

VEE SUMMARY

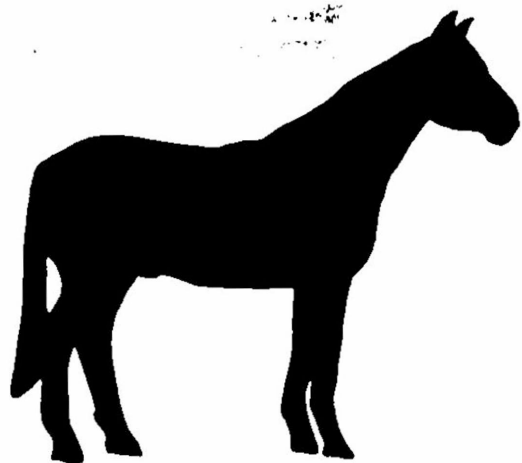
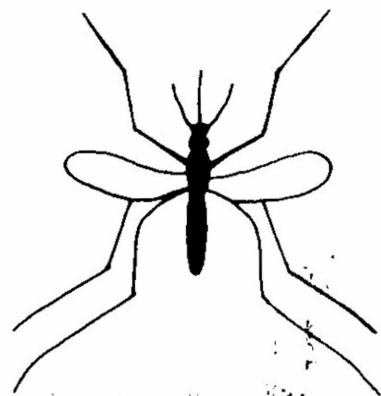
For July 1973

Issued August 1973

CENTER FOR DISEASE CONTROL

# VENEZUELAN EQUINE ENCEPHALITIS

## SURVEILLANCE



ZOOONOSIS

U. S. DEPARTMENT OF  
HEALTH, EDUCATION, AND WELFARE  
PUBLIC HEALTH SERVICE

# PREFACE

Summarized in this report is information received from State Health Departments, university investigators, virology laboratories and other pertinent sources, domestic and foreign. Much of the information is preliminary. It is intended primarily for the use of those with responsibility for disease control activities. Any one desiring to quote this report should contact the original investigator for confirmation and interpretation.

Contributions to the surveillance report are most welcome. Please address to:

Center for Disease Control  
Attn: Office of Veterinary Public Health Services  
Bureau of Epidemiology  
Atlanta, Georgia 30333

## SUGGESTED CITATION

Center for Disease Control: Venezuelan Equine Encephalitis Surveillance  
July 1973, Issued August 1973

Center for Disease Control . . . . . David J. Sencer, M.D., Director  
Bureau of Epidemiology . . . . . Philip S. Brachman, M.D., Director  
Office of Veterinary Public Health Services . . . . . Richard L. Parker, D.V.M., Chief  
Philip T. Durfee, D.V.M.  
Viral Diseases Branch . . . . . Michael B. Gregg, M.D., Chief

### *In Collaboration With:*

Bureau of Laboratories . . . . . U. Pentti Kokko, M.D., Director  
Virology Branch . . . . . Roy W. Chamberlain, Deputy Chief  
Vector Borne Diseases Branch . . . . . Archie D. Hess, Ph.D., Acting Chief  
Vector Ecology Investigations Section . . . . . D. Bruce Francis, Ph.D., Chief  
Arbovirus Ecology Section . . . . . W. Daniel Sudia, Ph.D., Chief  
Arbovirus Reference Section . . . . . Charles H. Calisher, Ph.D., Chief

Because of the need to provide information as soon as possible on VEE activity, these surveillance reports will be issued at various intervals--daily, weekly, bi-weekly or monthly--as the urgency of the information demands.

We invite your inquiries or information on VEE and related activities: Center for Disease Control, Office of Veterinary Public Health Services (404) 633-3311, Ext. 3691. Evening or weekend phone numbers:

Richard L. Parker, D.V.M. (404) 631-0125

Philip T. Durfee, D.V.M. (404) 636-4020

## I. SUMMARY

No isolations of Venezuelan equine encephalitis (VEE) virus have been reported from vertebrates in North America in the first 6 months of 1973. However, in January 1973, VEE virus was isolated from 1 pool of 50 Culiseta inornata mosquitoes in Xochimilco, D.F., Mexico (see VEE Annual Survey 1972). In the first 3 months of 1973, Peru reported 3,693 human VEE cases and 2,759 equine cases. Sporadic clinical cases in both man and equines were reported in other countries in South and Central America for the same period. In the United States, surveillance activities are being carried out by a number of cooperating federal, state, and local agencies. Both eastern equine encephalitis (EEE) virus and western equine encephalitis (WEE) virus have been recovered from mosquito pools and equines with encephalitis in the United States. Vaccination of horses against VEE is continuing in the United States, Mexico, and Peru.

