froth had a very faint but disagreeable taste which can be compared to the smell of a "sour" dishcloth.

5221. *Sphacelodes vulneraria* (Hbn.). Extension of range. A pair was caught at light on Big Pine Key in October.

Literature Cited

DOS PASSOS, C. F. 1964. A synonymic list of the nearctic Rhopalocera. Mem. Lepid. Soc., No. 1.

KIMBALL, C. P. 1965. Lepidoptera of Florida. Div. of Plant Industry, Fla. Dept. of Ag., Gainesville.

MCDUNNOUGH, J. 1938. Checklist of the Lepidoptera of Canada and the United States of America. Part 1. Macrolepidoptera. Mem. Southern Calif. Acad. Sci. Vol. 1.

SMALL, J. K. 1933. Manual of the southeastern flora. Univ. of North Carolina Press, Chapel Hill.

NYMPHALIDAE OF WISCONSIN

DAVID WM. SCHWEHR
University of Wisconsin, Madison

Fernekes (1909) and Muttkowski (1907) compiled a list of over 1000 species of Lepidoptera, including Nymphalidae, found in the Milwaukee County area. The list was by no means a complete survey of the Lepidoptera of Wisconsin, nor was it entirely accurate for the Milwaukee area. Lack of extensive collecting, deficiency of accurate records, and absence of recent distribution studies have resulted in only generalized records on the distribution and range of Nymphalidae in Wisconsin.

Thus, during the summer of 1966 and continuing into the spring of 1968, a survey was conducted in an attempt to establish the distributive range of Nymphalidae in Wisconsin. Literature sources provided a preliminary list of Wisconsin Nymphalidae. Specimen records were then obtained from the collections of the University of Wisconsin, Northern Michigan University, University of Minnesota, Concordia College, Wisconsin State University at Stevens Point, and from the personal collection records of J. A. Ebner, Wm. E. Sieker, Stephen C. Kleene, and Kurt Johnson, as well as from my own collection.

Twenty-four species of Nymphalidae were obtained through personal collecting in various parts of Wisconsin, ranging from Bayfield County in the north to Dane County in the south. *Polygonia faunus*, *Polygonia progne*, *Phyciodes batesii*, *Phyciodes gorgone*, and *Melitaea harrisii* were added through reference to the collection of the Russel Laboratory, at the University of Wisconsin. Collection records of *Agraulis vanillae* and

Boloria freija were received from Wm. E. Sieker, Madison, and Kurt Johnson, Stevens Point. Records of *Anaea andria* and *Nymphalis californica* have also been reported from the State by J. A. Ebner, West Allis.

Thirty-three species representing eight subfamilies and fifteen genera have been collected within the boundaries of Wisconsin. *Polygonia gracilis* and *Polygonia satyrus* may also occur within the State. A specimen of the latter, in the collection at Northern Michigan University, was taken in northern Wisconsin. However, its presence has not been established due to lack of collecting in that part of the State.

The county records for individual species are available to the interested reader. The following are the generalized ranges of Wisconsin Nymphalidae:

Charaxinae

Anaea andria Scudder. At present recorded only from Racine Co., but may inhabit the southern third of the State.

Apaturinae

Asterocampa celtis (Boisduval & Leconte). Probably present in the entire State, but not yet recorded from the northwestern counties.

Asterocampa clyton (Boisduval & Leconte). Inhabits the southern two-thirds of the State.

Limenitidinae

Limenitis (*Limenitis*) *arthemis* (Drury). Occurs through most of Wisconsin, but its existence is doubtful in the southern extremities.

Limenitis (*Limenitis*) *astyanax* (Fabricius). Is found in the southern half of Wisconsin.

Limenitis (*Limenitis*) *archippus* (Cramer). Has a state-wide range.

Vanessinae

Vanessa atalanta (Linnaeus). Has a state-wide range.

Vanessa virginiensis (Drury). Has a state-wide range.

Vanessa cardui (Linnaeus). Has a state-wide range.

Junonia coenia (Hubner). Is scattered throughout Wisconsin.

Nymphalinae

Nymphalis vau-album (Denis & Schiffermuller). Has a state-wide range, however the species is most frequently collected in northern Wisconsin.

Nymphalis californica (Boisduval). Has only been collected once in Wisconsin, and that was in Door Co.

Nymphalis milberti (Godart). Has a state-wide range.

Nymphalis antiopa (Linnaeus). Has a state-wide range.

Polygonia interrogationis (Linnaeus). Has a state-wide range.

Polygonia comma (Harris). Has a state-wide range.

Polygonia faunus (Edwards). Has been collected in the northern counties of Door, Chippewa, and Marinette.

Polygonia progne (Cramer). Ranges throughout Wisconsin; however the species is more frequently collected in the northern territories.

Melitaeinae

Phyciodes (*Phyciodes*) *tharos* (Drury). Has a state-wide range.

Phyciodes (*Phyciodes*) *batesii* (Reakirt). Has been taken only in the northeastern counties of Bayfield, Brown, and Marinette.

Phyciodes (*Phyciodes*) *gorgone* (Hübner). Is scattered throughout Wisconsin.

Melitaea (*Microtia*) *harrisii* Scudder. Inhabits portions of eastern Wisconsin, being most frequently collected in the northern third of the State.

Melitaea (*Microtia*) *nycteis* Doubleday. Has a state-wide range.

Euphydryas phaeton (Drury). Has a state-wide range.

Argynninae

Boloria (*Clossiana*) *selene* (Denis & Schiffermuller). Has a state-wide range.

Boloria (*Clossiana*) *toddi* (Holland). Has a state-wide range.

Boloria (*Clossiana*) *freija* (Thunberg). Has only been collected in Bayfield, Oneida, and Portage counties, but may later be found to range throughout the northern counties.

Speyeria (*Speyeria*) *idalia* (Drury). Distributed throughout southern Wisconsin.

Speyeria (*Speyeria*) *atlantis* (Edwards). Distributed through the northern third of Wisconsin.

Speyeria (*Semnopsyche*) *cybele* (Fabricius). Has a state-wide range.

Speyeria (*Semnopsyche*) *aphrodite* (Fabricius). Has a state-wide range.

Euptoieta claudia (Cramer). Is scattered throughout Wisconsin.

Heliconiinae

Agraulis vanillae (Linnaeus). Has only been collected in Grant and Portage counties, but may later be found to range throughout the southern parts of Wisconsin.

Acknowledgments

I am grateful to Dr. R. D. Shenefelt and L. J. Bayer, the University of Wisconsin; Gordon D. Gill, Northern Michigan University; Dr. Ke Chung Kim, the University of Minnesota; George Senechal, Concordia College; Kurt Johnson, Wisconsin State University at Stevens Point; J. A.