

NEW JERSEY MOSQUITO CONTROL ASSOCIATION, INC. NEWSLETTER

VOL. X NUMBER 3 February, 1999

HENRY RUPP HONORED

At its annual meeting in November 1998, the Alliance for Environmental Concerns, Inc. presented to Henry Rupp the "Ilona F. Gray Environmental Award". This award, with an engraved crystal bowl, is named after the first Executive Director of the Alliance, and was given to Henry in "special recognition for achievements, accomplishments and years of dedicated service to the Alliance and its mission".

The Alliance for Environmental Concerns, Inc. has the mission of communicating and disseminating scientific, factual information about pesticides and the environment, with the purpose of supporting responsible pesticide regulations and sound application practices. Founded in 1981, The Alliance has defended the interest of prudent pesticide use by giving legislators and regulators greater environmental awareness.

At the ceremony, Henry's distinguished career in mosquito control plus his service with the Alliance were described. Henry first became involved in the formative years of the Alliance because he believed that the mosquito control profession would benefit from representation. Attendees were reminded of the many times Henry spoke to defend the mosquito control community when pending law and rule changes, proposed by anti-pesticide zealots would have over regulated our services. Mr. Rupp served on the Alliance Board of Directors from 1986 through 1991. He also served on a steering committee with state officials and representatives of major industries in these efforts. Henry was also active in presenting our view and pointing out the shortcomings of proposed local pesticide ordinances.

As most readers know, Henry served as Superintendent of the Somerset County Mosquito Extermination Commission from 1976 until 1991 and has been a contributing member of the N.J.M.C.A., Inc. and the Associated Executives of Mosquito Control Work in New Jersey. The recognition Henry Rupp has received reflects well on the mosquito control community. We thank him for his extra efforts, the nights of speeches and debates and for his words well chosen.

Congratulations Henry!

Dr. Donald Sutherland, Bill Zawicki and Howard Emerson

Tentative Program For the 1999 Annual Meeting of the New Jersey Mosquito Control Association, Inc.

March 29 - April 1, 1999, Bally's Park Place, Atlantic City, New Jersey

Tuesday, March 30, 1999 First Session

- NJMCA Presidential Address - Marc Slaff - Morris County Mosquito Commission, NJ
- AMCA Update - William Zawicki, NE Vector Management, Clark Environmental Mosquito Management, Freehold, NJ
- Dept. Entomology Update - George Hamilton
- Report from the New Jersey State Mosquito Commission - Leonard Spiegel and Ken Bruder, NJMCC, Trenton, NJ
- Profile of the Morris County Mosquito Extermination Commission, Marc Slaff, MCMC, Morris Plains, NJ
- Field Evaluations of Altosid XRG, John Mathwig, Lake County College, Waukegan, IL and Bill Jany, Clark Mosquito Control Products, Roselle, IL
- Efficacy and Cost Effectiveness of Vetrolex CG Applications, John Mathowig, Lake County Community College, Waukegan, IL, and Bill Jany, Clarke Mosquito Control Products, Roselle, IL
- Operational Effectiveness of Aerial Applied Anvil 10+10 (Neet) to Natural Mosquito Populations, Bill Jany and Fran Krenick, Clarke Mosquito Control Products, Roselle, IL
- Evaluation of temephos on *Aedes sollicitans* larvae - a field and laboratory examination, Chris Lesser, Delaware Division of Fish, Game, and Wildlife, Mosquito Section, Milford, DE.
- Preliminary Results of a Cooperative Field Trial Research Project Investigating Possible Non-target Impacts of Mosquito Control Applications on a Leaf Eating Purple Loosestrife Beetle (*Galerucella* sp.) and on the Efforts of the U.S.F.&W.S. to Control Purple Loosestrife (*Lythrum salicaria* L.), Bernd Blossey, Biological Control of Non-Indigenous Plant Species Program, Department of Natural Resources, Cornell University; Elizabeth A. Herland, Wallkill River National Wildlife Refuge; Scott Crans, Sussex County Department of Health and Public Safety, Division of Mosquito Control, Newton, NJ.

Second Session - Epidemiological Investigations with EEE, Presiding - Wayne Crans.

