Approved: March 29, 2002
Date

MINUTES OF THE HOUSE COMMITTEE ON AGRICULTURE.

The meeting was called to order by Chairman Dan Johnson at 3:30 p.m. on March 25, 2002, in Room 423-S of the Capitol.

All members were present except: Representative Faber - excused
Representative O'Brien - excused

Committee staff present: Raney Gilliland, Legislative Research Department
Gordon Self, Revisor of Statutes
Kay Scarlett, Committee Secretary

Conferees appearing before the committee:
Dr. Bonnie Rush, Professor of Equine Internal Medicine, Kansas State University

Others attending: See attached list

Minutes of the March 11, 13, 18 and 20 meetings were distributed. Members were asked to notify the committee secretary of any corrections or additions prior to 5:00 p.m., March 26, or the minutes will be considered approved as presented.

Dr. Bonnie Rush, Professor of Equine Internal Medicine, Kansas State University, presented an overview of the West Nile virus which affects primarily horses and humans. West Nile encephalitis is an infection of the brain caused by the West Nile virus commonly found in Africa, West Asia, and the Middle East. She explained that the West Nile virus was first found in the United States in 1999 in the New York area and then moved down the Atlantic seaboard. The virus, transmitted by mosquitoes feeding on infected birds, has been found as far west as Iowa, Missouri, and Arkansas and is expected to reach Kansas this summer or fall. She discussed the transmission, prevention, symptoms, and treatment of the virus. (Attachment 1)

The meeting adjourned at 3:55 p.m. No further meetings of the House Committee on Agriculture are scheduled for the 2002 Legislative Session.

HOUSE AGRICULTURE COMMITTEE GUEST LIST

DATE: March 25, 2002

NAME	REPRESENTING
Mirk Hanson	Ks Bd of Veterinary Examiners
Sue Peterson	K-State
Janet McPherson	Ks. Farm Bureau
Nelson Krueger	Western Wireless

Questions and Answers

Please use the menu below to jump to a topic or scroll down to read the entire "Questions and Answers" page.

Topics on this page:

Overview of West Nile Virus

Q. What is West Nile encephalitis?
A. "Encephalitis" means an inflammation of the brain and can be caused by viruses and bacteria, including viruses transmitted by mosquitoes. West Nile encephalitis is an infection of the brain caused by West Nile virus, a flavivirus commonly found in Africa, West Asia, and the Middle East. It is closely related to St. Louis encephalitis virus found in the United States.

Q. Where did West Nile virus come from?
A. West Nile virus has been commonly found in humans and birds and other vertebrates in Africa, Eastern Europe, West Asia, and the Middle East, but until 1999 had not previously been documented in the Western Hemisphere. It is not known from where the U.S. virus originated, but it is most closely related genetically to strains found in the Middle East.

Q. Historically, where has West Nile encephalitis occurred worldwide?
A. See the map describing distribution of flaviviruses, including West Nile virus:

View enlarged image.

Q. How long has West Nile virus been in the U.S.?
A. It is not known how long it has been in the U.S., but CDC scientists believe the virus has probably been in the eastern U.S. since the early summer of 1999, possibly longer.

Q. How many cases of West Nile encephalitis in humans have occurred in the U.S.?
A. In 1999, 62 cases of severe disease, including 7 deaths, occurred in the New York area. In 2000, 21 cases were reported, including 2 deaths in the New York City area. No reliable estimates are available for the number of cases of West Nile encephalitis that occur worldwide.

Q. I understand West Nile virus was found in "overwintering" mosquitoes in the New York City area in early 2000. What does this mean?
A. One of the species of mosquitos found to carry West Nile virus is the

House Agriculture Committee
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Attachment 1

Culex species which survive through the winter, or "overwinter," in the adult stage. That the virus survived along with the mosquitoes was documented by the widespread transmission the summer of 2000.

Q. Do the findings indicate that West Nile virus is established in the Western Hemisphere?
A. The continued expansion of West Nile virus in the United States indicates that it is permanently established in the Western Hemisphere.

Q. Is the disease seasonal in its occurrence?
A. In the temperate zone of the world (i.e., between latitudes 23.5° and 66.5° north and south), West Nile encephalitis cases occur primarily in the late summer or early fall. In the southern climates where temperatures are milder, West Nile virus can be transmitted year round.

