

MISCELLANEOUS PUBLICATIONS  
MUSEUM OF ZOOLOGY, UNIVERSITY OF MICHIGAN, NO. 88

**An Annotated List of the Moths of Michigan  
Exclusive of Tineoidea (Lepidoptera)**

**BY**

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ANN ARBOR  
MUSEUM OF ZOOLOGY, UNIVERSITY OF MICHIGAN  
JANUARY 31, 1955

LIST OF THE MISCELLANEOUS PUBLICATIONS  
OF THE MUSEUM OF ZOOLOGY, UNIVERSITY OF MICHIGAN

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The publications of the Museum of Zoology, University of Michigan, consist of two series — the Occasional Papers and the Miscellaneous Publications. Both series were founded by Dr. Bryant Walker, Mr. Bradshaw H. Swales, and Dr. W. W. Newcomb.

The Occasional Papers, publication of which was begun in 1913, serve as a medium for original papers based principally upon the collections of the Museum. The papers are issued separately to libraries and specialists, and, when a sufficient number of pages has been printed to make a volume, a title page, table of contents, and index are supplied to libraries and individuals on the mailing list for the entire series.

The Miscellaneous Publications, which include papers on field and museum techniques, monographic studies, and other contributions not within the scope of the Occasional Papers, are published separately, and as it is not intended they will be grouped into volumes, each number has a title page and, when necessary, a table of contents.

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AN ANNOTATED LIST OF THE MOTHS OF MICHIGAN  
EXCLUSIVE OF TINEOIDEA  
(LEPIDOPTERA)

ALTHOUGH there are still parts of Michigan in which but little collecting of Lepidoptera has been done, sufficient data are now available to justify the publication of a list of the moths known to occur in the state, exclusive of the Tineoidea. In each of 13 counties, fairly well distributed, more than 200 species of non-Tineoid moths have been collected. These counties are Mackinac and Schoolcraft in the Upper Peninsula, and in the Lower Peninsula Benzie, Charlevoix, Cheboygan, and Midland in the north, and Berrien, Livingston, Macomb, Oakland, St. Clair, Washtenaw, and Wayne in the south. There are also records in lesser numbers from most of the other counties. The Tineoidea are omitted from the list, as the group has been little collected except in the southeast corner of the state, and many of the Michigan specimens have not yet been determined satisfactorily.

A few local and partial lists of Michigan moths have been published.<sup>1</sup> Pettit (1901) gave Upper Peninsula records for 13 species; Ruthven (1906:103) recorded three species from the Porcupine Mountains in Ontonagon County; Adams (1909:268) reported three from Isle Royale in Lake Superior; Newcomb (1913) published a list of the Michigan Sphingidae; and Welch (1915) recorded 91 species exclusive of Microlepidoptera in a list of the Lepidoptera of the Douglas Lake region in Cheboygan County. Andrews (1929:137) reported six species from the Huron Mountains in Marquette County, and Beebe (1953:28) listed four species of Microlepidoptera as occurring on the E. S. George Reserve in Livingston County. Three of the *Occasional Papers of the Museum of Zoology*, University of Michigan, contain records of Michigan moths: No. 54 (1918) is a report by McAlpine on a collection made at Whitefish Point in Chippewa County; Nos. 114 (1922) and 214 (1930) are respectively my "List of Northern Michigan Lepidoptera" and "Lepidoptera of the Beaver Islands."

Little or no attention seems to have been given the Lepidoptera of Michigan until about 1898. In that year W. W. Newcomb began collecting around Detroit, and from then until about 1920 he and W. S. McAlpine were practically the only men so engaged in the state, although Pettit did a little collecting in the Upper Peninsula. During this period some Lepidoptera were obtained by expeditions sent out under the auspices of the Museum of Zoology — to the Porcupine Mountains in Ontonagon County (1904), Isle Royale in Lake Superior (1904, 1905), the Charity Islands in Saginaw Bay (1910), Whitefish Point in Chippewa County (1913, 1914), Schoolcraft County (1915), Alger County (1916), and Berrien County (1917-20). After 1925 the number of collectors increased. The list includes G. W. Rawson, W. C. Stinson, W. VanDeurs, P. E. Moody, and J. H. Newman, all of whom

<sup>1</sup>"A List of the Butterflies of Michigan" by Sherman Moore was published in 1939 (*Occ. Papers Mus. Zool. Univ. Mich.*, 411:1-23).

did their collecting in the Detroit area except for short trips to other parts of the state, and R. R. Dreisbach, whose collecting of Lepidoptera has been chiefly in Midland and surrounding counties.

Newcomb's collection, and all of Rawson's moths except for a few of the rarer species, are now in the Museum of Zoology. McAlpine's private collection is at his home in Birmingham, and Stinson's collection is probably at his home in Port Huron. What became of the VanDeurs collection is not known, but he probably took it to Denmark with him. The Moody collection went to J. H. Newman, whose large and valuable collection, especially rich in Noctuidae, is at his home near South Lyon.

The present list of 1,066 forms is based on the materials contained in the above-mentioned collections; most of the specimens have passed through my hands at one time or another. The records have been taken from the card catalogue that I have maintained for more than 25 years. It is unfortunate that the only Michigan records of 41 species are based on specimens that are, or were, in private collections. Some of these already have been lost, and it is not pleasant to contemplate the probable fate of the others.

Most of the determinations have been made by me, assisted on some of the Noctuidae by the criticism of J. H. Newman. About 10 per cent of the determinations have been made by others than myself. Of McAlpine's material from Whitefish Point, some of the Noctuidae were determined by F. H. Wolley Dodd, and some of the Geometridae by L. W. Swett. One of the three Noctuidae recorded from Isle Royale was determined by H. G. Dyar. Occasional specimens that gave me trouble were determined for me by F. H. Benjamin, A. E. Brower, August Busck, J. F. Gates Clark, W. T. M. Forbes, J. G. Franclemont, Carl Heinrich, J. McDunnough, A. G. Richards, and L. W. Swett. Acknowledgment has been given in the list for determinations made by others. For specimens not seen by me which are county records, the name of the determiner is given in parentheses.

The arrangement and nomenclature here followed are those of the Barnes and McDunnough *Check List* (1917), with such modifications as were needed to include species recognized since the publication of that list. Use of the more recent McDunnough *Check List* (1938-39) was considered, but there seemed to be no advantage in adopting it, and its use might result in confusion as the collection in the Museum of Zoology is still arranged according to the older list. The cost of relabeling and rearranging that collection probably would not be justified, for still another list may be expected before many years. I have included in the present list only a few subspecific names. In the Lepidoptera a great many nominal subspecies are of uncertain validity, and there is the problem of what to do with the many intermediate forms.

To give to those unfamiliar with the location of the counties in Michigan a clear idea of the part of the state in which each species has been taken, the state has been divided into the three "zones" adopted by the Michigan Department of Conservation. One of these, designated by U. P., covers the Upper Peninsula including Isle Royale. The Lower Peninsula is divided into a northern and a southern zone by an irregular line following county boundaries from Saginaw Bay to Muskegon; these zones are



designated N.L.P. and S.L.P., respectively. Within each zone the counties in which each species has been taken are listed alphabetically, together with the earliest and latest dates of capture in that zone. It has seemed desirable to include, as localities equivalent to counties, Isle Royale (Keweenaw County) in Lake Superior, the Beaver Islands (Charlevoix County) and the Fox Islands (Leelanau County) in Lake Michigan, and the Charity Islands (Arenac County) in Saginaw Bay.

For those species that are illustrated in Holland's *Moth Book* (1905), cited as "H" in the list, references to plate (roman numerals) and figure numbers (arabic numerals) are given in the hope that this may be helpful to the amateur collector. The amateur should be warned, however, that definite determinations cannot be made from pictures alone. In many instances Holland's illustrations cannot be recognized with certainty even by one familiar with the species, especially in the later reprints of the book. There is, unfortunately, no other comparable work of more recent date. The Holland illustrations will, however, serve to give an idea of the general appearance of many of our species.

Most of the books dealing with American moths were published long ago, and are now out of print and difficult to obtain. Probably the most useful general work today is *The Lepidoptera of New York and Neighboring States* by W. T. M. Forbes. Part I (1923) deals principally with the Microlepidoptera, but includes also the families Epiplemidæ, Lacosomidae, Saturniidae, Ceratocampidae, Eupterotidae, Lasiocampidae, Thyatiridae, and Drepanidae. Part II (1948) contains the Sphingidae, Geometridae, Notodontidae, and Lymantriidae. Part III has been completed and in the hands of the printer for some time, awaiting funds for publication. It includes the remaining families. Although this work is based on the Lepidoptera of New York, many species from outside that state are included, and it covers very well the moths likely to occur in Michigan.

#### SPHINGIDAE

*Herse cingulata* Fabr. SLP: Wayne; Sept. 22. A straggler from the south. H vi: 3.

*Cocytius cluentius* Grote. SLP: Wayne; July. A stray from the tropics.

*Protoparce sexta* Johan. SLP: Berrien, Lenawee, Wayne; Aug. 8-Sept. 14. H. iv: 2.

*Protoparce quinque maculata* Haw. NLP: Charity Isl., Midland; July 14-Aug. 6. SLP: Berrien, Ionia, Kent, Lenawee, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; July 1-Sept. 30. H. iv: 1.

*Dolba hylaeus* Dru. NLP: Midland; June 10. SLP: Berrien, Livingston, Oakland, Wayne; June 17-Aug. 15. H. vi: 4.

*Ceratonia amyntor* Hbn. NLP: Beaver Isls., Midland; July 10-17. SLP: Gratiot, Ingham, Lenawee, Livingston, Montcalm, St. Clair, Washtenaw, Wayne; May 31-Oct. 1. H. iv: 6.

*Ceratonia undulosa* Wlk. UP: Alger, Chippewa, Mackinac, Menominee, Schoolcraft; June 27-Aug. 6. NLP: Beaver Isls., Benzie, Cheboygan, Iosco, Midland, Newaygo, Ogemaw, Oscoda; June 12-Aug. 3. SLP: Berrien, Cass, Hillsdale, Huron, Ingham, Lapeer, Lenawee, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 28-Aug. 16. H. vi: 7.

*Ceratonia catalpae* Bdv. SLP: Occasionally occurs in southern Michigan, and has overwintered in some localities (McDaniel, 1933, p. 47). H. iv: 7.

*Sphinx eremitus* Hbn. SLP: Berrien, Livingston, Oakland, Washtenaw, Wayne; June 6-Aug. 9. H. vi: 6.

*Sphinx chersis* Hbn. UP: Mackinac, Schoolcraft; July 2. NLP: Alpena, Antrim, Beaver Isls., Benzie, Charlevoix, Cheboygan (Welch, 1915), Midland, Oscoda; May-Aug. 23. SLP: Berrien, Genesee, Ingham, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 28-Aug. 3. H. vii: 8.

*Sphinx canadensis* Bdv. UP: Chippewa; July 18-20. NLP: Beaver Isls., Cheboygan; June 22-Aug. 23. H. text fig. 25.

*Sphinx kalmiae* A. & S. UP: Chippewa, Mackinac, Schoolcraft; June 5-July 14. NLP: Arenac, Beaver Isls., Cheboygan, Iosco, Midland, Oscoda; June 4-Aug. 9. SLP: Berrien, Macomb, Oakland, St. Clair, Wayne; June 13-Aug. 10. H. vi: 8.

*Sphinx gordius* Cram. UP: Chippewa, Luce, Mackinac, Schoolcraft; July 6-26. NLP: Crawford, Leelanau, Midland, Montmorency, Oscoda; May 29-Aug. 1. SLP: Livingston, Oakland, Washtenaw, Wayne; May 24-July 14. H. v: 13.

*Sphinx luscitiosa* Clem. UP: Chippewa, Luce, Mackinac, Menominee, Schoolcraft; June 18-July 29. NLP: Cheboygan, Crawford, Midland, Oscoda; June 4-Aug. 3. SLP: St. Clair, (no date). H. v: 1.

*Sphinx drupiferarum* A. & S. UP: Mackinac, ex pupa. NLP: Benzie, Cheboygan, Crawford, Midland, Oscoda; May 30-July 30. SLP: Ingham, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 16-July 17. H. vii: 7.

*Lapara bombycoides* Wlk. UP: Chippewa, Delta, Schoolcraft; July 2-21. NLP: Beaver Isls., Cheboygan, Crawford, Iosco, Midland, Oceana, Oscoda; June 12-July 28. SLP: Berrien, July, Aug. H. iii: 7.

*Smerinthus geminatus* Say. UP: Chippewa, Delta, Dickinson, Mackinac, Menominee, Schoolcraft; June 21-July 30. NLP: Alpena, Arenac, Beaver Isls., Benzie, Cheboygan, Iosco, Midland, Newaygo, Oscoda, Roscommon; May 16-Aug. 7. SLP: Branch, Clinton, Huron, Ingham, Lapeer, Lenawee, Livingston, Macomb, Oakland, Sanilac, St. Clair, Washtenaw, Wayne; May 13-Aug. 22. H. iv: 11.

*Smerinthus cerisyi* Kirby. UP: Chippewa, Mackinac, Schoolcraft; June 5-Aug. 22. NLP: Beaver Isls., Cheboygan, Crawford, Iosco, Lake, Midland, Montmorency, Oscoda, Roscommon; May 9-July 21. SLP: Lapeer, Livingston, Macomb, Washtenaw; May 14-July 27. H. vii: 3.

*Paonias excaecata* A. & S. UP: Alger, Chippewa, Luce, Mackinac, Schoolcraft; June 21-July 26. NLP: Alpena, Arenac, Beaver Isls., Benzie, Charlevoix, Cheboygan, Crawford, Grand Traverse, Midland, Montmorency, Newaygo, Oceana; May 28-July 28. SLP: Berrien, Branch, Clinton, Ingham, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne. May 1-Aug. 25. H. vii: 4.

*Paonias myops* A. & S. UP: Chippewa, June 26-July 10. NLP: Benzie, Cheboygan, Midland, Oceana, Ogemaw; July 4-Aug. 4. SLP: Berrien, Clinton, Lenawee, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 27-Aug. 9. H. iv: 12.

*Cressonia juglandis* A. & S. UP: Mackinac, June 18-July 6. NLP: Beaver Isls., Benzie, Oceana; May 18-July 15. SLP: Berrien, Cass, Lapeer, Livingston, Macomb, Oakland, Sanilac, St. Clair, Washtenaw, Wayne; May 14-July 27. H. vi: 9.

*Pachysphinx modesta* Harris. UP: Chippewa, Delta, Dickinson, Isle Royale, Mackinac, Schoolcraft; June 13-Aug. 13. NLP: Beaver Isls., Cheboygan, Crawford, Emmet, Iosco, Midland, Oscoda; June 13-Aug. 20. SLP: Berrien, Cass, Clinton, Huron, Lapeer, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; June 2-Aug. 16. H. vii: 1.

*Erimmyis ello* Linn. SLP: Wayne, Aug.-Oct. 5. A stray from the south. H. v: 3, 10.

*Enyo lugubris* Linn. SLP: Oakland, no date. A stray from the south. H. ii: 17.

*Aellopos tantalus* Linn. SLP: Berrien, June 2. A stray from the tropics.

*Aellopos titan* Cram. UP: Chippewa, July 10. A tropical species. Listed by McAlpine (1918) as *tantalus*. H. ii: 16.

*Haemorrhagia thysbe* Fabr. UP: Chippewa, Dickinson, Isle Royale (Adams, 1909), Luce, Mackinac, Marquette (Andrews, 1929), Schoolcraft; June 27-Aug. 7. NLP: Bay, Beaver Isls., Cheboygan, Emmet, Iosco, Midland, Montmorency, Oscoda, Presque Isle; May 30-Aug. 8. SLP: Berrien, Clinton, Ingham, Jackson, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 30-Sept. 5. H. ii: 5.

*Haemorrhagia gracilis* G. & R. UP: Chippewa, Mackinac; June 3-5. NLP: Arenac, Oscoda, Presque Isle, Roscommon; May 29-July 4. H. iii: 15.

*Haemorrhagia diffinis* Bdv. UP: Chippewa, Dickinson, Isle Royale, Luce, Mackinac, Marquette (Andrews, 1929), Schoolcraft; May 21-July 13. NLP: Arenac, Beaver Isls., Benzie, Cheboygan, Crawford, Fox Isls., Midland, Missaukee, Montmorency, Presque Isle, Ogemaw, Oscoda; May 11-July 25. SLP: Huron, Ingham, Lenawee, Livingston, Oakland, St. Clair, Washtenaw, Wayne; May 21-Sept. 4. H. ii: 1, 2, 3, 4.

*Pholus satellitia pandorus* Hbn. SLP: Berrien, Gratiot, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; July 4-Aug. 8. H. iii: 6.

*Pholus achemon* Dru. NLP: Midland, Oceana; July 13-16. SLP: Hillsdale, Macomb, Oakland, St. Clair, Washtenaw, Wayne; June 20-Aug. 15. H. iii: 5.

*Pholus labruscae* Linn. SLP: Wayne, no date. A stray from the south. H. iii: 11.

*Ampeloeca versicolor* Harris. SLP: Clinton, Livingston, Oakland, Washtenaw, Wayne; May 17-Aug. 12. H. iii: 13.

*Ampeloeca myron* Cram. UP: Schoolcraft, July 26. NLP: Iosco, Midland, Oceana; June 12-Aug. 3. SLP: Berrien, Cass, Ingham, Lapeer, Livingston, Montcalm, Oakland, St. Clair, Washtenaw, Wayne; May 23-Sept. 28. H. iii: 4.

*Darapsa pholus* Cram. UP: Chippewa, Schoolcraft; June 25-July 7. NLP: Cheboygan, Crawford, Midland, Presque Isle, Roscommon; May 27-July 26. SLP: Berrien, Ingham, Livingston, Oakland, Washtenaw, Wayne; June 4-Aug. 16. H. iii: 3.

*Sphecodina abbotti* Swains. SLP: Ingham, Livingston, Washtenaw, Wayne; May 18-June 12. H. ii: 19.

*Deidamia inscriptum* Harris. NLP: Midland, Newaygo; June 4-11. SLP: Genesee, Livingston, Macomb, Montcalm, Oakland, Washtenaw, Wayne; Apr. 10-June 14. H. ii: 15.

*Amphion nessus* Cram. UP: Mackinac, May 29-June 5. NLP: Benzie, Midland, Montmorency; May 24-June 1. SLP: Huron, Ingham, Lenawee, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 8-July 3. H. ii: 18.

*Xylophanes tersa* Linn. SLP: Macomb, Washtenaw; June 14. A stray from the south. H. ii: 13.

*Celerio galli intermedia* Kirby. UP: Chippewa, Mackinac; June 5-July 10. SLP: Macomb, St. Clair, Washtenaw, Wayne; June 8-July 12. H. ii: 20.

*Celerio lineata* Fabr. UP: Gogebic, Schoolcraft; Aug. NLP: Charity Isl., Cheboygan, Iosco, Leelanau, Mecosta, Midland, Otsego; June 8-Sept. 11. SLP: Berrien, Branch, Gratiot, Ingham, Lenawee, Livingston, Macomb, Montcalm, Oakland, St. Clair, Washtenaw, Wayne; May 28-Sept. 21. H. ii: 14.

#### SATURNIIDAE

*Samia cecropia* Linn. UP: Dickinson, Mackinac, Schoolcraft; June 23-Aug. 5. NLP: Benzie, Cheboygan, Midland, Ogemaw, Oscoda, Otsego; June 13-July 3. SLP: Branch, Ionia, Kent, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 27-July 13. H. viii: 1.

*Samia columbia* Smith. SLP: Lapeer, Montcalm, Oakland, Washtenaw, Wayne. All records are from pupae or specimens emerging indoors. H. viii: 8.

*Samia cecropia x columbia*. SLP: Oakland, June 13. This specimen and a few others that have been taken agree with known hybrids obtained in captivity.

*Callosamia promethea* Dru. UP: Chippewa, June 21. NLP: Mecosta, Midland, Newaygo, Ogemaw; June 14-July 7. SLP: Berrien, Ingham, Kent, Lenawee, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 30-July 23. H. xi: 11, 12.

*Callosamia angulifera* Wlk. SLP: Berrien, Branch, Cass, St. Clair; July 9-Aug. 18. H. viii: 3, 4.

*Tropaea luna* Linn. UP: Chippewa, Isle Royale, Luce, Mackinac, Ontonagon, Schoolcraft; June 6-July 6. NLP: Beaver Isls., Cheboygan, Clare, Crawford, Iosco, Manistee, Midland, Montmorency, Oceana, Roscommon; May 26-July 2. SLP: Berrien, Jackson, Livingston, Montcalm, Oakland, St. Clair, Washtenaw; May 10-July 27. H. xii: 7.

*Telea polyphemus* Cram. UP: Dickinson, Mackinac, Marquette, Schoolcraft; July 12-Aug. 5. NLP: Beaver Isls., Benzie, Charity Isl., Cheboygan (Welch 1915), Clare, Crawford, Midland, Oceana, Ogemaw; June 2-Aug. 2. SLP: Berrien, Branch, Ingham, Lapeer, Lenawee, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; June 1-July 24. H. ix: 1.

*Automeris io* Fabr. UP: Marquette, Menominee; June 18-July 5. NLP: Benzie, Clare, Crawford, Lake, Midland, Newaygo, Oceana; June 9-Aug. 26. SLP: Berrien, Ingham, Ionia, Kent, Livingston, Macomb, Montcalm, Monroe, Oakland, St. Clair, St. Joseph, Washtenaw, Wayne; May 18-Sept. 27. H. ix: 4, 5.

*Hemileuca maia* Dru. UP: Schoolcraft; no date. NLP: Lake; Sept. 23. SLP: Barry, Branch, Calhoun, Ingham, Montcalm; Sept. 20-Oct. 8. H. xi: 1.

#### CERATOCAMPIDAE

*Anisota stigma* Fabr. NLP: Newaygo; June 12. SLP: Ingham, Livingston, Macomb, Oakland, Wayne; June 25-July 20. H. xi: 9, 10.

*Anisota senatoria* A. & S. SLP: Livingston, Oakland, St. Clair, Wayne; June 13-July 17.

*Anisota virginiensis* Dru. NLP: Iosco, Midland, Oceana; June 28-July 6. SLP: Berrien, Livingston, Oakland, Washtenaw; June 5-July 20. H. xiii: 9, 10.

*Anisota rubicunda* Fabr. UP: Chippewa; June 22. NLP: Beaver Isls., Charity Isl., Cheboygan, Crawford, Midland, Missaukee, Newaygo, Oscoda, Roscommon; May 22-July 29. SLP: Berrien, Branch, Cass, Ingham, Lapeer, Lenawee, Livingston, Macomb, Montcalm, Oakland, St. Clair, Washtenaw, Wayne; May 8-July 25. H. xiii: 11.