- Does Bivoltinism in *Culiseta melanura* Regulate the Amplification Cycle of EEE- Wayne Crans & Farida Mahmood, Dept. Entomology, Rutgers, New Brunswick NJ.
- Differences in the Population Dynamics of *Culiseta melanura* in Northern vs Southern New Jersey - Tadhg Rainey, Dept. Entomology, Rutgers, New Brunswick NJ.
- Avian Breeding, Nesting and Migration Cycles in New Jersey, Lisa Reed, Dept. Entomology, Rutgers, New Brunswick NJ. Habitats Utilized by Host-Seeking *Coquillettidia perturbans*, Peter Bosak, Dept. Entomology, Rutgers, New Brunswick NJ. *Aedes albopictus*, A Potential Epidemic EEE Vector in Southern New Jersey, Jamesina Scott, Dept. Entomology, Rutgers, New Brunswick NJ.

Wednesday March 31, 1999 - CONTINENTAL BREAKFAST WITH THE EXHIBITORS - Exhibitor Presentations - 8:00 a.m. - 9:30 a.m.

Third Session, Presiding - Judy Hansen

- The Evolution of the State Airspray Program, Robert Kent, Office of Mosquito Control Coordination, NJDEP, Trenton NJ. Pesticide Control Element Permit Program, Holly, Easy, NJDEP, Trenton NJ.

- Regarding the Establishment of a Tick-borne Disease Program within the Monmouth County Mosquito Extermination Commission, Daniel Markowski & Martin Chomsky, Monmouth County Mosquito Extermination Commission, Eatontown, NJ Marsh Management at Green Creek, Cape May County, NJ Phase II, Edward Sokorai, Cape May County
- Mosquito Extermination Commission, Cape May Courthouse, NJ.
- Mosquito Control and Other Benefits of a Restored Tidal Urban Wetland, Thomas J. Moran, Mosquito Control and Wetland Rehabilitation, Delaware Division of Fish and Wildlife, Bear, DE.
- Results of the PSE&G Marsh Restoration Program, Lee Widjeskog, NJ Fish, Game, and Wildlife, NJDEP, Trenton, NJ.
- US Army Corps of Engineer's Delaware River Deepening Project. Hal Lurewics, US Army Corps of Engineers, Philadelphia, PA.
- Department of Environmental Protection Tire Pile Remediation Project, Joseph Davis, NJDEP, Trenton, NJ.

Fourth Session

- South Jersey Resource, Conservation and Development Council's Environmental Monitoring and Management Program. Steven Quesanberry, NJDEP, Trenton, NJ
- Biology of Alternate Fish Species Used for Biological Control, Robert Duryea, Warren County, Mosquito Extermination Commission, Oxford, NJ.
- The Debut of EEE in Warren County, NJ, Christine Musa, Warren County Mosquito Extermination Commission, Oxford NJ.
- *Aedes albopictus* in Gloucester County, NJ, John Sweet, Gloucester County Division of Mosquito Control, Dept. of Parks and Recreation, Sewall NJ, and Jamesina Scott, Dept. Entomology, Rutgers, New Brunswick, NJ.
- *Aedes japonicus* in New Jersey and New York - The First US Records. Michael Romanowski and Thomas Candeletti, Ocean County Mosquito Extermination Commission, Barnegat, NJ; Scott Cambell, Suffolk County Dept. of Health Services, Yaphank, NY; Dominick Ninivaggi, Suffolk County Department of Public Works, Yaphank, NY; Wayne C. Crans, Dept. Entomology, Rutgers University, New Brunswick, NJ.
- An Update on New Jersey's Blackfly Control Program in the Delaware River. James McNelly and Wayne C. Crans, Dept. Entomology, Rutgers University, New Brunswick, NJ.
- Laboratory Maintenance of Mosquitoes. Farida Mahmood and Wayne C. Crans, Dept. Entomology, Rutgers University, New Brunswick, NJ.
- Title Only - report from Associated Executives of Mosquito Control Work in New Jersey, 1998, Christine Musa, Warren County Mosquito Extermination Commission, Oxford, NJ.

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Thursday, April 1, 1999

Fifth Session - Workshop: **Look at this!!!** If you're interested in seeing a mosquito larva that lives in a carnivorous plant... If you're interested in finding a mosquito larva that never comes to the surface of the water to breathe... If you're interested in surveying the larva of the mosquito responsible for transmitting EEE in the bird population... Then plan to attend this field trip being sponsored by the New Jersey Mosquito Control Association on Thursday, April 1, 1999 as part of the 1999 annual meeting! Located in Colliers Mills area of Ocean County, this trip is intended to familiarize mosquito control personnel with the habits of and surveillance techniques for *Wy. Smithii*, *Cq. Perturbans* and *Cs.*

Melanura. **REGISTRATION AT THE ANNUAL MEETING IS NOT A PREREQUISITE FOR ATTENDANCE ON THIS FIELD TRIP.** This will be a valuable training tool for anyone involved in mosquito surveillance and control activities. This is your chance to see very unusual breeding habits of these mosquito species. Additional information will be forthcoming.