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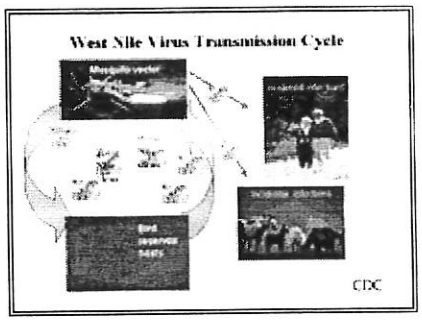
Transmission of West Nile Virus

Q. How do people get West Nile encephalitis?
A. By the bite of mosquitoes infected with West Nile virus.

Q. What is the basic transmission cycle?
A. Mosquitoes become infected when they feed on infected birds, which may circulate the virus in their blood for a few days. Infected mosquitoes can then transmit West Nile virus to humans and animals while biting to take blood. The virus is located in the mosquito's salivary glands. During blood feeding, the virus may be injected into the animal or human, where it may multiply, possibly causing illness.

Q. If I live in an area where birds or mosquitoes with West Nile virus have been reported and a mosquito bites me, am I likely to get sick?
A. No. Even in areas where mosquitoes do carry the virus, very few mosquitoes—much less than 1%—are infected. If the mosquito is infected, less than 1% of people who get bitten and become infected will get severely ill. The chances you will become severely ill from any one mosquito bite are extremely small.

Q. Can you get West Nile encephalitis from another person?
A. No. West Nile encephalitis is NOT transmitted from person-to-person. For example, you cannot get West Nile virus from touching or kissing a person who has the disease, or from a health care worker who has treated someone with the disease.



View enlarged image.

Q. Is a woman's pregnancy at risk if she gets West Nile encephalitis?
A. There is no documented evidence that a pregnancy is at risk due to infection with West Nile virus.

Q. Besides mosquitoes, can you get West Nile virus directly from other insects or ticks?
A. Infected mosquitoes are the primary source for West Nile virus. Although ticks infected with West Nile virus have been found in Asia and Africa, their role in the transmission and maintenance of the virus is uncertain. However, there is no information to suggest that ticks played any role in the cases

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identified in the United States.

Q. How many types of animals have been found to be infected with West Nile virus?
A. Although the vast majority of infections have been identified in birds, WN virus has been shown to infect horses, cats, bats, chipmunks, skunks, squirrels, and domestic rabbits.

Q. Can you get West Nile virus directly from birds?
A. There is no evidence that a person can get the virus from handling live or dead infected birds. However, persons should avoid bare-handed contact when handling any dead animals and use gloves or double plastic bags to place the carcass in a garbage can.

Q. Can I get infected with West Nile virus by caring for an infected horse?
A. West Nile virus is transmitted by infectious mosquitoes. There is no documented evidence of person-to-person or animal-to-person transmission of West Nile virus. Normal veterinary infection control precautions should be followed when caring for a horse suspected to have this or any viral infection.

Q. How does West Nile virus actually cause severe illness and death in humans?
A. Following transmission by an infected mosquito, West Nile virus multiplies in the person's blood system and crosses the blood-brain barrier to reach the brain. The virus interferes with normal central nervous system functioning and causes inflammation of brain tissue.

Q. What proportion of people with severe illness due to West Nile virus die?
A. Among those with severe illness due to West Nile virus, case-fatality rates range from 3% to 15% and are highest among the elderly. Less than 1% of those infected with West Nile virus will develop severe illness.

Q. If a person contracts West Nile virus, does that person develop a natural immunity to future infection by the virus?
A. It is assumed that immunity will be lifelong; however, it may wane in later years.

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Prevention of West Nile Virus

Q. What can be done to prevent outbreaks of West Nile virus?
A. Prevention and control of West Nile virus and other arboviral diseases is most effectively accomplished through integrated vector management programs. These programs should include surveillance for West Nile virus activity in mosquito vectors, birds, horses, other animals, and humans, and implementation of appropriate mosquito control measures to reduce mosquito populations when necessary. Additionally, when virus activity is detected in an area, residents should be alerted and advised to increase measures to reduce contact with mosquitoes. Details about effective prevention and control of West Nile virus can be found in CDC's Guidelines for Surveillance, Prevention, and Control (286 KB, 111 pages).

Q. Is there a vaccine against West Nile encephalitis?
A. No, but several companies are working towards developing a vaccine.

Q. What can I do to reduce my risk of becoming infected with West Nile virus?

A.

