

Levin: When the robin stops bobbin' along

By Lois A Levin/ Special To The Tab
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Many of the diseases that threaten human populations today originated in wildlife, and each disease has a unique transmission pathway. The diseases include HIV/AIDS, avian influenza (including the strain currently threatening to cause a human pandemic), SARS, Nipah virus, Lyme Disease and West Nile virus.

According to biologist Peter Daszak, director of the Consortium for Conservation Medicine in NY, West Nile virus is the major vector borne disease in the US. Since arriving here in 1999, most likely on an airplane, it has infected about a million people, caused 22,000 people to fall ill and resulted in at least 826 deaths. In 2006, between 2,000 and 10,000 new cases are expected in the US.

The greatest concentration of cases has been in the East, but the disease has also shown up in Colorado and California. Our area is at risk of West Nile virus again this summer. Computer models developed to predict the risks of human infection indicate that cases of West Nile will peak from late July to mid-August, and then decline toward the end of August.

When the virus first arrived in North America in 1999, thousands of crows contracted it. Recently, it has been discovered that large numbers of robins are now dying of this disease.

This is no reason to be afraid of robins. Humans cannot contract the disease from birds, only from being bitten by a *Culex pipiens* mosquito. Not only are robins far more appealing to these mosquitoes than humans, it turns out that mosquitoes prefer robins to all other birds, including crows and house sparrows. The robins hopping around on our lawns are members of the "host" species, and they are protecting us from the virus, temporarily. However, when the robins start to migrate south later in the summer, the mosquitoes will continue to look for blood meals, and the risk to humans will increase significantly - seven-fold.

This is just one reason why biodiversity, which is reduced whenever wildlife habitat is lost or fragmented, is so fundamental to the maintenance of human health, and why we need to limit human encroachment on wildlife habitats. Wildlife serves as a "reservoir" for many pathogens against which humans have little or no immunity. Of course, a pathogen such as West Nile virus is a threat to wildlife, too, and entire ecosystems are affected by a die-off of significant numbers of animals. When host species become threatened or extinct or the number of potential host species is reduced, humans are deprived of the buffers against many viruses borne by vectors such as mosquitoes.

As researchers learn more about the reasons that West Nile virus is partial to robins, they will be better able to predict outbreaks and make recommendations to prevent the disease from spreading to other regions. The public needs to support this research. Understanding the links between environmental factors and human health has never been more important than it is today.

Lois A Levin, PhD is the Environment Page Editor for the Newton TAB. This article is archived at www.greendecade.org.tabarchive.asp.