

Young), *Ae. (Och.) c. canadensis* (Theobald) and *Ae. (Och.) excrucians* (Walker). Attempts to locate additional specimens during 1976 failed. An early spring drought and the subsequent reduction and disappearance of many pools probably accounted for its absence.

However, on April 1 and 14, 1977, 11 additional *Ae. provocans* larvae were collected from these same woodland pools, thus establishing this mosquito as an endemic Pennsylvania species.

Wills and McElhattan (1968) added 3 new *Aedes* species to the state's list. *Ae. provocans* brings the total number of recorded species of *Aedes* to 24. The specimens are in a collection at the Williamsport Regional Office and the Medical Entomology Laboratory, Harrisburg.

References Cited

- Wills, William and V. McElhattan. 1968. Additions to the list of *Aedes* spp. In Pennsylvania. *Mosquito News* 28:108-109.
- Wood, D. M. 1977. Notes on the identities of some common Nearctic *Aedes* mosquitoes. *Mosquito News* 37:71-81.

SEVEN MOSQUITO SPECIES IN CONTAINER HABITATS IN MINNESOTA

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A larval survey was conducted in August, 1977 during premise inspections to reduce *Aedes triseriatus* (Say) the vector of California (LaCrosse) encephalitis. The survey area was near the west end of Lake Minnetonka in western Hennepin County, Minnesota. At the time of the survey, 2 young people from this area had been hospitalized with the disease. Six cases of California (LaCrosse) encephalitis were reported in Minnesota in 1977.

Habitats found producing mosquitoes during the survey included discarded tires, tree-holes, tin cans and other artificial containers. The most common breeding site found was the discarded tire. Many of these and other containers held leaves and twigs and were filled with water. Active breeding sites were located

Table 1.

Pure Cultures	Collections
<i>Aedes triseriatus</i>	89
<i>Culex restuans</i>	69
<i>Culex pipiens</i>	6
<i>Culex tarsalis</i>	4
Total	168
Mixed Cultures with <i>Aedes triseriatus</i>	
<i>Culex restuans</i>	31
<i>Culex restuans</i> and <i>Culex pipiens</i>	3
<i>Culex pipiens</i>	3
<i>Culiseta inornata</i>	1
Total	38
Mixed cultures with <i>Culex restuans</i>	
<i>Culex pipiens</i>	14
<i>Culex pipiens</i> and <i>Culiseta inornata</i>	1
<i>Culex pipiens</i> and <i>Culex tarsalis</i>	1
<i>Culex tarsalis</i> and <i>Culex territans</i>	1
<i>Culex salinarius</i>	1
Total	19
Total all collections	225

in shaded areas behind buildings, in high grass or in woods. They were found in good harboring areas for adult *Ae. triseriatus*.

Table I lists the species associations found in the survey. *Ae. triseriatus* was identified in 127 of the 225 collections examined, or 56.4%. Of these, 89 collections were pure cultures. Thus nearly 40% of all collections were pure cultures of *Ae. triseriatus*. *Culex restuans* was found nearly as often as *Ae. triseriatus*. This species was found in 119 sites or 52.9% of the collections, 69 times in pure culture. Pure cultures of these 2 species accounted for 70.2% of all collections. Such a high percentage of pure cultures seems unusual and the explanation is unclear.

Operationally this survey had 2 uses. First, it further confirmed the breeding habitat of *Ae. triseriatus*. Second, this survey resulted in the elimination of a large number of confirmed and potential *Ae. triseriatus* breeding sites. While cold fogging was required to control adult *Ae. triseriatus* mosquitoes during the survey, it is felt that the extensive elimination of breeding habitat will contribute to future control of *Ae. triseriatus* and reduce the threat of California (LaCrosse) encephalitis in this area.

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