

## New Galapagos threat: Mosquitoes from afar

## August 31 2009, By Sandy Bauers

Seems like every week a species from somewhere else shows up in a new area and takes over, wreaking havoc. The latest hotspot: the Galapagos, where non-native mosquitoes are arriving via aircraft and tour boats.

The southern house mosquito, Culex quinquefasciatus, already messed up Hawaii. It arrived there, most likely in airplanes, in the late 19th century and had a devastating effect on the islands' endemic birds.

The new bird house at the Philadelphia Zoo has an exhibit explaining what happened. About 20 to 50 alien species of plants and animals arrive in Hawaii every year, and one of them was the mosquito. It proved an excellent vector for the transmission of diseases among birds, and today most of the surviving avian species live more than 2,000 feet above sea level, where it is too cold for the mosquitoes.

The honeycreeper was particularly hard-hit. Only 19 out of 42 species and subspecies now remain, and many of the extinctions are considered to have been caused by diseases spread by the mosquito.

Now, scientists from the University of Leeds, the Zoological Society of London, the University of Guayaquil, the <u>Galapagos National Park</u> and the Charles Darwin Foundation, have shown that the mosquito is regularly hitching a ride from the mainland to the Galapagos and breeding with existing populations. They're also spreading via tourist boats that visit the islands.



Arnaud Bataille, a Leeds doctoral researcher said that, on average, the number of mosquitoes per airplane is low, "but many aircraft arrive each day from the mainland in order to service the tourist industry, and the mosquitoes seem able to survive and breed once they leave the plane."

Fellow researcher Andrew Cunningham said their studies found "that everything is in place for a similar disaster to occur in Galapagos as occurred in Hawaii. Unless immediate and forceful mitigating actions are taken, it is only a matter of time before Galapagos wildlife meet the same fate as the Hawaiian honeycreepers."

Tourism to these islands, so rich in wildlife, provides a lot of funds. But now, some are wondering if the cost outweighs the benefits.

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