

---

---

# Illinois Mosquito & Vector Control Association

# NEWS



# LETTER

Volume 11

Number 2

Fall 2001

---

**FROM THE PRESIDENT OF THE IMVCA  
GET READY FOR THE 47<sup>TH</sup> ANNUAL MEETING!**

It is amazing how much can happen in one year. At our annual meeting in Urbana-Champaign in November 2000, most of us predicted West Nile virus (WNV) would be introduced into Illinois within the next 3-5 years. To everyone's surprise, by 1 October 2001 about 100 birds from Cook, DuPage, Lake, Will, and Winnebago counties had preliminarily tested positive for WNV, as well as a dozen pools of mosquitoes. West Nile virus is spreading so rapidly that weekly summaries are generally out of date by the time they get published (I've had to change the number of birds and mosquitoes from Illinois 4 times in the past 2 weeks!). West Nile virus has been isolated from 21 mosquito species in the US; however, *Culex* species appear to account for over 90% of the total number of positive pools. The number of confirmed and suspected cases of human West Nile virus infection in the USA remains low, but the nationwide impact on birds and horses continues to increase even into October.

How will West Nile virus affect mosquito abatement activities in Illinois? What are the future health risks to humans, domestic animals, and wildlife? Will the war on terrorism change how we operate? Are we prepared for an endemic mosquito-borne disease vectored by *Culex* species? Did you know that Louisiana was facing an outbreak of St. Louis encephalitis with 63 human cases or that Florida has had four human cases of Eastern equine encephalitis (EEE) this year? These are some of the topics that will be addressed at the 47th Annual Meeting of the IMVCA, November 15-16, 2001 at the Cliffbreakers River Suites and Conference Center in Rockford, Illinois.

I believe we will see an increasing need for mosquito management throughout the east-central United States in the next 5 years, and public support of those activities will be a necessity. Learn more about the status of vector-borne diseases in Illinois by attending the Annual Meeting in Rockford and send in the attached form for pre-registration. Pre-registration for the annual meeting is \$60.00 per person which includes the cost of the banquet (form included in this Newsletter). Special thanks go to Don Oemeck for making the hotel arrangements. Bill Schneck, Vice-President of the IMVCA, has put together an impressive program, which he describes on the next page.

See you in Rockford, Rich Lampman

P.S. If you want to receive the Newsletter in the future by email, send me your address ([richlamp@uiuc.edu](mailto:richlamp@uiuc.edu)).



**FROM THE VICE-PRESIDENT OF THE IMVCA  
TENTATIVE 47<sup>TH</sup> ANNUAL IMVCA MEETING PROGRAM**

As Program Chairman, I have invited several outstanding speakers to our meeting in Rockford to cover topics from West Nile virus to tick-borne diseases.

The following is short list of some of the confirmed speakers:

**Robert R. Pinger** has been a member of the Department of Physiology and Health Science and Director of the Public Health Entomology Laboratory at Ball State University since 1977. His expertise is in tick-borne diseases.

**Joseph Sanzone** is from the Metropolitan Mosquito Control District, St. Paul, Minnesota. Joe is the North Central Regional Director of the AMCA and serves on several AMCA committees.

**Robert G. McLean** is Director And Supervisory Biologist of the National Wildlife Health Center, U.S. Geological Survey in Madison, Wisconsin. The Center works with agencies across the nation with information, technical assistance, and research on wildlife disease and health topics.

**Linda Glasser** is a Wildlife Disease Specialist at the U.S. Geological Survey and is the coordinator for West Nile virus wildlife issues.

**Linn Haramis** is the vector specialist with the Illinois Department of Public Health and is responsible for coordinating much of the mosquito and bird arbovirus surveillance by IDPH.

**Dave Brown** is from the Mosquito and Vector Control Association of California and is President Elect of the AMCA.

In addition to these speakers, we have several in-state speakers, mosquito abatement district reports, commercial representative talks, and much more. This year has been an exciting one with the introduction of West Nile virus into Illinois and now is time for all of us to share what we've learned, so we can prepare for the future.

