

Study highlights risk of mosquito borne illnesses to captive orca

May 31 2013, by Bob Yirka



A killer whale leaps out of the water when swimming—a behaviour known as porpoising. Credit: Minette Layne/Wikipedia/CC

(Phys.org) —Marine biologists John Jett and Jeffrey Ventra of Stetson University and Louisiana State University respectively have published a paper in *Journal of Marine Animals and Their Ecology* that suggests captive orca may be more at risk of dying from mosquito borne illnesses than has been previously thought.

In their paper Jett and Ventra note that two captive [orcas](#) have died from mosquito born ailments since the animals became tourist attractions at water parks. One was a 25 year old male that died of encephalitis in 1990, the other a 14 year old male that died of [West Nile Virus](#) in 2007. Both highlight the fact that orca are subject to [mosquito bites](#) and because of that are at risk of contracting mosquito borne illnesses.

To learn more about the problem the researchers studied the habits of the whales at water parks. They found that orca engage in a practice known as logging, where they simply float on the surface of the water rather than engage in swimming or diving. When logging, they note, mosquitoes congregate on the exposed surfaces of the whales, biting them. The two also noted that the whales are subject to sunburn, which they say, reduces immunity response to illness. Another problem is captive orca have substantial dental health problems which can lead to bacterial infections which in turn can also weaken an [immune response](#).

The two also point out that because Congress mandated that the National Oceanic and Atmospheric Administration keep track of captive orca, records exist of whale births and deaths. In looking at the record they discovered that the whale that died of West Nile Virus in 2007 was listed as having died of pneumonia, suggesting that other whale deaths might have been listed incorrectly as well.

The problem, the two say is that water parks are typically located in areas near other facilities that have standing water, which make them prime [breeding grounds](#) for mosquitoes. Also, there is no known way to apply sunscreen or mosquito repellent to orca to protect them. They also note that using fogging chemicals around water parks doesn't appear to be a solution either as most research has shown it to be ineffective as well as hazardous. Curiously, not discussed is the possibility of covering water park tanks with mosquito netting. In any case, Jett and Ventra suggest that more research be done to ascertain whether anything can be

done to make life safer for captive orca.

More information: Orca (*Orcinus Orca*) Captivity and Vulnerability to Mosquito-transmitted Viruses. *Journal of Marine Animals and Their Ecology*. Vol. 5, No.2. 2013. ([PDF](#))

© 2013 Phys.org

Citation: Study highlights risk of mosquito borne illnesses to captive orca (2013, May 31)
retrieved 27 April 2024 from

<https://phys.org/news/2013-05-highlights-mosquito-borne-illnesses-captive.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.