*Adelocephala bicolor* Harris. SLP: Oakland, Washtenaw, Wayne; May 22-Sept. 12. H. x: 5, 6.

*Basilona imperialis* Dru. SLP: Berrien, Branch, Cass, Ingham, Jackson, Livingston, Oakland, Washtenaw, Wayne; June 19-Aug. 11. H. x: 2, xi: 13.

*Basilona imperialis pini* Michener. NLP: Cheboygan (Type), Iosco; June 24-July 17. Determined by Michener.

*Citheronia regalis* Fabr. SLP: Has been reported from Hillsdale (Moody), and Ingham (McDaniel).

#### SYNTOMIDAE

*Scepsis fulvicollis* Hbn. UP: Alger, Chippewa, Dickinson, Iron, Mackinac, Schoolcraft; June 30-Sept. 24. NLP: Alpena, Beaver Isls., Benzie, Cheboygan, Clare, Emmet, Iosco, Mason, Midland, Oceana; June 25-Sept. 14. SLP: Berrien, Branch, Huron, Ingham, Jackson, Lapeer, Livingston, Macomb, Montcalm, Oakland, St. Clair, Washtenaw, Wayne; May 27-Oct. 28. H. xiii: 12.

*Lycomorpha pholus* Dru. UP: Mackinac, Marquette; July 20. NLP: Cheboygan (Welch 1915). Presque Isle, July 30. H. xiii: 15.

*Ctenucha virginica* Charp. UP: Alger, Luce, Mackinac, Marquette, Schoolcraft; June 24-July 31. NLP: Alpena, Beaver Isls., Benzie, Cheboygan, Crawford, Iosco, Leelanau, Midland, Newaygo, Ogemaw, Oscoda, Roscommon; June 18-July 24. SLP: Jackson, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 31-July. H. xiii: 18.

#### ARCTIDAE

##### Nolinae

*Celama cilicoides* Grote. NLP: Alpena, Iosco, Oceana; July 13-24. SLP: Branch, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; June 10-Aug. 26.

*Celama triquetrana* Fitch. NLP: Midland; May 10. SLP: Livingston, Macomb, Oakland, Washtenaw, Wayne; Mar. 30-May 19. H. xiii: 25.

*Nigentia formosalis* Wlk. SLP: Oakland, Washtenaw; July 4-25. H. xiii: 32.

*Roeselia minuscula* Zell. SLP: Livingston, Oakland, Washtenaw; May 30-July 4.

*Roeselia minuscula phylla* Dyar. NLP: Charity Isl., June 26. SLP: Livingston, Oakland, St. Clair, Washtenaw; May 2-July 30. Determined by Heinrich.

## Lithosiinae

*Lexis bicolor* Grote. UP: Dickinson, Isle Royale; Aug. 1-12. NLP: Beaver Isls., Cheboygan, Iosco, Oscoda; July 19-Aug. 12. H. xiii: 29.

*Crambidia pallida* Pack. NLP: Alpena, Beaver Isls., Cheboygan, Midland, Muskegon, Oscoda; July 14-Sept. 5. SLP: Allegan, Livingston, Oakland, Washtenaw; July 11-Aug. 27.

*Crambidia casta* Sanb. UP: Dickinson, Schoolcraft; July 23-Aug. 26. NLP: Beaver Isls., Cheboygan, Crawford, Osceola; Aug. 19-Sept. 9. SLP: Oakland, June 22-July 2. H. xiii: 30.

*Clemensia albata* Pack. UP: Alger, Chippewa, Mackinac; July 22-Aug. 2. NLP: Beaver Isls., Charlevoix, Cheboygan, Fox Isls., Iosco, Montmorency, Oceana; July 7-Aug. 9. SLP: Oakland, Wayne; June 18-29. H. xiii: 38.

*Hypoprepia miniata* Kirby. UP: Mackinac, Ontonagon, Schoolcraft; Aug. 5-28. NLP: Beaver Isls., Charlevoix, Cheboygan, Crawford, Fox Isls., Iosco, Lake, Midland, Montmorency, Newaygo, Oceana; June 11-Aug. 22. SLP: Huron, Livingston, Oakland, St. Clair; July 20-Aug. 8. H. xiii: 41.

*Hypoprepia fucosa* Hbn. UP: Mackinac; July 29. NLP: Beaver Isls., Charlevoix, Cheboygan, Iosco, Lake, Muskegon, Newaygo, Oceana, Oscoda; June 23-Aug. 15. SLP: Berrien, Cass, Ingham, Lapeer, Livingston, Macomb, Oakland, St. Clair, Washtenaw; June 27-Aug. 19. H. xiii: 42.

## Arctiinae

*Ammalo tenera* Hbn. UP: Mackinac, Schoolcraft; June 24-July 8. NLP: Beaver Isls., Cheboygan, Crawford, Midland; June 16-Aug. 26. SLP: Allegan, Berrien, Branch, Huron, Lapeer, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 28-Aug. 26.

*Halisidota caryae* Harris. UP: Luce; July 6. NLP: Midland, Oceana; June 2-July 3. SLP: Berrien, Ingham, Lapeer, Lenawee, Livingston, Macomb, Oakland, St. Clair, St. Joseph, Washtenaw; May 20-July 2. H. xiv: 10.

*Halisidota maculata* Harris. UP: Luce, Mackinac, Schoolcraft; June 7-July 26. NLP: Arenac, Beaver Isls., Benzie, Cheboygan, Midland, Missaukee, Oceana, Oscoda; June 7-July 30. SLP: Berrien, Ingham, Livingston, Oakland, St. Clair, Washtenaw; May 28-July 10. H. xiv: 11.

*Halisidota tessellaris* A. & S. UP: Schoolcraft; July 30. NLP: Beaver Isls., Benzie, Cheboygan, Fox Isls., Midland, Oceana, Oscoda, Otsego; June 25-Aug. 15. SLP: Berrien, Branch, Cass, Ingham, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; June 3-Aug. 18. H. xiv: 12.

*Eubaphe laeta* Guer. UP: Isle Royale, Mackinac; Aug. 1. NLP: Beaver Isls., Benzie, Cheboygan, Lake, Midland; June 24-Aug. 2. SLP: Berrien, Branch, Lapeer, Livingston, Oakland, Washtenaw, Wayne; June 10-July 29.

*Eubaphe aurantiaca* Hbn. UP: Alger, Chippewa, Dickinson, Isle Royale, Mackinac, Schoolcraft; June 20-Sept. 9. NLP: Alpena, Arenac, Beaver Isls., Benzie, Charity Isl., Charlevoix, Cheboygan, Crawford, Emmet, Fox Isls., Iosco, Lake, Montmorency, Midland, Muskegon, Newaygo, Oceana, Oscoda, Otsego, Presque Isle, Roscommon; June 20-Aug. 29. SLP: Berrien, Huron, Lapeer, Livingston, Macomb, Oakland, St. Clair, St. Joseph, Washtenaw, Wayne; May 30-Sept. H. xiv: 20 ? as *immaculata* Reak. 19, 21, form *rubicunda* as *brevicornis*.

*Eubaphe opella* Grote. NLP: Muskegon, Oceana; June 1-Aug. 16. SLP: Lenawee, Livingston, Oakland, St. Clair, Washtenaw; June 13-July 17. H. xiv: 23: 24, form *belmaria*.

*Eubaphe immaculata* Reak. UP: Isle Royale; Aug. 1. NLP: Cheboygan (Welch, 1915), Midland; July 11-26. SLP: Berrien, Branch, Livingston, Macomb, Washtenaw; May 22-July 31. H. xiv: 20, is much too red and looks like *aurantiaca*. This insect probably should be called *ferruginosa* Wlk., as in McDunnough's *Check List* (1938).

*Hyphoraia parthenos* Harr. UP: Chippewa; July 10-26. NLP: Cheboygan (Welch, 1915), Iosco; July-Aug. H. xvi: 20.

*Phragmatobia fuliginosa* Linn. NLP: Cheboygan, Iosco, Midland, Montmorency; July 21-Aug. 8. SLP: Branch, Cass, Ingham, Kent, Lenawee, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; June 29-Sept. 12. H. xiv: 31.

*Phragmatobia assimilans* Wlk. NLP: Benzie, Montmorency; Apr. 9-May 30.

*Diacrisia latipennis* Stretch. NLP: Cheboygan, Clare, Gladwin; June 11-July 8. SLP: Berrien, Branch, Lapeer, Livingston, Macomb, Monroe, Oakland, Washtenaw, Wayne; June 5-July 4. H. xvi: 6.

*Diacrisia virginica* Fabr. UP: Alger, Dickinson, Luce, Mackinac, Schoolcraft; June 23-July 26. NLP: Bay, Beaver Isls., Benzie, Cheboygan, Crawford, Gladwin, Midland, Newaygo, Oceana, Roscommon; May 29-Aug. 21. SLP: Berrien, Branch, Ingham, Lapeer, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; Apr. 16-Aug. 19. H. xvi: 7.

*Isia isabella* A. & S. UP: Dickinson, Mackinac, Menominee; June 18-July 6. NLP: Beaver Isls., Cheboygan, Midland; June 15-Aug. SLP: Berrien, Cass, Jackson, Lapeer, Livingston, Macomb, Montcalm, Oakland, St. Clair, Washtenaw, Wayne; May 20-Sept. 9. H. xvi: 13.

*Hyphantria textor* Harris. UP: Alger, Dickinson, Isle Royale, Luce, Mackinac, Schoolcraft; June 22-Aug. 12. NLP: Beaver Isls., Charity Isl., Cheboygan, Midland, Osceola, Roscommon; May 28-Aug. 5. SLP: Berrien, Ingham, Lapeer, Livingston, Macomb, Oakland, St. Clair, Van Buren, Washtenaw, Wayne; May 19-Aug. 16. H. xvi: 9.

*Hyphantria cunea* Dru. UP: Alger, Mackinac; June 18-27. NLP: Charity Isl., Cheboygan, Crawford, Newaygo; May 29-July 18. SLP: Livingston, Oakland; June 14-July 23. H. xv: 26, xvi: 10.



*Estigmene acraea* Dru. UP: Chippewa, Dickinson, Mackinac; June 25-Aug. 1. NLP: Midland, Newaygo; June 12-Aug. 18. SLP: Berrien, Genesee, Ingham, Lapeer, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 19-Aug. 28. H. xvi: 11, 12.

*Estigmene congrua* Wlk. NLP: Benzie, Cheboygan, Crawford, Midland, Oscoda; May 29-July 2. SLP: Lapeer, Livingston, Macomb, Oakland, Washtenaw; May 21-July. H. xvi: 8.

*Epantheria deflorata* Fabr. SLP: Berrien, Oakland; June 6-July. H. xvi: 16.

*Apantesis virgo* Linn. UP: Chippewa, Delta; July 17-22. NLP: Cheboygan, Charlevoix, Iosco, Midland, Osceola, Oscoda, Otsego, Presque Isle; July 23-Aug. SLP: Berrien, Clinton, Huron, Livingston, Oakland, St. Clair, Washtenaw, Wayne; July 3-Aug. 5. H. xv: 11.

*Apantesis parthenice* Kirby. UP: Alger, Dickinson, Mackinac, Schoolcraft; July 23-Aug. 18. NLP: Beaver Isls., Benzie, Charlevoix, Cheboygan, Crawford, Emmet, Iosco, Midland, Montmorency, Ogemaw, Osceola, Oscoda; July 3-Aug. 31. SLP: Berrien, Livingston, Montcalm, Oakland, Washtenaw; Aug. 13-Sept. 7. H. xv: 13.

*Apantesis rectilinea* French. NLP: Osceola; Sept. 12. SLP: Berrien, Ingham, Livingston, Macomb, Oakland, St. Clair, Washtenaw; May 27-Sept. 20. H. xv: 1.

*Apantesis arge* Dru. NLP: Benzie, Midland, Newaygo, Oceana; June 12-Aug. 6. SLP: Berrien, Ingham, Livingston, Oakland, St. Clair, Washtenaw, Wayne; May 16-Oct. 17. H. xv: 15.

*Apantesis anna* Grote. NLP: Newaygo; June 12. SLP: Berrien, Hillsdale, Huron, Ingham, Livingston, Macomb, Oakland, Washtenaw, Wayne; May 20-July 31. The majority of Michigan specimens are form *persephone* Grt. H. xv: 8, 10.

*Apantesis virguncula* Kirby. UP: Chippewa, Dickinson, Mackinac, Menominee; July 5-Aug. 1. NLP: Cheboygan, Iosco, Midland, Oceana; June 19-July 28. SLP: Cass, Ingham, Jackson, Livingston, Oakland, Sanilac, St. Clair, St. Joseph, Washtenaw, Wayne; June 10-July 8. H. xv: 9, 16.

*Apantesis williamsi* Dodge. UP: Chippewa; July 21-27. NLP: Oscoda; June 20. SLP: St. Clair; June. H. xv: 3, form *determinata*.

*Apantesis phyllira* Dru. UP: Dickinson, Schoolcraft; July 24-Aug. 5. NLP: Beaver Isls., Charlevoix, Cheboygan, Iosco, Manistee, Midland, Oceana, Osceola; May 31-Sept. 6. SLP: Berrien, Ingham, Livingston, Macomb, Oakland, Washtenaw; May 21-Aug. 27. H. xv: 14.

*Apantesis celia* Saund. NLP: Crawford, Oscoda; May 30-June 1. SLP: Livingston, May 5-Aug. 11.

*Apantesis nais* Dru. NLP: Midland; June 5-Aug. 13. SLP: Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; June 3-Sept. 5.

*Apantesis vittata* Fabr. SLP: Livingston, Oakland; May 20-June 5. H. xv: 22, 25.

*Apantesis phalerata* Harris. NLP: Benzie, Crawford, Midland; May 28-Aug. 20. SLP: Berrien, Hillsdale, Ingham, Lapeer, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 9-Aug. 30. H. xv: 6. Formerly listed as a form of *vittata*, now considered a valid species.

*Euchaetias egle* Dru. NLP: Bay, Beaver Isls., Cheboygan; June 26-July 23. SLP: Berrien, Cass, Livingston, Oakland, St. Clair, Washtenaw, Wayne; May 26-Aug. 9. H. xvi: 21.

*Euchaetias oregonensis* Stretch. UP: Mackinac; June 30. NLP: Cheboygan, Crawford, Iosco, Mecosta, Newaygo; May 22-July 17. SLP: Ingham, Lapeer, Livingston, Oakland, St. Clair, Washtenaw, Wayne; May 8-Aug. 15. H. xvi: 19.

*Arctia caia americana* Harris. UP: Alger, Marquette, Schoolcraft; July-Aug. 6. NLP: Beaver Isls., Cheboygan, Ogemaw, Presque Isle; July 9-Sept. H. xv: 2, as *wiskotti*.

*Utetheisa bella* Linn. UP: Mackinac, Schoolcraft; July 25-Sept. 6. NLP: Beaver Isls., Midland; July 27-Aug. 18. SLP: Livingston, Macomb, Oakland, St. Clair, Wayne; July 3-Sept. 26. H. xv: 27.

*Haploa clymene* Brown. SLP: Berrien, St. Clair, Wayne; June 18-Aug. 9. H. xvii: 7.

*Haploa colona* Hbn. UP: Mackinac; Aug. 1. NLP: Cheboygan, Midland, Missaukee, Muskegon, Oceana; July 12-Aug. 16. SLP: Cass, Livingston, Macomb, Monroe, Oakland, Washtenaw; June 3-Aug. 2. *Reversa* Stretch. is the common form in Michigan, form *fulvicosta* Clem. occurs occasionally, but the typical form is rare. H. xvii: 2.

*Haploa lecontei* Bdv. UP: Dickinson, July 5. NLP: Cheboygan, Presque Isle; July 3-15. SLP: Berrien, Clinton, Lapeer, Livingston, Macomb, Monroe, Oakland, St. Clair, Washtenaw, Wayne; June 16-Aug. H. text fig. 59; xvii: 1, 4, form *militaris* Harris.; xvii: 9, form *dyari* Merrick.

*Haploa confusa* Lyman. UP: Alger, Chippewa, Dickinson, Mackinac, Schoolcraft; June 20-Aug. 4. NLP: Alpena, Beaver Isls., Benzie, Cheboygan, Crawford, Iosco, Manistee, Midland, Montmorency, Muskegon, Oscoda, Presque Isle, Roscommon; June 24-Aug. 6. SLP: Berrien, Ingham, Kent, Livingston, Macomb, Oakland, Washtenaw; June 18-July 25. H. xvii: 6.

*Haploa contigua* Wlk. NLP: Benzie, Charlevoix, Cheboygan, Iosco, Montmorency, Oscoda, Presque Isle; July 2-25. H. text fig. 60.

#### AGARISTIDAE

*Alypia octomaculata* Fabr. UP: Mackinac, Schoolcraft; June 11-July 26. NLP: Beaver Isls., Midland; June 4-July 7. SLP: Berrien, Branch, Cass, Ingham, Livingston, Macomb, St. Clair, Washtenaw, Wayne; May 8-Sept. 1. H. xvii: 20, 21.

*Alypia langtoni* Couper. UP: Alger, Chippewa, Dickinson, Houghton, Mackinac, Schoolcraft; June 23-Aug. 1. NLP: Beaver Isls., Kalkaska; June 23-July 9. SLP: St. Clair; Aug. 14. H. xvii: 17.

## NOCTUIDAE

## Agrotinae

*Heliothis paradoxa* Grote. SLP: Ingham, Livingston, Oakland, Washtenaw, Wayne; June 19-Oct. 7. H. xxvii: 15.

*Heliothis phloxiphaga* G. & R. NLP: Midland, Newaygo, Oceana, Osceola, Oscoda; May 28-Aug. 15. SLP: Ingham, Livingston, Oakland, Washtenaw, Wayne; May 14-Sept. 21.

*Heliothis obsoleta* Fabr. UP: Keweenaw, Mackinac; July 16-Oct. 13. NLP: Beaver Isls., Benzie, Cheboygan, Midland; Sept. 9-Oct. SLP: Lena-wee, Livingston, Macomb, Oakland, Ottawa, St. Clair, Tuscola, Washtenaw, Wayne; June 20-Nov. 2. H. xxvii: 17, as *armigera*.

*Heliothis virescens* Fabr. SLP: Oakland, St. Clair, Washtenaw, Wayne; June 15-Sept. 13. H. xxvii: 14.

*Rhodophora florida* Gn. NLP: Beaver Isls., Cheboygan, Iosco, Midland; July 1-Aug. 20. SLP: Berrien, Huron, Ingham, Kalamazoo, Livingston, Oakland, St. Clair, Washtenaw, Wayne; July 15-Aug. 22. H. xxvii: 19.

*Lygranthoecia meskeana* Grote. NLP: Crawford; June 1.

*Lygranthoecia obscurata* Stkr. NLP: Newaygo; July 7. SLP: Livingston, Oakland, Washtenaw, Wayne; May 25-Aug. 27.

*Lygranthoecia marginata* Haw. UP: Dickinson; Aug. 7. NLP: Beaver Isls., Midland; Aug. 11-24. SLP: Berrien, Ingham, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 24-Sept. 7. H. xxvii: 44.

*Schinia trifascia* Hbn. NLP: Midland, Newaygo; July 7-Aug. 11. SLP: Berrien, Ingham, Livingston, Oakland, St. Clair, Washtenaw, Wayne; July 8-Oct. 1. H. xxvii: 35.

*Schinia mundina* Dru. NLP: Midland; Aug. SLP: Berrien, Livingston, Washtenaw; Aug. 12-27. H. xxvii: 33.

*Schinia lynx* Gn. NLP: Midland, Oceana; July 16-27. SLP: Berrien, Livingston, Oakland, St. Clair, Washtenaw, Wayne; June 5-Sept. 1. H. xxvii: 38.

*Schinia arcigera* Gn. NLP: Benzie, Crawford, Midland, Montmorency, Oceana; May 29-Aug. 21. SLP: Berrien, Livingston, Macomb, Oakland, Wayne; Aug. 12-Sept. 12. H. xxvii: 42, as *arcifera*.

*Porosagrotis vetusta* Wlk. UP: Schoolcraft; July 17-21. NLP: Beaver Isls., Charlevoix, Cheboygan, Crawford, Iosco, Midland, Muskegon, Osceola; July 3-Sept. 10. SLP: Berrien, Ingham, Livingston, Macomb, Oakland, Ottawa, St. Clair, Washtenaw, Wayne; Aug. 16-Oct. 11. H. xxii: 25.

*Euxoa perolivalis* Smith. NLP: Benzie, Iosco; July 4-Aug. 6. Determined by Brower.

*Euxoa catenula* Grt. NLP: Beaver Isls., Fox Isls., Midland; June 15-July 30. SLP: St. Clair; July 5. Determined by Forbes.

*Euxoa detersa* Wlk. UP: Mackinac, Schoolcraft; July 29-Sept. 18. NLP: Alpena, Beaver Isls., Charlevoix, Cheboygan, Crawford, Emmet, Iosco, Midland, Osceola, Oscoda; July 2-Sept. 20. SLP: Berrien, Genesee, Gratiot, Livingston, Macomb, Montcalm, Oakland, St. Clair, Wayne; July 27-Sept. 18. H. xxii: 39.

*Euxoa perpolita* Morr. UP: Dickinson; Aug. 12. NLP: Beaver Isls., Crawford, Midland; July-Aug. 24. H. xxii: 36.

*Euxoa mimallonis* Grt. UP: Dickinson; Aug. 18. NLP: Beaver Isls., Charlevoix, Cheboygan, Iosco, Osceola; Aug. 22-Sept. SLP: Huron; Sept. 5.

*Euxoa messoria* Harris. UP: Schoolcraft; Aug. 16. NLP: Beaver Isls., Benzie, Charlevoix, Cheboygan, Emmet, Iosco, Midland, Oceana, Osceola, Otsego; July 21-Sept. 26. SLP: Berrien, Cass, Clinton, Huron, Ingham, Livingston, Macomb, Oakland, Sanilac, St. Clair, Washtenaw, Wayne; July 5-Sept. 29. H. xxii: 40.

*Euxoa scholastica* McD. SLP: Washtenaw; Aug. 11. Determined by Gates Clark.

*Euxoa fumalis vestitura* Sm. UP: Dickinson; Aug. 7. SLP: Washtenaw, July 16.

*Euxoa ontario* Sm. SLP: Livingston, Oakland; July 22-29. Determined by Brower.

