

LOGGERHEAD OROCUTANEOUS HERPESVIRUS (LOCV)

ANIMAL GROUP AFFECTED	TRANSMISSION	CLINICAL SIGNS	FATAL DISEASE?	TREATMENT	PREVENTION & CONTROL
Sea turtles	Possible transmission by direct contact, marine leeches as possible mechanical vectors	Oral ulcers, cutaneous plaques	Unknown. Possible in conjunction with other factors	No specific treatment.	<p><i>In houses</i> Isolate affected turtles. Tanks should have separate water sources.</p> <p><i>in zoos</i> isolate affected turtles. Tanks should have separate water sources.</p>

Fact sheet compiled by Rachel E. Marschang, Institut für Umwelt- und Tierhygiene, Universität Hohenheim, Stuttgart, Germany	Last update February 2009
Fact sheet reviewed by Silvia Blahak, Chemisches und Veterinäruntersuchungsamt OWL, Detmold, Germany James F. X. Wellehan, Zoological Medicine Service, College of Veterinary Medicine, University of Florida	
Susceptible animal groups Loggerhead sea turtles (<i>Caretta caretta</i>). Found in wild-caught animals	
Causative organism Alphaherpesvirus.	
Zoonotic potential No.	
Distribution World-wide.	
Transmission Unclear. In the marine environment, loggerhead orocutaneous herpesvirus (LOCV) could potentially be transmitted to uninfected individuals by direct contact between infected turtles or by contact with substrates harbouring virus, such as sediments, contaminated surfaces or seawater. Lung, eye trachea virus (LETV), a related herpesvirus of sea turtles, can remain infectious in seawater for over 5 days. Marine leeches (<i>Ozobranchus</i> spp.) have been implicated them as mechanical vectors for sea turtle herpesviruses.	
Incubation period Unknown	
Clinical symptoms Ulcers in the oral cavity and cutaneous plaques that can be covered with exudate and have an erythematous border. Pneumonia.	
Post mortem findings Histologically, cutaneous plaques showed epidermal hyperplasia, hyperkeratosis, heterophilic inflammation, edema, and ballooning degeneration. Intranuclear eosinophilic inclusion bodies were observed in affected epithelial cells of the skin lesions, the oral ulcers and epithelial cells in the airways.	
Diagnosis Histopathologic evaluation of lesions, intranuclear inclusion bodies in epithelial cells, electron microscopic detection of viral particles. Polymerase chain reaction (PCR).	
Material required for laboratory analysis Samples from ulcerated tissues	
Relevant diagnostic laboratories Contact pathologists with experience with reptiles. <u>For virus detection:</u> Virology laboratories with experience in the diagnosis of viruses in reptiles and/or detection of herpesviruses from various species: <ul style="list-style-type: none"> • Dr. Rachel E. Marschang, Institut für Umwelt- und Tierhygiene (460), Hohenheim University, Stuttgart, 	



Germany

- Dr. Silvia Blahak, Chemisches und Veterinäruntersuchungsamt OWL, Detmold, Germany
- Dr. Szilvia Farkas, Veterinary Medical Research Institute of the Hungarian Academy of Sciences, Budapest, Hungary

It is best to contact the laboratory before collecting and sending the samples to optimize chances of success.

Treatment

Use of antimicrobial to control secondary bacterial infections is the suggested therapy.

Prevention and control in zoos

- Strict hygiene and quarantine procedures. Newly acquired animals should be kept isolated for a minimum of 3 months and should undergo thorough physical examinations both before and after quarantine.
- Preventive measures to reduce stress may help reduce mortality. Reduction in the number of animals per tank, strict hygiene procedures, high water quality, and optimal water temperature will reduce the number of animals affected.

Herpesviruses can cause latent infections, so any infected animals should be considered life-long carriers.

Suggested disinfectant for housing facilities**Notification****Guarantees required under EU Legislation****Guarantees required by EAZA Zoos****Measures required under the Animal Disease Surveillance Plan****Measures required for introducing animals from non-approved sources****Measures to be taken in case of disease outbreak or positive laboratory findings****Conditions for restoring disease-free status after an outbreak****Contacts for further information****References**

1. Stacy BA, Wellehan JFX, Foley AM, Coberley SS, Herbst LH, Manire CA, Garner MM, Brookins MD, Childress AL, Jacobson ER. 2008. Two herpesviruses associated with disease in wild Atlantic loggerhead sea turtles (*Caretta caretta*). *Vet Microbiol* 126: 63-73.