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THE DISCOVERY OF ORTHOPODOMYIA SIGNIFER (COQUILLETT) AND ANOPHELES BARBERI COQUILLETT IN MINNESOTA (Diptera, Culicidae)

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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-inst larva were taken from one tree hole at the base of a medium-sized elm and six pupae and three very late fourth-inst larva were taken from a similar tree hole in Dakota Co., Sept. 22. This species occurred in association with Aedes triseriatus (Say). O. signifera has been reported previous 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 larva were unable to survive freezing; in view of this and the fact that late fourth-inst larva and pupa 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 larva 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 associate 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 larva on these dates would seem to be in agreement with the statement of Matheson (1944) that second-inst larva overwinter frozen solidly in ice.

LITERATURE CITED

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