*Euxoa quinquelinea lutulenta* Sm. UP: Dickinson, Mackinac; Aug. 2-4. NLP: Charlevoix; Aug. 28. SLP: Macomb; Sept. 18. Determined by Forbes. H. xxiii: 13.

*Euxoa bostoniensis* Grt. UP: Isle Royale, Keweenaw; Aug. 9-17. Determined by Dyar.

*Euxoa tessellata* Harris. UP: Alger, Chippewa, Dickinson, Mackinac; July 12-Aug. 7. NLP: Beaver Isls., Benzie, Charlevoix, Cheboygan, Crawford, Emmet, Iosco, Midland, Montmorency, Oceana, Otsego, Presque Isle, Roscommon; July 1-Sept. 18. SLP: Berrien, Cass, Clinton, Huron, Lapeer, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; June 15-Sept. 23. H. xxiii: 4. Determined by Forbes.

*Euxoa declarata* Wlk. UP: Mackinac, Schoolcraft; Aug. 6-11. SLP: St. Clair; July 10. Determined by Forbes.

*Euxoa albipennis* Grt. NLP: Iosco, Osceola; Sept. 6-13. SLP: Berrien, Livingston, Macomb; July 29-Sept. 23. Determined by Brower. H. xxiii: 7.

*Euxoa mollis* Wlk. UP: Dickinson; July 24. NLP: Cheboygan, Roscommon; July 4.

*Euxoa divergens* Wlk. UP: Alger, Chippewa, Isle Royale, Mackinac; June 29-July 31. NLP: Beaver Isls., Charity Isl., Crawford, Montmorency, Osceola; June 18-Sept. 10. Determined by Dodd.

*Euxoa obeliscoides* Gn. SLP: Washtenaw; July 31-Aug. 11. H. xxiii: 12.

*Euxoa redimicula* Morr. UP: Mackinac; Aug. 3. NLP: Beaver Isls., Midland; July 16-Aug. 16. SLP: Livingston, Macomb, Oakland, St. Clair, Washtenaw; July 10-Aug. 31. H. xxiii: 9.

*Euxoa ochrogaster* Gn. UP: Chippewa, Dickinson, Keweenaw, Mackinac, Schoolcraft; June 25-Sept. 12. NLP: Beaver Isls., Benzie, Charlevoix, Cheboygan, Crawford, Fox Isls., Oceana, Oscoda; July 5-Aug. 25. SLP: Berrien, Huron, Oakland, St. Clair; July 1-Aug. 29. Determinations by Brower and Forbes. H. xxiii: 10.

*Euxoa excellens* Grt. UP: Dickinson; Aug. 1-9. NLP: Beaver Isls., Charlevoix; Aug. 6-21. A western species. Agrees with specimen from Oregon determined by Dyar.

*Euxoa tristicula* Morr. NLP: Cheboygan; Aug. 12. Determined by Brower.

*Feltia gladiaria* Morr. NLP: Beaver Isls., Midland; July 25-Sept. 9. SLP: Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; Sept. 6-22. H. xxii: 19.

*Feltia venerabilis* Wlk. UP: Mackinac; Aug. 29-Sept. 7. NLP: Beaver Isls., Cheboygan, Crawford, Newaygo, Oscoda, Otsego; June 5-Sept. 11. SLP: Genesee, Gratiot, Livingston, Macomb, Montcalm, Oakland, St. Clair, Washtenaw, Wayne; July 15-Oct. 4. H. xxii: 26.

*Feltia ducens* Wlk. UP: Dickinson, Keweenaw, Mackinac, Schoolcraft; Aug. 6-Sept. 4. NLP: Beaver Isls., Charlevoix, Cheboygan, Crawford, Iosco, Midland, Osceola, Otsego; Aug. 8-Sept. 9. SLP: Allegan, Berrien, Livingston, Macomb, Montcalm, Oakland, St. Clair, Washtenaw, Wayne; Aug. 7-Sept. 29. H. xxii: 21, as *subgothica*.

*Feltia subgothica* Haw. UP: Alger, Dickinson, Isle Royale, Mackinac; July 3-Aug. 26. NLP: Beaver Isls., Benzie, Charlevoix, Cheboygan, Crawford, Fox Isls., Iosco, Midland, Oscoda; July 2-Sept. 14. SLP: Berrien, Ingham, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; July 7-Sept. 24. H. xxii: 21, looks like *ducens*, text Fig. 105 is better.

*Feltia herilis* Grt. UP: Mackinac; July 25-Aug. 28. NLP: Beaver Isls., Cheboygan, Crawford, Lake, Montmorency; July 19-Aug. 15. SLP: Allegan, Berrien, Lapeer, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; July 14-Sept. 24. H. xxii: 20.

*Feltia volubilis* Harvey. NLP: Cheboygan, Iosco, Midland, Montmorency, Ogemaw, Oscoda; May 26-June 29. SLP: Livingston, Oakland, Washtenaw, Wayne; May 13-June 13. H. xxii: 23.

*Agrotis badinodis* Grt. NLP: Charlevoix, Cheboygan, Osceola, Otsego; Sept. 2-12. SLP: Livingston, Macomb, Oakland, Washtenaw, Wayne; Sept. 1-Oct. 1. H. xxi: 37.

*Agrotis geniculata* G. & R. UP: Mackinac; Aug.-Sept. NLP: Beaver Isls., Charlevoix, Cheboygan, Crawford, Iosco, Osceola, Oscoda; July 26-Sept. 12. SLP: Livingston, Macomb, Oakland, Ottawa, St. Clair; Aug. 29-Sept. 16. H. xxi: 36.

*Agrotis aurulenta* Grt. UP: Chippewa; July 7.

*Agrotis ypsilon* Rott. UP: Chippewa, Isle Royale, Mackinac, Menominee, Schoolcraft; May 15-Sept. 1. NLP: Beaver Isls., Benzie, Charlevoix, Cheboygan, Iosco, Midland, Oceana, Oscoda; May-Oct. 10. SLP: Berrien, Huron, Ingham, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; Apr. 20-Oct. 15. H. text fig. 103.

*Agrotis collaris* G. & R. UP: Dickinson; Aug. 19. NLP: Cheboygan, Crawford, Osceola; Aug. 24-Sept. 9. SLP: Livingston, Macomb, Oakland; Sept. 3-18. H. xxii: 7.

*Agrotis c-nigrum* Linn. UP: Mackinac, Schoolcraft; July 23-Oct. 3. NLP: Arenac, Beaver Isls., Benzie, Charlevoix, Cheboygan, Iosco, Midland, Oceana, Osceola, Oscoda; May-Sept. 25. SLP: Berrien, Huron, Ingham, Lapeer, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 5-Oct. 28. H. xxii: 1.

*Agrotis bicarnea* Gn. UP: Dickinson, Isle Royale, Menominee; Aug. 1-22. NLP: Beaver Isls., Benzie, Charlevoix, Cheboygan, Midland; July 31-Aug. 23. SLP: Allegan, Berrien, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 9-Sept. 18. H. xxi: 25.

*Agrotis treati* Grt. UP: Dickinson, Mackinac, Schoolcraft; July 19-Aug. 24. NLP: Beaver Isls., Cheboygan, Oscoda; July 23-Aug. 8. SLP: Livingston, Oakland, Washtenaw; Aug. 3-29. Determined by Brower.

*Agrotis normaniana* Grt. UP: Alger, Chippewa; July 20-30. NLP: Beaver Isls., Charlevoix, Fox Isls., Lake, Ogemaw, Osceola; Aug. 3-22. SLP: Allegan, Berrien, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; Aug. 8-24. H. xxi: 34.

*Agrotis baja* Fabr. UP: Alger, Chippewa, Dickinson, Mackinac, Schoolcraft; July 27-Aug. 19. NLP: Beaver Isls., Benzie, Charlevoix, Cheboygan, Crawford, Fox Isls., Iosco, Lake, Manistee, Midland, Osceola; May 30-Sept. 7. SLP: Berrien, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; July 10-Sept. 27.

*Agrotis plecta* Linn. UP: Alger, Chippewa, Mackinac, Schoolcraft; June 18-Aug. 23. NLP: Beaver Isls., Cheboygan, Crawford, Newaygo, Presque Isle, Osceola; May 29-Sept. 15. SLP: Allegan, Berrien, Lapeer, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 13-Sept. 12. H. xxii: 6.

*Agrotis cynica* Smith. NLP: Charlevoix; Aug. 3.

*Agrotis rubifera* Grt. UP: Dickinson, Mackinac; July 23-Aug. 2. NLP: Beaver Isls., Charlevoix, Cheboygan, Crawford, Iosco, Presque Isle; July 14-Aug. 26. SLP: Oakland, Wayne; June 28-July 5.

*Agrotis jucunda* Wlk. UP: Alger, Mackinac; July 23-29. NLP: Beaver Isls., Cheboygan; July 16-Aug. 3. SLP: Livingston, Oakland; July. H. xxii: 5.

*Agrotis phyllophora* Grt. UP: Alger, Chippewa, Mackinac; July 16-30. NLP: Beaver Isls., Cheboygan, Iosco, Lake, Midland, Montmorency, Oceana, Oscoda; June 20-Aug. 7. SLP: Livingston, Oakland, St. Clair, Washtenaw, Wayne; June 25-July 27. H. xxii: 2.

*Agrotis fennica* Tausch. UP: Alger, Chippewa, Isle Royale, Marquette; July 8-18. NLP: Beaver Isls., Charity Isl., Oceana, Presque Isle; June 10-Sept. 3. SLP: St. Clair, Wayne; Aug. 4-31. H. xxii: 4. Determined by Forbes.

*Agrotis unimacula* Morr. UP: Alger, Chippewa, Dickinson, Keweenaw, Mackinac; July 4-Aug. 7. NLP: Beaver Isls., Charity Isl., Cheboygan, Iosco, Midland, Montmorency, Oceana, Presque Isle; July 11-Aug. 20. SLP: Huron, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; June 30-Aug. 20. H. xxii: 9 as *haruspica*.

*Agrotis unicolor* Wlk. UP: Chippewa, Dickinson, Isle Royale, Mackinac, Marquette; June 29-Aug. 16. NLP: Alpena, Beaver Isls., Benzie, Charity Isl., Charlevoix, Cheboygan, Crawford, Iosco, Lake, Midland, Montmorency, Oceana, Oscoda, Otsego, Roscommon; June 18-Sept. 26. SLP: Berrien, Huron, Ingham, Jackson, Lapeer, Livingston, Macomb, Monroe, Oakland, St. Clair, Washtenaw, Wayne; June 1-Oct. 12. H. xxii: 14, as *clandestina*.

*Eucoptocnemis tripars* Wlk. SLP: Allegan, Livingston, Wayne; July 22-Sept. 17. H. xxii: 37.

*Epipsilia fungorum* G. & R. SLP: Ingham, Washtenaw; Sept. 11-21. H. xxvi: 23.

*Epipsilia manifesta* Morr. SLP: Livingston, Oakland, Wayne; May 10-June 11. Determined by Gates Clark.

*Epipsilia salicarum* Wlk. SLP: Macomb, Oakland, Washtenaw; Apr. 14-30. H. xxi: 31.

*Epipsilia monochromatea* Morr. SLP: Livingston; June 16.

*Epipsilia littoralis* Pack. UP: Alger, Chippewa, Dickinson, Mackinac; June 22-July 16. NLP: Beaver Isls., Cheboygan, Fox Isls.; June 19-July 8. H. xxi: 32.

*Lycophotia scandens* Riley. UP: Chippewa, Dickinson, Mackinac, Schoolcraft; June 17-Aug. 7. NLP: Alpena, Beaver Isls., Benzie, Charity Isl., Charlevoix, Cheboygan, Iosco, Lake, Midland, Missaukee, Muskegon, Oceana, Presque Isle, Roscommon; June 30-Aug. 28. SLP: Berrien, Ingham, Oakland, St. Clair, Washtenaw, Wayne; June 30-Sept. 4.

*Lycophotia astricta* Morr. UP: Chippewa, Isle Royale, Mackinac; July 23-Aug. 4. NLP: Iosco; Aug. 6-7. H. xxi: 41. Determined by Dodd.

*Lycophotia occulta* Linn. UP: Alger, Chippewa, Mackinac, Schoolcraft; June 30-Aug. 21. NLP: Beaver Isls., Charity Isl., Cheboygan, Emmet;

June 23-Sept. 16. SLP: Huron, Macomb, Oakland, St. Clair, Wayne; June 3-July 24. H. xxi: 42.

*Lycophotia margaritosa* Haw. UP: Alger, Houghton, Mackinac, Schoolcraft; July 5-Oct. 5. NLP: Beaver Isls., Benzie, Charlevoix, Cheboygan, Iosco, Mason, Midland, Muskegon, Oceana, Osceola; June 25-Sept. 25. SLP: Berrien, Huron, Ingham, Lenawee, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 8-Oct. 30. H. xxi: 40, as *saucia*.

*Lycophotia lubricans* Gn. NLP: Cheboygan, Midland, Oscoda; July 5-Aug. 27. SLP: Allegan, Livingston, Oakland, Washtenaw, Wayne; May 28-Sept. 4. H. xxii: 8.

*Aplectoides speciosa* Hbn. UP: Isle Royale, Aug. 2. Determined by Franclemont as *perquiritata* Morr. Barnes and McDunnough (1917) list this as a synonym of *speciosa*.

*Aplectoides pressus* Grt. UP: Alger, Chippewa, Isle Royale, Mackinac, Marquette, Schoolcraft; July 23-Aug. 1. NLP: Beaver Isls., Benzie, Cheboygan; July 3-Aug. 30. SLP: Berrien, Oakland, St. Clair, Washtenaw, Wayne; June 30-Aug. 1. H. xxi: 25.

*Aplectoides condita* Gn. UP: Mackinac; June 29-July 15. NLP: Benzie; July 5. SLP: Huron; July.

*Apharetra dentata* Grt. NLP: Iosco, Oscoda, Presque Isle; July 21-Aug. 29. H. text fig. 88.

*Ufeus satyricus* Grt. NLP: Benzie; Mar. 30. H. xxiii: 20.

*Anytus privata* Wlk. UP: Mackinac, Marquette; Aug.-Oct. 2. NLP: Osceola, Sept. 22. SLP: Macomb, Oakland, St. Clair, Van Buren, Washtenaw, Wayne; Aug. 30-Sept. 24. H. xxiii: 16.

*Matuta elimata* Gn. NLP: Beaver Isls., Crawford, Iosco, Oceana, Osceola; July 10-Sept. 8. SLP: Livingston, Oakland; Sept. 6-16. H. xxi: 29. Determined by Brower and by Forbes.

*Matuta tenebrifera* Wlk. SLP: Livingston, Macomb, Oakland, Washtenaw, Wayne; Mar. 30-May 27. H. xxi: 33.

*Matuta prasina* Fabr. UP: Alger, Chippewa, Dickinson, Keweenaw, Schoolcraft; July 8-Aug. 5. NLP: Beaver Isls., Charity Isl., Midland, Oceana; July 23-Sept. 3. SLP: Berrien, Livingston, Macomb, St. Clair, Washtenaw; July 5-Sept. 2. H. xxi: 24.

*Rhynchagrotis rufipectus* Morr. UP: Isle Royale, Mackinac; Aug. 1-20. SLP: Oakland; July 25. H. xxi: 22.

*Rhynchagrotis brunneicollis* Grt. UP: Luce; July 6. NLP: Cheboygan; July 6. SLP: Allegan, Berrien, Ingham, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; June 11-Sept. 5.

*Rhynchagrotis placida* Grt. UP: Mackinac; Aug. 28. NLP: Benzie, Charity Isl., Charlevoix, Cheboygan, Iosco, Oceana; July 4-Aug. 22. SLP: Huron, Livingston, Macomb, Oakland, St. Clair, Washtenaw; July 7-Sept. 18. H. xxi: 21, 23.



*Rhynchagrotis alternata* Grt. UP: Mackinac; July 18. NLP: Beaver Isls., Benzie, Charity Isl., Charlevoix, Cheboygan, Oscoda; July 4-Sept. 2. SLP: Allegan, Berrien, Huron, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; June 28-Oct. 20. H. xxi: 20.

*Rhynchagrotis anchocelioides* Gn. UP: Dickinson, Mackinac, Schoolcraft; July 26-Aug. 18. NLP: Beaver Isls., Benzie, Charity Isl., Charlevoix, Cheboygan, Montmorency, Oscoda; July 16-Sept. 10. SLP: Berrien, Huron, Livingston, Macomb, Oakland, Washtenaw, Wayne; June 28-Sept. 23. H. xxi: 19.

*Rhynchagrotis cupida* Grt. NLP: Beaver Isls., Fox Isls., Montmorency, Oscoda; July 18-Aug. 16. SLP: Livingston, Oakland; June 22-July 16. Most Michigan specimens are form *brunneipennis* Grt. Determined by Gates Clark.

*Rhynchagrotis gilvipennis* Grt. UP: Alger, Chippewa, Dickinson, Mackinac; July 20-Aug. 27. NLP: Beaver Isls., Lake, Oscoda; July 19-Aug. 10. SLP: Livingston, St. Clair, Washtenaw; June 17-Aug. 14. H. xxi: 18.

*Euretagrotis sigmoides* Grt. UP: Mackinac; July 23. NLP: Benzie, Charlevoix, Oceana; July 11-Aug. 3. SLP: Berrien, Branch, Cass, Macomb, Oakland, St. Clair, Washtenaw; July 4-Aug. 6. H. xxi: 26.

*Euretagrotis perattenta* Grt. UP: Alger, Chippewa, Dickinson, Mackinac, Marquette, Schoolcraft; June 28-Aug. 5. NLP: Beaver Isls., Benzie, Cheboygan, Iosco, Montmorency, Oscoda; June 25-Aug. 6. SLP: Livingston, Oakland, Washtenaw; June 13-July 14. H. xxi: 27.

*Euretagrotis attenta* Grt. NLP: Oscoda; July 24-25.

*Protagrotis niveivenosa* Grt. UP: Mackinac; June 20-July 28. NLP: Alpena; July 10. SLP: Huron; June 21.

#### Hadeninae

*Barathra curialis* Sm. UP: Chippewa; July. Determined by Dodd.

*Scotogramma trifolii* Rott. UP: Alger, Dickinson; July 31-Aug. 7. NLP: Charlevoix, Cheboygan, Crawford, Iosco, Midland; May 28-Aug. 26. SLP: Berrien, Hillsdale, Livingston, Macomb, Oakland, Sanilac, St. Clair, Washtenaw, Wayne; May 30-Sept. 25. H. xxiii: 29.

*Polia lustralis* Grt. UP: Mackinac; July 6. NLP: Alpena, Cheboygan, Oscoda; June 17-July 12. SLP: Oakland; Aug. 30. H. xxiii: 22.

*Polia detracta* Wlk. UP: Chippewa, Dickinson, Mackinac, Schoolcraft; July 3-28. NLP: Beaver Isls., Benzie, Charity Isl., Cheboygan, Crawford, Iosco, Lake, Midland, Oceana, Oscoda, Presque Isle; June 19-July 28. SLP: Berrien, Jackson, Lapeer, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; June 2-July 26. H. xxiii: 24.

*Polia imbrifera* Gn. UP: Alger, Chippewa, Dickinson, Mackinac; July 11-30. NLP: Beaver Isls., Cheboygan (Welch 1915), Oscoda; July 23-Aug. 3. H. xxiii: 32. Determined by Dodd.

*Polia purpurissata* Grt. UP: Alger, Chippewa, Dickinson, Isle Royale, Mackinac, Schoolcraft; July 22-Sept. 4. NLP: Beaver Isls., Cheboygan, Crawford, Iosco, Midland, Osceola, Oscoda; Aug. 6-Sept. 6. SLP: Berrien, Macomb, Oakland, Washtenaw; Aug. 8-30. H. xxiii: 26.

*Polia determinata* Sm. SLP: Livingston, Washtenaw; Aug. 24-29. This is a western species, described from Colorado. In male genitalia it agrees with *meditata*. Michigan specimens agree well with Smith's description, but whether the species is valid or a form of *meditata* is not clear. I have seen no intergrades. Specimens were submitted to authorities at the U. S. National Museum, but they declined to commit themselves.

*Polia meditata* Grt. UP: Isle Royale, Mackinac; Aug. 1-21. NLP: Beaver Isls., Benzie, Charlevoix, Cheboygan, Iosco, Manistee, Midland, Oceana, Oscoda; May 31-Sept. 7. SLP: Berrien, Ingham, Livingston, Macomb, Montcalm, Oakland, Ottawa, St. Clair, Washtenaw, Wayne; June 17-Sept. 14. H. xxiii: 21.

*Polia distincta* Hbn. SLP: Livingston, Oakland, Washtenaw; Apr. 15-May 18.

*Polia grandis* Bdv. UP: Chippewa, Mackinac; June 18-July 22. NLP: Beaver Isls., Charity Isl., Cheboygan, Crawford, Midland, Montmorency, Newaygo, Roscommon; May 31-July 7. SLP: Berrien, Livingston, Oakland, St. Clair, Washtenaw; May 27-June 25. H. xxiii: 41.

*Polia subjuncta* G. & R. UP: Dickinson; June 29. NLP: Benzie, Midland, Roscommon; June 28-Aug. 5. SLP: Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; Apr. 26-Sept. 4. H. xxiii: 27.

*Polia nevadae canadensis* Sm. UP: Chippewa; July 8. Determined by Dodd. H. (*nevadae*) xxiii: 33.

*Polia ingravis* Sm. NLP: Crawford, Ogemaw, Oscoda; May 18-June 1. SLP: Livingston; July 6. Determined by Brower.

*Polia lubens* Grt. UP: Luce, Mackinac; June 20-July 6. NLP: Beaver Isls., Benzie, Cheboygan, Crawford, Lake, Midland, Newaygo, Oscoda; May 31-July 24. SLP: Berrien, Livingston, Oakland, St. Clair, Washtenaw; June 2-Sept. 5. H. xxiii: 28.

*Polia latex* Gn. NLP: Beaver Isls., Benzie, Crawford, Montmorency; May 31-July 23. SLP: Berrien, Livingston, Monroe, Oakland, St. Clair, Washtenaw, Wayne; May 21-July 4. H. xxiii: 40.

*Polia nimbosa* Gn. UP: Luce; July 5.

*Polia adjuncta* Bdv. UP: Chippewa, Mackinac; from larvae. NLP: Beaver Isls., Benzie, Charity Isl., Midland; June 24-27. SLP: Ingham, Livingston, Macomb, Oakland, St. Clair, Wayne; May 23-Oct. 10. H. xxiii: 38.

*Polia atlantica* Grt. NLP: Beaver Isls.; July 9.

