

California Arbovirus Surveillance Bulletin # 19

Week 26 Friday, June 29, 2007

Weekly and Year-To-Date Summaries

WEEKLY COMMENTS



Humans

No new cases were reported this week. As of June 29, 2007, 1 human case of West Nile virus (WNV) fever has been identified in Kern County. The individual was first identified through testing done at a blood bank; the local health department later confirmed that the donor had developed symptoms compatible with West Nile fever. Two additional WNV-positive blood donation samples have been identified to date in Fresno and Kern counties; neither donor has developed symptoms.

Horses

No new horse cases were reported this week.

Dead Birds & Tree Squirrels

Forty-one new WNV positive dead birds were reported this week from the following 12 counties: Alameda (1), Butte (1), Contra Costa (1), Fresno (2), Kern (13), Merced (1), Orange (1), Sacramento (1), Santa Clara (1), Shasta (3), Stanislaus (15), and Yuba (1). **This is the first detection of WNV activity in Alameda, Butte, Contra Costa, Merced, and Yuba 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 39 new WNV positive pools this week from the following counties: Fresno (2), Imperial (2), Kern (24), Kings (2), Los Angeles (1), Shasta (1), and Sutter (7). **This is the first detection of WNV activity in Kings County this year.**

In addition, 4 mosquito pools from Kern County tested positive for western equine encephalomyelitis (WEE) this week. **This is the first detection of WEE in California this year.**

Sentinel Chickens

Two WNV positive seroconversions were reported this week from Kern County. These are the first WNV seroconversions reported from Kern County this year.

2007 & 2006 YTD West Nile Virus Comparisons		
	2007	2006
Total # Dead Bird Reports	11,873	18,917
# Positive Counties	21	16
# Human Cases/ # Tested	1 / 458	1 / 592
# Horse Cases/ # Tested	2 / 130	0 / 191
# Positive Dead Birds/ # Tested	99 / 1,987	45 / 2,141
# Positive Mosquito Pools/ # Tested	72 / 7,578	23 / 7,142
# Positive Chicken Sera/ # Tested	4 / 11,442	6 / 13,068
# Positive Squirrels/ # Tested	0 / 68	0 / 35

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YTD WNV Activity by Element and County, 2007

County	Humans*	Horses	Dead Birds	Mosquito Pools	Sentinel Chickens	Squirrels
Alameda			1			
Butte			1			
Contra Costa			1			
Fresno			6	2		
Imperial				2	1	
Kern	1		23	49	2	
Kings				2		
Los Angeles			2	3	1	
Merced			1			
Orange			9			
Riverside				1		
Sacramento			2			
San Bernardino			1			
San Diego			5			
Santa Clara			17			
Shasta			4	1		
Stanislaus			24	4		
Sonoma		2				
Sutter				8		
Tehama			1			
Yuba			1			
State Totals	1	2	99	72	4	0

* Total does not include asymptomatic infections

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	21	0	0	0	0	0	0	0	0
	YTD	458	0	1	0	0	0	0	0	0
Horses Tested	Week	0	0	0	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	210	41
	YTD	1987	99
Tree Squirrels	Week	15	0
	YTD	68	0

Sentinel Chickens & Mosquito Pools

		Number Tested	WNV Positive	WEE Positive	SLE Positive	Flavivirus* Positive
Chicken Sera	Week	983	2	0	0	0
	YTD	11,442	4	0	0	0
Mosquito Pools: RT-PCR	Week	1002	39	0	0	0
	YTD	7248	72	0	0	0
Mosquito Pools: RAMP	Week	27	0	N/A	N/A	N/A
	YTD	330	0	N/A	N/A	N/A

