

NEWS



LETTER

Volume 19, Fall 2009

**Mark your calendars!! November 19-20,  
Peoria, IL ... IMVCA Annual Meeting**

**Remember the Deadline to Reserve Rooms at our IMVCA Group  
Rate is October 29<sup>th</sup>, 2009.**

**Contact the Pere Marquette directly at Phone (309) 637-6555 or  
Reservations Toll Free: (800) 447-1676.**

**See You In November!**

**WEST NILE VIRUS IN THE U.S., TEN YEARS LATER  
AND IN ILLINOIS, WITH SEVEN YEARS OF DATA**

Jack Swanson, Past President of IMVCA

As you may remember from the last Newsletter, we had looked at some information to see how the number of human cases by September 1<sup>st</sup> related to final case numbers in Illinois as well as for the United States. If we were to use this to predict final numbers for 2009, we had one case reported for Illinois as of the first week of September. If that was about 20% (see Sum All below) by the end of this year we could expect around five human cases. For the U.S. CDC had reported 156 cases on September 1<sup>st</sup>. If that was about 25%, the final U.S. total should be 624.

<b>WNV Human Cases in IL</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>Sum All</b>
# Cases by September 1 <sup>st</sup>	165	3	16	82	49	14	4	333
Total # Cases by the end of year	884	54	60	252	215	101	20	1,586
% cases = Sept. 1 <sup>st</sup> / Final #	19%	6%	27%	33%	23%	14%	20%	21%
Data from IDPH web page: <a href="#">http://www.idph.state.il.us/IDPH/11/08</a>								
<b>West Nile Virus in all U.S.</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>Sum All</b>
# people by 1st week of Sept	750	1,764	1,191	821	1,267	906	413	7,112
Total people by end of year	4,156	9,862	2,539	3,000	4,261	3,630	1,338	28,786
% cases = Sept. / Final #	18%	18%	47%	27%	30%	25%	32%	25%
Data from CDC web site of 2/13/09								
J. Swanson, Past President of IMVCA								

## Articles of interest to our readers

Although West Nile virus activity is down in Illinois as well as across the rest of the U.S., you may be interested in the fact that this year has been a very “hot” year for Eastern Equine Encephalitis as noted below from ProMEDs website. Also for current arbovirus activity at the U.S. level, several can be found at: [http://diseasemaps.usgs.gov/wnv\\_us\\_human.html](http://diseasemaps.usgs.gov/wnv_us_human.html) Also note besides WNV, SLE, LAC, WEE & EEE you can check mosquito activity, bird, equine, etc. when appropriate for the disease selected. You can also go to a State and click on adjacent states.

### **EEE outbreaks in animals are high in northeastern US (e.g., Massachusetts, Rhode Island, New Hampshire, & Maine), as well as southern states (e.g., Florida, Louisiana, Georgia).**

**Horse put down after showing signs of EEE in Rhode Island** *Communicated by: ProMED-mail <promed@promedmail.org>* A horse in Exeter [Rhode Island] that had eastern equine encephalitis [EEE] has been euthanized. State environmental officials say the 5 month old animal was put down on Sunday [4 Oct 2009] after displaying neurological symptoms of the disease, and positive test results for EEE were confirmed Friday [9 Oct 2009]. Officials say the animal had not been vaccinated against the disease. It was the 2nd horse death from EEE in Rhode Island this fall [2009]. There have been no human cases in the state.

Horse owners are advised to inspect their barns for mosquito breeding areas and use repellants. Symptoms can include stumbling, partial paralysis, and muscle twitching. Also on Friday [9 Oct 2009], state officials said test results from 39 mosquito pools all tested negative for both West Nile virus and EEE.

*This has been a year that has struck horse owners on the eastern coast of the US particularly hard. They have had a cooler than normal summer season with an abundance of rain. That rain has formed a multitude of pools, which can serve as breeding areas for mosquitoes. While not every year is as difficult at this one, it should serve as a reminder, regardless of weather, to protect your animals with a vaccination program. - Mod.TG*

### **Foreclosed and Neglected Properties: A Financial and Public Health Risk to Your Community**

By: David Zazra, North Shore Mosquito Abatement District

This past season, the North Shore Mosquito Abatement District attempted to treat as many of the neglected and foreclosed properties that lay with in the area that we serve. Working in conjunction with numerous people from those communities, we identified approximately 25 locations that required treatment above and beyond the normal course of action.