*Polia legitima* Grt. UP: Mackinac, Schoolcraft; June 17-Aug. 1. NLP: Cheboygan, Iosco, Lake, Midland, Presque Isle, Oscoda; July 3-Aug. 12.

SLP: Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; June 17-Sept. 5.

*Polia lilacina* Harvey. UP: Alger; July. SLP: Oakland, Washtenaw; Aug. 24. H. xxiii: 39.

*Polia goodelli* Grt. UP: Dickinson, Mackinac, Schoolcraft; June 28-July 30. NLP: Charity Isl., Oscoda; June 25-July 21. SLP: Berrien, Oakland, St. Clair, Washtenaw, Wayne; May 20-Aug. 14.

*Polia obscura* Sm. UP: Mackinac; June 28-July 3. NLP: Beaver Isls., Montmorency, Oscoda; May 31-July 8. SLP: Livingston, Oakland; May 24-26.

*Polia assimilis* Morr. UP: Chippewa, Luce, Mackinac, Schoolcraft; July 3-17. NLP: Cheboygan, Midland; July 12-24. SLP: Livingston, Oakland; July 15-26.

*Polia anguina* Grt. UP: Luce; July 6. NLP: Beaver Isls., Crawford, Montmorency, Newaygo, Ogemaw, Oscoda, Roscommon; May 25-July 8. SLP: Livingston; May 1-June 1. H. xxiv: 5.

*Polia vicina* Grt. UP: Chippewa; July 25. NLP: Beaver Isls., Benzie, Charlevoix, Cheboygan, Crawford, Iosco, Leelanau, Midland, Oscoda, Presque Isle; June 7-Aug. 12. SLP: Berrien, Van Buren; July 26-Aug. 10. H. xxiv: 6.

*Polia renigera* Steph. UP: Alger, Chippewa, Dickinson, Mackinac, Menominee, Schoolcraft; July 17-Aug. 4. NLP: Alpena, Beaver Isls., Benzie, Charity Isl., Charlevoix, Cheboygan, Iosco, Midland, Montmorency, Oceana, Roscommon; June 9-Sept. 14. SLP: Berrien, Branch, Genesee, Ingham, Lapeer, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; Apr. 30-Sept. 23. H. xxiii: 35.

*Polia lorea* Gn. UP: Alger, Chippewa, Mackinac, Schoolcraft; July 3-30. NLP: Beaver Isls., Benzie, Cheboygan, Crawford, Oscoda, Presque Isle; June 18-July 27. SLP: Berrien, Ingham, Lapeer, Livingston, Oakland, St. Clair, Washtenaw, Wayne; May 30-July 28. H. xxiv: 2.

*Polia olivacea* Morr. UP: Alger, Mackinac, Menominee, Schoolcraft; July 22-Aug. 28. NLP: Beaver Isls., Charlevoix, Cheboygan, Crawford, Fox Isls., Iosco, Midland, Montmorency, Osceola, Otsego; July 30-Sept. 3. SLP: Macomb, St. Clair; Aug. 18-Sept. 9. H. xxiii: 37.

*Polia implicata* McD. NLP: Newaygo; Aug. 20-24 (paratypes). SLP: Livingston, Oakland, Ottawa; Aug. 19-Sept. 17. Determined by Brower. H. xxiv: 1, as *laudabilis*.

*Epia capsularis* Gn. NLP: Beaver Isls., Newaygo; June 11-July 1. SLP: Livingston, Oakland, Washtenaw; May 28-June 17.

*Chabuata signata* Wlk. UP: Mackinac; June 28-Aug. 24. NLP: Beaver Isls., Charlevoix, Fox Isls., Iosco, Midland; July 8-Aug. 26. SLP: Berrien, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; July 24-Sept. 2. H. xxv: 7.

*Hyssia modesta* Morr. NLP: Beaver Isls., Cheboygan, Crawford, Newaygo, Ogemaw, Oscoda, Roscommon; May 22-June 30. SLP: Huron, Livingston, Oakland; June 14-July 9. H. xxiv: 16. Determined by Forbes.

*Eriopyga incincta* Morr. UP: Luce, Mackinac; July 5-Aug. 29. NLP: Beaver Isls., Iosco; Aug. 19-Sept. 7. SLP: Allegan, Berrien, Oakland, Wayne; May 30-Sept. 2.

*Eriopyga oviduca* Gn. UP: Mackinac, Schoolcraft; June 9-July 14. NLP: Beaver Isls., Benzie, Cheboygan, Crawford, Montmorency, Newaygo, Oceana, Oscoda, Roscommon; May 23-Sept. 14. SLP: Lapeer, Livingston, Oakland, St. Clair, Washtenaw, Wayne; May 14-July 2. H. xxv: 2.

*Eriopyga culea* Gn. NLP: Crawford, Newaygo; May 28-June 11. SLP: Livingston, May 24-June 13. H. xxv: 1.

*Eriopyga crenulata* Butl. UP: Mackinac, July 29. NLP: Beaver Isls., Cheboygan, Iosco, Oceana, Presque Isle; July 11-Aug. 3. SLP: Berrien, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; June 3-Sept. 9. H. xxiv: 37.

*Eriopyga cynica* Gn. UP: Chippewa, Dickinson, Luce, Mackinac; June 18-July 14. NLP: Beaver Isls., Benzie, Charity Isl., Cheboygan, Oscoda; June 1-July 16. SLP: Berrien, Lapeer, Livingston, Oakland, St. Clair, Washtenaw, Wayne; May 22-July 17. H. xxiv: 38.

*Eriopyga intractata* Morr. SLP: Livingston, Oakland; Apr. 29-May 6.

*Eriopyga vecors* Gn. UP: Schoolcraft; July 25. SLP: Berrien, Washtenaw; June 2-Aug. 12. H. xix: 20.

*Eriopyga contrahens* Wlk. SLP: St. Clair; July 17. H. xxiv: 44.

*Eriopyga furfurata* Grt. NLP: Beaver Isls., Benzie; July 28-Aug. 2. SLP: Berrien, Oakland, St. Clair, Washtenaw; July 4-Aug. 5.

*Nephelodes emmedonia* Cram. UP: Chippewa, Mackinac, Menominee, Schoolcraft; Aug. 22-Sept. 11. NLP: Beaver Isls., Charlevoix, Cheboygan, Crawford, Fox Isls., Manistee, Midland, Osceola; July 2-Sept. 9. SLP: Allegan, Berrien, Genesee, Ingham, Livingston, Macomb, Montcalm, Oakland, Sanilac, St. Clair, Washtenaw, Wayne; Aug. 3-Sept. 24. H. xxiv: 33, as *minians*.

*Morrisonia evicta* Grt. NLP: Crawford, Oscoda; May 9-30. SLP: Lenawee, Livingston, Macomb, Oakland, Washtenaw, Wayne; Apr. 17-May 24. H. xxiv: 13, as *sectilis*; 14 form *vomerina*.

*Morrisonia confusa* Hbn. NLP: Crawford, Newaygo; May 9-June 29. SLP: Livingston, Macomb, Oakland, Washtenaw, Wayne; Apr. 29-May 26. H. xxiv: 15.

*Xylomyges dolosa* Grt. NLP: Crawford, Montmorency, Oscoda; May 9-30. SLP: Livingston, Macomb, Oakland, Washtenaw; Apr. 22-June 11. H. xxiv: 20.

- Orthosia rubrescens* Wlk. NLP: Benzie; Apr. 17. SLP: Livingston, Macomb, Oakland, Washtenaw; Apr. 25-June 11.
- Orthosia arthrolita* Harvey. NLP: Oscoda; May 30.
- Orthosia garmani* Grt. SLP: Livingston, Macomb, Oakland, Washtenaw; Apr. 15-May 8. H. xxv: 4.
- Orthosia revicta* Morr. NLP: Ogemaw; May 25. SLP: Livingston, Oakland, Washtenaw, Wayne; Apr. 21-May 12.
- Orthosia hibisci* Gn. UP: Mackinac; May 25. NLP: Benzie, Crawford, Oscoda; Apr. 16-May 30. SLP: Lapeer, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; Mar. 25-May 21. H. xxv: 3, as *alia*.
- Sideridis rosea* Harvey. NLP: Crawford, Iosco, Midland, Montmorency, Ogemaw; May 25-June 19. SLP: Livingston, Macomb, Oakland, Sanilac, St. Clair, Washtenaw; May 23-July 9. H. xxiii: 30.
- Sideridis normani* Grt. NLP: Benzie, Crawford, Montmorency; May 31-June 14. SLP: Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; Apr. 19-Sept. 27. H. xxiv: 43.
- Sideridis congermana* Morr. NLP: Cheboygan; Sept. 10. SLP: Huron, Oakland, St. Clair, Wayne; June 11-Aug. 2. H. xxiii: 31.
- Sideridis rubefacta* Morr. UP: Chippewa; July 6. NLP: Oscoda; June 5-16.
- Ceramica picta* Harris. UP: Mackinac, ex larva. NLP: Midland, Montmorency; May 29-Aug. 22. SLP: Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 23-Aug. 29. H. xxiii: 34.
- Cirphis pseudargyria* Gn. NLP: Beaver Isls., Benzie, Charlevoix, Cheboygan, Midland, Montmorency, Oceana; July 2-31. SLP: Berrien, Ingham, Jackson, Lapeer, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 23-Sept. 1. H. xxiv: 47.
- Cirphis multilinea* Wlk. UP: Alger, Dickinson, Mackinac; July 12-Aug. 9. NLP: Beaver Isls., Charlevoix, Cheboygan, Osceola; July 9-Sept. 6. SLP: Huron, Ingham, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 20-Sept. 4. H. xxiv: 39.
- Cirphis commoides* Gn. UP: Chippewa, Dickinson, Mackinac; July 2-Aug. 2. NLP: Beaver Isls., Benzie, Cheboygan, Iosco, Midland, Montmorency, Oceana; July 2-Aug. 12. SLP: Berrien, Branch, Huron, Livingston, Oakland, St. Clair, Washtenaw, Wayne; May 28-Aug. 12. H. xxiv: 42.
- Cirphis phragmatidicola* Gn. UP: Mackinac, Schoolcraft; May 20-Sept. 1. NLP: Charlevoix, Cheboygan, Crawford, Iosco, Midland, Osceola; June 13-Oct. 4. SLP: Lapeer, Livingston, Oakland, St. Clair, Washtenaw, Wayne; May 24-Sept. 27.
- Cirphis insueta* Gn. UP: Luce; July 5. NLP: Beaver Isls., Charity Isl.; June 15-30. SLP: Berrien, Livingston, Oakland, Washtenaw; May 31-June 24.

*Cirphis unipuncta* Haw. UP: Isle Royale, Mackinac, Schoolcraft; May 30-Oct. 3. NLP: Beaver Isls., Benzie, Charlevoix, Cheboygan, Crawford, Iosco, Lake, Manistee, Midland, Oceana, Osceola, Roscommon; May 24-Oct. 10. SLP: Berrien, Branch, Huron, Lapeer, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 24-Nov. 7. H. xxiv: 40.

*Neleucania rubripennis* G. & R. SLP: Oakland, Wayne; Aug. 7-13. A western species, recorded from Missouri and Texas.

*Neleucania albilinea* Hbn. UP: Dickinson, Luce, Mackinac; June 1-Aug. 4. NLP: Beaver Isls., Benzie, Charlevoix, Cheboygan, Iosco, Midland, Missaukee, Muskegon, Newaygo; May 22-Aug. 31. SLP: Berrien, Genesee, Lapeer, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 6-Sept. 16. H. xxiv: 34.

*Leucania luteopallens* Sm. UP: Alger, Chippewa, Dickinson, Mackinac, Schoolcraft; June 28-Aug. 13. NLP: Beaver Isls., Charlevoix, Cheboygan, Midland; June 5-July 29. SLP: Berrien, Branch, Lapeer, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 19-Oct. 3.

#### Cuculliinae

*Cucullia speyeri* Lint. NLP: Midland; June 14-Aug. 6. SLP: Livingston, Oakland, Washtenaw; May 18-Sept. 9. H. xxv: 26.

*Cucullia intermedia* Spey. UP: Mackinac, Schoolcraft; June 9-11. NLP: Benzie; June. H. xxv: 30.

*Cucullia postera* Gn. UP: Mackinac, Schoolcraft; ex larvae. NLP: Cheboygan, Midland, Roscommon; June 24-Sept. 14. SLP: Livingston, Washtenaw; May 24-Aug. 10.

*Cucullia asteroides* Gn. UP: Chippewa; July 21. NLP: Alpena, Benzie, Midland; June 27-Aug. 20. SLP: Berrien, Clinton, Ingham, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; Apr. 30-Sept. 19. H. xxv: 27.

*Cucullia convexipennis* G. & R. UP: Mackinac, ex larva. NLP: Midland; July 13. SLP: Berrien, Livingston, Oakland, St. Clair, Washtenaw, Wayne; July 20-Aug. 19. H. xxv: 29.

*Lepipolys perscripta* Gn. NLP: Newaygo; June 11-12. H. xxi: 11.

*Oncocnemis saundersiana* Grt. SLP: Livingston, Oakland, Washtenaw; Sept. 1-20. Determined by Gates Clark.

*Oncocnemis viriditincta* Sm. NLP: Midland; Aug. 21. SLP: Oakland; Aug. 29-Sept. 18. Determined by Gates Clark.

*Oncocnemis riparia* Morr. UP: Mackinac, Schoolcraft; July 24-Oct. 13. NLP: Beaver Isls., Charity Isl., Iosco, Oceana, Oscoda; June 26-July 19. SLP: Berrien; July.

*Homohadena badistriga* Grt. UP: Mackinac; July 22-24. NLP: Midland, Oscoda; July 12-26. SLP: Oakland, St. Clair, Washtenaw, Wayne; June 27-July 26. H. xxi: 1.

*Feralia jocosa* Gn. NLP: Benzie; Apr. 14. H. xvii: 32.

*Momophana comstocki* Grt. UP: Isle Royale; June 3. H. text Fig. 95.

*Psaphida resumens* Wlk. NLP: Crawford; May 9-10. SLP: Livingston, Macomb, Oakland, Washtenaw, Wayne; Mar. 30-May 14. H. xxi: 15.

*Psaphida grotei* Morr. SLP: Macomb, Oakland, Washtenaw; Apr. 14-May 5. H. xxi: 14.

*Psaphida thaxteriana* Grt. SLP: Oakland; Mar. 17-Apr. 19.

*Psaphida electilis* Morr. SLP: Livingston, Oakland, Washtenaw; Apr. 15-May 12.

*Eutotype grandis* Sm. SLP: Livingston, Oakland, Washtenaw; Mar. 19-May 16. Determined by Gates Clark.

*Eutotype depilis* Grt. SLP: Livingston, Oakland, Washtenaw, Wayne; Apr. 10-May 25. H. xxi: 13, as *bombyciformis*.

*Eutotype rolandi* Grt. SLP: Livingston, Oakland, Washtenaw; Mar. 27-May 12.

*Copipanolis cubilis* Grt. NLP: Crawford; May 9. SLP: Livingston, Oakland, Washtenaw; Mar. 20-May 16. H. xxi: 12.

*Litholomia napaea* Morr. UP: Mackinac; Oct. 3. NLP: Cheboygan, Clare, Osceola; Apr. 29-Sept. 20. H. xxv: 22.

*Hillia algens* Grt. NLP: Beaver Isls.; Sept. 6. SLP: Oakland, St. Clair; July 24-Aug. 15. H. xix: 35. Determined by Brower.

*Hillia iris* Zett. NLP: Midland; July 30. Determined by Forbes.

*Lithomoia solidaginis* Hbn. NLP: Cheboygan, Midland, Osceola; Sept. 6-20. SLP: Macomb, St. Clair, Van Buren, Washtenaw, Wayne; Aug. 10-Sept. 30. H. xxv: 12, as *germana*.

*Graptolitha semiusta* Grt. SLP: Macomb, Oakland; Apr. 19, Sept. 9-27.

*Graptolitha bethunei* G. & R. NLP: Benzie, Osceola; Apr. 17, Sept. 24-Oct. 10. SLP: Livingston, Macomb, Oakland, Washtenaw, Wayne; Mar. 17-May 30; Sept. 11-Oct. 16.

*Graptolitha patefacta* Wlk. NLP: Benzie, Osceola; Mar. 31-Apr. 14; Oct. 15. SLP: Oakland, Sept. 10.

*Graptolitha innominata* Sm. NLP: Benzie; Mar. 31-Apr. 17. H. xxv: 10.

*Graptolitha disposita* Morr. NLP: Osceola; Oct. 4. SLP: Macomb, St. Clair, Wayne; Sept. 22-26. H. xxv: 13.

*Graptolitha ferrealis* Grt. NLP: Benzie; Apr. 17. SLP: Macomb; Sept. 19-27; Oct. 9.

- Graptolitha petulca* Grt. SLP: Macomb; Sept. 9-27. H. xxv: 9.
- Graptolitha signosa* Wlk. SLP: Macomb, Washtenaw, Wayne; Mar. 23-Apr. 18; Sept. 18-Oct. 17.
- Graptolitha amanda* Sm. UP: Mackinac, Schoolcraft; Aug. 24-Sept. 10. NLP: Oscoda; May 30. SLP: Macomb; Sept. 13.
- Graptolitha unimoda* Lint. NLP: Benzie; Mar. 31. SLP: Macomb, Oakland, Washtenaw; Mar. 17-May 5. H. xxv: 16.
- Graptolitha laticinerea* Grt. NLP: Benzie, Osceola; Mar. 31; Sept. 25-Oct. 9. SLP: Livingston, Macomb, Oakland, Washtenaw, Wayne; Feb. 8-Apr. 19, Sept. 16-Oct. 29. H. xxv: 17.
- Graptolitha antennata* Wlk. NLP: Benzie, Osceola; Mar. 31-Apr. 15; Oct. 5. SLP: Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; Mar. 14-May 2; Sept. 18-Oct. 27.
- Graptolitha cinerosa* Grt. NLP: Osceola; Oct. 3. SLP: Livingston, Macomb, Oakland, Washtenaw, Wayne; Mar. 21-Apr. 30; Sept. 21-Nov. 1.
- Graptolitha georgii* Grt. UP: Mackinac; Sept. 9-Oct. 21.
- Graptolitha fagina* Morr. NLP: Osceola; Oct. 4.
- Graptolitha tepida* Grt. NLP: Benzie, Midland, Osceola; Apr. 5-18; Sept. 20-Oct. 10. H. xxv: 15.
- Graptolitha pexata* Grt. NLP: Montmorency, Osceola; May 29-31; Oct. 8. SLP: Macomb, St. Clair; Sept. 25-Oct. 1. H. xxv: 20.
- Graptolitha thaxteri* Grt. NLP: Ogemaw; May 25. SLP: Oakland; Apr. 18. H. xxv: 18.
- Xylena nupera* Lint. UP: Mackinac; Sept. 11. SLP: Macomb, St. Clair, Wayne; Apr. 4-May 15, Sept. 6-27. H. xxv: 24.
- Xylena curvimacula* Morr. UP: Mackinac; Sept. 18. NLP: Benzie, Osceola; Mar.; Oct. 3. SLP: Macomb, Oakland, Washtenaw; Mar. 23-Apr. 30. H. xxv: 23.
- Xylena cineritia* Grt. UP: Mackinac; Oct. 17. NLP: Benzie; May 7. SLP: Macomb, Wayne; Apr. 20-May 6; Oct. 8-Nov. 1.
- Xylotype capax* G. & R. NLP: Beaver Isls.; Sept. 14.
- Eurotype confragosa* Morr. UP: Mackinac; Oct. 2.
- Harpaglaea sericea* Morr. NLP: Osceola; Oct. 10. SLP: Livingston, Washtenaw, Wayne; May 2, Oct. 11-29. H. xxvi: 36.
- Epiglaea decliva* Grt. SLP: Livingston, Macomb, Washtenaw; Sept. 23-Nov. 1. H. xxvi: 40.
- Epiglaea apiata* Grt. NLP: Osceola; Oct. 4. SLP: Livingston, Washtenaw; Sept. 16-Oct. 12. Determined by Gates Clark.



*Psectraglaea carnosa* Grt. NLP: Beaver Isls., Lake, Midland, Presque Isle, Oscoda; Sept. 15-Oct. 20.

*Conistra inulta* Grt. NLP: Midland, Osceola; July 24-Sept. 6. SLP: Livingston, Macomb, Oakland, Washtenaw, Wayne; Sept. 16-Oct. 12. H. xxvi: 37.

*Conistra signata* French. SLP: Washtenaw; Mar. 26.

*Conistra tristigmata* Grt. UP: Mackinac; Sept. 15-21. NLP: Benzie; Mar. 31. SLP: Livingston, Macomb, Oakland, Washtenaw; Feb. 25-Apr. 27.

*Conistra sidus* Gn. NLP: Benzie, Crawford, Osceola, Oscoda; Mar. 31-May 30, Sept. 14-Oct. 4. SLP: Livingston, Macomb, Oakland, Washtenaw, Wayne; Jan. 25-May 5. H. xxvi: 35, as *walkeri*.

*Conistra morrisoni* Grt. UP: Schoolcraft; Sept. 5. NLP: Benzie, Osceola; Apr. 17; Oct. 4. SLP: Livingston, Macomb, Oakland, Washtenaw, Wayne; Jan. 25-May 27, Oct. 10-Dec. 13.

*Conistra devia* Grt. SLP: Oakland, Washtenaw, Wayne; Feb. 20-Apr. 27, Oct. H. xxvi: 42.

*Conistra indirecta* Wlk. NLP: Benzie; Apr. SLP: Livingston, Macomb, Oakland, St. Clair, Washtenaw; Jan. 25-May 13, Sept. 25-Oct. 15. H. xxvi: 33, as *moffatiana*.

*Conistra graefiana* Grt. SLP: Macomb; Jan. 24-26, Oct. 13-17.

*Conistra pettiti* Grt. SLP: Macomb; Apr. 4. Determined by Brower and by Benjamin.

*Conistra ceromatica* Grt. NLP: Benzie; Apr. 17. SLP: Macomb; Apr. 4-May 6. H. xxvi: 34.

*Parastichtis bicolorago* Gn. UP: Keweenaw, Mackinac; Aug. 27-Sept. 25. NLP: Beaver Isls., Crawford, Midland, Osceola; Sept. 17-Oct. 2. SLP: Livingston, Macomb, Oakland, St. Clair, Van Buren, Washtenaw, Wayne; Aug. 30-Oct. 21. H. xxvi: 29.

*Parastichtis valla* G. & R. NLP: Alpena, Charlevoix, Cheboygan; Aug. 8-Sept. 18. SLP: Berrien, Oakland, Wayne; July 24-Sept. 5.