For meeting registration information, contact Loretta Undercuffler of the Cape May County Mosquito Commission at (609) 465-9038.

N.J.M.C.A. Annual Pesticide Training Sessions

Once again there will be a north Jersey and a south Jersey session of the NJMCA Annual Pesticide Training Course. The south Jersey session will be held at Bally's Park Place in Atlantic City Monday March 29, 1999 and the north Jersey session will take place in Piscataway Monday April 5, 1999. Call 732-932-9801 for information on these sessions, or, contact Dr. George Hamilton, Department of Entomology, Rutgers, The State University of New Jersey, 93 Lipman Dr., New Brunswick, NJ 08901-8524.

FAQ's on Mosquitoes: Why are some people more attractive to mosquitoes than others?

Scientists are still investigating the complexities involved with mosquito host acceptance and rejection. Some people are highly attractive to mosquitoes and others are rarely bothered. Mosquitoes have specific requirements to satisfy and process many different factors before they feed. Many of the mosquito's physiological demands are poorly understood and many of the processes they use to evaluate potential blood meal hosts remain a mystery. Female mosquitoes use the CO₂ we exhale as their primary cue to our location. A host seeking mosquito is guided to our skin by following the slip stream of CO₂ that exudes from our breath. Once they have landed, they rely on a number of short range attractants to determine if we are an acceptable blood meal host. Folic acid is one chemical that appears to be particularly important. Fragrances from hair sprays, perfumes, deodorants and soap can cover these chemical cues. They can also function to either enhance or repel the host seeking drive. Dark colors capture heat and make most people more attractive to mosquitoes. Light colors refract heat and are generally less attractive. Detergents, fabric softeners, perfumes and body odor can counteract the effects of color. In most cases, only the mosquito knows why one person is more attractive than another.

Dr. Wayne J. Crans Mosquito Research & Control Rutgers University

**For more information
on mosquitoes and
their control, check
out the New Jersey
Mosquito Control
Association Web Page
at:**

<http://www-rci.rutgers.edu/~insects/njmca.htm>

You'll be glad you did!

MEMBERSHIP IN NEW JERSEY MOSQUITO CONTROL ASSOCIATION, Inc.

To apply for membership fill out the following application and forward it to: Membership Chairman, Office of Mosquito Control Coordination, PO Box 400, Trenton, NJ 08625. Make checks payable to "New Jersey Mosquito Control Association", membership period is from March to March.

Name: _____ Individual \$30.00/yr:

Sustaining \$300.00/yr: _____

Address: _____ Contribution to D.M. Scholarship:

_____ Phone: Office:() _____ Home:(
) _____

New species to the U.S. found in New Jersey and New York....

***Aedes japonicus*: Accidental Introduction to the Northeastern United States**

Wayne J. Crans

An exotic mosquito, now known to be *Aedes (Finlaya) japonicus japonicus* (Theobald), was recovered from a light trap collection from Colliers Mills, New Jersey. Additional specimens were collected from 2 locations in Suffolk, Co. New York. Since the species has previously been reported only from Palearctic Japan, the collections represent a new record for the United States.

On September 17, 1998, Mike Romanowski of the Ocean County Mosquito Extermination Commission recognized a strange looking adult female mosquito from a light trap operated at Colliers Mills, NJ. Both he and Superintendent Tom Candeletti are proficient at mosquito identification and decided that this specimen did not match the description for any of the native species. The mosquito was liberally marked with white

scales and was initially thought to be the first record for *Aedes albopictus* from Ocean County. Further examination revealed banding patterns on the palps, thorax, abdomen and legs that were inconsistent with those of *Ae. albopictus*. As a result, Ocean County sent the specimen to our Mosquito Research and Control laboratories at Rutgers University for further examination.

Linda McCuiston, my ID Specialist, examined the specimen and was unable to make an identification using keys to mosquitoes of the Northeast, Southeast and Caribbean region. We sent the specimen to Dick Darsie at FMEL, Vero Beach who was unable to make an identification using keys to Neotropical, Oriental and Palearctic regions. Dick mailed the specimen back to Rutgers with the suggestion that we send it to the Smithsonian.