**IF YOU WISH TO GIVE A 10-15 minute TALK AND DID NOT RECEIVE THE CALL FOR PAPERS**, contact Rich Lampman ([richlamp@uiuc.edu](mailto:richlamp@uiuc.edu)) with your name, affiliation, talk title, length of talk, and brief abstract and he'll forward those to me. We'll confirm your place on the program as soon as possible. Sincerely, Bill Schneck

**WEST NILE UPDATE: DOWNSTATE CRAWFORD COUNTY BIRD POSITIVE**

The Illinois Department of Public Health today reported that a dead crow found in Crawford County has tested positive for West Nile virus. This is the first county outside of northern Illinois where the virus has been detected. The crow collected in Palestine in Crawford County on Sept. 26 was identified as preliminarily positive by the Illinois Department of Agriculture lab in Galesburg. Previously, birds have been found with West Nile virus in Cook, DuPage, Lake, Will and Winnebago counties. In addition to the crow from Crawford County, the Department today reported 27 other birds in the Chicago area have preliminarily tested positive for the virus. These birds bring to 124 the total number that have either been confirmed (4) or tested preliminarily positive (120) for West Nile virus since it was first detected in the state on Sept. 5. No human cases of West Nile disease have been reported.



## Illinois Mosquito & Vector Control Association

P.O. BOX 1655 SOUTH HOLLAND, IL. 60473 708-333-3135

### UPCOMING EVENTS

February 17 - 21, 2002. American Mosquito Control Association Annual Meeting, Denver, CO  
Adam's Mark Hotel. Adam's Mark Denver phone: 303.893.3333 FAX: 303.626.2542

### SAMPLE BALLOT FOR THE IMVCA VOTING MEMBERS

Amendment No. 1: To be added to Section 2 under Article II.

Nomination – Election of Officers: shall read as follows YES

“The name of the current Vice President, who automatically NO  
ascends to the office of President, shall not appear upon the ballot  
for election of officers.”

### IT IS TIME TO THINK OF NOMINATIONS FOR IMVCA OFFICERS AND THE EXECUTIVE COMMITTEE.

From the by-laws -- “Nominations by the Nominating Committee shall be posted in writing by the Nominating Committee prior to the closing time of the opening session of the annual meeting. The Nominating committee shall also receive and post during the first session of the annual meeting, nominations made in writing and signed by the designated representative of at least three (3) Voting Members, for any elective office in this Association. Nominations may not be made in any other manner.” If more than one nomination exists for a position, a majority vote (by voting members) wins.

### CULEX PIPIENS COMPLEX

Believe it or not, listing the members of the *Culex pipiens* complex can generate considerable debate. Technically, the *Culex pipiens* complex in North America is represented by *Culex pipiens* and *Cx. quinquefasciatus*, which are often listed as subspecies. In areas above 39 degrees N latitude, *Cx. pipiens*, the northern house mosquito, is typically encountered, whereas *Cx. quinquefasciatus*, the southern house mosquito, is generally present at latitudes less than 36 degrees N. Between 36 and 39 degrees N latitudes, hybrids seasonally occur between the two species (about one-fourth of Illinois). Older texts also refer to *Culex molestus* (an autogenous form of *Cx. pipiens* - able to develop offspring without a bloodmeal). Adult specimens in the *Cx. pipiens* complex can be hard to distinguish from rubbed specimens of *Cx. restuans* and *Cx. salinarius*.

### ENCEPHALITIS

The word "encephalitis" means an inflammation of the brain and possibly the spinal cord (encephalomyelitis). There are several possible bacterial and viral causes, but some involve arthropod-transmitted viruses (arboviruses). The reaction of humans infected with St. Louis encephalitis or West Nile viruses is variable and dependent on age, general health, and other poorly understood characteristics. Most infected humans experience subclinical (inapparent) symptoms. A small percentage of infected humans exhibit the onset of fever, nausea, and vomiting with severe headaches within three to seven days. Severe central nervous symptoms may produce temporary or permanent physical or mental disabilities, or even death. In general, the fatality rate is higher and the symptoms more severe in people over 55 years of age. In past epidemics, the fatality rates have ranged from four to 20 percent with most deaths occurring in the older age groups.