*Parastichtis puta* G. & R. NLP: Beaver Isls., Charlevoix, Cheboygan, Iosco, Osceola; Aug. 8-Sept. 25. SLP: Livingston, Macomb, Washtenaw, Wayne; Aug. 7-Sept. 29.

*Atethmia pampina* Gn. UP: Mackinac; Aug. 28. NLP: Alpena, Beaver Isls., Cheboygan, Midland, Osceola, Otsego; Aug. 31-Oct. 2. SLP: Livingston, Macomb, Oakland, Ottawa, Saginaw, St. Clair, Washtenaw, Wayne; Sept. 4-Oct. 6. H. xxvi: 21.

*Iodia rufago* Hbn. NLP: Osceola, Oscoda; May 30-Oct. 15. SLP: Livingston, Oakland; Apr. 27-May 15. H. xxvi: 17.

*Brachycosmia digitalis* Grt. UP: Marquette; Aug. SLP: Livingston, Washtenaw, Wayne; Sept. 26-Oct. 30. H. xxvi: 25.

*Xanthia lutea* Strom. UP: Isle Royale, Mackinac; Sept. 10-Oct. 18. NLP: Beaver Isls., Osceola; Sept. 14-25. SLP: Ingham, Livingston, Oakland, St. Clair, Washtenaw; Sept. 27-Oct. 16. H. xxvi: 16, as *flavago*.

*Homoglaea hircina* Morr. NLP: Crawford; May 10. SLP: Livingston, Macomb, St. Clair; Feb. 22-Apr. 12; Nov. 4. H. xxvi: 39.

#### Acronyctinae

*Amphipyra pyramidoides* Gn. UP: Mackinac, Schoolcraft; Aug. 25-28. NLP: Alpena, Beaver Isls., Charlevoix, Cheboygan, Lake, Manistee, Midland, Montmorency, Oscoda, Roscommon; Aug. 1-Sept. 18. SLP: Berrien, Branch, Huron, Ingham, Kent, Livingston, Lenawee, Macomb, Oakland, St. Clair, Washtenaw, Wayne; July 16-Sept. 18. H. xx: 30.

*Amphipyra tragopoginis* Linn. NLP: Charlevoix, Midland; July 7-Aug. 9. SLP: Huron, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; July 4-Aug. 8. H. xx: 31.

*Amphipyra glabella* Morr. UP: Menominee; July 22. SLP: Macomb, Oakland, Washtenaw; July 28-Nov. 20. H. xx: 32.

*Magusa orbifera* Wlk. SLP: Oakland, Wayne; July 22-Sept. 14. H. xxi: 2, as *dissidens*.

*Dipterygia scabriuscula* Linn. UP: Schoolcraft, July 17. NLP: Benzie, Midland; June 28-July 24. SLP: Berrien, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 30-Sept. 2. H. xx: 28.

*Septis verbascoides* Gn. UP: Chippewa, Mackinac; July 22-29. NLP: Beaver Isls.; Aug. 6. SLP: Livingston, Macomb, Oakland, St. Clair, Wayne; June 13-July 17. H. xix: 43.

*Septis nigrior* Sm. NLP: Charity Isl., Cheboygan, July 6-17. SLP: Livingston, Oakland, St. Clair, Washtenaw, Wayne; June 10-July 9. H. xix: 42.

*Septis cariosa* Gn. NLP: Benzie, Cheboygan; July 1-Aug. 3. SLP: Berrien, Livingston, Oakland, St. Clair, Washtenaw, Wayne; May 9-July 23.

*Septis cristata* Grt. SLP: Washtenaw; July 6.

*Septis vulgaris* G. & R. SLP: Oakland; June 6-18.

*Septis lignicolora* Gn. UP: Alger, Dickinson, Mackinac; July 12-Aug. 1. NLP: Beaver Isls., Charlevoix, Cheboygan, Crawford, Iosco, Lake, Midland, Oceana; June 24-Aug. 31. SLP: Berrien, Huron, Lapeer, Livingston, Macomb, Oakland, St. Clair, Washtenaw; June 7-July 30. H. xx: 5.

*Septis vultuosa* Grt. NLP: Beaver Isls., Benzie; July 6-14. SLP: St. Clair; Aug. 3. H. xx: 11.

*Septis apamiformis* Gn. UP: Alger; July. NLP: Charity Isl.; June 25. SLP: Huron, Macomb, Oakland, Washtenaw, Wayne; June 20-July 31.

*Septis plutonia* Grt. NLP: Oscoda; June 16. SLP: Berrien, Livingston, Macomb, Oakland, Washtenaw; June 3-Aug. 4.

*Septis arctica* Bdv. UP: Alger, Chippewa, Dickinson, Isle Royale, Mackinac, Schoolcraft; July 9-Aug. 17. NLP: Alpena, Beaver Isls., Benzie, Cheboygan, Crawford, Iosco, Midland, Montmorency, Oceana, Presque Isle; June 18-Aug. 21. SLP: Berrien, Branch, Huron, Ingham, Lapeer, Livingston, Macomb, Oakland, Sanilac, St. Clair, Washtenaw, Wayne; June 4-Aug. 8. H. xix: 45.

*Septis alia* Gn. NLP: Benzie, Midland; June 28-July 1. SLP: Lapeer, Oakland, St. Clair, Washtenaw; May 30-July 21.

*Trachea illocata* Wlk. NLP: Cheboygan; July 5-Sept. 6. Determined by Gates Clark. H. xx: 24.

*Trachea delicata* Grt. NLP: Beaver Isls., Cheboygan, Midland; July 12-Aug. 16. SLP: Berrien, Livingston, Oakland, Washtenaw, Wayne; June 26-Aug. 26. H. xx: 27.

*Trachea miselioides* Gn. NLP: Charity Isl.; June 25. SLP: Berrien, Van Buren; July 26-Sept. 2. H. xx: 15.

*Trachea turbulenta* Hbn. SLP: Berrien; June 11-Aug. 15. Determined by Forbes. H. xx: 16.

*Trachea indocilis* Wlk. UP: Alger, Chippewa; July 20-28. NLP: Beaver Isls.; July 15-16. SLP: Macomb, St. Clair; July 16-27.

*Trachea mactata* Gn. NLP: Beaver Isls., Charlevoix, Fox Isls.; Aug. 12-Sept. 13. SLP: Berrien, Macomb, Oakland, Van Buren, Wayne; July 24-Sept. 23. H. xx: 8.

*Trachea separans* Grt. SLP: Berrien, Oakland, St. Clair, Washtenaw; May 31-June 21.

*Trachea finitima* Gn. UP: Alger, Mackinac; July 15-Sept. 24. NLP: Benzie; May-June. SLP: Oakland, St. Clair, Washtenaw; May 27-June 20.

*Trachea jocasta* Sm. NLP: Cheboygan, Osceola; Aug. 9-23. SLP: Livingston, Oakland, Washtenaw; July 15-Sept. 6.

*Trachea modica* Gn. UP: Mackinac; July 16. NLP: Beaver Isls., Charlevoix, Midland; July 13-Aug. 24. SLP: Berrien, Ingham, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; June 17-Sept. 1. H. xx: 14.

*Trachea impulsula* Gn. UP: Chippewa, Dickinson, Mackinac; July 9-22. NLP: Beaver Isls., Cheboygan; June 15-July 16. SLP: Oakland, Washtenaw; June 9-15.

*Euplexia lucipara* Linn. UP: Mackinac; July 12. NLP: Beaver Isls., Benzie, Charity Isl., Montmorency, Presque Isle; May 31-July 28. SLP: Berrien, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 13-Sept. 16. H. xx: 26.

*Perigea xanthoides* Gn. SLP: Livingston, Oakland, Washtenaw, Wayne; May 26-Aug. 31. H. xix: 30.

*Perigea vecors* Gn. NLP: Benzie, Newaygo; June 12-July 30. SLP: Berrien, Livingston, Macomb, Oakland, Washtenaw, Wayne; May 6-Sept. 29. H. xix: 31.

*Perigea sutor* Gn. SLP: Wayne, Aug.-Sept. 25.

*Oligia bridghami* G. & R. UP: Chippewa, Aug. 5. NLP: Charlevoix, Cheboygan, Lake; Aug. 1-9. H. xx: 2.

*Oligia fractilinea* Grt. SLP: Berrien, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; June 2-Aug. 27. H. xx: 10.

*Oligia misera* Grt. SLP: Oakland, St. Clair, Washtenaw, Wayne; July 8-Aug. 22.

*Oligia minuscula* Morr. NLP: Beaver Isls., Cheboygan; Sept. 6-Oct. 2.

*Oligia diversicolor* Morr. NLP: Beaver Isls., Charlevoix; Aug. 22-Oct. 2. SLP: Ingham, Livingston, St. Clair, Washtenaw, Wayne; Aug. 2-Sept. 30.

*Oligia ambifusca* J. H. Newman. SLP: Livingston (types), Oakland; Aug. 17-Oct. 1.

*Oligia semicana* Wlk. NLP: Oscoda; July 22-25. SLP: Wayne; June 25.

*Oligia exhausta* Sm. SLP: Oakland, Washtenaw, Wayne; June 11-July 9.

*Oligia subjuncta* Sm. NLP: Oscoda; July 19-26. H. xix: 25.

*Oligia includens* Wlk. SLP: Oakland; July 1.

*Agroperina dubitans* Wlk. UP: Alger, Chippewa, Dickinson, Keweenaw, Mackinac, Schoolcraft; July 3-Aug. 30. NLP: Beaver Isls., Charlevoix, Cheboygan, Midland, Osceola; July 5-Sept. 6. SLP: Allegan, Berrien, Huron, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; June 9-Sept. 14. H. xix: 39.

*Agroperina lateritia* Hufn. UP: Chippewa, Dickinson, Mackinac, Schoolcraft; June 27-July 26. NLP: Beaver Isls., Benzie, Cheboygan, Midland; June 22-Aug. 14. H. xix: 38.

*Agroperina inficita* Wlk. UP: Isle Royale; Aug. 1-4. Determined by Forbes.

*Agroperina helva* Grt. NLP: Benzie; Apr. 17. SLP: Berrien, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; July 25-Oct. 10. H. xxvi: 30.

*Taeniosea discivaria* Wlk. UP: Chippewa, Mackinac; July 29-31. NLP: Charity Isl., Montmorency; June 26-July 16. Determined by Brower. H. xxvi: 31.

*Macronoctua onusta* Grt. UP: Mackinac; Aug. 31. NLP: Beaver Isls.; Sept. 10. SLP: Livingston, Oakland, St. Clair, Washtenaw, Wayne; July 24-Oct. 29. H. xx: 18.

*Sidemia devastator* Brace. UP: Chippewa, Dickinson, Houghton, Isle Royale, Keweenaw, Mackinac, Menominee, Schoolcraft; July 7-Aug. 22. NLP: Alpena, Beaver Isls., Benzie, Charity Isl., Charlevoix, Cheboygan, Crawford, Iosco, Lake, Midland, Muskegon, Oceana, Oscoda, Otsego; June 30-Sept. 7. SLP: Berrien, Branch, Huron, Ingham, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; June 1-Sept. 19. H. xix: 44.

*Luperina stipata* Morr. SLP: Wayne; Aug. 3.

*Luperina obtusa* Sm. NLP: Newaygo; July 5. SLP: Berrien, Livingston; July 17-Aug. 7.

*Luperina passer* Gn. UP: Mackinac; July 18. NLP: Beaver Isls., Charity Isl., Cheboygan, Crawford, Midland, Oceana; June 23-July 29. SLP: Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; June 14-Oct. 6. H. xix: 36.

*Phlogophora iris* Gn. UP: Chippewa, Mackinac; June 22-July 24. NLP: Beaver Isls., Benzie, Midland, Montmorency, Oceana, Oscoda; May 31-July 15. SLP: Huron, Livingston, Oakland, St. Clair, Washtenaw, Wayne; May 20-July 16. H. xxvi: 19.

*Chutapha periculosa* Gn. UP: Alger, Chippewa, Mackinac, Schoolcraft; July 12-Aug. 14. NLP: Beaver Isls., Benzie, Charlevoix, Cheboygan, Iosco, Mecosta, Oscoda; July 3-Sept. 4. SLP: Berrien, Wayne; Aug. 27-Sept. 12. H. xxvi: 18, form *v-brunneum*.

*Conservula anodonta* Gn. NLP: Iosco, Roscommon; July 5-23. SLP: Livingston; July 1-27. H. xxvi: 20.

*Callopietria mollissima* Gn. NLP: Cheboygan, Newaygo; June 12-July 6. SLP: Branch, Livingston, Oakland, St. Clair, Washtenaw, Wayne; June 2-Aug. 12. H. xxix: 63.

*Callopietria monetifera* Gn. UP: Luce, Mackinac, Schoolcraft; June 20-July 22. NLP: Beaver Isls., Benzie, Charity Isl., Cheboygan, Crawford, Midland, Montmorency, Muskegon, Oceana, Ogemaw, Roscommon; June 11-Aug. 14. SLP: Livingston, Oakland, St. Clair, Washtenaw, Wayne; May 29-July 14. H. xxix: 62.

*Fagitana littera* Gn. SLP: Livingston; May 16-Aug. 7. H. xxvi: 28.

*Chytonix chlorostigma* Harvey. SLP: Oakland; July 15.

*Chytonix palliatricula* Gn. UP: Dickinson, Luce, Schoolcraft; July 6-14. NLP: Beaver Isls., Benzie, Grand Traverse, Iosco, Newaygo, Oceana; June 7-Aug. 7. SLP: Berrien, Lapeer, Livingston, Oakland, Washtenaw, Wayne; May 29-Aug. 12. H. xix: 13, 14.

*Chytonix sensilis* Grt. UP: Schoolcraft; Aug. 3. NLP: Cheboygan (Welch, 1915), Iosco, Lake, Midland, Oscoda, Presque Isle; July 11-30. SLP: Livingston, Macomb, Oakland, St. Clair, Washtenaw; July 5-Aug. 12.

*Harrisimemma trisignata* Wlk. NLP: Beaver Isls., Cheboygan; June 28-July 4. SLP: Berrien, Livingston, Washtenaw; May 30-July 18. H. xix: 4.

*Cerma cora* Hbn. UP: Luce; July 6. H. text fig. 90.

*Polygrammate hebraicum* Hbn. NLP: Midland, Oceana; June 24-July 20. SLP: Berrien, Livingston; June 16-Sept. 2. H. xix: 11.

*Leuconycta diphteroides* Gn. UP: Schoolcraft; July. NLP: Beaver Isls., Benzie, Cheboygan, Fox Isls., Midland; June 3-Aug. 6. SLP: Berrien, Ingham, Lapeer, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 5-Aug. 4. H. xix: 9, 10.

*Agriopodes fallax* H. S. UP: Chippewa, Schoolcraft; July 21-26. NLP: Iosco, Oscoda; June 15. H. xviii: 1.

*Agriopodes lepidula* Grt. NLP: Midland; Aug. 3. SLP: Lapeer, Livingston, Macomb, Oakland, Washtenaw, Wayne; May 5-Aug. 4. H. xix: 7.

*Agriopodes teratophora* H. S. UP: Houghton, Mackinac; June 18-Aug. 7. NLP: Midland; July 24. SLP: Berrien, Lapeer, Livingston, Macomb, Oakland, Washtenaw, Wayne; May 18-Aug. 22. H. xix: 8.

*Acronycta vinnula* Grt. SLP: Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 10-Aug. 14. H. xviii: 25.

*Acronycta connecta* Grt. SLP: Livingston, Macomb, St. Clair, Washtenaw; July 27-Aug. 26. H. xviii: 19.

*Acronycta ovata* Grt. NLP: Iosco, Muskegon; July 4. SLP: Livingston, Oakland, St. Clair; June 26-Aug. 11.

*Acronycta haesitata* Grt. NLP: Charity Isl., Lake; July 10-18. SLP: Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; Apr. 12-Sept. 13.

*Acronycta pruni* Harris. SLP: Berrien, Oakland, Washtenaw, Wayne; June 3-Sept. 5.

*Acronycta fragilis* Gn. UP: Alger, Chippewa, Mackinac; June 29-July 30. NLP: Beaver Isls., Montmorency, Newaygo, Presque Isle; May 31-July 14. H. xix: 1.

*Acronycta inclara* Sm. SLP: Lapeer, Livingston, Oakland, St. Clair, Washtenaw; May 21-Aug. 19.

*Acronycta superans* Gn. UP: Chippewa, Mackinac, Schoolcraft; June 15-July 24. NLP: Benzie, Charity Isl., Crawford, Montmorency, Oceana; May 30-July 6. SLP: Berrien, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 16-Aug. 8. H. xviii: 26.

*Acronycta subochrea* Grt. SLP: Berrien, Livingston, Washtenaw; June 30-Aug. 4.

*Acronycta noctivaga* Grt. UP: Schoolcraft; July. NLP: Beaver Isls., Cheboygan, Midland, Montmorency, Oceana, Osceola, Roscommon; May 30-July 10. SLP: Livingston, Oakland, Shiawassee, Washtenaw, Wayne; May 25-July 21. H. xviii: 20.

*Acronycta afflictica* Grt. NLP: Beaver Isls.; July 8-17. SLP: Oakland, Livingston; June 7-Aug. 19.

*Acronycta retardata* Wlk. UP: Chippewa, Mackinac; July 3-15. NLP: Benzie, Charity Isl., Cheboygan, Midland, Newaygo, Oceana; June 9-July 11. SLP: Berrien, Lenawee, Livingston, Macomb, Oakland, Sanilac, St. Clair, Washtenaw, Wayne; May 22-Aug. 31.

*Acronycta impleta* Wlk. NLP: Beaver Isls., Benzie; July 1-5. SLP: Livingston, Oakland, St. Clair; May 1-Sept. 25. H. xviii: 22.

*Acronycta quadrata* Grt. UP: Luce, Mackinac; July 8. NLP: Beaver Isls.; June 30. H. xviii: 15.

*Acronycta hasta* Gn. UP: Chippewa; July 21. NLP: Emmet, ex larva. SLP: Berrien, Livingston, St. Clair, Wayne; May 1-Aug. 4. H. xix: 6.

*Acronycta furcifera* Gn. NLP: Benzie, Montmorency, Oscoda; May 29-July 31. SLP: Berrien, Livingston, Macomb, Oakland, Washtenaw; May 1-Sept. 20. H. xviii: 10.

*Acronycta lobeliae* Gn. NLP: Benzie, Oceana, Presque Isle; July 1-11. SLP: Berrien, Washtenaw, Wayne; July 16-Sept. H. xviii: 9.

*Acronycta tritona* Hbn. NLP: Cheboygan, Crawford, Iosco, Montmorency, Oscoda, Roscommon; May 31-Aug. 1. SLP: Livingston, Aug. 7.

*Acronycta grisea* Wlk. UP: Dickinson, Luce, Mackinac, Schoolcraft; June 16-July 7. NLP: Beaver Isls., Iosco, Montmorency; May 31-July 10. SLP: Livingston, Oakland, Washtenaw; May 24-31. H. xviii: 11.

*Acronycta radcliffei* Harvey. UP: Chippewa; July 23. NLP: Iosco; July 10. H. xviii: 16.

*Acronycta morula* G. & R. UP: Alger; July. NLP: Benzie; June 10. SLP: Livingston, Macomb, Oakland, Sanilac, St. Clair, Washtenaw, Wayne; Apr. 23-Aug. 24. H. xviii: 8.

*Acronycta interrupta* Gn. UP: Alger; June 18. NLP: Midland; July 23. SLP: Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; Apr. 19-Sept. 2. H. xix: 5.

*Acronycta populi* Riley. UP: Chippewa, Mackinac; July 6-20. NLP: Beaver Isls., Cheboygan, Crawford, Midland, Montmorency, Ogemaw; May 25-Sept. 2. SLP: Ingham, Livingston, Oakland, St. Clair, Washtenaw, Wayne; May 24-Sept. 2. H. xviii: 14.

*Acronycta chionochroa* Hamp. NLP: Cheboygan, Oscoda; May 31-July 5. SLP: Wayne; May 15-18.

*Acronycta leporina* Linn. NLP: Charity Isl.; June 25.

*Acronycta innotata* Gn. UP: Alger, Chippewa, Luce, Mackinac, Marquette, Schoolcraft; June 16-July 30. NLP: Beaver Isls., Charity Isl., Cheboygan, Iosco, Oceana, Presque Isle; June 27-Aug. 12. SLP: Oakland, St. Clair, Wayne; May 25-July 4. H. xviii: 13.

*Acronycta americana* Harris. UP: Chippewa, Mackinac, Schoolcraft; July 15-23. NLP: Beaver Isls., Charity Isl., Cheboygan, Midland, Montmorency, Oceana, Presque Isle; June 23-July 27. SLP: Berrien, Ingham, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 17-Aug. 16. H. xviii: 12.

*Acronycta dactylina* Grt. UP: Chippewa, Mackinac, Schoolcraft; June 20-Aug. 5. NLP: Beaver Isls., Benzie, Cheboygan, Iosco, Lake, Midland, Montmorency, Oceana; June 10-Aug. 12. SLP: Berrien, Huron, Ingham, Jackson, Livingston, Macomb, Oakland, St. Clair, St. Joseph, Washtenaw, Wayne; May 28-Aug. 17. H. xviii: 17.

*Acronycta hastulifera* A. & S. UP: Mackinac; June 20.

*Acronycta impressa* Wlk. UP: Mackinac, ex larva. NLP: Beaver Isls., Benzie, Midland, Ogemaw, Oscoda, Presque Isle; May 25-Aug. 21. SLP: Berrien, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; Apr. 30-Aug. 20. H. xviii: 21.

*Acronycta distans* Grt. SLP: Oakland; Apr. 11-May 12. Determined by Brower.

*Acronycta longa* Gn. NLP: Crawford, Montmorency, Presque Isle, Roscommon; May 27-July 11. SLP: Berrien; Sept. 2.

*Acronycta sperata* Grt. UP: Chippewa, Schoolcraft; July 15. NLP: Cheboygan, Crawford, Midland, Montmorency, Newaygo, Oscoda; May 28-July 6. SLP: Berrien, Ingham, Livingston, Oakland, St. Clair, Washtenaw, Wayne; May 24-June 14.

*Acronycta lithospila* Grt. NLP: Presque Isle; July 11. SLP: Livingston; Aug. 1-15. H. xviii: 24, as *xyliniformis*.

*Acronycta oblinita* A. & S. NLP: Arenac, Beaver Isls., Cheboygan, Crawford, Midland, Newaygo, Roscommon; May 27-Aug. 5. SLP: Berrien, Ingham, Livingston, Macomb, Monroe (Cole), Oakland, St. Clair, Washtenaw, Wayne; May 15-Aug. 31. H. xviii: 18.