*Does not include those later confirmed as WNV or SLE

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POSITIVES: 6/25/07-6/29/07

Dead Birds

County	City	Zip Code	Species	Collected	Tested	Test Type
Alameda	Hayward	94544	European Starling	6/19/07	6/25/07	RT-PCR
Butte	Paradise	95969	Steller's Jay	6/19/07	6/25/07	RT-PCR
Contra Costa	Lafayette	94549	House Finch	6/19/07	6/25/07	RT-PCR
Fresno	Fresno	93726	Western Scrub-Jay	6/18/07	6/25/07	RT-PCR
Fresno	Clovis	93611	American Crow	6/20/07	6/25/07	RT-PCR
Kern	Bakersfield	93307	Western Scrub-Jay	6/13/07	6/25/07	RT-PCR
Kern	Bakersfield	93309	American Crow	6/14/07	6/25/07	RT-PCR
Kern	Bakersfield	93304	Canary	6/14/07	6/25/07	RT-PCR
Kern	Bakersfield	93311	Western Scrub-Jay	6/14/07	6/25/07	RT-PCR
Kern	Bakersfield	93306	Mourning Dove	6/14/07	6/25/07	RT-PCR
Kern	Bakersfield	93307	Western Scrub-Jay	6/14/07	6/25/07	RT-PCR
Kern	Bakersfield	93307	House Finch	6/13/07	6/25/07	RT-PCR
Kern	Bakersfield	93304	House Sparrow	6/15/07	6/25/07	RT-PCR
Kern	Bakersfield	93304	House Sparrow	6/18/07	6/25/07	RT-PCR
Kern	Bakersfield	93304	American Crow	6/19/07	6/25/07	RT-PCR
Kern	Bakersfield	93305	House Finch	6/18/07	6/25/07	RT-PCR
Kern	Bakersfield	93312	House Finch	6/20/07	6/25/07	RT-PCR
Kern	Bakersfield	93304	House Sparrow	6/20/07	6/25/07	RT-PCR
Merced	Merced	95340	Yellow-billed Magpie	6/12/07	6/25/07	RT-PCR
Orange	Cypress	90630	American Crow	6/18/07	6/25/07	IHC
Sacramento	Sacramento	95819	American Crow	6/13/07	6/25/07	RT-PCR
Santa Clara	Los Altos	94024	American Crow	6/19/07	6/25/07	VecTest
Shasta	Redding	96001	American Crow	6/20/07	6/25/07	VecTest
Shasta	Redding	96001	American Crow	6/18/07	6/25/07	VecTest
Shasta	Redding	96003	American Crow	6/18/07	6/25/07	VecTest
Stanislaus	Modesto	95350	Western Scrub-Jay	6/13/07	6/25/07	RT-PCR
Stanislaus	Modesto	95350	Yellow-billed Magpie	6/13/07	6/25/07	RT-PCR
Stanislaus	Modesto	95356	Yellow-billed Magpie	6/13/07	6/25/07	RT-PCR
Stanislaus	Modesto	95350	American Crow	6/13/07	6/25/07	RT-PCR
Stanislaus	Modesto	95355	American Crow	6/14/07	6/25/07	RT-PCR
Stanislaus	Modesto	95355	American Crow	6/14/07	6/25/07	RT-PCR
Stanislaus	Modesto	95350	Western Scrub-Jay	6/14/07	6/25/07	RT-PCR
Stanislaus	Modesto	95357	Brewer's Blackbird	6/14/07	6/25/07	RT-PCR
Stanislaus	Modesto	95350	House Sparrow	6/15/07	6/25/07	RT-PCR
Stanislaus	Modesto	95350	Sparrow	6/18/07	6/25/07	RT-PCR
Stanislaus	Modesto	95354	American Crow	6/18/07	6/25/07	RT-PCR
Stanislaus	Ceres	95307	House Sparrow	6/18/07	6/25/07	RT-PCR
Stanislaus	Ceres	95307	Western Scrub-Jay	6/18/07	6/25/07	RT-PCR
Stanislaus	Modesto	95355	American Crow	6/19/07	6/25/07	RT-PCR
Stanislaus	Ceres	95307	Western Scrub-Jay	6/19/07	6/25/07	RT-PCR
Yuba	Marysville	95901	American Crow	6/18/07	6/25/07	RT-PCR

