laboratory mouse is a superior blood source for *An. stephensi* under insectary conditions. Significantly more eggs were laid by mosquitoes fed on mouse blood than by those fed on guinea pig, sheep erythrocytes or defibrinated bovine blood. The differential response on egg production to different blood sources was also confirmed.

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CULEX TARSALIS, AEDES SOLLICITANS, AEDES GROSSBECKI: NEW DISTRIBUTION RECORDS FROM SOUTHWESTERN ONTARIO[1]

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In 1976, a large scale surveillance program for St. Louis encephalitis virus was initiated in Ontario. As an integral part of this program mosquitoes were trapped at weekly intervals from May to October, 1976 and 1977, at 11 sites in the southwestern region of the province. In this paper we report new distribution records for 3 species of mosquitoes and their possible significance.

A single *Culex tarsalis* Coquillett was collected from a CDC trap located in Windsor during mid-July 1976. This was the first record of the species from Ontario. In 1977, 49 adult females of *Cx. tarsalis* were captured as far east as Toronto (Table 1). A single *Cx. tarsalis* larva was also collected in Guelph.

Table 1. Dates of collection of *Culex tarsalis* by CDC and other traps, Ontario, 1977.

Collection Week of:	Location	Number Collected
July 20	Sarnia	6
	Windsor[1]	3
July 27	Sarnia	2
	Windsor[1]	5
August 3	Sarnia	2
	Toronto[2]	2
	Windsor	4
August 10	Leamington	9
	Sarnia	1
	Windsor	6
August 17	Sarnia	2
	Toronto[2]	1
	Windsor	5
August 24	Windsor	1
	TOTAL	49

[1] Specimen in ovipositional trap.
[2] Collected by New Jersey light trap.

Since the species is the principal vector of WEE and SLE in western North America, it is desirable to monitor populations to ascertain if they are increasing. In 1976, ca. 100,000 mosquitoes were collected of which ca. 13,000 were *Culex* females. In 1977, using the same trapping sites and trapping techniques, only 38,000 female mosquitoes were collected of which ca. 5,500 were *Culex* including 44 *Cx. tarsalis*. The population of *Culex* sp. was much lower in 1977 than in 1976 yet populations of *Cx. tarsalis* were considerably higher. It appears that low level populations of *Cx. tarsalis* are now established throughout much of southern Ontario. This is not surprising since a single *Cx. tarsalis* specimen has now been reported as far eastward as New Jersey (Lesser et al. 1977).

Thirty-six *Aedes sollicitans* (Walker) females were captured in Sarnia from July 12 to August 22, 1976. This represents the first record from

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Ontario. In 1977, 17 *Ae. sollicitans* females were collected from May 24 to August 9 from Windsor and Sarnia. Mosquito collections in 1977 were lower in general than those in 1976, and this trend can be seen with *Ae. sollicitans*. All of these collections were by CDC trap and are listed in Table 2. The collection sites in both Sarnia and Windsor were adjacent to large brine pools associated with major chemical companies. *Ae. sollicitans* is a major vector of EEE (Crans 1977) and has been recorded previously from many inland states, particularly from sites with brackish water found in association with salt and oil wells (Fellton 1944).

Table 2. Dates of collection of *Aedes sollicitans* by CDC trap, Ontario, 1976–77.

Collection Week of:	Location	Number Collected
July 12/76	Sarnia	14
July 25/76	Sarnia	5
August 8/76	Sarnia	5
August 15/76	Sarnia	5
August 22/76	Sarnia	7
	TOTAL	36
May 25/77	Sarnia	1
	Windsor	1
June 15/77	Sarnia	1
July 6/77	Sarnia	1
July 13/77	Sarnia	1
July 20/77	Sarnia	9
August 3/77	Sarnia	2
September 14/77	Windsor	1
	TOTAL	17

Aedes grossbecki (Dyar and Knab) was represented by a single female collected June 15, 1977 by a CDC trap located in Windsor. This represents the first record of this species in Canada. The nearest distribution record to Windsor is New York State (Barnes et al. 1950).

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EFFECT OF TEMEPHOS AND CHLORPYRIFOS ON CRUSTACEA

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In the context of an environmental impact statement the Metropolitan Mosquito Control District needed information about the effects of its larval control program on Crustacea. Crustacea make up a substantial proportion of the diet of nesting waterfowl, and there was concern that the District's operations might adversely affect crustacean production, thus reducing waterfowl populations. To resolve this issue data on the occurrence of Crustacea were collected from sites treated with insecticide and from untreated sites. In particular, the effects of temephos and chlorpyrifos, both in granular formulations, were studied. Field observations were carried out in July, 1977.

For this study, 124 Type I sites in Anoka, Hennepin, Scott, and Washington counties of Minnesota were checked for the presence of Crustacea. (Type I sites are defined by the District as upland depressions which are intermittently filled with surface runoff.) Of these, 48 were treated with chlorpyrifos at rates of either 0.05 lb. AI/acre or 0.10 lb. AI/acre; 28 were treated with temephos at a rate of 0.025 lb. AI/acre; and 48 were untreated. All applications were carried out in the routine operations of the District larval control program; thus evaluation was coordinated with the normal field check procedure and was made 1 to 6 wk post-treatment.

All observations were made by operational field personnel. To verify their findings sam-