

Wet or dry, Montana still threatened by West Nile

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West Nile virus is apparently here to stay despite Montana's cool, wet spring, says Montana State University entomologist Greg Johnson.

Urging Montanans to protect themselves with repellents, Johnson said the mosquitoes that carry the virus are sure to emerge when temperatures reach the 70s and 80s. Infection rates and deaths may not always be as high as they were in 2003 and 2007, but Montanans should be aware of the threat.

"Regardless of whether it's a wet or dry year, we still need to think about mosquitoes and West Nile virus," Johnson said.

Elton Mosher, disease surveillance specialist with the Montana Department of Public Health, said West Nile virus infected 202 Montanans last year and killed five people. They were from Cascade County, Chouteau County, Dawson County, Sheridan County and Yellowstone County. Last summer was Montana's second highest season on record for the number of people affected by West Nile, Mosher said. First was 2003 when 226 Montanans were infected and four people died.

This summer could be another busy season if the rain continues and temperatures rise as expected, Mosher said.

Johnson, now in his sixth summer of a statewide study of West Nile virus, said the *Culex tarsalis* mosquito is the primary species that transmits West Nile virus in Montana. The mosquito likes river

drainages, extensive wetlands and areas irrigated for agriculture. Hot spots in the state are the Medicine Lake National Wildlife Refuge in northeast Montana, the Yellowstone River and the Milk River. More infected mosquitoes have been found in eastern Montana than western.

Johnson and his research teams have been studying West Nile virus since it first appeared in Montana in 2003. This summer, they'll conduct research in about 20 counties. They have already returned to Medicine Lake to capture mosquitoes, trap stable flies and monitor pelicans. They will also trap mosquitoes along the Yellowstone and Milk rivers, locations in western Montana and in some state parks.

Mosquitoes play a major part in the transmission of West Nile virus, but stable flies may play a role, too, Johnson said. He already believes that birds and not mosquitoes are responsible for bringing West Nile virus into the state. Those could be a variety of birds -- ranging from sparrows and robins to shore birds -- coming from various locations.

It appears that West Nile virus is transmitted between birds as well as between mosquitoes and other species, Johnson said. At Medicine Lake, for example, pelicans shed West Nile through their mouths and feces. Since the Medicine Lake pelicans live in colonies and nest on the ground, they may pass the virus to each other.

Johnson suggested that Montanans protect themselves against West Nile by using mosquito repellents. He recommended Picaradin (trade name: Cutters Advanced) or repellents that list DEET as an active ingredient. Some people prefer Picaradin, he said, because they like its scent more than DEET's. It's also less oily than DEET and doesn't dissolve nylon watchbands or clothes.

The *Culex tarsalis* mosquito is most active an hour before sunset to midnight, Johnson said. It stops flying when temperatures fall below 50

degrees.

Source: Montana State University

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