*Acronycta lanceolaria* Grt. UP: Mackinac, Schoolcraft; three specimens all reared from larvae.

*Simyra henrici* Grt. NLP: Midland, Newaygo; May 29-Aug. 14. SLP: Berrien, Livingston, Macomb, Monroe (Cole), Oakland, St. Clair, Washtenaw, Wayne; May 4-Sept. 12. H. xviii: 6, as *albovenosa*.

*Delta ramosula* Gn. NLP: Beaver Isls., Benzie, Cheboygan, Otsego; May 25-Sept. 1. SLP: Berrien, Lapeer, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; Apr. 10-Oct. 1. H. xx: 29.

*Andropolia extincta* Sm. NLP: Leelanau; July 29.

*Hyppa xylinoides* Gn. UP: Alger, Chippewa, Mackinac, Schoolcraft; June 28-Sept. 2. NLP: Beaver Isls., Benzie, Charity Isl., Charlevoix, Cheboygan, Midland, Oscoda; May 28-Sept. 3. SLP: Berrien, Huron, Ingham, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 14-Sept. 24. H. xx: 23.

*Catabena lineolata* Wlk. NLP: Midland; July 5-Aug. 3. SLP: Berrien, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 5-Aug. 28. H. xix: 15.



*Prodenia ornithogalli* Gn. NLP: Benzie, Midland; June 13-Sept. 26. SLP: Livingston, Macomb, Oakland, Washtenaw, Wayne; July 6-Oct. 27. H. xx: 35.

*Laphygma frugiperda* A. & S. UP: Alger (Pettit, 1901), Mackinac; Sept. 1-Oct. 14. NLP: Alpena, Beaver Isls., Lake; Sept. 17-Oct. 20. SLP: Livingston, Macomb, St. Clair, Washtenaw, Wayne; Aug. 23-Nov. 10. H. xx: 37.

*Caradrina multiferla* Wlk. UP: Mackinac; Aug. 4. NLP: Beaver Isls., Charlevoix, Cheboygan, Iosco; Aug. 8-31. H. xix: 29.

*Caradrina meralis* Morr. NLP: Charlevoix, Cheboygan, Crawford, Osceola; July 5-Sept. 4. SLP: Livingston; Sept. 3-8. H. xix: 22.

*Caradrina tarda* Gn. SLP: Ottawa; Aug. H. xix: 19, as *prima*.

*Proxenus miranda* Grt. UP: Chippewa, Mackinac, Schoolcraft; June 29-July 21. NLP: Beaver Isls., Cheboygan, Crawford, Midland, Montmorency; June 9-Sept. 7. SLP: Cass, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 16-Sept. 4. Determined by Dodd.

*Galgula partita* Gn. NLP: Benzie, Cheboygan, Midland; June 24-July 8. SLP: Berrien, Jackson, Lapeer, Livingston, Oakland, St. Clair, Washtenaw, Wayne; Apr. 29-Nov. 6. H. xxix: 32, 31, form *hepara*.

*Crambodes talidiformis* Gn. NLP: Midland; June 28-July 26. SLP: Berrien, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 21-Aug. 27. H. xix: 17.

*Platysenta videns* Gn. NLP: Midland, Muskegon; June 28-Aug. 11. SLP: Berrien, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; Apr. 26-Sept. 9. H. xix: 21.

*Balsa malana* Fitch. UP: Mackinac; Aug. 18-Sept. 26. NLP: Beaver Isls., Benzie, Charlevoix, Cheboygan, Midland, Missaukee, Montmorency, Muskegon; May 29-Aug. 19. SLP: Cass, Lenawee, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 3-Aug. 10. H. xix: 18.

*Balsa tristrigella* Wlk. SLP: Lapeer, Livingston, Oakland, Washtenaw, Wayne; May 18-July 18.

*Balsa labecula* Grt. NLP: Crawford, Montmorency, Oscoda; May 31-June 5. SLP: Berrien, Livingston, Oakland, St. Clair, Washtenaw; May 13-July 18.

*Monodes versicolor* Grt. UP: Mackinac; June 27-28. NLP: Beaver Isls.; July 14.

*Monodes chalcedonia* Hbn. NLP: Oceana; July.

*Monodes festivooides* Gn. UP: Luce, Mackinac; June 20-July 6. NLP: Beaver Isls., Benzie, Cheboygan, Crawford, Montmorency, Newaygo, Oscoda, Presque Isle, Roscommon; May 22-July 28. SLP: Hillsdale, Huron, Livingston, Oakland, St. Clair, Washtenaw; May 5-July 11. H. xix: 32.

*Monodes grata* Hbn. SLP: Livingston, Macomb, Oakland, Washtenaw, Wayne; May 3-Oct. 7. H. xix: 33.

*Monodes georgei* Moore & Rawson. SLP: Livingston (types), Oakland; Apr. 24-July 11.

*Menopsimus caducus* Dyar. UP: Dickinson; Aug. 15. SLP: Livingston, Oakland; June 5-Aug. 18. Determined by Busck and by Franclemont.

*Menopsimus fractilinea* Sm. UP: Schoolcraft; July 10. NLP: Beaver Isls., Lake; July 10-Aug. 1. SLP: Lapeer, Livingston, Oakland; May 27-Sept. 12. Determined by Franclemont.

*Xylomoia chagnoni* B. & McD. UP: Dickinson, Schoolcraft; July 21-23. NLP: Oscoda; July 25. SLP: Ingham, Livingston, Washtenaw; July 3-25. Determined by Brower.

*Helotropha caduca* Grt. SLP: Berrien, Jackson (type), Livingston, Oakland; May 26-July 29.

*Helotropha reniformis* Grt. UP: Chippewa, July 23-27. NLP: Beaver Isls., Iosco, Osceola; Aug. 25-Oct. 2. SLP: Berrien, Cass, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; June 10-Sept. 19. H. xx: 33, 34.

*Apamea velata* Wlk. UP: Alger, Schoolcraft; July 22-29. NLP: Beaver Isls., Benzie, Midland, Oceana; July 8-Aug. 20. SLP: Berrien, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; June 25-Aug. 19. H. xxvi: 3.

*Apamea americana* Spey. UP: Alger, Chippewa, Dickinson, Isle Royale, Mackinac, Schoolcraft; July 18-Sept. 25. NLP: Beaver Isls., Charlevoix, Cheboygan, Iosco, Midland, Montmorency, Oceana, Otsego; July 14-Sept. 13. SLP: Berrien, Huron, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; June 29-Sept. 18. H. xxvi: 2, as *nictitans*.

*Achatodes zae* Harris. UP: Alger; Aug. 4. NLP: Osceola; Aug. 9. SLP: Livingston, Macomb, Oakland, St. Clair, Washtenaw; July 7-Sept. 6. H. xxvi: 1. Determined by Forbes.

*Gortyna stramentosa* Gn. SLP: Washtenaw; Sept. 24.

*Rhodoecia aurantiago* Gn. SLP: Livingston, St. Clair, Washtenaw, Wayne; July 23-Aug. 22.

*Pyrrhia umbra* Hufn. UP: Chippewa, Isle Royale, Mackinac, Marquette; July 7-13. NLP: Beaver Isls., Cheboygan, Midland, Montmorency, Oceana, Oscoda; May 31-Aug. 2. SLP: Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 15-Sept. 16. H. xxvi: 15.

*Papaipema inquaesita* G. & R. NLP: Midland; Sept. 26. SLP: Livingston, Macomb, Oakland, Washtenaw, Wayne; Sept. 7-Oct. 12. H. xxvi: 5.

*Papaipema marginidens* Gn. NLP: Cheboygan, Osceola; July 5-Sept. 8. SLP: Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; July 23-Oct. 11. H. xxvi: 11.

*Papaipema furcata* Sm. NLP: Cheboygan, Osceola; Sept. 7-Oct. 4. SLP: Livingston, Macomb, Oakland, Washtenaw, Wayne; Sept. 10-Oct. 17. H. xxvi: 14.

- Papaipema circumlucens* Sm. SLP: Washtenaw, Wayne; Sept. 12-Oct. 6.
- Papaipema rutila* Gn. SLP: Oakland; Sept. 14.
- Papaipema arctivorens* Hamp. SLP: Livingston, Oakland, Washtenaw; Aug. 9-Sept. 16.
- Papaipema merriccata* Bird. SLP: Livingston, Oakland; Sept. 12-21.
- Papaipema astuta* Bird. NLP: Fox Isls.; Aug. 30. SLP: Livingston; Aug. 15. Determined by Wyatt.
- Papaipema verona* Sm. UP: Isle Royale; Sept. 25. Determined by Forbes.
- Papaipema impecciniosa* Grt. SLP: Macomb, Oakland, Wayne; Sept. 18-Oct. 12.
- Papaipema purpurifascia* G. & R. UP: Mackinac; Aug. 28. NLP: Cheboygan; Sept. 11. H. xxvi: 7.
- Papaipema pterissi* Bird. UP: Luce, Mackinac; Sept. 1-Oct. 1. NLP: Beaver Isls., Crawford, Midland; Sept. 26-Oct. 2. SLP: Livingston, Oakland, Wayne; Aug. 29-Sept. 12. Determined by Wyatt.
- Papaipema cataphracta* Grt. SLP: Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; Sept. 2-Oct. 19. H. xxvi: 6.
- Papaipema duovata* Bird. SLP: Wayne; Sept. 12.
- Papaipema rigida* Grt. SLP: Livingston, Oakland, Washtenaw, Wayne; Aug. 29-Oct. 26.
- Papaipema aweme* Lyman. NLP: Beaver Isls.; Aug. 13. Determined by Forbes.
- Papaipema frigida* Sm. NLP: Osceola; Sept. 20-Oct. 2. SLP: Livingston, Oakland, Washtenaw; Sept. 5-Oct. 11.
- Papaipema limpida* Gn. SLP: Oakland, Washtenaw; Oct. 1-17.
- Papaipema nebris* Gn. SLP: Livingston, St. Clair, Washtenaw, Wayne; Sept. 11-Oct. 12. H. xxvi: 8, 9. Names are interchanged.
- Papaipema necopina* Grt. SLP: Livingston, Macomb, Oakland, Washtenaw, Wayne; Sept. 2-Oct. 18. H. xxvi: 12.
- Papaipema eupatorii* Lyman. SLP: Livingston, Washtenaw; Oct. 4-12.
- Papaipema beeriana* Bird. SLP: Livingston; Oct. 2.
- Ogdoconta cinereola* Gn. NLP: Beaver Isls., Midland, Roscommon; July 19-Aug. 14. SLP: Allegan, Berrien, Jackson, Lapeer, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 18-Sept. 11. H. xxix: 1.
- Stibadium spumosum* Grt. SLP: Macomb, Wayne; Aug. 3-5. H. xxviii: 3.
- Ipimorpha pleonectusa* Grt. UP: Houghton; Aug. 7. NLP: Beaver Isls., Charlevoix, Cheboygan, Iosco, Midland, Osceola; July 22-Sept. 10. SLP:

Berrien, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; July 10-Sept. 16. H. xxvii: 3.

*Bagisara rectifascia* Grt. SLP: Livingston, Oakland, Washtenaw; June 6-July 26.

*Cosmia orina* Gn. NLP: Crawford, Iosco, Lake, Montmorency, Muskegon, Oceana; May 29-Aug. 19. SLP: Ingham, Livingston, Oakland, St. Clair, Washtenaw; June 15-Aug. 12. H. xxvii: 1.

*Cirrhophanus triangulifer* Grt. SLP: Livingston, Oakland, Washtenaw; Aug. 19-Sept. 8. H. xxviii: 2.

*Energia decolor* Wlk. UP: Keweenaw, Mackinac, Ontonagon; July 20-Sept. 2. NLP: Alpena, Beaver Isls., Charlevoix, Cheboygan, Fox Isls., Oscoda, Otsego; July 2-Sept. 18. SLP: Macomb, Oakland, St. Clair, Wayne; Aug. 3-Sept. 18. H. xxvi: 32, as *paleacea*.

*Stiriodes obtusa* H. S. SLP: Berrien, Cass, Oakland, Washtenaw; June 2-July 7. H. xxix: 41.

*Plagiomimicus pityochromus* Grt. SLP: Ingham, Washtenaw; July 30-Aug. 22. H. xxviii: 9.

*Arzama obliqua* Wlk. NLP: Cheboygan; June 24. SLP: Berrien, Livingston, Oakland, St. Clair, Washtenaw, Wayne; May 22-Aug. 13. H. xxv: 36.

*Bellura gortynoides* Wlk. SLP: Berrien, Livingston, Washtenaw; May 25-July 29. H. text fig. 119.

*Bellura diffusa* Grt. UP: Schoolcraft; July 14.

*Archanara oblonga* Grt. NLP: Charlevoix, Midland; Aug. 12-22. SLP: Livingston, Monroe (Cole), St. Clair, Van Buren, Washtenaw, Wayne; July 21-Sept. 4. H. xxv: 33.

*Archanara subflava* Grt. NLP: Beaver Isls., Midland; July 23-Sept. 17. SLP: Oakland, Wayne; July 28-Aug. 10. Determined by Gates Clark. H. xxv: 34.

*Archanara laeta* Morr. SLP: Livingston, Oakland, Wayne; Aug. 5-31.

*Calamia inquinata* Gn. UP: Mackinac; Aug. 1. SLP: Livingston, Washtenaw, Wayne; June 6-July 29.

*Calamia variana* Morr. SLP: Wayne (type). H. xxvi: 26.

*Calamia basistriga* McD. SLP: Livingston, Oakland, Washtenaw; July 7-Aug. 12.

*Calamia defecta* Grt. SLP: Livingston; Aug. 6.

*Amolita fessa* Grt. NLP: Bay, Midland; June 8-July 16. SLP: Berrien, Cass, Livingston, Oakland, St. Clair, Washtenaw, Wayne; May 26-July 25. H. xxix: 13.

*Euthisanotia grata* Fabr. NLP: Midland, Oceana; June 27-July 17. SLP: Berrien, Cass, Livingston, Macomb, Oakland, St. Clair, St. Joseph, Washtenaw, Wayne; June 16-Aug. 8. H. xvii: 24, as *unio*.

*Euthisanotia unio* Hbn. NLP: Iosco, Midland; June 10-Aug. 7. SLP: Berrien, Branch, Cass, Ingham, Livingston, Oakland, St. Clair, Washtenaw, Wayne; May 25-Oct. 6. H. xvii: 23, as *grata*.

*Psychomorpha epimenis* Dru. SLP: Kent, Lenawee, Livingston; May 3-15. H. iii: 9.

#### Erastrinae

*Amyna octo* Gn. NLP: Beaver Isls.; Aug. 23. SLP: Wayne; Sept. 16. H. xxix: 7. A southern species.

*Chamyris cerintha* Treit. NLP: Cheboygan, Midland, Montmorency, Oceana, Oscoda, Roscommon; May 31-July 12. SLP: Berrien, Branch, Ingham, Livingston, Oakland, St. Clair, Washtenaw, Wayne; May 23-July 15. H. xxix: 43.

*Lithacodia synochitis* G. & R. NLP: Beaver Isls., Benzie, Midland, Oscoda; June 4-Aug. 5. SLP: Berrien, Lapeer, Livingston, Macomb, Oakland, Sanilac, St. Clair, Washtenaw, Wayne; May 27-July 26. H. xxix: 24.

*Lithacodia albidula* Gn. UP: Alger, Chippewa, Dickinson, Isle Royale, Luce, Mackinac, Schoolcraft; July 20-Aug. 1. NLP: Alpena, Bay, Beaver Isls., Benzie, Cheboygan, Crawford, Midland, Missaukee, Montmorency, Muskegon, Otsego, Roscommon; June 3-Aug. 27. SLP: Berrien, Huron, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 27-Aug. 19. H. xxix: 22.

*Lithacodia bellicula* Hbn. UP: Chippewa, Dickinson, Mackinac, Schoolcraft, July 7-30. NLP: Cheboygan, Emmet, Iosco, Midland, Osceola, Oscoda, Otsego; May 26-Aug. 14. SLP: Berrien, Livingston, Oakland, Washtenaw; May 27-Aug. 16. H. xxix: 30. Determined by Dodd.

*Lithacodia musta* G. & R. NLP: Oceana; July 19. SLP: Livingston, Oakland; July 6-Aug. 28. H. xxix: 25.

*Lithacodia carneola* Gn. UP: Alger, Chippewa, Dickinson, Luce, Mackinac, Menominee, Schoolcraft; June 9-Aug. 22. NLP: Beaver Isls., Benzie, Charity Isl., Cheboygan, Midland, Oceana; June 4-Aug. 24. SLP: Berrien, Branch, Ingham, Lapeer, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 5-Sept. 18. H. xxix: 28.

*Lithacodia apicosa* Haw. NLP: Benzie, Midland; July 2-Aug. 13. SLP: Berrien, Livingston, Oakland, St. Clair, Washtenaw, Wayne; Mar. 21-Sept. 11. H. xxix: 27.

*Lithacodia muscosula* Gn. NLP: Beaver Isls., Benzie, Lake, Midland, Oscoda, Presque Isle, Roscommon; June 4-Sept. 17. SLP: Berrien, Cass, Jackson, Lapeer, Livingston, Monroe, Oakland, St. Clair, Washtenaw, Wayne; May 8-Aug. 16. H. xxix: 26.

*Cryphia pervertens* B. & McD. NLP: Oceana; July.

*Cryphia villificans* B. & McD. NLP: Oceana; July. SLP: Livingston; June 29-July 27.

*Erastria secta* Grt. NLP: Lake; Aug. 1. SLP: Livingston; May 31-Aug. 25.

*Exyra fax* Grt. SLP: Oakland; June 10. Determined by Gates Clark. Only four specimens in the U. S. National Museum.

*Spragueia leo* Gn. SLP: Oakland; Sept. 5.

*Tarachidia tortricina* Zell. NLP: Oscoda; June 4. SLP: Wayne; Aug. 15. Determined by Brower.

*Tarachidia erastrionides* Gn. NLP: Benzie, Midland, Roscommon; May 30-Aug. 24. SLP: Allegan, Berrien, Cass, Lapeer, Livingston, Oakland, St. Clair, Washtenaw, Wayne; May 16-Aug. 26. H. xxix: 54.

*Tarachidia candefacta* Hbn. NLP: Benzie, Crawford, Midland, Newaygo, Oscoda; May 23-Aug. 12. SLP: Berrien, Huron, Ingham, Lapeer, Livingston, Oakland, St. Clair, Washtenaw, Wayne; May 14-Oct. 17.

*Tarache aprica* Hbn. SLP: Ingham, Livingston, Oakland, Washtenaw, Wayne; June 3-Sept. 19. H. xxix: 50.

*Tarache terminimaculata* Grt. SLP: Cass, Livingston, Macomb, Oakland, St. Clair, Washtenaw; June 28-Aug. 9. H. xxix: 46.

#### Euteliinae

*Eutelia pulcherrima* Grt. SLP: Ingham, Livingston, Oakland; May 20-July 13. H. text Fig. 150.

*Marathyssa basalis* Wlk. SLP: Livingston, Macomb, Oakland, Washtenaw; Apr. 29-June 15. H. xxix: 5, as *ventilator*.

*Marathyssa inficita* Wlk. NLP: Benzie, Charity Isl., Cheboygan, Midland, Oceana, Roscommon; June 10-Aug. 29. SLP: Berrien, Branch, Jackson, Livingston, Macomb, Oakland, St. Clair, Washtenaw; May 20-Sept. 15. H. xxix: 6.

*Paectes oculatrix* Gn. SLP: Berrien, Livingston, Oakland, Washtenaw; May 24-Aug. 12. H. xxix: 4.

*Paectes pygmaea* Hbn. NLP: Oscoda; June 1-16. A southern species. H. xxix: 2.

#### Sarrothripinae

*Characoma nilotica* Rogenh. SLP: Branch, Livingston, St. Clair; July 9-Sept. 5. Determined by Brower.

*Sarrothripus revayana* Scop. UP: Mackinac; July 26-30. NLP: Beaver Isls., Charlevoix, Cheboygan (Welch, 1915), Montmorency, Osceola, Oscoda;

May 29-Oct. 15. SLP: Berrien, Livingston, Oakland, Washtenaw, Wayne; June 11-Aug. 25. H. xlii: 15, form *lintnerana*.

*Baileya doubledayi* Gn. NLP: Crawford, Midland, Oscoda; May 30-Aug. 6. SLP: Oakland, St. Clair; June 27-Aug. 8. H. xvii: 26.

*Baileya ophthalmica* Gn. UP: Mackinac; June 20. NLP: Fox Isls., Montgomery, Oceana, Oscoda; May 30-June 26. SLP: Berrien, Hillsdale, Lapeer, Macomb, Oakland, Washtenaw, Wayne; May 5-July 21. H. xvii: 25.

*Baileya australis* Grt. SLP: Hillsdale, Lapeer, Livingston, St. Clair, Washtenaw, Wayne; May 6-Sept. 4. Determined by Forbes. H. xvii: 27.

*Baileya dormitans* Gn. SLP: Berrien, Oakland, Washtenaw; May 20-June 20.

*Baileya levitans* Sm. SLP: Berrien, Livingston, Washtenaw; Apr. 27-July 7.

#### Catocalinae

*Catocala innubens* Gn. SLP: Lenawee, Macomb, Oakland, Washtenaw, Wayne; July 11-Sept. 14. H. xxxiii: 13.

*Catocala piatrix* Grt. SLP: Branch, Macomb, Oakland, Ottawa, Washtenaw, Wayne; Aug. 7-Sept. 23. H. xxxvi: 6.

*Catocala epione* Dru. SLP: Livingston, Macomb, Oakland, Washtenaw; July 6-Aug. 2. H. xxxi: 3.

*Catocala antinympha* Hbn. UP: Dickinson; July 30-Aug. 17. NLP: Beaver Isls., Cheboygan, Crawford, Iosco, Midland, Presque Isle, Oceana, Ogemaw, Oscoda; July 12-Aug. 30. SLP: Allegan, Livingston, St. Clair, Wayne; July 27-Aug. 10. H. xxxii: 8.

*Catocala coelebs* Grt. UP: Mackinac, Schoolcraft; July 11-24. Determined by Brower. H. xxxii: 18.

*Catocala habilis* Grt. SLP: Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; July 17-Sept. 21. H. xxxiii: 11.

*Catocala serena* Edw. SLP: Washtenaw; July. H. xxxiii: 14.

*Catocala robinsoni* Grt. SLP: Wayne; Sept. 12. H. xxxi: 7.