## II. INTERNATIONAL NOTES

In Peru, the provinces of Trujillo, Pacasmayo, Contumaza, San Miguel, Chiclayo, Lambayeque, Piura, Sullana, and Morropon are presently involved in an epizootic of VEE. In the first 3 months of 1973, 3,693 human VEE cases and 2,759 equine cases were reported. As of August 1, 6,230 equines had been vaccinated with VEE attenuated virus vaccine. Other countries reporting clinical cases (No. in parenthesis) of VEE in humans or equines are El Salvador (2), Mexico (unknown), Venezuela (unknown), Honduras (1), Ecuador (2), Colombia (2). (Source: Centro Panamericano de Zoonosis: Vigilancia Epidemiologica, (English Edition), Vol. II, No. 3, May 11, 1973).

In Mexico for the period January 1 through July 15, 1973, 2,130,123 equines were vaccinated against VEE with an attenuated vaccine. Of this number, 524,273 (24.6%) were located in the border states of Sonora, Chihuahua, Coahuila, Nuevo Leon, and Tamaulipas. However, it should be noted that no equines were reported vaccinated in Baja California and only 586 in the State of Tamaulipas which borders southern Texas. (Reported by: Dr. Roberto Sanz Bienzobas, Direccion General de Sanidad Animal, Depto. de Sanidad Equina, Mexico, D.F.)

Since June 24, 1973, Panama has reported approximately 45 horse deaths caused by encephalitis. The causative agent appears to be EEE virus as it has been isolated from 3 of the horses, and elevated serum antibody titers against EEE virus have been found in 50 additional horses. One child died with a clinical diagnosis of encephalitis, however, no virus was isolated from the child nor were arbovirus antibodies found in the serum. On August 8, 1973, it was reported that no new horse cases were being observed and that the epizootic was apparently over,

There were no human deaths and apparently few human cases reported during the 5 week epizootic. (Reported by: William Dietz, M.D., Gorgas Memorial Institute-Middle America Research Unit, Dr. Pedro Galindo, Gorgas Memorial Institute-Gorgas Memorial Laboratory, Balboa Hts, Canal Zone, Panama, and Dr. Otto Alearez, Panama Viejo Veterinary Laboratory, Ministry of Agriculture and Development, Panama.)

### III. STATE ACTIVITIES

#### A. California

As of July 1, 1973, a total of 52,000 mosquitoes (1,609 pools) had been tested for the presence of arboviruses from Imperial County, California, and Yuma County, Arizona. The majority of these mosquitoes were collected in the first week of June 1973. While all pools were negative for VEE virus, 28 isolations of other arboviruses were made. These included St. Louis encephalitis (SLE) virus (2), WEE virus (8), Turlock virus (12), and unidentified viruses (6). Of 27 suspect horse brains and serum samples examined by the State Department of Public Health, none were found to contain virus. (Reported by: Richard W. Emmons, M.D., Public Health Physician, and George L. Humphrey, D.V.M., Chief, Veterinary Public Health Section, California State Department of Public Health, Berkeley, California).

#### B. Arizona

Of 24 pools of Culex tarsalis mosquitoes collected from the Nogales area, all were negative for VEE virus. However, WEE virus was isolated from 1 pool collected on July 7, 1973. An isolation of Turlock virus was made from 1 of 9 pools of Aedes vexans collected on June 6, 1973. To date, at least 2 horse cases of WEE have been reported in Arizona, 1 of them in Phoenix. (Reported by: Philip M. Hotchkiss, D.V.M., State Public Health Veterinarian, Arizona Department of Public Health, Phoenix, and D. Bruce Francy, Ph.D., Chief, Vector Ecology Investigations Section, Vector-Borne Diseases Branch, Center for Disease Control, Ft. Collins, Colorado.)

#### C. Texas

To date in 1973, no VEE virus has been isolated from either animals or mosquitoes in Texas. WEE virus has been isolated from pools of Culex tarsalis and Aedes dorsalis mosquitoes in El Paso County, and from C. tarsalis mosquitoes in Hale County. One case of equine WEE was also reported from the State. In Hardin County (eastern Texas) 6 horses died in early August 1973 with a clinical diagnosis of encephalitis. Subsequently, 2 of these equine cases were diagnosed as EEE by serology. There have been no human EEE cases reported to date.

