

West Nile's North American spread described

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The rapid spread of West Nile virus in North America over the past decade is likely to have long-lasting ecological consequences throughout the continent, according to an article in the November issue of *BioScience*. The mosquito-borne virus, which was little known before its emergence in New York in 1999, has since been found in all 48 contiguous states.

West Nile virus has killed hundreds of millions of birds and more than 1000 people in North America, and new outbreaks occur each year. Horses are also commonly infected. Though populations of house wrens and blue jays have returned to normal levels, most of the bird species that suffered large population declines, such as the American crow, American robin, Eastern bluebird, and Tufted titmouse, have yet to recover. The extent of mortality in birds of prey and other affected animals remains largely unknown. Changes in seed dispersal, insect abundances, and scavenging services resulting from the virus's effects on wildlife "are probable and demand attention," according the article's authors, Shannon L. LaDeau of the Smithsonian Migratory Bird Center in Washington, DC, and three others.

LaDeau and colleagues emphasize that research has yet to provide a clear picture of why species vary in their vulnerability to infection by the virus and in their probability of transmitting it, via mosquitoes, to other animals. For humans, living close to vegetation cover within a city appears to increase the risk of infection, but scientists still have much to learn about how temperature, precipitation, and changing landscapes interact in fostering outbreaks. Research on how these factors affect

susceptible wildlife and mosquitoes could lead to better predictions and possibly public warnings and expanded mosquito abatement programs in vulnerable areas.

Source: American Institute of Biological Sciences

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