A Study of the Adult Mosquito Population of a Northern Ohio Woods

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A STUDY OF THE ADULT MOSQUITO POPULATION OF A NORTHERN OHIO WOODS

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The data presented in this paper are based on collections made by the author at various times over a two-year period, 1946–1948. The work is being carried out much more intensively at the present time so a more detailed report should be forthcoming; however, the present paper, at least, lists the species so far collected.

The area studied is shown on the Cleveland Quadrangle, U. S. Geological Survey Map (Fig. 1), and covers an area of only four square miles mostly because of the author's lack of sufficient transportation. Much of the region is approximately seven hundred seventy feet above mean sea level with three valleys having approximate depths of eighty feet cutting through close to the laboratory. The top land is mostly utilized by market gardeners, but open grassland is common. In the ravines, trees and shrubbery grow in abundance.

Dominating species of trees are the Tulip Tree, *Liriodendron tulipifera* L., and Beech, *Fagus americana* Sw., with Sycamores, *Platanus occidentalis* L., and Hop Hornbeams, *Ostrya virginiana* K., abundant. Other plants include most of those generally found in beech-maple climax forests. Because much of the land is water-logged, marsh-dwelling plants are common. The Jewel Weed, *Impatiens*
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biflora Walt., immediately fills in any area left open by eroding of a bank or the
death of a tree. Water-holes, almost completely filled-in with leaves, are common,
and wherever these are exposed to sunlight, aquatic plants such as Cattails, Typha
latifolia L., Arrowheads, Sagittaria cuneata S., and Hornwort, Ceratophyllum
demensum L., grow profusely.

Mosquito collections and identifications were made according to methods
generally used by workers in that particular field. The bibliography lists two
references which describe the subjects fully.

ADULT COLLECTIONS

Indoors (evening) ........................................ (72 adults)
Culex restuans Theobald .................................. 45%
Culex pipiens Linnaeus ................................... 30
Anopheles punctipennis Say ................................ 20
Aedes triseriatus Say ....................................... 5

Rain-water barrels situated close by served as the breeding place for C. restuans. A.
punctipennis adults were found flying about indoors as late as November.

Outdoors (evening—not biting) ............................ (23 adults)
Aedes vexans Meigen ....................................... 92%
Culex salinarius Coquillett ................................ 8

Winter Resting Places ................................... (346 adults)
Culex restuans Theobald .................................. 98%
Culex pipiens Linnaeus ................................... 2

Summer Resting Places ................................ (184 adults)
Culex salinarius Coquillett ................................ 40%
Culex restuans Theobald .................................. 40
Anopheles punctipennis Say ................................ 4
Culex apicalis Adams ....................................... 4
Uranotaenia sapphirina Osten Sac ........................ 4
Megalhinus septentrionalis D. & K ........................ 4
Unknown ..................................................... 4

Light Trap Collections .................................. (211 adults)
Culex restuans Theobald .................................. 43%
Aedes vexans Meigen ....................................... 34
Anopheles punctipennis Say ................................ 5
Mansonia perturbans Walker ................................ 5
Culex pipiens Linnaeus ................................... 3
Culex salinarius Coquillett ................................ 2
Aedes triseriatus Say ....................................... 2
Culiseta morsitans Theobald ............................... 1.5
Culex apicalis Adams ....................................... 1.5
Uranotaenia sapphirina Osten Sac ......................... 1.5
Culex erraticus Dyar & Knab .............................. 1.5

Biting Stations ........................................... (586 adults)
Aedes vexans Meigen ....................................... 51%
Aedes canadensis Theobald ................................ 14
Mansonia perturbans Walker ................................ 13
Aedes triseriatus Say ....................................... 6
Anopheles punctipennis Say ................................ 4
Culex salinarius Coquillett ................................ 3
Aedes trivittatus Coquillett ................................ 2
Culex restuans Theobald .................................. 1
Aedes excrucians Walker ................................... 9
Culex erraticus Dyar & Knab ............................................. 7
Anopheles quadrimaculatus Say ........................................... 7
Aedes fitchii Felt & Young .................................................. 7
Aedes stimulans Walker ..................................................... 6
Aedes sticticus Meigen ..................................................... 6
Unknown ................................................................. 6
Aedes cinereus Meigen .................................................... 4
Aedes thibaulti Dyar & Knab ............................................. 4
Culex apicalis Adams ...................................................... 4

The last species on the list above was represented by a single specimen, gorged with blood, which did not attempt to bite but insisted upon resting on the arm of the author along with others which were feeding.

The “Unknowns” were specimens which were damaged so badly that they could not be identified. *A. quadrimaculatus* was a fierce daytime biter when its resting place was invaded. Up to the present time, no distribution pattern could be determined for the various larvae found.

A biting station was set up adjacent to a temporary pool, labeled “Pig Pen Pond” on the map, during the last week of May, 1948. Ninety-seven adults were collected within twenty minutes, as listed below, but since the station was somewhat away from the points where most of the other collections were made, the results were not included in with the others. Large numbers of *Culex apicalis* larvae were collected in the water.

### Adults

<table>
<thead>
<tr>
<th>Species</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Aedes stimulans</em> Walker</td>
<td>61</td>
</tr>
<tr>
<td><em>Aedes fitchii</em> Felt and Young</td>
<td>18</td>
</tr>
<tr>
<td><em>Aedes excrucians</em> Walker</td>
<td>11</td>
</tr>
<tr>
<td><em>Aedes vexans</em> Meigen</td>
<td>7</td>
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</tbody>
</table>

**BIBLIOGRAPHY**