I attended the meetings of the Northeastern Mosquito Control Association in Loon Mountain Vermont, in early December and found that Scott Campbell, of the Suffolk County Department of Health Services had several female mosquitoes from his area that could not be identified. When he sent them to us, we realized that the mosquitoes collected on Long Island were the same as the single specimen from Colliers Mills, NJ. They were later identified as *Aedes japonicus* by E. L. Peyton at the Walter Reed Biosystematics Unit, Smithsonian Institution in Washington, D.C.

Aedes japonicus japonicus is one of 4 subspecies described in the *Revision of the Adult and Larval Mosquitoes of Japan and Korea* (Tanaka et al. 1976). The species is a container breeder that was accidentally introduced to New Zealand with *Ae. albopictus* in used tires in the early 1990's. The species is quite common in northern Japan and readily bites humans but is not considered a major pest. In all probability, *Ae. japonicus* was introduced to the USA via the tire trade under circumstances previously described for *Ae. albopictus*.

The fact that specimens would turn up in the New Jersey Pine Barrens and Long Island at the same time suggests that the species may be more common than initial collections indicate. Scott Campbell collected the 1st specimen at Southold, NY on August 13 in a CDC trap collection. The Colliers Mills, NJ collection was made September 17 in a standard New Jersey trap. Two additional specimens were trapped in New Jersey light traps at Brookhaven, NY on September 18 bringing the total known specimens to 4. To date, no larvae have been detected despite a relatively intense survey in the vicinity of the light trap at Colliers Mills. Examination of the plates in the Tanaka book show that the larvae bear a superficial resemblance to *Aedes atropalpus*, another container breeder that has become exceedingly common in tires habitats in much of the northeast.

Plans are currently underway to increase surveillance efforts in the vicinity of last year's collections once the season breaks and conduct genetic studies at the Smithsonian to confirm the origin for this exotic. Preliminary information suggests that *Ae. japonicus* has used tires as a vehicle for worldwide transport. If this is the case, the populations of *Ae. albopictus* that have invaded the northeast may not represent a single introduction that has moved northward via domestic tire transport.

1999 Mosquito Week Celebration Planning Update

Based on a survey among mosquito control workers throughout New Jersey, the NJMCA Public Relations Committee is planning a single statewide event to celebrate National Mosquito Control Awareness Week during the week of June 20-26, 1999. *Please note and pass on:*

1. statewide event will be held early in the week with the target date of Sunday, June 20th, 1999, with the 19th and 21st as backups. The intent is to have the event early in the week so that a county agency can host an event or participate in activities within its own county later in the week.
2. The event will be in the southern part of the state in 1999 with serious consideration being given to Island Beach State Park.

This statewide event represents the entire New Jersey Mosquito Control Community, PLEASE, to help make this event a success plan now for your own contribution and participation.

Statewide Event Suggestions:

Pencil in Saturday, June 19th - Monday, June 21st as proposed statewide event days to help avoid making other commitments during that time period.

Consider committing personnel to help at the statewide event.

Start now designing or developing a display or educational activity that could be contributed to the statewide event and could still be used for local events.

Some suggestions for County Events:

Write resolutions recognizing National Mosquito Control Awareness Week and your program for passage by your Commissioners, Freeholders and County Executives.

Look for events or activities in your county that you may be able to participate in with mosquito display or activity during the week of June 20 - 26.

Continue promoting the statewide poster contest using the notebook provided in November/December. The winners of the contest will again be

invited to the statewide event to receive recognition and their awards/prizes.

The more that the public understands about mosquitoes, mosquito borne disease and professional mosquito control in New Jersey and worldwide, the easier it is for us to do our jobs.

[Culex salinarius Coquillett](#)

Wayne J. Crans, Rutgers University

And for a little fun...

MOSQUITO CONTROL Word Search

F N B P C L Y A I I T J F D Z T C Q H Q B C E C Y
F U X F R X L G I V S D Y Y E Q G V J V Q D W R W
S I X S T U U N F D A R O U Q A Z C K P I Z W Z F
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AEDES	GAMBUSIA	PUPA
AIRSPRAY	JAPONICUS	ROTARYDITCHER
ANOPHELES	LARVA	SURVEILLANCE

BIORATIONAL	LARVICIDE	TEMEPHOS
COQUILLETIDIA	METHOPRENE	ULV
CULEX	OMWM	VECTOR
CULISETA	PALPI	
DIPPER	PROBOSCIS	

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