These types of locations included homes that were on the market for an extended period of time, construction sites that had stalled and homes where residents could no longer afford proper maintenance. If left untreated, these sites had the potential to become a tremendous source of mosquito production due to the large amounts of water they held.

# Illinois Mosquito & Vector Control Association

The cost involved in treating these types of properties can easily put a strain the budgets of those responsible for mosquito abatement. One home, located in an upscale development within a wealthy suburb, required approximately \$90.00 worth of products to treat the mess left behind after the home went into foreclosure. The labor involved in the clean-up required two people and three hours to complete. This particular home normally would have sold for \$700-800,000 (providing the NSMAD with about \$3.00 of our annual tax extension) was left with a swimming pool that looked as if it had been left behind after Katrina. The amount of buckets, flowerpots, Frisbees and other items holding water was almost beyond comprehension.

These types of situations will probably become more frequent until the housing market improves. Until then, plan on spending additional time and money on locating and treating these properties. Developing a strong communications plan with the areas you serve will help you learn about these types of locations early before they become a problem, giving you a better chance of forming a treatment plan that will be more cost effective than the emergency treatments the NSMAD had to perform numerous times this past season.

The content of the articles in the IMVCA Newsletter are brought together by the Newsletter Editor and reviewed by the Executive Board. The comments in the articles do not necessarily reflect the official position of the association, nor of its officers and members.

## POETRY CORNER

Although I travel incognito,  
I can't deceive the smart mosquito;  
While others also have corpuscles,  
Mine are the ones toward which she hustles;  
My blood is thin and I have asthma;  
She doesn't care, she wants my plasma.  
Mosquitoes seem to love the rind of me,  
The front, the sides, and the behind of me;  
I've tried to think why they're so smitten,  
And as I think, once more I'm bitten.

~ Dick Emmons~

## Publications of interest

- Host selection by Culex pipiens mosquitoes and West Nile virus amplification. GL Hamer, UD Kitron, TL Goldberg, JD Brawn - Am. journal Tropical Medicine Hygiene, 2009
- Avian host community structure and prevalence of West Nile virus in Chicago, Illinois. SR Loss, GL Hamer, ED Walker, MO Ruiz, TL. - Oecologia, 2009
- Geospatial variability in the egg raft distribution and abundance of Culex pipiens and CulexBG Jacob, RL Lampman, MP Ward, EJ Muturi, RJ Novak - International Journal of Remote Sensing, 2009
- Developing operational algorithms using linear and non-linear squares estimation in Python for the identification of Culex pipiens and Culex restuans in a mosquito abatement district (Cook County, Illinois, USA). Jacob BJ, Gu W, Caamano EX, Novak RJ. Geospat Health. 2009.

# Illinois Mosquito & Vector Control Association

## Overlap of Invasive Species, *Aedes albopictus* & *japonicus* in Illinois

By Jack Swanson, Past President, IMVCA

One of the tasks the Illinois Department of Public Health (IDPH) has taken on since the invasive species *Aedes albopictus* was discovered in Illinois in 1986 has been to document its detection in additional counties. In cooperation with various agencies, surveys were originally initiated with personnel from the Centers for Disease Control and Prevention (CDC) and particularly Dr. George B. Craig, Jr. and others from Notre Dame University. Additional field collections were conducted by the Illinois Natural History Survey (INHS), Dr. Robert Novak and Don W. Webb as well as Harvey Dominick and Dr. Linn D. Haramis of IDPH<sup>1</sup>. Also, more reports came from local health departments and the Illinois Environmental Protection Agency (IEPA). Through 2008 *Aedes albopictus* has been collected in thirty five Illinois counties with the majority of these reports south of the 40° N latitude.

In 2006 another Asian invasive species, *Aedes (Ochlerotatus) japonicus*, was detected in Illinois by the INHS.<sup>2</sup> Since the first four counties reporting this invader in 2006, it has now been collected in seventeen counties in Illinois with most of these reports along the line near 40° N latitude and going north. It is interesting to note that after this species was found in two locations in LaSalle County along the Illinois River, that the two locations reported from Bureau and Putnam Counties in the following years are both “downstream” along the river. The type of rock along this section of the river could very well be conducive to dispersing this species as larvae when rain causes rock holes to overflow and collect further “downstream”.

