# Living with West Nile Virus

By Bob Sallinger, Wildlife Care Center Director

Although West Nile Virus has been present in other parts of the world since the 1937, it did not arrive in North America until 1999 when it was first identified in New York City. Its sudden appearance and quick spread westward has generated sensational headlines and much interest. In fact the risks present to humans by this virus are very low and can be reduced even further by some easy, common sense steps. Once established, there is no way to eliminate the virus from a geographic area. West Nile Virus first appeared in Oregon during 2004 and health officials expect to see an increased presence during 2007.[1] It is important that we understand the risks presented by the virus and how best to reduce our chances of exposure. As in other parts of the world that have been coping with the virus for decades, it is important that we learn to live with West Nile Virus.

## Putting West Nile Virus in Perspective: Humans

How much of a risk does West Nile Virus really pose to humans? Since 1999, there have been a total of 23,975 confirmed human cases of West Nile Virus and 962 deaths. To put this in perspective, more people die of influenza each month, than have died of West Nile Virus during the past eight years.[2]

The primary mode of transmission to humans is by being bitten by an infected mosquito.[3] Some species of mosquito do not carry the virus and not everyone who is bitten by an infected mosquito will contract the virus. Of those who do contract the virus, most will never show any symptoms at all; they will most likely never know that they even had the virus. 20% of humans who become infected will show flu-like symptoms. One out of 150 people who show flu-like symptoms will develop meningitis or encephalitis. One out of ten people who develop meningitis or encephalitis will die. To put it another way, if 7,500 people contact the virus, 6000 will never even know they have the virus, 1,500 will show flu-like symptoms, 10 will become seriously ill with meningitis or encephalitis, and 1 person will likely die.

## Putting West Nile Virus in Perspective: Domestic Animals

As with humans, domestic animals become infected with West Nile Virus by being bitten by an infected mosquito. West Nile Virus infections in dogs and cats are extremely rare. Infections of horses and domestic birds are more common. Vaccinations for birds and horses are available. To find out more about vaccinations consult with your veterinarian.

## Putting West Nile Virus in Perspective: Wildlife

While West Nile Virus has impacted a wide array of wildlife species, the primary impacts have been on birds. Humans cannot contract West Nile Virus by coming in contact with infected birds. To date there are at least 250 avian species in the United States that have been documented to have contracted West Nile Virus. Members of the corvid family (crows, ravens, magpies and jays) have been particularly hard hit. Some individuals will recover, but many will die from the virus. Data is only preliminary, but early indications are that while the immediate arrival of West Nile Virus in a new area can cause temporary reductions in the populations of some species, those populations tend to recover in ensuing years as species build up immunity. Experts are particularly concerned about threatened and endangered species such as spotted owls and condors whose populations are still relatively small and may have more difficulty recovering from short-term population crashes.

## What You Can Do to Minimize Your Risk

It is neither desirable nor possible to completely eliminate entire mosquito populations, but there are some common sense steps that individuals can take to minimize their risks;

· Install screens in all windows and doorways.

· When traveling in areas with high densities of mosquitoes, wear long sleeve shirts, long pants and socks. Consider using a mosquito repellent and always read the warning label. For those who camp, it is worth noting that the mosquito species typically associated with wooded habitat are not the ones that have been identified as primary carriers of West Nile Virus.

· Reduce standing water around your home. Mosquitoes can breed in water left standing for a week or more. Clean rain gutters, cover barrels, remove old tires, empty birdbaths at least once weekly.

· If you find a bird you believe is sick with West Nile Virus, leave it alone and contact your local Fish and Wildlife Agency or wildlife rehabilitation center. Always wear gloves when handling any wildlife regardless of whether you believe it has contracted West Nile Virus or not.

· Remember that pesticides are poisons. Far more people become ill from pesticides each year than will be impacted by West Nile Virus. Random use of pesticides will not protect you from West Nile Virus but it will add another unnecessary hazard to your environment.

## A Word on Behalf of Mosquitoes

Often lost in the discussion of West Nile Virus is the important role that mosquitoes play in the food web. Not all mosquito species carry West Nile Virus. All mosquito species do however play a vital role in the survival of a vast array of bird and bat species. We could not eliminate all the mosquitoes even if that was what we desired.

The species of greatest concern is the Culex tarsalis or "house" mosquito commonly associated with urban and suburban areas rather than wetlands and woodlands. These mosquitoes breed in standing water oftentimes found in old tires, catch basins, clogged gutters and open garbage receptacles. It is by reducing these types of mosquito breeding opportunities around our homes rather than by promoting widespread use of pesticides or elimination of fish and wildlife habitat that we will reduce our greatest risk of exposure. By observing the prudent measures listed above we can protect ourselves and still appreciate and respect the important ecological role played by the mosquito.

## Living with West Nile Virus

The arrival of West Nile Virus in Oregon has generated sensational headlines and a great deal of fear. However, it is a response that is driven more by its sudden arrival and quick spread than by the threat that it poses to human health. In fact another mosquito borne virus quite similar to West Nile Virus, Saint Lewis Encephalitis, has been among us for more than five decades, but hardly generates any coverage or interest at all. Many people may recall the blaring headlines and pervasive fear generated by the emergence of tick borne Lyme Disease in the early 1990's. Today Lyme Disease is still among us, but we have adopted common sense strategies to reduce our exposure and there are few among us who now fear to venture out into the woods. Ten years from now West Nile Virus will still be among us,. However it too, will ultimately become something that we take prudent measures to protect ourselves from but think about rarely.

[1] During 2006, 73 humans, 25 birds and 35 horses tested positive for the virus in Oregon.
[2] According to the Oregon Health Services on average 36,000 U.S. citizens die of influenza and pneumonia each year.
[3] The other modes of transmission include blood transfusion, organ transplant and possibly via breast milk.

**For information on West Nile Virus visit the following websites:**

Oregon Health Division
www.dhs.state.or.us/publichealth/acd/wnile/index.cfm
Centers for Disease Control West Nile Virus
www.cdc.gov/westnile/
Northwest Alternatives to Pesticides
www.pesticide.org/