

California Arbovirus Surveillance Bulletin # 18

Week 25 Friday, June 22, 2007

Weekly and Year-To-Date Summaries

WEEKLY COMMENTS



Humans

The first confirmed human case of West Nile virus (WNV) in California in 2007 was reported from Kern County this week. The 21-year-old female resident of Kern County was initially identified through testing done at a blood bank; the local health department later confirmed that the woman had developed symptoms compatible with West Nile fever. One other WNV-positive blood donation sample has been identified in Kern County this year; this second individual has not developed symptoms and is therefore classified as an asymptomatic infection.

Horses

The California Department of Food and Agriculture reported one new case of WNV in a horse from Sonoma County this week.

Dead Birds & Tree Squirrels

Twenty-five new WNV positive dead birds were reported this week from the following counties: Fresno (4), Kern (8), Santa Clara (8), Stanislaus (4), and Tehama (1). **This is the first detection of WNV activity in Fresno and Tehama counties this year.** No tree squirrels have tested positive for WNV in 2007.

Reminder: Local agencies should check the Surveillance Gateway for their county DYCAST bird reporting updates.

Mosquito Pools

CVEC reported 15 new WNV positive pools this week from the following counties: Kern (12), Sutter (1), and Stanislaus (2). **This is the first detection of WNV activity in Sutter County this year.**

Sentinel Chickens

No new seroconversions were reported this week.

YTD ARBOVIRUS ACTIVITY WNV* Activity by Element and County, 2007

County	Humans	Horses	Dead Birds	Mosquito Pools	Sentinel Chickens	Squirrels
Fresno			4			
Imperial					1	
Kern	1		10	25		
Los Angeles			2	2	1	
Orange			8			
Riverside				1		
Sacramento			1			
San Bernardino			1			
San Diego			5			
Santa Clara			16			
Shasta			1			
Stanislaus			9	4		
Sonoma		2				
Sutter				1		
Tehama			1			
State Totals	1	2	58	33	2	0

*No other arbovirus activity has been detected in 2007.

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2007 & 2006 YTD West Nile Virus Comparisons		
	2007	2006
# Hotline Calls	11,582	19,575
Total # Dead Bird Reports	10,748	17,137
# Positive Counties	15	14
# Humans Cases / # Tested	1 / 437	1 / 566
# Horse Cases / # Tested	2 / 130	0 / 171
# Positive Dead Birds/ # Tested	58 / 1,768	31 / 2,016
# Positive Mosquito Pools/ # Tested	33 / 6,549	13 / 6,135
# Positive Chicken Sera/ # Tested	2 / 10,459	4 / 12,086
# Positive Squirrels/ # Tested	0 / 53	0 / 30

Website Information For updated information on WNV in California, please visit the California WNV website, www.westnile.ca.gov, or the California Vectorborne Disease Surveillance System website, www.calsurv.org. For national information on WNV and other arboviruses, please visit the CDC website, www.cdc.gov, and the USGS website, www.westnilemaps.usgs.gov.

TEST SUMMARIES

Human & Horse Cases

		Number Tested	WNV		WEE		SLE		Other	
			Imported	Local	Imported	Local	Imported	Local	Imported	Local
Humans Tested	Week	26	0	1	0	0	0	0	0	0
	YTD	437	0	1	0	0	0	0	0	0
Horses Tested	Week	10	0	1	0	0	0	0	0	0
	YTD	130	0	2	0	0	0	0	0	0

Dead Birds & Tree Squirrels

		Number Tested	WNV Positive
Dead Birds	Week	183	25
	YTD	1768	58
Tree Squirrels	Week	9	0
	YTD	53	0

Sentinel Chickens & Mosquito Pools

		Number Tested	WNV Positive	WEE Positive	SLE Positive	Flavivirus* Positive
Chicken Sera	Week	1068	0	0	0	0
	YTD	10,459	2	0	0	0
Mosquito Pools: RT-PCR	Week	1124	15	0	0	0
	YTD	6246	33	0	0	0
Mosquito Pools: RAMP	Week	32	0	N/A	N/A	N/A
	YTD	303	0	N/A	N/A	N/A