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Mosquito Pools

Site Code	Pool #	Species	# in Pool	Collected	Tested	City	County	Virus
AFSB0062	5172	Ae melanimon	50	6/21/2007	6/29/2007	Lost Hills	Kern	WN
AFSB0108	5166	Cx quinquefasciatus	50	6/19/2007	6/27/2007	Bakersfield	Kern	WN
AFSB1002	5161	Cx quinquefasciatus	50	6/19/2007	6/27/2007	Bakersfield	Kern	WN
AFSB1002	5162	Cx quinquefasciatus	28	6/19/2007	6/27/2007	Bakersfield	Kern	WN
AFSB1005	5159	Cx quinquefasciatus	50	6/19/2007	6/27/2007	Bakersfield	Kern	WN
AFSB1005	5160	Cx quinquefasciatus	12	6/19/2007	6/27/2007	Bakersfield	Kern	WN
AFSB2005	5164	Cx quinquefasciatus	10	6/19/2007	6/27/2007	Bakersfield	Kern	WN
CNSL1062	48	Cx tarsalis	16	6/26/2007	6/27/2007	Fresno	Fresno	WN
CNSL1068	49	Cx quinquefasciatus	50	6/26/2007	6/27/2007	Fresno	Fresno	WN
COAV5001	1118	Cx tarsalis	50	6/19/2007	6/28/2007	Niland	Imperial	WN
COAV5001	1123	Cx tarsalis	50	6/19/2007	6/28/2007	Niland	Imperial	WN
KERN0013	137	Cx tarsalis	50	6/19/2007	6/27/2007	Bakersfield	Kern	WEE
KERN0013	139	Cx tarsalis	50	6/19/2007	6/27/2007	Bakersfield	Kern	WEE
KERN0013	141	Cx tarsalis	50	6/19/2007	6/27/2007	Bakersfield	Kern	WEE
KERN0013	142	Cx tarsalis	50	6/19/2007	6/27/2007	Bakersfield	Kern	WEE
KERN0032	156	Cx tarsalis	50	6/20/2007	6/27/2007	Arvin	Kern	WN
KERN2002	169	Cx quinquefasciatus	31	6/22/2007	6/27/2007	Bakersfield	Kern	WN
KERN2007	171	Cx quinquefasciatus	50	6/22/2007	6/27/2007	Bakersfield	Kern	WN
KERN2007	172	Cx quinquefasciatus	45	6/22/2007	6/27/2007	Bakersfield	Kern	WN
KERN2010	173	Cx quinquefasciatus	50	6/22/2007	6/27/2007	Bakersfield	Kern	WN
KERN2010	174	Cx quinquefasciatus	50	6/22/2007	6/27/2007	Bakersfield	Kern	WN
KERN2010	175	Cx quinquefasciatus	50	6/22/2007	6/27/2007	Bakersfield	Kern	WN
KERN2014	176	Cx quinquefasciatus	23	6/22/2007	6/27/2007	Bakersfield	Kern	WN
KERN2015	177	Cx quinquefasciatus	41	6/22/2007	6/27/2007	Bakersfield	Kern	WN
KERN2016	178	Cx quinquefasciatus	50	6/22/2007	6/27/2007	Bakersfield	Kern	WN
KERN2016	179	Cx quinquefasciatus	33	6/22/2007	6/29/2007	Bakersfield	Kern	WN
KERN2018	130	Cx quinquefasciatus	50	6/15/2007	6/27/2007	Bakersfield	Kern	WN
KERN2018	131	Cx quinquefasciatus	50	6/15/2007	6/27/2007	Bakersfield	Kern	WN
KERN2018	180	Cx quinquefasciatus	50	6/22/2007	6/29/2007	Bakersfield	Kern	WN
KERN2018	181	Cx quinquefasciatus	50	6/22/2007	6/27/2007	Bakersfield	Kern	WN
KERN2020	184	Cx quinquefasciatus	38	6/22/2007	6/27/2007	Bakersfield	Kern	WN
KERN2024	170	Cx quinquefasciatus	34	6/22/2007	6/27/2007	Bakersfield	Kern	WN
KNGS3010	42	Cx tarsalis	38	6/26/2007	6/27/2007	Hanford	Kings	WN
KNGS4003	35	Cx tarsalis	37	6/26/2007	6/27/2007	Hanford	Kings	WN
LACW1079	166	Cx erythrothorax	50	6/21/2007	6/27/2007	Playa Vista	Los Angeles	WN
SHAS0059	13	Cx	26	6/21/2007	6/26/2007	Redding	Shasta	WN
SUYA0022	71	Cx tarsalis	50	6/25/2007	6/27/2007	Tudor	Sutter	WN
SUYA0044	58	Cx tarsalis	50	6/25/2007	6/27/2007	Pleasant Grove	Sutter	WN
SUYA0044	59	Cx tarsalis	50	6/25/2007	6/27/2007	Pleasant Grove	Sutter	WN
SUYA0044	60	Cx tarsalis	50	6/25/2007	6/27/2007	Pleasant Grove	Sutter	WN
SUYA0044	61	Cx tarsalis	33	6/25/2007	6/27/2007	Pleasant Grove	Sutter	WN
SUYA0044	82	Cx tarsalis	50	6/25/2007	6/28/2007	Pleasant Grove	Sutter	WN
SUYA0044	85	Cx tarsalis	46	6/25/2007	6/28/2007	Pleasant Grove	Sutter	WN

Sentinel Chickens

Site Code	County	Nearest City	Date Bled	Virus	Band 01	Band 02
KERN0105	Kern	Pumpkin Center	6/11/2007	WN	1814	1818

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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.