Surveillance of wildlife in Hildago County is continuing. Of 76 serum samples submitted to the U.S. Department of Agriculture Veterinary Services Diagnostic Laboratory, Ames, Iowa, 5 contained neutralizing antibodies to WEE virus, and serum samples from 2 coyotes showed positive titers to VEE virus. (Reported by: A. B. Rich, D.V.M., Director, Division of Veterinary Public Health, Texas State Department of Health, Austin; D. Bruce Francy, Ph.D., Chief, Vector Ecology Investigations Section, Vector-Borne Diseases Branch, Center for Disease Control, Ft. Collins, Colorado; Everett F. Baker, Jr., D.V.M., CDC Activities Office, El Paso, Texas.)

#### D. Colorado

No VEE activity was reported for the first 6 months of 1973. The prevalence of equine WEE was substantially less than was seen last year in the same period. No human WEE cases have been reported in 1973.

WEE virus has been isolated from 11 of 90 blood samples drawn from nestling house sparrows in Morgan County, Colorado. (Reported by: Martin D. Baum, D.V.M., State Public Health Veterinarian, Colorado State Department of Public Health and D. Bruce Francy, Ph.D., Chief, Vector Ecology Investigations Section, Vector-Borne Diseases Branch, CDC, Ft. Collins, Colorado.)

#### E. New Mexico

New Mexico reported no VEE activity. Surveillance of 15 sentinel poultry flocks in June and July showed no birds infected with either WEE or SLE viruses. (Reported by: Mr. Bryan Miller, Chief, New Mexico Environmental Improvement Agency, Health and Social Services Department, Santa Fe, New Mexico.)

#### F. Southeastern States

State health departments and the USDA Veterinary Services Diagnostic Laboratory, Ames, Iowa, have reported equine EEE cases from 7 southeastern states. To date, no human EEE cases have been reported. Florida reported 46 equine EEE cases based on serology. These cases were limited to the northern portion of the State and were considered to represent a substantial increase in the incidence of this disease over last year. One deer from northern Florida was also found to have antibodies against EEE virus. Georgia reported 7 equine EEE cases, 4 based on virus isolation, and 3 on serology. North Carolina has reported 10 cases, all based on serology. South Carolina reported 8 cases, 4 based on virus isolation, and 4 on serology. Virginia reported 3 cases, all based on virus isolation. Alabama, Louisiana, and Mississippi each reported 1 case, those in Alabama and Louisiana based on serology and the 1 in Mississippi based on virus isolation.

VEE virus surveillance is continuing in Florida. Of 76 raccoon serum samples submitted from southern Florida, 6 were positive for antibodies against VEE virus. This undoubtedly represents exposure to the endemic strain of this virus which is known to be present in this area. (Reported by: James B. Nichols, D.V.M., Director, Division of Veterinary Public Health, Florida State Board of Health; R.K. Sikes, D.V.M., State Public Health Veterinarian, and Maurice Miot, Chief, Virus Laboratory, Georgia State Department of Human Resources; T.B. Ryan, D.V.M., Rollins Animal Disease Diagnostic Laboratory, North Carolina Department of Agriculture, Raleigh, N.C.; Carl E. Boyd, D.V.M., State Veterinarian, Columbia, S.C.; Dr. A.J. Roth, Coordinator, Animal Health Services, Virginia Department of Agriculture and Karl A. Western, M.D., State Epidemiologist, Virginia Department of Health; Frederick S. Wolf, M.D., State Epidemiologist, Alabama State Department of Health; Charles T. Caraway, D.V.M., State Epidemiologist, Louisiana State Department of Health; Durward L. Blakey, M.D., State Epidemiologist, Mississippi State Board of Health and John Lomi, D.V.M., USDA, Jackson, Mississippi; and J.E. Pearson, D.V.M., Veterinary Services Diagnostic Laboratory, Ames, Iowa.)

#### IV. USDA ACTIVITIES

USDA veterinarians continue to investigate all reported cases of equine encephalitis. Between January 1 and July 21, 1973, specimens from 188 equines diagnosed as clinical cases were submitted to the Veterinary Services Diagnostic Laboratory, Ames, Iowa. Of these, 32 were positive for EEE and 12 for WEE. In the first 6 months of 1973, USDA received reports that 54,087 horses in the United States had been vaccinated against VEE. (Reported by: J. E. Pearson, D.V.M., Veterinary Services Diagnostic Laboratory, Ames, Iowa and Bob Mathis, D.V.M., Animal and Plant Health Inspection Service, USDA, Hyattsville, Maryland.)

