HEALTH AWARENESS

Satellites Track West Nile Virus In The U.S.

(NAPSA)—Satellites hundreds of miles up in the sky are helping us stay healthier here on earth. A NASA-funded study uses temperature and vegetation from satellites to help track and predict where the West Nile Virus is spreading in North America. Scientists and public health officials hope one day to have real-time maps to focus resources and stave off the disease more efficiently.

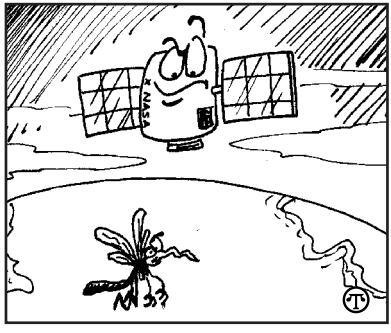
The disease, first reported in the U.S. in 1999, causes flu-like symptoms and can lead to fatal encephalitis in people with compromised immune systems such as the elderly.

Though not yet proven, scientists believe the West Nile Virus may spread access the country by infected birds traveling along their migration routes. Mosquitoes that act as vectors carry the virus, and pass it on when feeding on hosts like birds, livestock, other animals and people.

The satellite maps show nationwide temperatures, distributions of vegetation, bird migration routes and areas pinpointing reported cases. The combined data helps scientists predict disease outbreaks by showing where conditions are right for the insects to thrive and where the disease appears to be spreading.

Mosquitoes tend to thrive in warmer, wetter areas. Satellites let researchers see which areas have these conditions, allowing for better prediction of disease transmission.

Similarly, satellites also help plot patterns like the timing of



Satellites vs. Mosquitoes: It is hoped that satellites will soon be able to track and predict where the next outbreak of West Nile Virus will occur.

when temperatures peak during a year. Mosquito populations appear to increase during the first half of the year but only reach sufficient levels to transmit the disease during the second half of the year.

The idea is to let the satellite capture where the disease is spreading from year to year and make some predictions about where the disease is going.

The study suggests that a mild winter in 1998 to 1999 may have provided favorable conditions for mosquitoes to survive the winter, leading to a greater number of carriers in 1999.

The methods used in this research may be modified and applied to study a variety of other problems, including malaria, dengue fever, Lyme disease, influenza, even asthma.

For more information, visit http://earthobservatory.nasa.gov.