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Vector Borne Disease Bulletin



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A Note from the Editor:

Welcome to the second 2008 issue of the Vector-borne Disease Bulletin. The intent of this quarterly bulletin is to keep you better informed about the vector-borne disease investigations and surveillance conducted by the California Department of Public Health and collaborating State and local agencies in California. This second publication of the year includes a brief summary of surveillance results of current quarterly information from January 1st, 2008. Look for the next bulletin at the beginning of August. In the meantime, please email me with any suggestions to make this bulletin more useful for your work and research. Thanks to everyone who contributed to this bulletin.

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Mosquito-borne Virus Surveillance



As of April 18, 2008, West Nile virus (WNV) activity has been reported from 6 counties. WNV positive dead birds have been detected in Kern (1), Sacramento (1), San Diego (7) and Santa Clara (1) counties. Nine mosquito pools have tested positive for WNV from Riverside County, and antibodies to WNV have been detected in two sentinel chickens from Los Angeles County. No human or equine cases have been reported.



2008 & 2007 YTD West Nile Virus Comparisons*

	2008	2007
Positive Counties	6	8
Human Cases/Tested	0 / 152	0 / 264
Horse Cases/Tested	0 / 0	1 / 71
Total Dead Bird Reports	3,543	7,014
Positive Dead Birds/Tested	10 / 465	17 / 874
Positive Mosquito Pools/Tested	9 / 922	2 / 1,431
Positive Chicken Sera/Tested	2 / 1,902	2 / 2,337
Positive Squirrels/Tested	0 / 20	0 / 22



* As of April 18, 2008



A summary of West Nile virus activity from 2003-2008 can be found at:

www.westnile.ca.gov



Hantavirus Surveillance

Rodent surveillance for Sin Nombre virus (SNV) was conducted in three California counties from January through March, 2008. Of 28 deer mice (*Peromyscus maniculatus*) collected and tested, antibodies to SNV were detected in none.

Results of testing for serum antibody to Sin Nombre virus in *Peromyscus maniculatus* reported in Jan-March, 2008.

County	No. Positive	No. Tested
Contra Costa	0	2
Riverside	0	2
San Diego	0	24



Plague Surveillance

A total of 78 specimens have been tested for plague antibody from 11 counties. Of these, 11 samples from four counties were seroreactive.

Mammals testing positive for plague (*Yersinia pestis*), 2008

County	Location	Date	Host	No. pos	Results
Modoc	Lake City, 3N	5-Jan	Coyote	2	1:64, 1:128
Modoc	Lake City, 8NE	11-Jan	Coyote	1	1:32
Modoc	Fort Bidwell, 3S	16-Jan	Coyote	1	1:128
Plumas	Vinton, 4SW	24-Jan	Coyote	1	1:32
Plumas	Vinton, 5SW	24-Jan	Coyote	1	1:64
Sierra	Beckwourth, 3S	15-Jan	Coyote	1	1:64
Sierra	Calpine, 4W	15-Jan	Coyote	1	1:64
Sierra	Sierraville, 3S	15-Jan	Coyote	1	1:32
Siskiyou	Callahan, 2.5E	1-Feb	Coyote	1	1:128
Siskiyou	Callahan, 2.5E	11-Feb	Coyote	1	1:64
Total No. Mammals Positive for Plague				11	

Tick-borne Disease Surveillance

A total of 71 cases of Lyme disease* were reported to the CDPH in 2007. Case-patients were residents of 22 counties.

Tick-borne relapsing fever

Two cases of tick-borne relapsing fever* (TBRF) were reported to CDPH in 2007; one case was acquired in-state (Mono County) the other was acquired out-of-state.

* Human data from 2007 is provisional

2008 Activity:

Seven cases of Lyme disease and a single case of TBRF have been reported this year to date in California.

Between January and mid-April, 2008, 2,480 adult *Ixodes pacificus* were collected in 10 California counties (Alameda, Calaveras, Contra Costa, Los Angeles, Marin, Mendocino, Riverside, San Diego, Santa Clara, and Solano) by CDPH-VBDS and local vector control and public health departments. In addition, 68 *I. pacificus* nymphs were collected from 4 counties (Contra Costa, Los Angeles, Riverside, and Santa Clara); nymphal *I. pacificus* were detected as early as late February in Contra Costa County.

In addition, 575 male and 573 female *Dermacentor occidentalis* were collected in 9 counties (Alameda, Calaveras, Contra Costa, Los Angeles, Marin, Mendocino, Riverside, San Diego, and Santa Clara). *Dermacentor variabilis* (5 male and 5 female) were collected in Alameda, Contra Costa, Marin, and Santa Clara counties.

No adult ticks have been tested for any disease-causing agents to date this year. Of 36 *I. pacificus* nymphs from Contra Costa County tested for *Borrelia* spp. by DFA in 2008, all tested negative. An interesting natural history note: a single *Ixodes auritulus* nymph from Contra Costa County tested positive for *Borrelia* spp. by DFA; this tick species primarily parasitizes birds.



At this site in Santa Clara County, a total of 757 *Ixodes pacificus* adults were collected in 3 hours of flagging in April (classically seen as the end of the season for adult *I. pacificus*!).



Ixodes pacificus nymph
on a finger



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www.cdph.ca.gov



www.calsurv.org

***Ixodes pacificus* collected, California, January - April, 2008.**

County	Location	Male	Female	Nymphs
Alameda	Indian Joe Trail	11	21	
	Jewel Lake Trail	80	89	
	Laurel Canyon Trail	21	24	
	Little Yosemite Area	1	3	
	Pine Tree Trail	4	11	
Calaveras	Natural Bridges	49	54	
	Solid Waste Station	3	2	
Contra Costa	Big Springs PA			1
	Brook PA	2	1	4
	Carousel PA	0	1	24
	Curran Trail	5	9	1
	Fern PA	0	1	2
	Indian Camp PA	1	0	1
	Meadows Canyon Trail	36	40	
	Meadows PA	1	0	
	Nimitz Trail	52	80	
	Quarry Trail	5	3	
	Steam Trains PA	1	0	5
Los Angeles	Backbone Trail	187	153	
	Deer Leg Trail	156	129	
	Barley Flats	2	3	
	Charmlee Wilderness	67	75	
	Red Box PA	8	6	1
	Switzer PA	7	4	
Marin	Fort Baker	21	29	
	Point Bonita	19	23	
Mendocino	Manchester State Beach	12	17	
Riverside	Kenworthy Forest Station	28	26	1
San Diego	Secret Canyon	21	14	
Santa Clara	Corral Trail	12	11	
	Forest Trail	362	395	28
Solano	Stebbins Cold Canyon	28	36	
Total		1207	1273	68

PA- Picnic Area

If you have questions about the information contained in this report, please contact your CDPH VBDS Regional Biologist, or VBDS Headquarters at 916-552-9730.