



The Discovery of *Orthopodomyia Signifera* (Coquillett) and *Anopheles Barberi* Coquillett in Minnesota (Diptera, Culicidae)

Author(s): Roger D. Price and Leo R. Abrahamsen

Source: *Journal of the Kansas Entomological Society*, Vol. 31, No. 2 (Apr., 1958), p. 92

Published by: Kansas (Central States) Entomological Society

Stable URL: <https://www.jstor.org/stable/25082275>

Accessed: 08-10-2019 15:14 UTC

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at <https://about.jstor.org/terms>



JSTOR

Kansas (Central States) Entomological Society is collaborating with JSTOR to digitize, preserve and extend access to *Journal of the Kansas Entomological Society*

**THE DISCOVERY OF *ORTHOPODOMYIA SIGNIFERA* (COQUILLET) AND *ANOPHELES BARBERI* COQUILLET IN MINNESOTA
(Diptera, Culicidae)¹**

ROGER D. PRICE AND LEO R. ABRAHAMSEN

Department of Entomology and Economic Zoology, University of Minnesota, St. Paul

Collections by one of the authors (LRA) from tree holes and stump holes during the fall of 1957 revealed the presence of *Orthopodomyia signifera* (Coq.) and *Anopheles barberi* Coq., two species of mosquitoes not previously reported as occurring in Minnesota.

Five pupae of *O. signifera* were taken from a stump hole of what was possibly an elm in Scott Co., Sept. 17; eight late fourth-instar larvae were taken from one tree hole at the base of a medium-sized elm and six pupae and three very late fourth-instar larvae were taken from a similar type of tree hole in another elm in Dakota Co., Sept. 22. This species occurred in association with *Aedes triseriatus* (Say). *O. signifera* has been reported previously from the adjacent states of Iowa and North Dakota (Carpenter and LaCasse, 1955), and the ease with which this species was taken in Minnesota would suggest that it is more widespread in the northern portion of its range than previously known. Matheson (1944) reported that *O. signifera* larvae were unable to survive freezing; in view of this and the fact that late fourth-instar larvae and pupae were found in Minnesota late in September, it is possible that in this area the species overwinters in either the adult or egg stage.

A total of 13 *A. barberi* larvae were taken on Sept. 8 and Sept. 17 in Scott Co., collections on both dates being from the same hole in a fallen burned-out tree trunk (elm?) in a wooded pasture. The larval associates consisted of *A. triseriatus* and *Culex restuans* Theob. The northern boundary of *A. barberi* distribution was known to run from southcentral New York through northern Illinois and central Iowa (Jenkins and Carpenter, 1946) and these same workers theorized that this limitation was probably due to the ". . . cold temperatures and long winters through which the larvae must survive." This Minnesota record probably represents the most severe climatic conditions that this species is known to breed in. The finding of early instar larvae on these dates would seem to be in agreement with the statement of Matheson (1944) that second-instar larvae overwinter frozen solidly in ice.

LITERATURE CITED

- Carpenter, S. J., and LaCasse, W. J. 1955. Mosquitoes of North America (North of Mexico). Univ. of Calif. Press. Berkeley and Los Angeles, vi + 1-360.
Jenkins, D. W., and Carpenter, S. J. 1946. Ecology of the tree hole breeding mosquitoes of nearctic North America. Ecol. Monogr. 16:31-47.
Matheson, R. 1944. Handbook of the mosquitoes of North America. 2nd ed. Comstock Publ. Co., Inc. Ithaca. viii + 1-314.

¹ Paper No. 3850 Scientific Journal Series, Minnesota Agricultural Experiment Station, St. Paul 1, Minnesota.