- Stay indoors at dawn, dusk, and in the early evening.
- Wear long-sleeved shirts and long pants whenever you are outdoors.
- Spray clothing with repellents containing permethrin or DEET since mosquitoes may bite through thin clothing.
- Apply insect repellent sparingly to exposed skin. An effective repellent will contain 35% DEET (N,N-diethyl-meta-toluamide). DEET in high concentrations (greater than 35%) provides no additional protection.
- Repellents may irritate the eyes and mouth, so avoid applying repellent to the hands of children.
- Whenever you use an insecticide or insect repellent, be sure to read and follow the manufacturer's DIRECTIONS FOR USE, as printed on the product.
- Note: Vitamin B and "ultrasonic" devices are NOT effective in preventing mosquito bites.

Q. Where can I get more information on mosquito repellents?

A. Visit the American College of Physicians website: "Mosquitoes and mosquito repellents: A clinician's guide" (Mark S. Fradin, MD. *Annals of Internal Medicine*. June 1, 1998;128:931-940). You can also find information on insect repellents containing DEET* at the Environmental Protection Agency (EPA) website.

Q. Where can I get information about the use of pesticide sprays that are being used for mosquito control?

A. The federal agency responsible for pesticide evaluation is the Environmental Protection Agency (EPA). See the EPA website* for detailed answers to the questions about pesticides used for mosquito control.

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Symptoms of West Nile Virus

Q. Who is at risk for getting West Nile encephalitis?

A. All residents of areas where virus activity has been identified are at risk of getting West Nile encephalitis; persons older than 50 years have the highest risk of severe disease.

Q. What are the symptoms of West Nile encephalitis?

A. Most infections are mild, and symptoms include fever, headache, and body aches, occasionally with skin rash and swollen lymph glands. More severe infection may be marked by headache, high fever, neck stiffness, stupor, disorientation, coma, tremors, convulsions, muscle weakness, paralysis, and, rarely, death.

Q. What is the incubation period in humans (i.e., time from infection to onset of disease symptoms) for West Nile encephalitis?

A. Usually 3 to 15 days.

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Testing and Treating West Nile Encephalitis in Humans

Q. I think I have symptoms of West Nile virus. What should I do?
A. Contact your health care provider if you have concerns about your health. If you or your family members develop symptoms such as high fever, confusion, muscle weakness, and severe headaches, you should see your doctor immediately.

Q. How do health care providers test for West Nile virus?
A. Your physician will first take a medical history to assess your risk for West Nile virus. People who live in or traveled to areas where West Nile virus activity has been identified are at risk of getting West Nile encephalitis; persons older than 50 years of age have the highest risk of severe disease. If you are determined to be at high risk and have symptoms of West Nile encephalitis, your provider will draw a blood sample and send it to a commercial or public health laboratory for confirmation.

Q. How is West Nile encephalitis treated?
A. There is no specific therapy. In more severe cases, intensive supportive therapy is indicated, often involving hospitalization, intravenous fluids, airway management, respiratory support (ventilator), prevention of secondary infections (pneumonia, urinary tract, etc.), and good nursing care.

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West Nile Virus and Birds

Q. Do birds infected with West Nile virus die or become ill?
A. In the 1999 New York area epidemic, there was a large die-off of American crows. West Nile virus has been identified in more than 70 species of birds found dead in the United States. Most of these birds were identified through reporting of dead birds by the public.

Q. How can I report a sighting of dead bird(s) in my area?
A. Please contact your state or local health department.

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West Nile Virus and Dogs and Cats

Q. Can West Nile virus cause illness in dogs or cats?
A. There is a published report of West Nile virus isolated from a dog in southern Africa (Botswana) in 1982. West Nile virus has been isolated from several dead cats in 1999 and 2000. A serosurvey of dogs and cats in the epidemic area showed a low infection rate.

Q. Can infected dogs or cats be carriers (i.e., reservoirs) for West Nile virus and transmit the virus to humans?
A. West Nile virus is transmitted by infectious mosquitoes. There is no documented evidence of person-to-person, animal-to-animal, or animal-to-person transmission of West Nile virus. Veterinarians should take normal infection control precautions when caring for an animal suspected to have this or any viral infection.

