

# Louisiana Morbidity Report



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## Mayaro Virus Infection Louisiana, 2011

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In June 2011, the Louisiana Department of Health and Hospitals, Infectious Disease Epidemiology Section received notification from the Centers for Disease Control and Prevention (CDC) Arboviral Diseases Branch that a sample from a male patient in his late 20s, seen at a Region 1\* hospital, was confirmed for recent infection with Mayaro virus. Mayaro fever, also known as Uruma Fever, is a RNA virus transmitted by *Haemagogus* mosquitoes endemic to several tropical regions of South America (Figure).

**Figure:** *Haemagogus janthinomys* Mosquito; Image Courtesy of Judy Stoffer, Walter Reed Biosystematics Unit



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## A *Taenia Saginata* Infection Louisiana - May, 2011

Susanne Straif-Bourgeois PhD, MPH, MS

A 26-year-old healthy male presented with complaints about abdominal pain and nausea to a Region 1\* hospital's emergency department (ED). He had some mild abdominal pain off and on for the previous two months that became much more painful the night before his visit to the ED. The patient also stated that he had seen worms in his stool recently. He denied any recent travel but had moved from Lebanon to Louisiana about a year before.

The patient's stool sample was checked for worms and some *Taenia* proglottids were found. Microscopic identification of gravid proglottids identified the tapeworm as *Taenia saginata* (beef tapeworm) (Figure).

**Figure:** Mature Proglottid of *T. Saginata*, Stained With Carmine. The Number of Primary Uterine Branches Is Used to Differentiate the Beef Tapeworm *Taenia saginata* from a More Serious *Taenia solium* (Pork Tapeworm) Infection. Image Courtesy of CDC.



Upon diagnosis, the patient was treated successfully with the antihelminthic drug Praziquantel.

*T. saginata* is a parasite of both cattle and humans, causing taeniasis in humans. *T. saginata* is normally 12 to 30 feet in length, but can become very large, over 36 feet long in some situations. The body is whitish in color, divided into the head-like part named the scolex, followed by a short neck and a highly extended body

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\* Map of Regions on Page 7.

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# ***Photobacterium damsela*, Rare Illness in Humans Louisiana, 2011**

Erin Delaune, MPH

*Photobacterium damsela* (previously classified as *Listonella damsela*; originally classified as *Vibrio damsela*) is a Gram negative, halophilic bacterium. *P. damsela* is known to cause disease and skin ulcers in fish and other marine animals. In 1981, it was found to be the cause of ulcers in damselfish, which is where the bacterium got its name. Human infection from *P. damsela* can also occur. Worldwide, most cases of *P. damsela* are wound or soft tissue infections. Wound infections can occur when a pre-existing wound is exposed to sea water, or when a person sustains a wound while in the sea water, or from handling marine animals. *P. damsela* produces an extracellular toxin called damselysin, which has the ability to break down red blood cells. Human wound infections can develop into necrotizing fasciitis, progress rapidly and may lead to death. Illness from seafood consumption is very rare, but possible if the infected fish or seafood is consumed raw.

Human infections caused by *Photobacterium damsela*/*Vibrio damsela* are rare in Louisiana. From 1982 to May of 2011, seven cases were reported. The majority of the cases (71%) were reported in the 1990s; the most recent case was reported in 2004. Most cases were male (86%), with the average age being 39 years old (range: younger than one year to 71 years). Two cases were known wound infections; one case was a septicemia. Although the exact location of exposure is not known, all cases resided in the following regions: 1, 2, 3, 4 and 9\*.

Infection from Vibrios, including *P. damsela* is a class C disease; reporting is required within five business days. The State Public Health Lab accepts *Vibrio* isolates (including *P. damsela*) for confirmation and serotyping.

For more information, please contact Ms. Delaune at (504) 568-8316 or email to [erin.delaune@la.gov](mailto:erin.delaune@la.gov).

\* Map of Regions on Page 7

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## *(Mayaro Virus Infection ... Continued from Page 1)*

Mayaro virus is an Alphavirus in the family Togaviridae, similar to Eastern Equine Encephalitis and Western Equine Encephalitis. The virus is maintained in enzootic cycles circulating between vertebrate hosts (birds, rodents, and marmosets), and mosquitoes. The vector mosquito species *Haemagogus janthinomys* is well known for transmitting Yellow Fever. Humans are considered accidental hosts, becoming infected when they interact with these mosquitoes dwelling in the forest canopy. A 1998 seroprevalence study in French Guiana indicated a higher prevalence in persons living along the river and near the tropical forest. Mayaro virus is endemic to Trinidad, Brazil, Venezuela, Bolivia and Peru.

Mayaro virus, is similar to Dengue Fever and Chikungunya

virus in clinical presentation; it causes an acute, self-limiting systemic febrile illness with headache, rash and severe arthralgia. The arthralgia can last for several weeks to months until full recovery. The virus was first isolated in 1954 from patients who recovered from febrile illness in Trinidad. In 1955, there were two reported outbreaks of "jungle fever" with 50 cases in Para, Brazil, and 400 settlers from Japan in Uruma, Bolivia. In 1977-1978, over the course of the rainy season another 4,000 persons in Brazil had complaints of arthralgia in ankles, wrists and toes, edema in joints and macropapular rash lasting three to five days.

On March 31, 2011, the patient became ill with a high fever (104°F) which persisted for three days accompanied by night sweats, neck stiffness and pain, swelling and stiffness in wrist, fingers and ankles. On April 4 2011, he complained of similar pain, swelling and stiffness in the knees. The fever resolved but the arthralgias persisted for months, even though there was an overall decrease in severity from the initial presentation. The patient did not report rash, lesions, lymphadenopathy, cough, bleeding or bruising.

He lived and worked in the Amazon basin near Iquitos, Peru from March 5 to April 5, 2011, traveling to Iquitos three times a year for one month at a time since July 2009. The patient also visited central Brazil in the fall of 2010 and reported multiple mosquito bites during this trip. He had taken malaria prophylaxis prior to his travels and during his stay, but did not complete the course of treatment. He was vaccinated against yellow fever in 2009. On May 5, 2011, the patient with no past medical history, presented to a Region 1 hospital with a one month history of migratory polyarthralgias. The physician sent a serum sample to the CDC, as the provider suspected Mayaro virus infection. The arboviral testing was positive for Mayaro virus by IgM and IgG ELISA capture. The CDC confirmed that the serology tests can be cross-reactive with related alphaviruses including Eastern Equine Encephalitis and Chikungunya viruses. This patient was cross-reactive for IgG antibodies. The CDC confirmed Mayaro virus with neutralization assays (plaque-reduction neutralization tests) which are more specific.

The signs and symptoms of this case were similar to previous clinical descriptions of the disease in the geographical area in which this patient traveled. Increasing industrialization, changing land use of these tropical forests and humans living closer to infected mosquitoes could increase the frequency of human Mayaro fever cases. It should be noted that the vector mosquito species capable of transmitting Mayaro virus is found in Louisiana. All suspect cases of Mayaro fever should be investigated.

For more information, please call Ms. Scott-Waldron at (504) 568-8301 or email to [christine.scott-waldron@la.gov](mailto:christine.scott-waldron@la.gov).

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## **Save The Date! Field Epidemiology Training**

New Orleans - September 13, 2011

Lake Charles - September 29, 2011

Shreveport - October 26, 2011

For more details and to download registration forms please go to <http://www.dhh.louisiana.gov/offices/page.asp?id=249&detail=9560>