

***Anopheles barberi* Coquillett**

Eastern United States: South Dakota to New York, south to Texas and Florida (Zavortink 1970).

**Point Pelee Records (1973):** 29 June, TH #1: adult (♀); 5 July, TH #2: larva — II<sup>a</sup> (1)<sup>b</sup>; TH #3: larvae — II(5); 11 July TH #13: larvae — IV(5), III(1), II(1); 30 July, TH #4: larva — II(1); TH #5: larvae — IV(3), III(1), II(5), I(5); TH #6: larva — I(1); TH #12: larvae — III(1), II(1), I(1); TH #13: adults (4♂♂), pupa (1), larvae — IV(9), III(1), II(1); TH #18: larvae — IV(7), III(2), II(2).

***Orthopodomyia signifera* (Coquillett)**

Oregon, Utah, New Mexico, North Dakota and Massachusetts, south to California, Tamaulipas (Mexico), Cuba, and the Virgin Islands (Zavortink 1968).

**Point Pelee Records (1973):** 5 July, TH #5: larvae — III(3); 30 July, TH #4: larvae — I(4); TH #5: pupae (2), larvae — IV(20); TH #6: larva — IV(1); TH #18: larvae — III(6).

***Orthopodomyia alba* Baker**

New Mexico northeast to New York and south to Coahuila (Mexico) and Georgia (Zavortink 1968).

**Point Pelee Record (1973):** 11 July, TH #12: larvae — I(17).

These additions to the Canadian fauna do not constitute significant extensions of the ranges of these mosquitoes. The records are noteworthy only because it has been traditional to define the boundaries of faunal surveys and taxonomic treatments geographically rather than biologically. We suspect that some of these tree-hole mosquitoes may occur elsewhere in Canada because tree-holes have been little investigated anywhere in the country. Nevertheless, it is certain that the distributions of these species, because they are restricted to these special habitats, have been very much reduced as a result of man's activities. The Point Pelee populations of these species may now be relatively isolated and may therefore constitute, in some sense, "relict" populations. Whether or not any of these mosquitoes occur elsewhere in Canada, the Point Pelee populations should be carefully conserved, for if they do not occur elsewhere, then the Point Pelee populations are unique in Canada; if they do occur elsewhere, then the Point Pelee populations should be protected, at least until the distribution and status of these species in Canada are better known.

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<sup>a,b</sup>Larval instar and number of specimens, respectively.

THE BIOLOGY OF TREE-HOLES OF POINT PELEE  
NATIONAL PARK, ONTARIO

I. NEW MOSQUITO RECORDS FOR CANADA (DIPTERA: CULICIDAE)

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**Abstract**

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The mosquitoes *Anopheles barberi*, *Orthopodomyia signifera*, and *Orthopodomyia alba* are recorded for the first time in Canada. All three species were found breeding in the water-filled rot cavities of trees in the deciduous forest of Point Pelee National Park, Ontario. Attention is drawn to the probable rarity of these mosquitoes in Canada and their conservation is recommended.

Recently (April 1973) we initiated a study of the fauna and biology of the water-filled rot cavities of trees in Point Pelee National Park, Ontario (41°56' N., 82°31' W.). We selected Point Pelee for this study because of its extreme southern location in Canada and because it contains plant communities representative of the Deciduous Forest Region, a forest type which at one time occupied a narrow band north of lakes Erie and Ontario but which in Canada is now represented by remnants only (Rowe 1972). The primary aims of this study are to describe the fauna of these tree-holes, to investigate the biology of the more important elements of the fauna with special reference to their overwintering and reproductive strategies, and, as a long-term aim, to examine interspecific phenomena, in particular predator-prey relationships and competition among the few species of animals which occupy these small, reasonably discrete habitats.

At the time of writing, 19 tree-holes (TH) are under observation; this sample provides a variety of cavities, varying with respect to the tree species in which the cavity occurs, their size, amount of contained water, "bottom" type, height above the ground, and degree of insolation. More detailed descriptions of the several cavities under study will be presented in a subsequent paper in this series. For the present we wish to record only the identity of the trees in which the tree-holes occur: 14 tree-holes are in oaks (*Quercus* spp.) [#1-7, 10, 11, 14, 15, and 17-19]; two in walnut (*Juglans* sp.) [#13 and 16]; one in ash (*Fraxinus nigra* L.) [#12]; one in sycamore (*Platanus occidentalis* L.) [#9]; and one in shagbark hickory (*Carya ovata* (Mill.) K. Koch) [#8].

The major elements of the fauna of these tree-holes are insects. Our first samples were qualitative only and were made by removing quantities of the water with a siphon or suction tube and samples of the sediment with a spoon. Adult insects 'resting' inside tree-holes were collected with an aspirator.

This note records the presence in Canada of three species of mosquitoes not previously known to form part of the Canadian fauna, viz. *Anopheles barberi* Coquillett, *Orthopodomyia signifera* (Coquillett), and *Orthopodomyia alba* Baker. A report of additions to the Canadian fauna is appropriate at this time because a revision of the Canadian mosquitoes is in progress (R. A. Ellis and D. M. Wood, pers. comm.).

The habitats of all three species are virtually restricted to water-filled rot cavities of deciduous trees (Jenkins and Carpenter 1945). At Point Pelee all three species were invariably associated with another widespread mosquito inhabitant of tree-holes, *Aedes triseriatus* Say.

We here record the distribution of each species (based on the literature) and the data for the collections on which the present additions to the ranges are based. Specimens will be deposited in the Canadian National Collection of Insects, Ottawa.