The list of Illinois counties and the year of detection for each is shown in Table 1. The state was divided into three sections with “north” being approximately from 41° N latitude to the Wisconsin border around 42° 30' N. “Central” is from about 39° 30' N to 41° N and “south” is from the southern tip of Illinois around 37° N up to 39° 30' N. Of the thirty five counties with reports of *Aedes albopictus*, twenty five are in the “south”, eight in the “central” and two “north”. For *Aedes (Ochlerotatus) japonicus* of the seventeen counties with reports, six are in the “north”, nine in the “central” and two “south”.

Counties where both species have been reported in Illinois are Adams, Cook, Effingham, Macon, Macoupin, Menard and Peoria. Although the sizes of these populations and if they overlap in the same areas needs to be determined, it may be of interest in the future to see how the two invaders may or may not have an impact on each other. Some studies have already been done where the two have been found together. One was basically a container survey done in the Southern Appalachians.<sup>3</sup> It was noted that although *Aedes albopictus* was collected only in artificial containers, *Ae. japonicus* was found in both natural and artificial containers. Another study done in Northern Virginia looked at competition between the two species.<sup>4</sup> They found that *Aedes albopictus* had a slight advantage over *Ae. japonicus* but many other factors are involved in determining the impact they may have on each other.

1. MMWR (CDC) Oct. 17,1986 / 35(41); 649-651
2. Morris, et al., 2007 J Am Mosq Control Assoc, 23(3): 243-251
3. Bevins, S.N., 2007 J Med Entomol 44(6): 945-952
4. Armistead, et al. 2008 J Med Entomol 45(4): 629-637

# Illinois Mosquito & Vector Control Association

Table 1. Invasive species of mosquitoes in Illinois by county & year of discovery, as of 2009

<u><i>Aedes albopictus</i></u>	<u>Year</u>	<u><i>Aedes (Oc.) japonicus</i></u>
St. Clair(S), Jefferson(S)	1986	
Cook(N)	1987	
Madison(S)	1988	
Kankakee(N), Pulaski(S)	1990	
Macoupin(S), Williamson(S)	1991	
Alexander(S), Jackson(S)	1993	
Randolph(S), Union(S)	'93	
Jasper(S)	1994	
Massac(S)	1996	
Peoria(C)	1997	
Johnson(S)	1998	
Gallatin(S), Richland(S)	1999	
Hamilton(S), Perry(S), Pope(S)	2000	
Saline(S), White(S)	'00	
Marion(S), Montgomery(S), Sangamon(C)	2001	
Macon(C)	2002	
Adams(C), Clay(S)	2004	
Fayette(S)	2005	
Effingham(S), McLean(C)	2006	Champaign(C), Cook(N)
	'06	Effingham(S), LaSalle(N)
Menard(C)	2007	Menard(C)
Logan(C), Piatt(C)	2008	Brown(C), Cass(C), DuPage(N)
	'08	Knox(C), Macon(C),
	'08	McDonough(C)
	2009	Adams(C), Bureau(N),
	'09	Macoupin(S), Peoria(C), Putnam(N),
	'09	Rock Island (N)

See text for details: (N) = North, (C) = Central, (S) = South

## Summary of West Nile Virus Data for Illinois, Seven Years and 2009 (thru 10/21/09)

2002	2003	2004	2005	2006	2007	2008	2009 Partial
<b>884 cases</b>	<b>54 cases</b>	<b>60 cases</b>	<b>252 cases</b>	<b>215 cases</b>	<b>101 cases</b>	<b>20 cases</b>	<b>5 cases</b>
67 death	1 death	4 deaths	12 deaths	10 deaths	4 deaths	1 death	0 deaths
<b>28</b> mosquito pools	<b>507</b> mosquito pools	<b>1,313</b> mosquito pools	<b>2,465</b> mosquito pools	<b>2,980</b> mosquito pools	<b>1,552</b> mosquito pools	<b>658</b> mosquito pools	397 mosquito pools
<b>513 +</b> birds	<b>236 +</b> birds	<b>233 +</b> birds	<b>227 +</b> birds	<b>161 +</b> birds	<b>39 +</b> birds	<b>31 +</b> birds	26+ birds
,147 Horses	70 Horses	12 Horses	16 Equines	21 Equines	5 Equines	1 Equine	6 + equine
00 counties	77 counties	63 counties	57 counties	77 counties	48 counties	28 counties	36 countie
1st report in Cook Co. = dead birds	1st report in Cook Co. = mosquitoes	1 <sup>st</sup> report i Cook Co. mosquito					