# STATE EPIDEMIOLOGISTS AND STATE PUBLIC HEALTH VETERINARIANS

July 18, 1973

Key to all disease surveillance activities are the State Epidemiologists, who are responsible for collecting, interpreting, and transmitting data and epidemiologic information from their individual States. Their contributions to this report are gratefully acknowledged. In addition, valuable contributions to zoonoses surveillance reports are made by State Public Health Veterinarians.

STATE	STATE EPIDEMIOLOGIST	STATE PUBLIC HEALTH VETERINARIAN
Alabama	Frederick S. Wolf, M.D.	
Alaska	Donald K. Freedman, M.D.	
Arizona	*Philip M. Hotchkiss, D.V.M.	*Philip M. Hotchkiss, D.V.M.
Arkansas	G. Doty Murphy, III, M.D.	Harvie R. Ellis, D.V.M.
California	James Chin, M.D.	George L. Humphrey, D.V.M.
Colorado	Thomas M. Vernon, Jr., M.D.	Martin D. Baum, D.V.M.
Connecticut	James C. Hart, M.D.	
Delaware	Ernest S. Tierkel, V.M.D.	Ernest S. Tierkel, V.M.D.*
District of Columbia	William E. Long, M.D.	Paul L. Romig, D.V.M.
Florida	Ralph B. Hogan, M.D.	James B. Nichols, D.V.M.
Georgia	John E. McCroan, Ph.D.	R. Keith Sikes, D.V.M.
Hawaii	Ned Wiebenga, M.D.	John M. Gooch, D.V.M.
Idaho	John A. Mather, M.D.	Michael Daley, D.V.M.
Illinois	Byron J. Francis, M.D.	Russell J. Martin, D.V.M.
Indiana	Charles L. Barrett, M.D.	I. Dale Richardson, D.V.M.
Iowa	Charles A. Herron, M.D.	S. L. Hendricks, D.V.M.
Kansas	Don E. Wilcox, M.D.	George A. Mullen, D.V.M.
Kentucky	Calixto Hernandez, M.D.	Joseph W. Skaggs, D.V.M.
Louisiana	*Charles T. Caraway, D.V.M.	*Charles T. Caraway, D.V.M.
Maine	Peter J. Leadley, M.D.	
Maryland	John D. Stafford, M.D.	Kenneth L. Crawford, D.V.M.
Massachusetts	Nicholas J. Fiumara, M.D.	Francis Fitzgerald, D.V.M.
Michigan	Norman S. Hayner, M.D.	Donald B. Coohon, D.V.M.
Minnesota	D. S. Fleming, M.D.	
Mississippi	Durward L. Blakey, M.D.	
Missouri	H. Denny Donnell, Jr., M.D.	Edmund R. Price, D.V.M.
Montana	Martin D. Skinner, M.D.	
Nebraska	Paul A. Stoesz, M.D.	
Nevada	William M. Edwards, M.D.	
New Hampshire	Vladas Kaupas, M.D.	
New Jersey	Ronald Altman, M.D.	William C. Carter, D.V.M.
New Mexico		
New York State	Alan R. Hinman, M.D.	Melvin K. Abelseth, D.V.M.
New York City	Pascal J. Imperato, M.D.	Samuel Hutt, D.V.M.
North Carolina	Martin P. Hines, D.V.M.	John I. Freeman, D.V.M.
North Dakota	Kenneth Mosser	
Ohio	John H. Ackerman, M.D.	Jack H. Russell, D.V.M.
Oklahoma	Stanley Ferguson, Ph.D.	
Oregon	John A. Googins, M.D.	Monroe Holmes, D.V.M.
Pennsylvania	W. D. Schrack, Jr., M.D.	Ernest J. Witte, V.M.D.
Puerto Rico	Luis Mainardi, M.D.	Eduardo Toro, D.V.M.
Rhode Island	James R. Allen, M.D. (Acting)	Thomas J. Grennan, Jr., D.V.M.
South Carolina	William B. Gamble, M.D.	
South Dakota	Robert S. Westaby, M.D.	
Tennessee	Robert H. Hutcheson, Jr., M.D.	Luther E. Fredrickson, D.V.M.
Texas	M. S. Dickerson, M.D.	A. B. Rich, D.V.M.
Utah	Taira Fukushima, M.D.	F. James Schoenfeld, D.V.M.
Vermont	Geoffrey Smith, M.D.	Dymitry Pomar, D.V.M.
Virginia	Karl A. Western, M.D.	
Washington	John Beare, M.D. (Acting)	
West Virginia	N. H. Dyer, M.D.	
Wisconsin	H. Grant Skinner, M.D.	Wayne H. Thompson, D.V.M.
Wyoming	Herman S. Parish, M.D.	

\*Dual assignment