## DISTRICT AND ALLIED AGENCY ORAL REPORTS

Many IMVCA members have requested that the oral reports at the annual meeting be accompanied by a 1-page handout, covering the type of pesticides and amounts used, the areas treated, as well as any important observations made during the field season. These would be collected by the Sec.-Treas. and included in the next Newsletter (with possible editing for space limitations). We would like to limit the oral reports to 10-15 minutes per agency. An example by Henry Lawicki is enclosed with the Newsletter.

## EDITORIAL ON MOSQUITO IPM

(These are excerpts from and additions to a book chapter by Robert J. Novak and Richard L. Lampman.

This article represents the authors' opinions and are not necessarily shared by the IMVCA)

The concepts and practices of Integrated Pest Management (IPM) were largely developed in response to crop pests; however, they are readily adaptable to public health pests. The initial step is to identify the target species (nuisance, vector, or both) and define their life cycles, as best as possible. Vector management requires one to identify the basic vector, host, and pathogen components of the transmission cycle, within the context of a pest management unit (PMU = the specific geographic area targeted for management). The cornerstone of managing an arthropod-borne pathogen is surveillance. An active monitoring program determines when, where, and how to treat and provides the ecological data to delineate management strategies for different habitats within the PMU. Although generalizations can be made about IPM strategies, they must be tailored to the physical, biological, ecological, and political characteristics of a specific PMU. Federal, state, and/or local public health agencies in the US are usually responsible for pathogen surveillance and measuring trends in human disease incidence. However, human disease surveillance is seldom an effective tool for managing an arbovirus outbreak. First, if people are the sentinel hosts, who or what are you trying to protect? Second, control interventions enacted after detecting human cases tend to be limited in scope and often too late to significantly impact the course of an epidemic (WNV in NYC, 1999).

Most mosquito abatement districts (MADs) in the US focus on monitoring and controlling nuisance and vector species (their mandate frequently includes a wide range of public health pests). The goal of vector management is to implement short- and long-term control interventions that reduce and maintain vector abundance below the levels necessary for the transition from enzootic transmission to urban epidemic transmission. Typically, emergency control measures (ULV and aerial applications) are held in reserve until an urban transmission cycle is detected either by seroconversion of sentinel animal hosts (such as chickens for St. Louis encephalitis virus) or the presence of arbovirus positive mosquitoes in standard traps (as used for WNV). When dealing with nuisance mosquitoes, a threshold of call-in complaints, biting rates, or specific trap catches may be used to implement adulticide treatments, in order to supplement the larval control strategies. It should be kept in mind, that adulticide treatments are of short duration. A paradigm for

mosquito management is that it is an area-wide problem. Larval habitats occur on public and private lands in urban, agricultural, and natural habitats. Therefore, vector IPM often requires the cooperation of local, state, and federal agencies.

Despite the similarities of vector management to crop pest management, there are significant differences. For example, a pathogen transmission cycle may include rural and urban transmission cycles, involving multiple animal hosts, reservoirs, and vectors that exhibit considerable habitat, seasonal, and/or biological variation. Transmission cycles usually are inapparent and difficult to predict in time and space. The confirmed cases of a vector-borne disease typically underestimate the number of people infected with a pathogen. Also, action thresholds in vector management are lower than economic thresholds for crop pests (the level of damage tolerated before an intervention is taken). For these and other reasons, the best vector management programs rely on a combination of long- and short-term preventive treatments to reduce vector populations and eliminate breeding sites before pathogen transmission has been detected.