*Catocala judith* Stkr. SLP: Oakland, Washtenaw, Wayne; July 15-Sept. 2. H. xxxii: 2.

*Catocala flebilis* Grt. SLP: Oakland, Washtenaw; Aug. 19-21. H. xxxi: 11 is *angusii* not *flebilis*.

*Catocala obscura* Stkr. SLP: Branch, Macomb, Oakland, Wayne; Aug. 3-Oct. 1. H. xxxi: 14 is *residua* not *obscura*.

*Catocala residua* Grt. SLP: Livingston, Macomb, Oakland, Washtenaw; July 26-Sept. 10. H. xxxi: 14, as *obscura*.

*Catocala resecta* Grt. NLP: Roscommon; Oct. 19. SLP: Branch, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; Aug. 6-Sept. 24. H. xxxi: 8.

*Catocala dejecta* Stkr. SLP: Washtenaw; July 27-Aug. 11. H. xxxii: 1.

*Catocala insolabilis* Gn. SLP: Berrien; Aug. H. xxxi: 10.

*Catocala vidua* A. & S. SLP: Branch, Lenawee, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; Aug. 2-Oct. 9. H. xxxi: 5.

*Catocala palaeogama* Gn. NLP: Otsego; Aug. 9. SLP: Branch, Livingston, Macomb, Oakland, Washtenaw; July 12-Sept. 13. H. xxxvi: 3, 4.

*Catocala nebulosa* Edw. SLP: Oakland; Aug. 14. H. xxxiii: 16.

*Catocala subnata* Grt. SLP: St. Clair; July 30. H. xxxiii: 15.

*Catocala neogama* A. & S. SLP: Berrien, Macomb, Oakland, Van Buren, Washtenaw, Wayne; July 17-Sept. 11. H. xxxvi: 5.

*Catocala ilia* Cram. NLP: Beaver Isls., Charity Isl., Cheboygan, Osceola, Oscoda; July 6-Aug. 20. SLP: Berrien, Branch, Ingham, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; July 5-Sept. 11. H. xxxiv: 7, as *osculata*, 14, 17, as *uxor*.

*Catocala cerogama* Gn. NLP: Benzie, Charlevoix, Cheboygan, Midland, Newaygo, Osceola; July 7-Aug. 12. SLP: Berrien, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; July 26-Sept. 18. H. xxxiv: 6.

*Catocala relicta* Wlk. UP: Alger, Chippewa, Keweenaw, Mackinac, Schoolcraft; Aug. 4-Oct. 2. NLP: Beaver Isls., Charlevoix, Cheboygan, Emmet, Iosco, Mecosta, Midland, Otsego, Presque Isle; July 2-Sept. 10. SLP: Berrien, Huron, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; Aug. 6-Oct. 2. H. xxxii: 6, 7.

*Catocala parta* Gn. UP: Dickinson, Aug. 5. NLP: Benzie, Cheboygan, Emmet, Midland, Oceana, Ogemaw, Presque Isle; July 19-Sept. 7. SLP: Allegan, Berrien, Huron, Ingham, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; July 16-Sept. 14. H. xxxiv: 11.

*Catocala briseis* Edw. UP: Chippewa, Isle Royale, Keweenaw, Mackinac, Marquette, Schoolcraft; July 25-Sept. 22. NLP: Beaver Isls., Cheboygan, Midland; July 27-Aug. 7. SLP: Macomb, Oakland, St. Clair, Wayne; July 25-Sept. 13. H. xxxv: 12.

*Catocala meskei* Grt. UP: Chippewa; July. NLP: Cheboygan, Emmet, Iosco, Midland; July 24-Sept. 16. SLP: Macomb, Washtenaw, Wayne; July 17-Sept. 6. Determined by Brower. H. xxxiii: 6.

*Catocala unijuga* Wlk. UP: Chippewa, Isle Royale, Keweenaw, Mackinac, Marquette, Ontonagon, Schoolcraft; July 19-Sept. 18. NLP: Beaver Isls., Charity Isl., Charlevoix, Cheboygan, Crawford, Iosco, Oceana, Oscoda, Presque Isle; July 7-Sept. 16. SLP: Berrien, Branch, Huron, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; July 11-Sept. 17. H. xxxiii: 5.



*Catocala semirelictica* Grt. UP: Mackinac, Marquette; Aug. 14-18. NLP: Emmet; Sept. 7. Determined by Brower.

*Catocala junctura* Wlk. SLP: Berrien; Aug. 17.

*Catocala cara* Gn. NLP: Midland; July. SLP: Berrien, Branch, Ingham, Lenawee, Livingston, Macomb, Oakland, St. Clair, Van Buren, Washtenaw, Wayne; Aug. 1-Oct. 13. H. xxxii: 9.

*Catocala concumbens* Wlk. UP: Houghton, Mackinac, Schoolcraft; July 30-Oct. 29. NLP: Beaver Isls., Benzie, Cheboygan, Mecosta, Midland, Otsego, Presque Isle; Sept. 27-Oct. 29. SLP: Berrien, Branch, Ingham, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; July 28-Oct. 2. H. xxxv: 10.

*Catocala amatrix* Hbn. NLP: Midland; Aug.-Sept. SLP: Allegan, Berrien, Branch, Calhoun, Ingham, Lenawee, Livingston, Macomb, Oakland, St. Clair, Van Buren, Washtenaw, Wayne; July 20-Sept. 28. H. xxxii: 12, 13.

*Catocala gracilis* Edw. NLP: Iosco, Oscoda, Presque Isle; July 15-Aug. 6. SLP: Huron, Livingston, Wayne; July 21-Aug. 4. H. xxxv: 7, as *praeclara*.

*Catocala coccinata* Grt. NLP: Midland, Oscoda; July 27. SLP: Oakland, St. Clair, Washtenaw, Wayne; July-Aug. 11. H. xxxiv: 10.

*Catocala ultronia* Hbn. UP: Mackinac; Aug. 9. NLP: Beaver Isls., Benzie, Cheboygan (Welch, 1915), Iosco, Midland; July 29-Sept. 27. SLP: Berrien, Ingham, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; July 7-Sept. 1. H. xxxiii: 2, 4, 7.

*Catocala crataegi* Saund. NLP: Oscoda; July 27. SLP: St. Clair, July 14-Aug. 7. H. xxxiv: 12.

*Catocala mira* Grt. NLP: Alpena, Osceola, Oscoda; July 16-Aug. SLP: Livingston, Macomb, Oakland, St. Clair, Washtenaw; July 7-Sept. 1. H. xxxiv: 13, as *polygama*; xxxv: 5, as *jaquenetta*.

*Catocala grynea* Cram. NLP: Midland; July 19-Aug. 6. SLP: Branch, Ingham, Macomb, Oakland, St. Clair, Washtenaw, Wayne; July 1-Aug. 25. H. xxxv: 6.

*Catocala praeclara* G. & R. UP: Schoolcraft; Aug. 12. NLP: Midland, Oceana; July-Aug. 7. SLP: Berrien, Huron, Livingston, Macomb, Oakland, Washtenaw; July 13-Aug. 19. H. xxxv: 7 is *gracilis*, not *praeclara*. Determined by Brower.

*Catocala blandula* Hlst. NLP: Roscommon; July 26-30. (Brower).

*Catocala similis* Edw. NLP: Oscoda; July 25. SLP: Livingston, Oakland, Washtenaw; July 9-27. H. xxxv: 2, 3.

*Catocala minuta* Edw. SLP: Washtenaw, Wayne; June 27-July 8. H. xxxii: 17.

*Catocala amica* Hbn. SLP: Berrien, Branch, Livingston, Macomb, Oakland, Washtenaw, Wayne; July 7-Sept. 1. H. xxxii: 16, 19, 20.

*Euparthenos nubilis* Hbn. NLP: Benzie, Cheboygan, Manistee, Oceana, Oscoda; June 27-July 28. SLP: Cass, Ingham, Livingston, Macomb, Oakland, Sanilac, St. Clair, Washtenaw; May 23-Sept. 8. H. xxxiv: 2.

*Allotria elonympha* Hbn. SLP: Berrien; July 31. H. xxxiii: 18.

*Parallelia bistriaris* Hbn. UP: Alger, Dickinson, Schoolcraft; June 18-Aug. 4. NLP: Alpena, Beaver Isls., Benzie, Charity Isl., Cheboygan, Lake, Midland, Muskegon, Newaygo, Oceana, Oscoda; May 29-Aug. 9. SLP: Berrien, Ingham, Lapeer, Livingston, Oakland, St. Clair, Washtenaw, Wayne; May 28-Sept. 4. H. xxxvi: 18.

*Euclidia cuspeida* Hbn. UP: Chippewa, Isle Royale, Mackinac; June 1-27. NLP: Beaver Isls., Benzie, Cheboygan, Iosco, Midland, Oscoda; May 26-June 7. SLP: Lapeer, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 11-July 22. H. xxx: 20.

*Caenurgia erectea* Cram. UP: Chippewa, Mackinac, Schoolcraft; July 8-Sept. 6. NLP: Beaver Isls., Charity Isl., Charlevoix, Cheboygan, Iosco, Midland, Muskegon, Oceana; May 12-Aug. 21. SLP: Berrien, Branch, Ingham, Lapeer, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; Apr. 10-Oct. 1. H. xxx: 14.

*Caenurgia crassiuscula* Haw. UP: Alger, Chippewa, Dickinson, Mackinac, Schoolcraft; July 7-Sept. 28. NLP: Alpena, Beaver Isls., Benzie, Cheboygan, Fox Isl., Iosco, Manistee, Midland, Montmorency, Muskegon, Oceana; May 18-Aug. 30. SLP: Berrien, Cass, Huron, Ingham, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; Apr. 1-Sept. 13. H. xxx: 15.

*Pelamia latipes* Gn. SLP: Huron, Livingston, Macomb, Oakland, Wayne; July 21-Sept. 20. H. xxxvi: 16, as *repanda*.

*Phurys lima* Gn. SLP: Livingston; June 5. A southern species. H. xxxvi: 11.

*Celiptera frustulum* Gn. SLP: Livingston, Macomb, Oakland, Wayne; Aug. 17-Sept. 22. H. xxxvi: 13.

*Argyrostroma anilis* Dru. NLP: Arenac, Crawford, Iosco, Ogemaw, Oscoda; May 29-Aug. 4. SLP: Hillsdale, Lapeer, Livingston, Oakland, St. Clair, Washtenaw; June 7-Aug. 2. H. xxx: 41.

*Zale lumata* Dru. UP: Schoolcraft; Aug. 20. NLP: Beaver Isls., Midland, Oceana; June 27-Sept. 27. SLP: Allegan, Berrien, Lenawee, Livingston, Macomb, Oakland, Ottawa, St. Clair, Van Buren, Washtenaw, Wayne; June 20-Nov. 22. H. xxxvii: 15, 16.

*Zale unilineata* Grt. NLP: Crawford, Iosco, Montmorency, Newaygo, Oscoda; May 30-June 11. SLP: Livingston, Oakland, Washtenaw, Wayne; May 11-June 12. H. xxxvii: 14.

*Zale aeruginosa* Gn. NLP: Crawford, Montmorency, Ogemaw, Oscoda, Roscommon; May 18-June 3. SLP: Livingston, Wayne; May 16-July 26.

*Zale undularis* Dru. NLP: Midland; June 6-26. SLP: Berrien, Livingston, Macomb, Oakland, St. Clair, Washtenaw; May 14-Aug. 6. H. xxxvii: 6.

*Zale minerea* Gn. UP: Mackinac, Schoolcraft; June 13-July 18. NLP: Benzie, Crawford, Midland, Montmorency, Oceana, Oscoda; May 22-July 6. SLP: Livingston, Macomb, Oakland, Washtenaw, Wayne; May 11-July 21.

*Zale lunifera* Hbn. UP: Mackinac; June 2. NLP: Midland, Oscoda, Roscommon; May 27-Aug. 21. SLP: Berrien, Ingham, Macomb, Oakland, Sanilac, St. Clair, Washtenaw, Wayne; May 1-Sept. 2. H. xxxvii: 5.

*Zale duplicata* Beth. NLP: Cheboygan, Crawford, Montmorency, Ogemaw, Oscoda; May 18-June 24.

*Zale bethunei* Sm. NLP: Charity Isl.; June 25.

*Zale squamularis* Dru. UP: Mackinac; June 4. NLP: Crawford, Montmorency, Ogemaw, Oscoda; May 18-June 4.

*Zale obliqua* Gn. NLP: Benzie; July 7. SLP: Berrien; June 9.

*Zale cingulifera* Wlk. NLP: Benzie, Oscoda; May 29. SLP: Livingston, Macomb, Oakland; Apr. 24-May 16. H. xxxvii: 17.

*Zale calycanthata* A. & S. NLP: Ogemaw; May 18-25. SLP: Oakland; May 15. Determined by U. S. National Museum.

*Zale horrida* Hbn. UP: Schoolcraft; July. NLP: Benzie, Charity Isl., Cheboygan, Crawford, Oscoda, Roscommon; May 27-July 17. SLP: Cass, Livingston, Macomb, Oakland, Washtenaw; June 2-July. H. xxxvii: 3.

#### Pantheinae

*Colocasia flavicornis* Sm. SLP: Berrien; July 19. Determined by Brower.

*Colocasia propinquinelinea* Grt. UP: Mackinac; July 6. NLP: Beaver Isls., Benzie; June 20-July 16. SLP: Lapeer, Livingston, Macomb, Oakland, St. Clair, Washtenaw; May 16-July 5. H. xix: 3.

*Panthea acronyctoides* Wlk. NLP: Beaver Isls.; July 17. SLP: Livingston; May 24-Aug. 11.

*Panthea furcilla* Pack. UP: Mackinac, ex larva. NLP: Beaver Isls., Cheboygan, Iosco, Newaygo, Oceana, Oscoda; May 30-Aug. 6. SLP: Berrien, Oakland, St. Clair; May 22-Aug. 11. H. xvii: 31.

*Charadra deridens* Gn. NLP: Beaver Isls., Midland, Newaygo, Oceana; June 23-Aug. 26. SLP: Berrien, Livingston, Macomb, Oakland, Washtenaw; May 14-Aug. 17. H. xviii: 4.

## Plusiinae

*Autographa falcifera* Kirby. UP: Chippewa, Isle Royale, Luce, Mackinac, Schoolcraft; June 4-Oct. 1. NLP: Beaver Isls., Benzie, Charity Isl., Cheboygan, Crawford, Fox Isls., Iosco, Midland, Montmorency, Newaygo, Oceana, Ogemaw; May 22-Sept. 15. SLP: Berrien, Branch, Huron, Ingham, Lapeer, Livingston, Macomb, Oakland, Sanilac, St. Clair, Washtenaw, Wayne; May 2-Oct. 15. H. xxviii: 37, form *simplex*.

*Autographa epigaea* Grt. UP: Chippewa, Keweenaw; July 28-Aug. 5.

*Autographa selecta* Wlk. UP: Alger, Keweenaw; Aug. 1-6. NLP: Beaver Isls.; Aug. 26. H. xxviii: 39.

*Autographa rectangulata* Kirby. UP: Alger, Chippewa, Keweenaw; July 7-Aug. 6. NLP: Beaver Isls., Charlevoix, Cheboygan, Midland, Oceana; July 4-Aug. 27. SLP: St. Clair; Aug. 15. H. xxviii: 32.

*Autographa alias* Ottol. UP: Mackinac; July 31. NLP: Beaver Isls., Cheboygan; July 23-Aug. 8.

*Autographa octoscripta* Grt. UP: Alger, Keweenaw, Mackinac; June 29-Aug. 2. SLP: St. Clair, Wayne; Aug. 2-5.

*Autographa egena* Gn. SLP: Wayne; Oct. 5. H. xxviii: 29.

*Autographa verruca* Fabr. SLP: Macomb, Washtenaw, Wayne; Sept. 5-21. H. xxviii: 20.

*Autographa brassicae* Riley. UP: Keweenaw, Mackinac, Schoolcraft; June 29-Oct. 3. NLP: Cheboygan, Crawford, Midland; July 10-Oct. 2. SLP: Ingham, Lenawee, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; June 14-Nov. 11. H. xxviii: 36.

*Autographa basigera* Wlk. SLP: Wayne; Sept. 22. H. xxviii: 26.

*Autographa rubida* Ottol. NLP: Oscoda; June 5.

*Autographa oxygramma* Geyer. SLP: St. Clair, Washtenaw, Wayne; Sept. 8-Oct. 26. H. xxviii: 30.

*Autographa putnami* Grt. UP: Alger, Dickinson, Mackinac, Schoolcraft; June 22-Aug. 3. NLP: Beaver Isls.; July 14-Sept. 17. SLP: Livingston, Oakland, St. Clair, Washtenaw, Wayne; May 22-Oct. 12. H. xxviii: 15.

*Autographa contexta* Grt. UP: Chippewa, Dickinson; July 29-Aug. 3. NLP: Midland; July 21. SLP: Livingston, Oakland, St. Clair, Washtenaw, Wayne; June 13-Oct. 5. H. xxviii: 23.

*Autographa biloba* Steph. NLP: Cheboygan; July 17. SLP: Berrien, Ingham, Lenawee, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 20-Oct. 22. H. xxviii: 24.

*Autographa oo* Cram. SLP: Livingston, Oakland, Washtenaw, Wayne; Sept. 11-Oct. 24.

*Autographa precatationis* Gn. UP: Mackinac; Aug. 3-24. NLP: Alpena, Beaver Isls., Benzie, Cheboygan, Midland, Oceana, Osceola, Oscoda; May 30-Sept. 25. SLP: Berrien, Branch, Lapeer, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; Apr. 26-Oct. 28. H. xxviii: 28.

*Autographa bimaculata* Steph. UP: Alger, Chippewa, Houghton, Isle Royale, Keweenaw, Mackinac, Marquette, Schoolcraft; July 23-Aug. 11. NLP: Beaver Isls., Oscoda; July 17-Aug. 12. SLP: Washtenaw; Nov. 4. H. xxviii: 19.

*Autographa mappa* G. & R. UP: Chippewa, Mackinac; June 18-July 29.

*Autographa ou* Gn. SLP: Livingston, Oakland, Washtenaw, Wayne; July 27-Oct. 16. H. xxviii: 33.

*Autographa ampla* Wlk. UP: Alger, Chippewa, Dickinson, Mackinac; July 12-24. NLP: Beaver Isls., Cheboygan, Oscoda; July 3-22. SLP: St. Clair, Washtenaw, Wayne; July 1-Aug. 4. H. xxviii: 31.

*Plusia aereoides* Grt. UP: Alger, Mackinac, Schoolcraft; July 19-Aug. 20. NLP: Beaver Isls., Cheboygan, Midland, Montmorency, Oscoda; July 11-Aug. 6. SLP: Oakland, St. Clair, Washtenaw; July 10-Aug. 12. H. xxviii: 17.

*Plusia aerea* Hbn. NLP: Midland, Oceana; June 25-Aug. 12. SLP: Ingham, Livingston, Macomb, Oakland, Ottawa, St. Clair, Washtenaw, Wayne; May 29-Oct. 15. H. xxviii: 16.

*Plusia balluca* Geyer. UP: Alger, Mackinac; July 18-Aug. 13. NLP: Beaver Isls., Benzie; July 20-Sept. SLP: Livingston, Macomb, Oakland, St. Clair, Washtenaw; June 26-Oct. 1. H. xxviii: 22.

*Eosporopteryx thyatyroides* Gn. UP: Alger, Mackinac; July 18-Aug. 28. NLP: Fox Isls.; Aug. 30. SLP: Livingston, Macomb, Oakland, St. Clair, Washtenaw; June 26-Sept. 14. H. xxviii: 18.

*Pseudeva purpurigera* Wlk. UP: Luce; July 6. NLP: Fox Isls., Midland; July 24-Aug. 9. SLP: Livingston, Oakland, Washtenaw; June 21-Aug. 16. H. xxviii: 13.

*Palaeoplusia venusta* Wlk. NLP: Beaver Isls., Cheboygan, Midland; July 11-Sept. 8. SLP: Livingston, Oakland, St. Clair, Washtenaw, Wayne; June 10-Sept. 8. H. xxviii: 21.

*Abrostola formosa* Grt. NLP: Oscoda; July 22. SLP: Livingston, Washtenaw; June 17-July 22. H. xxviii: 14.

*Abrostola urentis* Gn. UP: Alger; July. NLP: Midland; June 30. SLP: Branch, Ingham, Lapeer, Lenawee, Livingston, Oakland, Sanilac, St. Clair, Washtenaw, Wayne; May 6-Aug. 29. H. xxviii: 42.

#### Erebinae

*Raphia frater* Grt. UP: Chippewa, Isle Royale, Luce, Mackinac; June 28-Aug. 1. NLP: Beaver Isls., Benzie, Cheboygan, Midland, Newaygo,

Oceana, Oscoda, Presque Isle, Roscommon; May 30-Aug. 23. SLP: Berrien, Ingham, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; Apr. 30-Aug. 14. H. xviii: 3.

*Cissura spadix* Cram. SLP: Oakland; Apr. 15. A southwestern species.

*Melipotis jucunda* Hbn. SLP: Livingston, Oakland, Washtenaw, Wayne; May 25-Aug. 28. H. xxx: 24.

*Drasteria graphica atlantica* B. & McD. UP: Schoolcraft; May 30-June 18. NLP: Crawford, Iosco, Ogemaw, Oscoda, Roscommon; May 25-June 1. H. xxx: 30.

*Syneda limbolaris* Geyer. NLP: Arenac, Bay, Cheboygan, Crawford, Midland, Montmorency, Newaygo, Oceana, Roscommon; May 27-Aug. 8. SLP: Berrien, Livingston, Montcalm, Oakland, St. Clair, Washtenaw, Wayne; May 22-Aug. 16. H. xxx: 27.

*Syneda alleni* Grt. UP: Alger, Chippewa, Mackinac, Schoolcraft; June 7-July 15. NLP: Arenac, Beaver Isls., Benzie, Cheboygan, Midland, Ogemaw, Oscoda; May 25-July 16. H. xxx: 35.

*Hypocala andremona* Cram. NLP: Midland; July. SLP: Wayne; Sept. 8. Neotropical, Texas. H. xxx: 40.

*Phoberia atomaris* Hbn. NLP: Crawford; May 9. SLP: Livingston, Washtenaw; Mar. 29-May 12. H. xxxvi: 14. Determined by Gates Clark.

*Panopoda rufimargo* Hbn. NLP: Cheboygan, Midland, Oceana, Presque Isle; June 19-July 16. SLP: Berrien, Ingham, Livingston, Oakland, Sanilac, St. Clair, Washtenaw, Wayne; May 11-Oct. 4. H. xxxvi: 19.