Q. How do dogs or cats become infected with West Nile virus?
A. The same way humans become infected—by the bite of infectious

mosquitoes. The virus is located in the mosquito's salivary glands. During blood feeding, the virus is injected into the animal. The virus then multiplies and may cause illness. Mosquitoes become infected when they feed on infected birds, which may circulate the virus in their blood for a few days. It is possible that dogs and cats could become infected by eating dead infected animals such as birds, but this is unproven.

Q. Can a dog or cat infected with West Nile virus infect other dogs or cats?
A. No. There is no documented evidence that West Nile virus is transmitted from animal to animal.

Q. How long can a dog or cat be infected with West Nile virus?
A. The answer is not known at this time.

Q. Should a dog or cat infected with West Nile virus be destroyed? What is the treatment for an animal infected with West Nile virus?
A. No. There is no reason to destroy an animal just because it has been infected with West Nile virus. Full recovery from the infection is likely. Treatment would be supportive and consistent with standard veterinary practices for animals infected with a viral agent.

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West Nile Virus and Horses

Q. Has West Nile virus caused severe illness or death in horses?
A. Yes, while data suggest that most horses infected with West Nile virus recover, results of investigations indicate that West Nile virus has caused deaths in horses in the United States.

Q. How do the horses become infected with West Nile virus?
A. The same way humans become infected—by the bite of infectious mosquitoes. The virus is located in the mosquito's salivary glands. When mosquitoes bite or "feed" on the horse, the virus is injected into its blood system. The virus then multiplies and may cause illness. The mosquitoes become infected when they feed on infected birds or other animals.

Q. How does the virus cause severe illness or death in horses?
A. Following transmission by an infected mosquito, West Nile virus multiplies in the horse's blood system, crosses the blood brain barrier, and infects the brain. The virus interferes with normal central nervous system functioning and causes inflammation of the brain.

Q. Can I get infected with West Nile virus by caring for an infected horse?
A. West Nile virus is transmitted by infectious mosquitoes. There is no documented evidence of person-to-person or animal-to-person transmission of West Nile virus. Normal veterinary infection control precautions should be followed when caring for a horse suspected to have this or any viral infection.

Q. Can a horse infected with West Nile virus infect horses in neighboring stalls?
A. No. There is no documented evidence that West Nile virus is transmitted between horses. However, horses with suspected West Nile virus should be isolated from mosquito bites, if at all possible.

Q. My horse is vaccinated against eastern equine encephalitis (EEE),

western equine encephalitis (WEE), and Venezuelan equine encephalitis (VEE). Will these vaccines protect my horse against West Nile virus infection?
A. No. EEE, WEE, and VEE belong to another family of viruses for which there is no cross-protection.

Q. Can I vaccinate my horse against West Nile virus infection?
A. A West Nile virus vaccine for horses was recently approved, but its effectiveness is unknown.

Q. How long will a horse infected with West Nile virus be infectious?
A. We do not know if an infected horse can be infectious (i.e., cause mosquitoes feeding on it to become infected). However, previously published data suggest that the virus is detectable in the blood for only a few days.

Q. What is the treatment for a horse infected with West Nile virus? Should it be destroyed?
A. There is no reason to destroy a horse just because it has been infected with West Nile virus. Data suggest that most horses recover from the infection. Treatment would be supportive and consistent with standard veterinary practices for animals infected with a viral agent.

Q. Where can I get more information on horses and West Nile virus?
A. Visit the USDA website Animal and Plant Health Inspection Service (APHIS).*

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West Nile Virus and Wild Game Hunters

Q. Are duck and other wild game hunters at risk for West Nile virus infection?
A. Because of their outdoor exposure, game hunters may be at risk if they become bitten by mosquitoes in areas with West Nile virus activity. The extent to which West Nile virus may be present in wild game is unknown. Surveillance studies are currently underway in collaboration with the U.S. Geological Survey (USGS) National Wildlife Health Center (in Madison, Wisconsin) and with state and local wildlife biologists and naturalists to answer this question.

Q. What should wild game hunters do to protect against West Nile virus infection?
A. Hunters should follow the usual precautions when handling wild animals. If they anticipate being exposed to mosquitoes, they should apply insect repellents to clothing and skin, according to label instructions, to prevent mosquito bites. Hunters should wear gloves when handling and cleaning animals to prevent blood exposure to bare hands and meat should be cooked thoroughly.

Q. Who should wild game hunters contact for information about the risk for West Nile virus infection in specific geographic areas?
A. Hunters should check with their local area department of wildlife and naturalist resources, state epidemiologist at the state health department, or the U.S. Geological Survey (USGS) National Wildlife Health Center, Madison, WI, 608-270-2400 for information on local area risk.