*Does not include those later confirmed as WNV or SLE

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POSITIVES: 6/18/07-6/22/07

Dead Birds

County	City	Zip Code	Species	Collected	Tested	Test Type
Fresno	Fresno	93710	American Crow	6/6/07	6/18/07	RT-PCR
Fresno	Fresno	93710	American Crow	6/7/07	6/18/07	RT-PCR
Fresno	Fresno	93710	American Crow	6/11/07	6/18/07	RT-PCR
Fresno	Fresno	93703	American Crow	6/12/07	6/18/07	RT-PCR
Kern	Bakersfield	93309	Western Scrub-Jay	6/7/07	6/18/07	RT-PCR
Kern	Bakersfield	93305	American Crow	6/7/07	6/18/07	RT-PCR
Kern	Bakersfield	93306	American Crow	6/7/07	6/18/07	RT-PCR
Kern	Bakersfield	93305	Rock Dove	6/7/07	6/18/07	RT-PCR
Kern	Bakersfield	93306	House Sparrow	6/8/07	6/18/07	RT-PCR
Kern	Bakersfield	93312	House Sparrow	6/8/07	6/18/07	RT-PCR
Kern	Bakersfield	93304	American Crow	6/11/07	6/18/07	RT-PCR
Kern	Bakersfield	93306	House Sparrow	6/11/07	6/18/07	RT-PCR
Santa Clara	San Jose	95128	American Crow	6/1/07	6/1/07	VecTest
Santa Clara	Sunnyvale	94087	American Crow	6/5/07	6/5/07	VecTest
Santa Clara	Stanford	94305	American Crow	6/5/07	6/5/07	VecTest
Santa Clara	San Jose	95124	American Crow	6/7/07	6/7/07	VecTest
Santa Clara	San Jose	95124	American Crow	6/8/07	6/8/07	VecTest
Santa Clara	Cupertino	95014	American Crow	6/12/07	6/12/07	VecTest
Santa Clara	Saratoga	95070	American Crow	6/12/07	6/12/07	VecTest
Santa Clara	Los Altos	94024	American Crow	6/15/07	6/15/07	VecTest
Stanislaus	Modesto	95350	American Crow	6/4/07	6/18/07	RT-PCR
Stanislaus	Modesto	95355	Western Scrub-Jay	6/5/07	6/18/07	RT-PCR
Stanislaus	Modesto	95350	American Crow	6/8/07	6/18/07	RT-PCR
Stanislaus	Modesto	95355	American Crow	6/11/07	6/18/07	RT-PCR
Tehama	Red Bluff	96080	American Crow	6/18/07	6/18/07	VecTest

Mosquito Pools

Site Code	Pool #	Species	# in Pool	Collected	Tested	City	County	Virus
KERN2002	109	Cx quinquefasciatus	50	6/15/07	6/20/07	Bakersfield	Kern	WN
KERN2002	110	Cx quinquefasciatus	50	6/15/07	6/20/07	Bakersfield	Kern	WN
KERN2010	116	Cx quinquefasciatus	50	6/15/07	6/20/07	Bakersfield	Kern	WN
KERN2010	117	Cx quinquefasciatus	50	6/15/07	6/20/07	Bakersfield	Kern	WN
KERN2010	118	Cx quinquefasciatus	50	6/15/07	6/20/07	Bakersfield	Kern	WN
KERN2010	119	Cx quinquefasciatus	50	6/15/07	6/20/07	Bakersfield	Kern	WN
KERN2010	120	Cx quinquefasciatus	50	6/15/07	6/20/07	Bakersfield	Kern	WN
KERN2016	125	Cx quinquefasciatus	50	6/15/07	6/20/07	Bakersfield	Kern	WN
KERN2016	126	Cx quinquefasciatus	50	6/15/07	6/20/07	Bakersfield	Kern	WN
KERN2018	128	Cx quinquefasciatus	50	6/15/07	6/20/07	Bakersfield	Kern	WN
KERN2018	129	Cx quinquefasciatus	50	6/15/07	6/20/07	Bakersfield	Kern	WN
KERN2002	111	Cx quinquefasciatus	50	6/15/07	6/22/07	Bakersfield	Kern	WN
SUYA0044	25	Cx tarsalis	50	6/11/07	6/20/07	Pleasant Grove	Sutter	WN
TRLK0434	471	Cx pipiens	22	6/19/07	6/21/07	Ceres	Stanislaus	WN
TRLK0424	525	Cx tarsalis	22	6/19/07	6/21/07	Patterson	Stanislaus	WN