Cultural, biological, and relatively target-specific chemical interventions in non-emergency situations are preferred over emergency adulticide interventions. The IPM approach allows the use of mosquitofish, source reduction, sanitation and sewage management, vegetation and water-flow management, growth regulators, microbial control agents, and other relatively host-specific methods. Emergency interventions tend to rely on adulticides over broader areas, and occasionally may affect some non-target organisms. In emergency situations, the goal is to achieve a high degree of knockdown, to interrupt ongoing transmission. Adulticides are an important component of mosquito management programs, although their use may be restricted. If the pest management unit contains breeding sites outside the jurisdiction of a MAD, then abatement options become limited.

Finally, vector IPM deals with several potentially volatile topics, such as human and domestic animal health, pesticide application in urban environments, and modification of human behavior to avoid exposure. Thus, it requires a level of cooperation with the public and legislative bodies that is seldom necessary for crop pest management. Visit <http://www.epa.gov/reg5foia/pest/>



# Illinois Mosquito & Vector Control Association

P.O. BOX 1655 SOUTH HOLLAND, IL. 60473 708-333-3135

## Annual Meeting Pre-Registration Form Due November 5, 2001

Meeting is on November 15<sup>th</sup> afternoon and 16<sup>th</sup> morning.

Clip at the dotted line and mail with check to:  
Rosemarie Climpson, Sec. Treas. IMVCA  
P.O. Box 1655  
South Holland, IL 60473  
708-333-3135

Pre-registration:	\$60 per person	\$ _____
Membership:	\$10 per person (if not already paid)	\$ _____
Spouse:	\$25	\$ _____
Student:	\$20	\$ _____
<b>TOTAL</b>		<b>\$ _____</b>

Registration at the door of the conference is \$10 extra per category (e.g. \$70 per person, \$35 per spouse, \$30 per student). *So get your pre-registration in and save money!* Registration covers admittance to talks on Nov. 15<sup>th</sup> and 16<sup>th</sup>, banquet, hospitality hour, and all other activities provided.

Name and Work Affiliation: \_\_\_\_\_

(As will appear on conference badge)

Name of Spouse, if attending: \_\_\_\_\_

Address: (use address you want membership materials, Newsletter, announcements, etc. sent to)

\_\_\_\_\_ Business or Apt. #

\_\_\_\_\_ Number and Street

\_\_\_\_\_ City, State, Zip Code

Work phone: \_\_\_\_\_ Home phone: \_\_\_\_\_

**-----**  
**MAKE YOUR HOTEL RESERVATIONS BEFORE OCTOBER 25TH**  
**TO GET THE SPECIAL RATE OF \$79/night**

Cliffbreakers River Suites Hotel,  
Conference Center and Riverview Restaurant  
700 West Riverside Boulevard  
Rockford, IL 61103  
Phone Number: (815) 282-3033  
Fax Number: (815) 282-6505  
Toll free 1-800-478-9395  
E-Mail: [Info@cliffbreakers.com](mailto:Info@cliffbreakers.com)

(Mention the IMVCA or say "mosquito group" to jog their memory).

# Exhibitor's Registration Form - Due October 25, 2001

Meeting is on November 15<sup>th</sup> afternoon and 16<sup>th</sup> morning.

Please mail with check by Oct 25<sup>th</sup> to:  
Rosemarie Climpson, IMVCA  
P.O. Box 1655  
South Holland, IL 60473  
708-333-3135

Pre-registration:	\$60 per person	\$_____
Membership:	\$10 per person (if not already paid)	\$_____
Exhibitor Table:	\$50 per table	\$_____
Donation to Society:		\$_____
<b>TOTAL</b>		<b>\$_____</b>

Registration covers admittance to talks on Nov. 15<sup>th</sup> and 16<sup>th</sup>, banquet, hospitality hour, and all other activities provided.

Name and Work Affiliation: \_\_\_\_\_

(As will appear on conference badge)

Address:

\_\_\_\_\_ Business

\_\_\_\_\_ Other AddressInfo

\_\_\_\_\_ Number and Street

\_\_\_\_\_ City, State, Zip Code

\_\_\_\_\_

Work phone: \_\_\_\_\_