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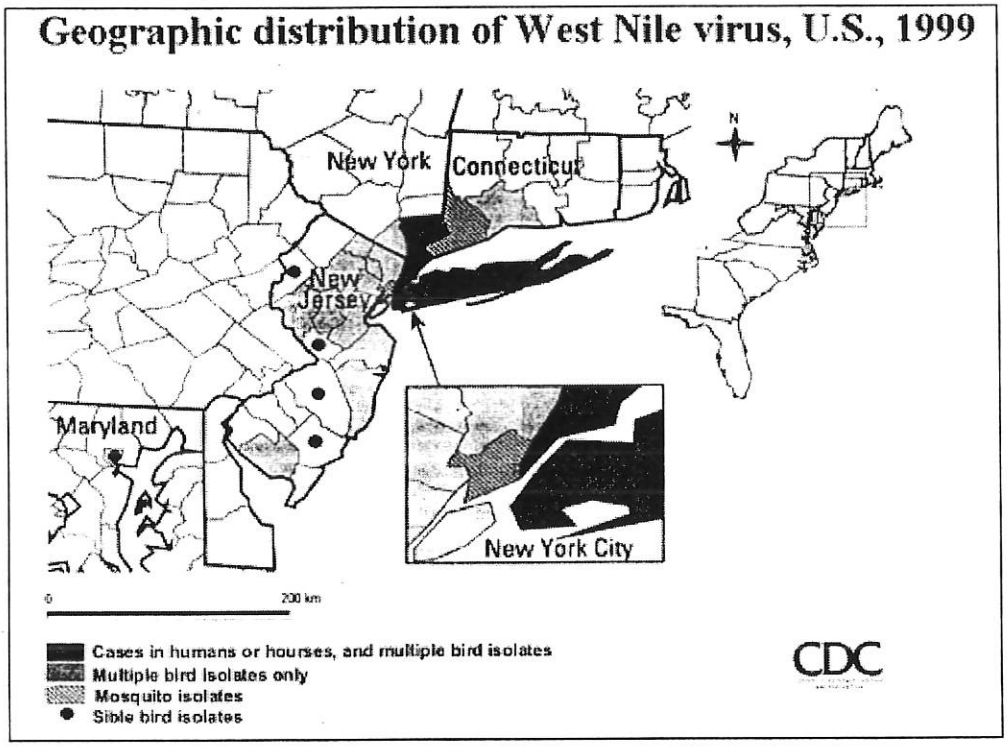
Map: Geographic distribution of West Nile virus, U.S., 1999



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This page last reviewed June 20, 2001

| Division of Vector-Borne Infectious Diseases |
| National Center for Infectious Diseases |
| Centers for Disease Control and Prevention |
P.O. Box 2087
Fort Collins, Colorado 80522

