTML/Angiostrongyliasis.htm](http://www.dpd.cdc.gov/DPDx/HTML/Angiostrongyliasis.htm).

## HOW YOU CAN STAY SAFE

State Department of Health advice on how to avoid rat lungworm infection:

- Do not eat raw foods potentially contaminated by snails or slugs.
- Wash locally grown produce thoroughly and completely (e.g., wash each leaf of lettuce separately).
- Boil snails and freshwater prawns and crabs for at least 3 to 5 minutes.
- Do not handle snails or slugs with bare hands.
- Apply slug bait to eliminate slugs from your garden;

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A third Big Island resident, Zsolt Halda, 36, was treated for the disease and released in January but continues to be extremely weak. Halda said he lost 30 pounds in four weeks and suffered excruciating pain, but "compared to the other two, I'm getting off easy."

Lorena Wong, an O'ahu woman who is recovering from a bout of the disease contracted last year, said she is still taking painkillers to cope with its lingering effects on her nervous system.

### THE DISEASE

Most of the 2,827 rat lungworm cases reported in worldwide medical literature have been in China, Taiwan and Thailand, where in some areas consumption of raw or lightly cooked snails and slugs is common practice, according to the October 2008 Lancet Infectious Disease journal.

Of the 116 cases reported in the United States, many were people who had traveled to places where the parasite is common. The entire state of Hawai'i is one of those places.

Hawai'i's first confirmed cases were in 1962.

The state Health Department knows of 33 cases from 2001 to now. But state epidemiologist Dr. Sarah Park said it is not known how many people have suffered through a milder form of the disease. Total reported Hawai'i cases before 2000 weren't available late last week.

Symptoms can range from headache, joint pain and other symptoms that resolve on their own, to blindness, nerve damage and death.

Slugs and snails in Hawai'i are known to carry the rat lung-worm, a nematode named because it hatches in the lungs of rats. From there, the larvae pass through rat feces to slugs, snails or other mollusks.

People who ingest snails or slugs that contain the parasite can get a rare form of meningitis — infection of the spinal fluid.

There is no cure for the disease. Treatment is painkillers and anti-inflammatory drugs to cope with the body's response to the invasion of the worm into the spinal fluid and brain.

Park said she's working now on ways to remind doctors and other medical professionals that rat lungworm disease is out there.

"It's not as simple as it seems," Park said, because early stages of the disease could resemble other medical problems. And testing, which requires taking spinal fluid, doesn't always reveal the parasites, even in someone who has them.

"A person with tingling or itching in a limb may not want to get a spinal tap" — especially if the results are inconclusive," Park said.

"A lot of people just tough it out, with excruciating pain," Howe said. "There are people who had it years ago and to this day can't wear long pants" because of continuing nerve sensitivity.

### SEMI-SLUG QUESTION

Howe, a Big Island advocate of sustainable, organic farming, said she wonders whether the severity of McCumber's and Strauch's illness could be blamed on a relatively new slug on the Big Island.

According to U.S. Department of Agriculture research published in the Oct. 1, 2007, issue of Pacific Science, the semi-slug (*Parmarion martensi*) that was discovered on the Big Island in 2004 could be a more significant transmitter of rat lungworm to humans because:

- More than 77.5 percent of semi-slugs sampled on the Big Island had the rat lungworm, compared with 24.3 percent of the common local slug, the Cuban slug (*Veronicella cubensis*).
- Semi-slugs are reported by Puna residents to be a garden pest — and to climb the walls of homes.

McCumber's uncle, Geoff Rauch, said he's gone out at night and picked hundreds of slugs off of

read instructions for use and be aware of exposure risks for children and pets.

- Cover catchment tanks to prevent access by snails/slugs or other contaminants.
- Control rodent infestations.

"A lot of people just tough it out, with excruciating pain. There are people who had it years ago and to this day can't wear long pants (because of continuing nerve sensitivity)."

Lyn Howe | Graham McCumber's aunt

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backyard vegetables and walls of his house.

One Puna woman found a semi-slug in her teapot, Howe said.

Park said if the severity of a person's illness is related to the number of parasites that enter the body, the higher incidence of infection in the semi-slugs could make a difference.

## COMMUNITY MOMENTUM

About 40 Puna residents attended a community meeting last weekend to talk about action that can be taken to better prevent and treat the disease, said Howe, who attended.

Others attending included Martell, the Hilo doctor; County Councilwoman Emily Naeole; and Halda, the man who was hospitalized with the disease and released in January.

Possible actions discussed by the group included forming a community action network to educate others about the disease and its prevention; encouraging research on the disease; and seeking funding for those efforts.

Martell told the group that Hilo Medical Center would be taking a more proactive stance on testing for the disease.

"I feel hopeful with anything where the community actually comes together," Howe said of the meeting. "A number of people seemed highly motivated to take action."

Meanwhile, government agencies working on the problem include the state Department of Health (Disease Investigation, Vector Control, Food and Drug, and Sanitation branches), the state and U.S. Agriculture departments, and the federal Centers for Disease Control and Prevention in Atlanta.

## CATCHMENT WATER

Big Island residents who drink water from catchments are worried whether slug slime could get in the water.

"The Department of Health has no evidence of infection from contaminated drinking water," Park said.

The rat lungworm parasite has been found in the slime left by slugs, but it's not known whether the low concentration found in the slime is enough to produce infection or contaminate catchment water because of the dilution effect, she said.

The Health Department's official stance is that catchment water shouldn't be used for drinking because of multiple health risks.

Meanwhile, a recent medical test showed reduced swelling in Strauch's brain, which is good news, said her friend, Kristina Mauak.

Strauch's parents and brother, who flew over from Germany after she got ill, stay at her bedside, stroking her feet, combing her hair and playing music for her, Mauak said.

Of McCumber, Howe said: "If you hold a picture up, he looks at it. If he hears your voice, he will open his eyes."

But how much recovery he will ultimately make, "nobody really knows."

Reach Diana Leone at [dleone@honoluluadvertiser.com](mailto:dleone@honoluluadvertiser.com).

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