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NATIONAL COMMENTS

No new update. As of June 12, 2007, WNV activity has been reported from the following 11 states: California, Florida, Idaho, Illinois, Indiana, Iowa, Mississippi, South Dakota, Tennessee, Texas, and Virginia. A total of 6 human cases have been reported in Iowa (1), Mississippi (4), and South Dakota (1). Of the 6 cases reported, 3 (50%) had West Nile neuroinvasive disease (i.e. encephalitis or meningitis). The median age of the cases was 45 years (range: 35-62 years) and 33% were male. One of the cases reported from Mississippi was fatal.

TEST PROTOCOLS

Humans:

Specimens are tested by local laboratories with an IgM or IgG immunofluorescent assay (IFA) and/or an IgM enzyme immunoassay (EIA). Specimens with inconclusive results are forwarded to VRDL for further testing or confirmation by plaque reduction neutralization test (PRNT).

Horses:

Serum or brain tissue specimens from horses displaying neurological symptoms are submitted to the California Animal Health and Safety Laboratory (CAHFS) and tested by EIA and PRNT.

Dead Birds and Tree Squirrels:

All bird and tree squirrel species from all zip codes are currently being accepted for testing unless otherwise requested by a local agency. Additionally, once WNV has been detected within a county, doves, pigeons, and chickens will no longer be accepted for testing from that county. Corvids that test positive via RAMP or VecTest are no longer confirmed. Dead birds and squirrels are necropsied at the California Animal Health and Food Safety (CAHFS) laboratory at UC Davis. Oral swabs from American Crows and kidney tissue from all other dead birds and squirrels are forwarded to the UC Davis Center for Vectorborne Diseases (CVEC) for WNV testing using the singleplex RT-PCR Taqman assay and confirmed with a second primer set. The WNV Dead Bird Surveillance Coordinator, Ryan Carney, can be reached directly at (510) 412-6254.

Sentinel Chickens:

Dried blood spot specimens from sentinel chickens submitted each week to the DHS Viral and Rickettsial Disease Laboratory (VRDL) are tested for the presence of antibodies to West Nile virus (WNV), western equine encephalomyelitis (WEE), and St. Louis encephalitis (SLE) viruses by EIA and IFA. Positive samples are confirmed by western-blot or PRNT.

Mosquito Pools:

Mosquito pools are screened for WEE, SLE, and WNV viral RNA using a Taqman multiplex RT-PCR. CVEC will cease confirmation testing on PCR-positive pools of *Cx. tarsalis* and *Cx. quinquefasciatus* but will continue to confirm multiplex PCR-positive results for other mosquito species using singleplex RT-PCR.

Prepared by the Vector-Borne Disease Section (Infectious Diseases Branch) and the Viral and Rickettsial Disease Laboratory Branch, Division of Communicable Disease Control, California Department of Health Services, 850 Marina Bay Parkway, Richmond, CA 94804. Questions concerning this bulletin should be addressed to Tina Feiszli by phone (510) 412-6298, FAX (510) 412-6263, or email: tfeiszli@dhs.ca.gov.