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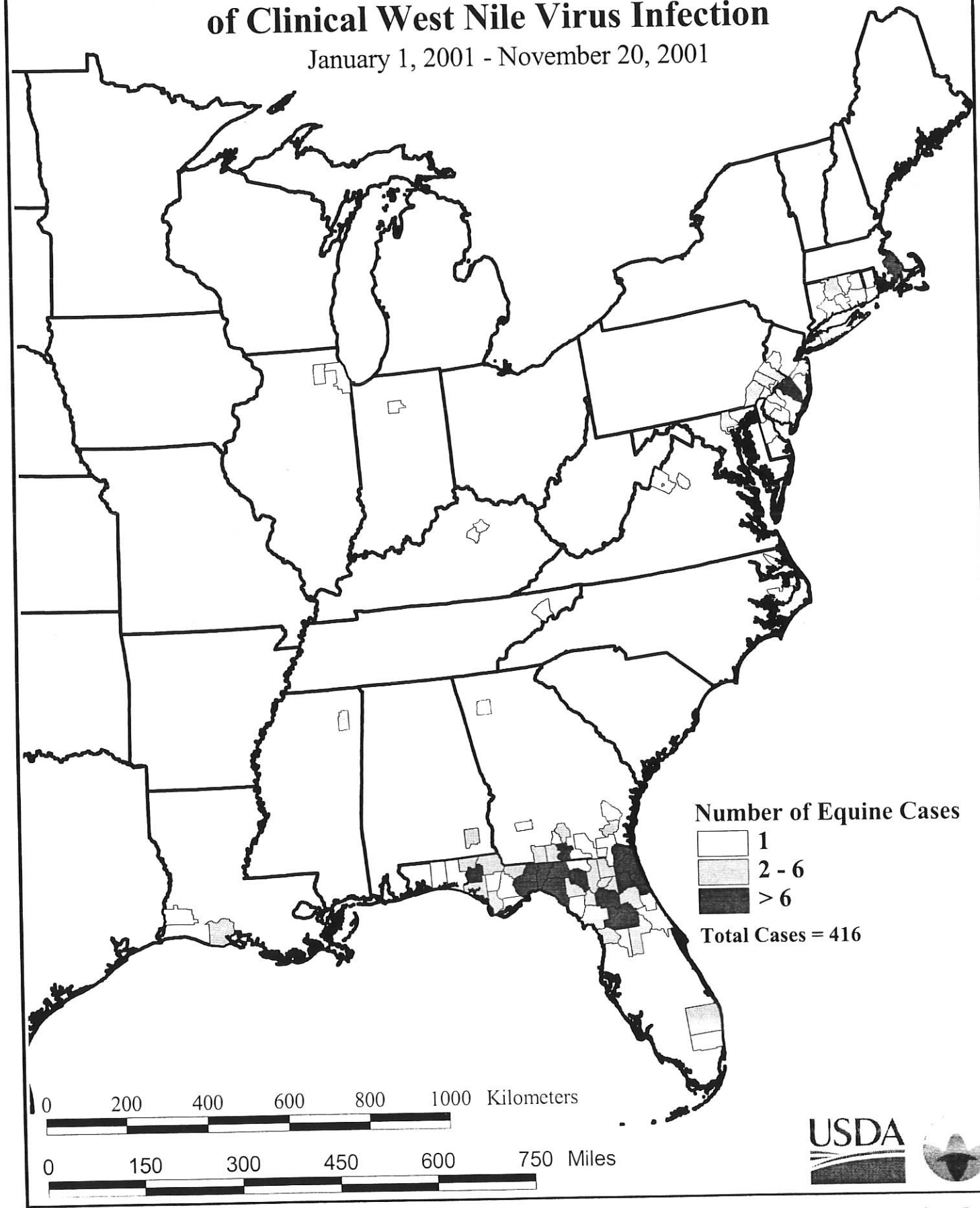
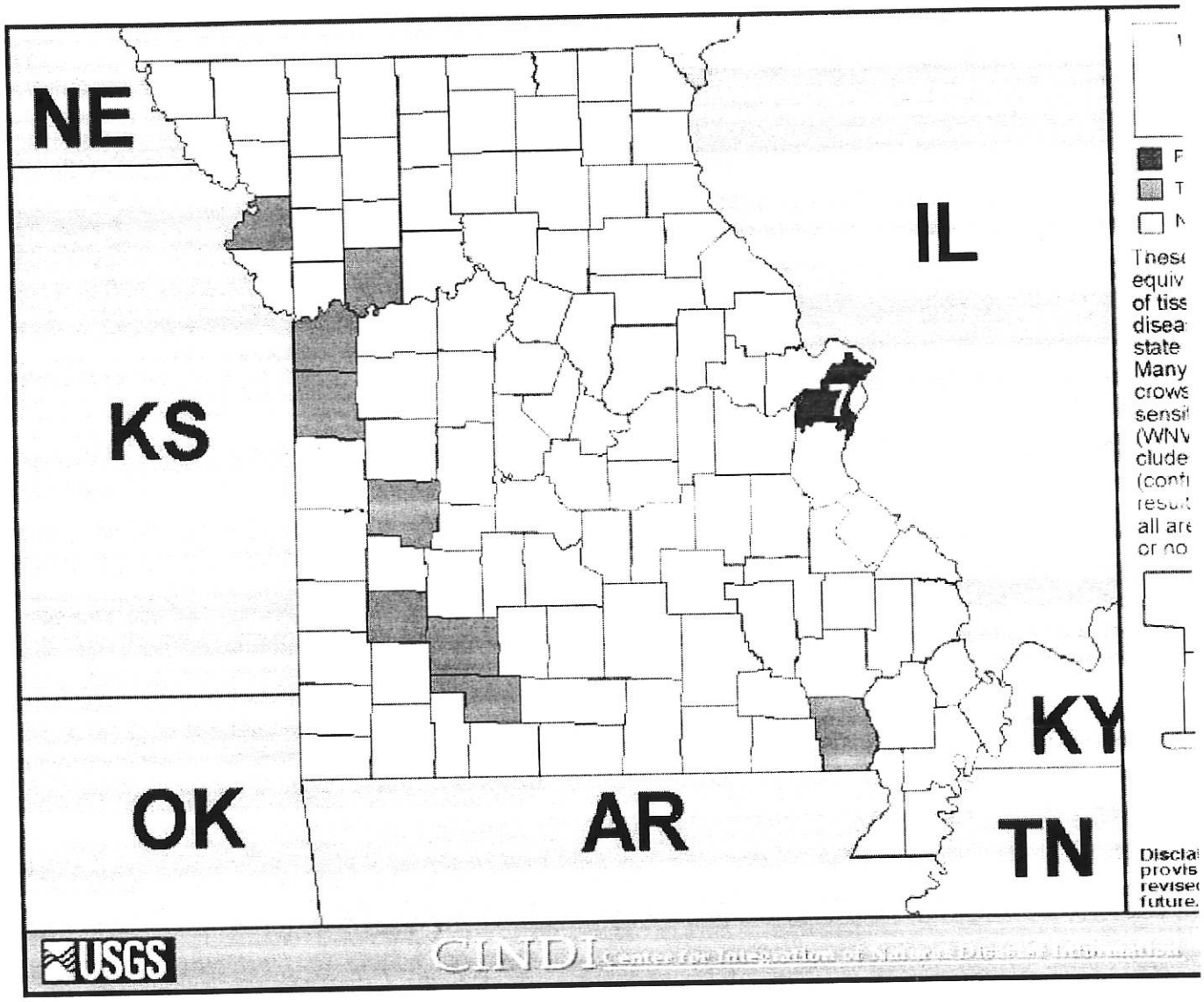
Counties with Equine Cases of Clinical West Nile Virus Infection

