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# Vector Borne Disease Bulletin



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## A Note from the Editor:

Welcome to the third 2009 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 publication is a summary of surveillance results for January- August, 2009. Look for the next quarterly bulletin at the beginning of November. In the meantime, please email me with any suggestions to make this bulletin more useful for your work and research and any pictures you have of surveillance activities. Thanks to everyone who contributed to this bulletin.

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## Mosquito-borne Virus Surveillance



As of August 28, 2009, West Nile virus (WNV) activity has been reported from 38 counties. A total of 19 human WNV cases have been identified in 8 counties and no fatalities have been reported. Four equine WNV cases have been reported from 3 counties; 2 were euthanized as a result of their infection. Thirty-three counties have detected a total of 354 WNV positive dead birds and 4 counties have reported a total of 4 WNV positive tree squirrels. Twenty-four counties have detected a total of 744 WNV positive mosquito samples and 139 sentinel chickens from 17 counties have tested positive for WNV antibodies.



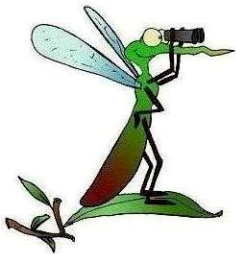


2009 & 2008 YTD West Nile Virus Comparisons\*

	2008	2009
Positive Counties	38	38
Human Cases/Tested	92/ 636	19/ 654
Horse Cases/Tested	5/ 159	4/ 135
Total Dead Bird Reports	24,585	12,380
Positive Dead Birds/Tested	1,295/ 3,910	354/ 2,114
Positive Mosquito Pools/Tested	1,101/ 20,317	744/ 18,380
Positive Chicken Sera/Tested	109/ 19,366	139/ 17,132
Positive Squirrels/Tested	9/ 113	4/ 69



\* As of August 28th, 2009



A summary of West Nile virus activity from 2003-2009 can be found at:

[www.westnile.ca.gov](http://www.westnile.ca.gov)



## Hantavirus Surveillance



No human cases of hantavirus cardiopulmonary syndrome have been identified in California in 2009 to date.

The following *Peromyscus* spp. were submitted to the CDPH Viral and Rickettsial Diseases Laboratory for Sin Nombre virus serology in April-July 2009:

County	<i>P. boylii</i>		<i>P. californicus</i>		<i>P. crinitus</i>		<i>P. eremicus</i>		<i>P. maniculatus</i>		<i>P. truei</i>	
	Pos	Tested	Pos	Tested	Pos	Tested	Pos	Tested	Pos	Tested	Pos	Tested
El Dorado	0	1							22	49		
Lassen	0	86							0	5		
Mono									0	15		
Orange	0	2							18	40		
Riverside	1	5	4	14	0	4	0	20	2	23		
San Benito									0	5	0	6
San Bernardino	0	4	0	4					0	9		
San Diego	0	4	0	33			0	71	0	45		
Siskiyou					0	10			2	10	0	2
<b>California YTD</b>	1 / 126 (0.8 %)		5 / 138 (3.6 %)		0 / 14		1 / 290 (0.3%)		46 / 278 (16.5 %)		0 / 8	

## Plague Surveillance

Thus far in 2009, 391 specimens from 26 counties were tested for plague antibody. Of these, four specimens from one county were seroreactive.

Mammals testing positive for plague (*Yersinia pestis*), Jan-July 2009.

County	Location	Collection Date	Host	Result
Inyo	Baker Creek CG	4/30/2009	California Ground Squirrel	1:64
Inyo	Taboose Creek CG	5/28/2009	California Ground Squirrel	1:32
Inyo	Taboose Creek CG	5/28/2009	California Ground Squirrel	1:32
Inyo	Millpond CoP and CG	6/10/2009	California Ground Squirrel	1:256



## Tick-borne Disease Surveillance



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[www.cdph.ca.gov](http://www.cdph.ca.gov)



[www.calsurv.org](http://www.calsurv.org)

### Lyme Disease

Lyme disease surveillance numbers for 2008 were finalized in May 2009 and indicate that 78 cases of Lyme disease were reported.

### Tick-borne disease surveillance in Golden Gate National Recreation Area and Point Reyes National Seashore, 2008.

In September 2007, the National Park Service (NPS) signed a cooperative agreement with the California Department of Public Health (CDPH) to develop a vector-borne disease prevention program for the 24 NPS units in California. This report summarizes tick-borne disease activities pursuant to this cooperative agreement that VBDS conducted in 2008.

Between January and June, 2008, VBDS staff conducted tick surveillance in and around hiking and walking trails in Golden Gate National Recreation Area (GOGA) and Point Reyes National Seashore (PORE). At least 0.5 person-hours of flagging were conducted approximately monthly at each of three sites each in GOGA and PORE. A total of 271 ticks was collected from five of the six surveillance sites: 104 western black-legged ticks (*Ixodes pacificus*), 144 pacific coast ticks (*Dermacentor occidentalis*), and 23 American dog ticks (*Dermacentor variabilis*). *Borrelia* bacteria were detected by direct fluorescent antibody in 3 of 69 adult *I. pacificus* adults and 0 of 3 *I. pacificus* nymphs. The three positive ticks were collected from the Fort Baker area. VBDS recommended continued trailside vegetation maintenance and posting of Tick Warning signs at trailheads to reduce risk of tick bite for visitors and staff.

Principal findings of this investigation include:

- Evidence of infection with *Borrelia* bacteria in *Ixodes pacificus* ticks from Fort Baker, GOGA.
- Documentation of ticks of three human-biting species from both GOGA and PORE.
- Estimation of moderate and high numbers of ticks at GOGA and moderate and low numbers at PORE.
- To minimize risk to staff and visitors an active education and personal protection program should be implemented. Tick Warning signs need to be posted. Current trail edge maintenance practices should be continued.

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.