January 1, 2001 - November 20, 2001



USGS
science for a changing world

West Nile Virus -Missouri
Cumulative Bird Map



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KANSAS
DEPARTMENT OF HEALTH & ENVIRONMENT
BILL GRAVES, GOVERNOR

Clyde D. Graeber, Secretary

For Immediate Release

October 11, 2001

Contact: Mike Heideman, 785-296-5795

State Health Officials, Universities Form Partnership to Track West Nile

Kansas Department of Health and Environment (KDHE) is partnering with the University of Kansas and the Kansas State University to monitor for West Nile Virus in Kansas. Dead birds are being monitored through the University of Kansas Museum of Natural History and selected birds will be tested at the United States Geological Survey National Wildlife Health Center.

"West Nile Virus has not been found yet among birds, animals, or humans in Kansas," said KDHE State Public Health Veterinarian Dr. Gail Hansen. "However, the movement of the virus west across the country has been more rapid than originally projected and I expect to see the virus in Kansas. We are working closely with the two major universities to identify and then track the virus in the state".

During 2001, 25 cases of West Nile Virus encephalitis have been reported in the U.S. The disease produces flu-like symptoms and is usually a mild disease, but the elderly and people with weak immune systems can develop brain inflammation and serious consequences. At least 10 people in the United States have died since the mosquito borne illness first appeared in New York in 1999. There is no specific treatment for the disease nor a vaccine to prevent it in humans.

The virus is spread by the bite of an infected mosquito. Birds, especially crows and other scavenger birds, are susceptible to West Nile Virus and usually die within 2-3 weeks of infection. Dead birds cannot transmit the virus, but rather serve as indicators that the West Nile Virus is around. The virus in not spread from bird to person or person to person. West Nile Virus has spread to about two dozen U.S. states, and birds with the virus have been found in nearby states including Missouri, Arkansas, and Iowa. No West Nile Virus positive samples have been found in Kansas. Entomologists through the Kansas State University have been collecting mosquitoes and doing limited sentinel bird blood testing around the state.

The University of Kansas Natural History Museum is coordinating dead bird surveillance in Kansas. Limited testing will be done this fall on dead birds found in good condition. Call the

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University of Kansas Museum of Natural History at 785-864-3926 for reporting dead birds and for information on submitting birds for testing. Birds for testing should be placed in two plastic bags and frozen. More information on dead bird monitoring and testing in Kansas can be found at: http://nhm.ku.edu/birds/

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