*Anticarsia gemmatilis* Hbn. SLP: Macomb, Oakland, Washtenaw, Wayne; Sept. 8-Nov. 2. H. xxxvii: 10.

*Strenoloma lunilinea* Grt. SLP: Berrien, Oakland, Washtenaw, Wayne; June 5-Aug. 8. H. xxxvi: 9.

*Erebus odora* Linn. NLP: Cheboygan, July 14-Aug. 1 (Voss). SLP: Ingham, Macomb, St. Clair, Washtenaw; July 30-Sept. 9. A straggler from the south. H. xxxvii: 2.

*Thysania zenobia* Cram. NLP: Midland; Oct. 2. SLP: Oakland; Sept. 6. A straggler from the south, only two specimens seen. H. xxxvii: 1.

*Calpe canadensis* Beth. UP: Schoolcraft; July. NLP: Cheboygan, Midland, Osceola; June 25-Aug. 18. SLP: Branch, Ingham, Lenawee, Livingston, Macomb, Oakland, Washtenaw, Wayne; June 11-Sept. 5. H. xxviii: 8.

*Scoliopteryx libatrix* Linn. UP: Chippewa, Isle Royale, Mackinac, Marquette, Schoolcraft; July 21-Sept. 17. NLP: Beaver Isls., Benzie, Cheboygan, Emmet, Midland, Montmorency, Oceana, Ogemaw, Osceola, Oscoda, Otsego; May 30-Oct. 6. SLP: Berrien, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; July 3-Oct. 12. H. xxvi: 22.

*Plusiodonta compressipalpis* Gn. NLP: Charity Isl., Kalkaska; June 27-July 9. SLP: Berrien, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 13-Aug. 26. H. xxviii: 6.

*Alabama argillacea* Hbn. UP: Mackinac, Schoolcraft; Sept. 5-Oct. 2. NLP: Beaver Isls., Benzie, Charlevoix, Midland, Osceola; Aug. 23-Sept. 7. SLP: Huron, Livingston, Macomb, Oakland, St. Clair, Tuscola, Washtenaw, Wayne; Aug. 26-Oct. 27. H. xxix: 11.

*Anomis erosa* Hbn. SLP: Huron, Livingston, Washtenaw, Wayne; Sept. 4-Nov. 1. H. xxix: 12.

#### Hypeninae

*Scolecocampa liburna* Geyer. NLP: Kalkaska, Oceana; July 9-22. SLP: Berrien, Cass, Livingston, Macomb, Oakland, Washtenaw; July 1-27. H. xxix: 16.

*Gabara subnivosella* Wlk. NLP: Oscoda; June 19-July 26. Determined by Richards.

*Isogona tenuis* Grt. SLP: Berrien, Monroe; July 4-18. H. xxxvii: 18, *natatrix* which is doubtfully distinct.

*Rivula propinqualis* Gn. UP: Alger, Dickinson, Mackinac, Schoolcraft; May 30-July 25. NLP: Beaver Isls., Cheboygan, Fox Isls., Midland, Montmorency, Muskegon, Newaygo; July 5-Aug. 16. SLP: Branch, Lapeer, Livingston, Monroe, Oakland, St. Clair, Washtenaw, Wayne; May 9-Sept. 12. H. xxix: 14.

*Phytometra semipurpurea* Wlk. SLP: Livingston, Macomb, Oakland; May 9-Sept. 3. H. xxix: 36.

*Oxycilla panatela* Sm. UP: Dickinson, Schoolcraft; July 14-Aug. 3. SLP: Berrien, Branch, Livingston, Macomb, Oakland, St. Clair, Washtenaw; June 3-Aug. 13. Determined by Brower.

*Phalaenostola larentioides* Grt. NLP: Midland, July 3-Aug. 6. SLP: Berrien, Branch, Cass, Livingston, Oakland, St. Clair, Washtenaw, Wayne; June 4-Sept. 19. H. xxx: 1.

*Pangrapta decoralis* Hbn. UP: Chippewa, Dickinson, Schoolcraft; June 10-July 27. NLP: Beaver Isls., Charity Isl., Cheboygan, Grand Traverse, Kalkaska, Midland, Montmorency, Oscoda; May 27-Aug. 1. SLP: Livingston, Oakland, St. Clair, Washtenaw, Wayne; May 28-Aug. 22. H. xxx: 3.

*Spargaloma sexpunctata* Grt. UP: Schoolcraft; July. NLP: Beaver Isls., Charity Isl., Charlevoix, Midland, Missaukee, Newaygo, Oscoda; June 12-July 28. SLP: Lapeer, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 30-Aug. 15. H. xxx: 2.

*Spargaloma perditalis* Wlk. NLP: Midland; July 14. SLP: Berrien, Branch, Huron, Jackson, Lapeer, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 4-Aug. 20. H. xxx: 4.

*Melanomma auricinctaria* Grt. NLP: Midland; July 5-20. SLP: Berrien, Huron, Livingston, Oakland, Ottawa, Washtenaw; May 16-Sept. 17. H. text fig. 162.

*Dyspyralis illocata* Warr. SLP: Livingston, Oakland, Washtenaw; July 22-27.

*Dyspyralis puncticosta* Sm. SLP: Livingston, Macomb; July 27-Aug. 15.

*Dyspyralis nigellus* Stkr. SLP: Cass, St. Clair, Washtenaw; July 7-Aug. 11. Determined by Brower.

*Metalestra discalis* Grt. SLP: Berrien, Branch, Cass, Livingston, Wayne; July 4-Aug. 27.

*Metalestra quadrisignata* Wlk. UP: Alger, Mackinac, Schoolcraft; June 28-July 26. NLP: Alpena, Beaver Isls., Charity Isl., Cheboygan, Fox Isls., Lake, Montmorency, Newaygo, Oceana, Oscoda, Presque Isle; June 1-Sept. 7. SLP: Berrien, Cass, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 28-Sept. 9. H. xxx: 5, as *contracta*.

*Metalestra tantillus* Grt. NLP: Beaver Isls.; July 28.

*Epizeuxis americalis* Gn. UP: Alger, Chippewa, Dickinson, Isle Royale, Mackinac; July 8-Aug. 6. NLP: Beaver Isls., Benzie, Cheboygan, Mason, Midland, Montmorency, Oceana, Osceola, Presque Isle; June 11-Oct. 5. SLP: Berrien, Genesee, Ingham, Lapeer, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 15-Oct. 19. H. text Fig. 168.

*Epizeuxis aemula* Hbn. UP: Alger, Chippewa, Dickinson, Isle Royale, Mackinac, Marquette; July 23-Aug. 5. NLP: Arenac, Beaver Isls., Benzie, Cheboygan, Clare, Crawford, Lake, Midland, Montmorency, Muskegon, Newaygo, Oceana, Osceola, Presque Isle; June 22-Aug. 23. SLP: Allegan, Berrien, Cass, Huron, Kent, Lapeer, Livingston, Macomb, Monroe, Oakland, St. Clair, Washtenaw, Wayne; May 15-Oct. 19. H. text fig. 169.

*Epizeuxis scobialis* Grt. NLP: Oceana; July 11. SLP: Berrien; July 20. H. xxxvii: 28.

*Epizeuxis rotundalis* Wlk. NLP: Beaver Isls., Charity Isl., Cheboygan, Oceana, Presque Isle, Roscommon; July 11-Sept. 6. SLP: Berrien, Huron, Livingston, Oakland, St. Clair, Washtenaw, Wayne; July 2-Aug. 20.

*Epizeuxis julia* B. & McD. NLP: Charity Isl., Iosco, Lake, Osceola, Presque Isle; July 16-Aug. 6. SLP: Berrien, Huron, Livingston, Macomb, Oakland, St. Clair, Washtenaw; June 30-Aug. 12.

*Epizeuxis forbesi* French. NLP: Lake, Montmorency, Presque Isle; July 25-Aug. 2. SLP: Berrien, Lapeer, Livingston, Oakland, Washtenaw, Wayne; June 7-Aug. 26.

*Epizeuxis diminuendis* B. & McD. NLP: Charity Isl., Cheboygan, Crawford, Lake, Midland, Montmorency, Oscoda, Presque Isle; July 10-26. SLP: Cass, Lapeer, Livingston, Oakland, Washtenaw; May 27-July 31.

*Epizeuxis denticulalis* Harvey. SLP: Berrien, Livingston, Macomb, Oakland, Washtenaw, Wayne; June 23-Aug. 9. H. xxxvii: 27.

*Epizeuxis lubricalis* Geyer. UP: Alger, Dickinson, Marquette, Schoolcraft; July 14-Aug. 16. NLP: Alpena, Beaver Isls., Benzie, Charity Isl.,



Cheboygan, Crawford, Fox Isls., Lake, Midland, Montmorency, Muskegon, Oceana; July 3-Sept. 18. SLP: Berrien, Cass, Huron, Lapeer, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; June 9-Sept. 21. H. xxxvii: 29.

*Epizeuxis majoralis* Sm. SLP: Livingston, Oakland, St. Clair, Washtenaw, Wayne; June 28-Sept. 2.

*Parahyphenodes quadralis* B. & McD. SLP: Livingston; June 23-Oct. 4. Determined by McDunnough.

*Zanclognatha lituralis* Hbn. UP: Mackinac; June 15-July 6. NLP: Cheboygan, Kalkaska, Presque Isle; July 8-12. SLP: Berrien, Livingston, Macomb, Oakland, Washtenaw; June 13-Aug. 4. H. xxxvii: 20.

*Zanclognatha theralis* Wlk. UP: Schoolcraft; July 25. NLP: Beaver Isls.; July 28-Aug. 12.

*Zanclognatha inconspicualis* Grt. UP: Mackinac; June 21. SLP: Washtenaw; July 12.

*Zanclognatha laevigata* Grt. UP: Chippewa, Dickinson, Schoolcraft; July 16-Aug. 2. NLP: Beaver Isls., Fox Isls., Midland, Oceana; July 7-Aug. 9. SLP: Berrien, Livingston, Macomb, Oakland, St. Clair, Washtenaw; May 18-Aug. 13. H. xxxvii: 21.

*Zanclognatha pedipilalis* Gn. NLP: Midland; June 10. SLP: Livingston, Washtenaw, Wayne; June 6-Aug. 2.

*Zanclognatha protumnusalis* Wlk. UP: Keweenaw; Aug. 1. SLP: Oakland, Washtenaw; July 14-Sept. 2. H. text Fig. 170.

*Zanclognatha cruralis* Gn. UP: Schoolcraft; July 15-Aug. 11. NLP: Beaver Isls., Charity Isl.; June 20-27. SLP: Oakland, Washtenaw; July 18-Sept. 27.

*Zanclognatha jacchusalis* Wlk. UP: Chippewa, Dickinson; July 8-15.

*Zanclognatha ochreipennis* Grt. UP: Chippewa, Dickinson, Isle Royale, Mackinac, Schoolcraft; July 5-31. NLP: Alpena, Beaver Isls., Benzie, Charity Isl., Charlevoix, Cheboygan, Crawford, Fox Isls., Iosco, Lake, Midland, Montmorency, Oceana; July 2-Aug. 15. SLP: Allegan, Berrien, Huron, Ingham, Lapeer, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 18-Sept. 20. H. xxxvii: 22.

*Hormisa absorptalis* Wlk. UP: Alger, Mackinac, Schoolcraft; July 21. NLP: Cheboygan, Iosco, Midland, Muskegon, Oceana; June 27-Aug. 19. SLP: Berrien, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; June 7-Aug. 12. H. xxxvii: 19.

*Hormisa litophora* Grt. UP: Chippewa; July 15. SLP: Berrien, Livingston, Oakland, Washtenaw; June 5-Aug. 28.

*Hormisa bivittata* Grt. UP: Chippewa, Schoolcraft; July 7-24. NLP: Bay, Midland; July 14-17. SLP: Cass, Livingston, Oakland, Washtenaw, Wayne; July 11-30. H. xxxvii: 31.

*Hormisa orciferalis* Wlk. NLP: Bay, Montmorency, Muskegon, Presque Isle; July 17-29. SLP: Livingston, Oakland, St. Clair, Washtenaw, Wayne; May 30-Aug. 25. H. text Fig. 171.

*Xylormisa louisiana* Forbes. SLP: Livingston, Oakland, Washtenaw; June 19-Sept. 15. Determined by Brower.

*Philometra metonalis* Wlk. UP: Alger, Chippewa, Dickinson, Mackinac, Schoolcraft; July 16-Aug. 4. NLP: Alpena, Cheboygan, Crawford, Iosco, Midland, Muskegon, Wexford; June 25-Aug. 16. SLP: Hillsdale, Jackson, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; June 5-Aug. 19. H. xxvii: 30.

*Philometra eumelusalis* Wlk. NLP: Alpena, Cheboygan, Midland, Newaygo, Roscommon; July 5-31. SLP: Berrien, Branch, Livingston, Macomb, Oakland, St. Clair, Washtenaw; June 12-Sept. 10.

*Philometra hanhami* Sm. UP: Dickinson; July 23-Aug. 2. NLP: Cheboygan, Montmorency, Oscoda, Presque Isle; June 26-Aug. 15. SLP: Branch, Livingston, Oakland; June 30-July 14.

*Chytolita morbidalis* Gn. NLP: Beaver Isls., Benzie, Charity Isl., Charlevoix, Cheboygan, Crawford, Montmorency; May 12-July 24. SLP: Berrien, Branch, Lapeer, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 30-July 2. H. xxxvii: 23.

*Chytolita petrealis* Grt. UP: Chippewa, Dickinson, Luce, Mackinac, Schoolcraft; June 18-July 26. NLP: Beaver Isls., Cheboygan, Midland; June 18-July 20. SLP: Berrien, Jackson, Lapeer, Livingston, Macomb, Monroe, Oakland, Washtenaw, Wayne; May 26-July 25.

*Renia salusalis* Wlk. SLP: Berrien, Washtenaw; July 2-27.

*Renia factiosalis* Wlk. NLP: Alpena, Charity Isl., Fox Isls., Kalkaska, Midland, Oceana; July 1-Aug. 18. SLP: Berrien, Cass, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 31-Sept. 15.

*Renia discoloralis* Gn. SLP: Berrien, Livingston, Oakland; July 24-Aug. 19. H. xxxvii: 24.

*Renia flavipunctalis* Geyer. UP: Isle Royale, Mackinac; July 23-Aug. 6. NLP: Alpena, Bay, Beaver Isls., Charity Isl., Charlevoix, Cheboygan, Fox Isls., Iosco, Lake, Midland, Montmorency, Muskegon, Oceana, Oscoda, Otsego; July 1-Sept. 3. SLP: Berrien, Branch, Cass, Huron, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; July 1-Sept. 16.

*Renia sobrialis* Wlk. SLP: Berrien; July 27.

*Renia larvalis* Grt. NLP: Cheboygan; July 17. SLP: Washtenaw; June 13-July 13. Determined by Brower.

*Bleptina caradrinalis* Gn. UP: Chippewa, Dickinson, Mackinac, Schoolcraft; July 8-30. NLP: Bay, Beaver Isls., Benzie, Charity Isl., Charlevoix, Cheboygan, Crawford, Lake, Midland, Montmorency, Muskegon, Oceana, Presque Isle, Roscommon; June 25-Aug. 5. SLP: Berrien, Branch, Cass, Livingston, Macomb, Oakland, St. Clair, Van Buren, Washtenaw, Wayne; June 10-Sept. 5. H. xxxvii: 32.

*Tetanolita mynesalis* Wlk. SLP: Livingston, Macomb, Wayne; Sept. 19-Oct. 15. H. text fig. 174.

*Phalaenophana pyramusalis* Wlk. UP: Mackinac, Schoolcraft; June 18-July 10. NLP: Beaver Isls., Charlevoix, Fox Isls.; June 2-July 14. SLP: Cass, Lapeer, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 4-Aug. 15. H. xxxvii: 26.

*Lascoria ambigualis* Wlk. NLP: Montmorency; May 31. SLP: Berrien, Livingston, Macomb, Oakland, Sanilac, St. Clair, Washtenaw, Wayne; Apr. 28-Sept. 16. H. xlii: 2.

*Palthis angualis* Hbn. UP: Alger, Chippewa, Mackinac, Schoolcraft; June 8-July 30. NLP: Beaver, Benzie, Cheboygan (Welch, 1915), Osceola, Otsego; June 20-Aug. 25. SLP: Berrien, Livingston, Macomb, Oakland, Ottawa, St. Clair, Washtenaw, Wayne; May 5-Aug. 27. H. xxxvii: 25.

*Palthis asopialis* Gn. NLP: Crawford; May 29. SLP: Berrien, Oakland; June 29-Aug. H. xlii: 1.

*Capis curvata* Grt. UP: Dickinson, Mackinac, Schoolcraft; June 13-Aug. 1. NLP: Cheboygan (Welch, 1915), Montmorency; July 10-Aug. 4. SLP: Jackson, Lapeer, Livingston, Macomb, Oakland, St. Clair, Washtenaw; June 6-Aug. 15. H. xxxvii: 33.

*Salia interpuncta* Grt. NLP: Midland; July 22. SLP: Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 16-Aug. 8. H. text fig. 176.

*Bomolocha manalis* Wlk. SLP: Berrien, Livingston, Macomb, Monroe, Oakland, St. Clair, Washtenaw, Wayne; May 30-Sept. 5. H. xlii: 3.

*Bomolocha baltimoralis* Gn. UP: Luce, Schoolcraft; July 5-15. NLP: Beaver Isls., Cheboygan, Crawford, Midland, Montmorency, Oceana; May 30-Aug. 6. SLP: Berrien, Lapeer, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; Apr. 14-Sept. 3. H. xlii: 4.

*Bomolocha bijugalis* Wlk. UP: Mackinac; June 30-July 2. NLP: Charity Isl., Cheboygan; June 27-Aug. 19. SLP: Huron, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 13-Sept. 12. H. xlii: 7.

*Bomolocha palparia* Wlk. UP: Mackinac; July 28. NLP: Beaver Isls., Benzie, Oceana, Oscoda; June 28-July 22. SLP: Berrien, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 21-Sept. 3. H. xlii: 10, as *scutellaris*.

*Bomolocha abalienalis* Wlk. NLP: Benzie, Cheboygan, Presque Isle; June 24-July 22. SLP: Berrien, Livingston, Macomb, Oakland, Washtenaw, Wayne; May 16-Aug. 12. H. xlii: 5.

*Bomolocha deceptalis* Wlk. UP: Mackinac; July 12. NLP: Beaver Isls., Benzie, Charlevoix, Cheboygan, Fox Isls.; June 15-Aug. 9. SLP: Berrien, Hillsdale, Ingham, Lapeer, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 15-Aug. 26. H. xlii: 8.

*Bomolocha madefactalis* Gn. SLP: Livingston, Macomb, Oakland, Washtenaw; June 9-Aug. 15. H. xlii: 6.

*Bomolocha sordidula* Grt. NLP: Midland; June 10. SLP: Lapeer, Lenawee, Monroe, Oakland, St. Clair, Washtenaw, Wayne; May 14-Aug. 11.

*Bomolocha atomaria* Sm. SLP: Livingston, Oakland, Washtenaw; May 27-Aug. 29.

*Bomolocha toreuta* Grt. SLP: Livingston, Oakland, St. Clair, Washtenaw; May 27-Aug. 12. H. xlii: 9.

*Bomolocha edictalis* Wlk. UP: Alger; July 21. NLP: Charlevoix; Aug. 11. SLP: Oakland, Washtenaw; July 1-Aug. 9. H. xlii: 11.

*Bomolocha citata* Grt. SLP: Washtenaw, Wayne; Aug. 26-Oct. 3.

*Lomanattes eductalis* Wlk. NLP: Iosco; Aug. 6. H. text Fig. 177.

*Plathypera scabra* Fabr. UP: Gogebic, Mackinac; June 15-Aug. 29. NLP: Beaver Isls., Benzie, Charlevoix, Cheboygan, Fox Isls., Iosco, Kalkaska, Midland, Oceana, Oscoda; May 30-Sept. 26. SLP: Alpena, Berrien, Branch, Cass, Huron, Lapeer, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 20-Nov. 17. H. xlii: 14.

*Hypera humuli* Harris. UP: Dickinson; July 1-31. NLP: Osceola; Oct. SLP: Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; Apr. 23-Oct. 8. H. xlii: 12, 13.

#### NOTODONTIDAE

*Ichthyura apicalis* Wlk. UP: Mackinac; July 6. NLP: Beaver Isls., Cheboygan, Midland, Montmorency, Oscoda; May 30-Aug. 1. SLP: Berrien, Huron, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; Apr. 28-Sept. 5. H. xl: 18.

*Ichthyura inclusa* Hbn. NLP: Newaygo; June 12. SLP: Berrien, Oakland, Washtenaw, Wayne; Apr. 28-July 23. H. xl: 19.

*Ichthyura strigosa* Grt. UP: Mackinac; June 21-July 5. NLP: Beaver Isls., Cheboygan, Midland, Montmorency, Oceana; May 30-Aug. 1. SLP: Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 13-Aug. 12. H. xl: 17.

*Ichthyura albosigma* Fitch. UP: Dickinson, Mackinac; June 22-Aug. 3. NLP: Beaver Isls., Charlevoix, Cheboygan, Crawford, Emmet, Iosco, Midland, Montmorency, Newaygo, Oceana, Osceola, Oscoda, Presque Isle, Roscommon; May 7-Oct. 5. SLP: Berrien, Lapeer, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; Apr. 17-Sept. 2. H. xl: 16.

*Ichthyura brucei* Hy. Edw. UP: Dickinson; July 31.

*Datana ministra* Dru. UP: Chippewa, Isle Royale, Mackinac, Schoolcraft; June 7-July 26. NLP: Beaver Isls., Charity Isl., Cheboygan, Midland, Newaygo; June 11-July 22. SLP: Berrien, Cass, Lapeer, Lenawee, Livingston, Oakland, St. Clair, Washtenaw, Wayne; May 29-Aug. 6. H. xl: 11.

*Datana angusi* G. & R. NLP: Oceana; June 28. SLP: Berrien, Livingston, Oakland, St. Clair, Washtenaw; May 22-Aug. 15. H. xl: 12.

*Datana drexeli* Hy. Edw. SLP: Berrien, Livingston, Oakland, Washtenaw, Wayne; June 3-July 29.

*Datana perspicua* G. & R. NLP: Midland; July 4-25. SLP: Berrien, Cass, Livingston, Oakland, Washtenaw, Wayne; June 29-Sept. 18. H. xl: 14.

*Datana integerrima* G. & R. NLP: Benzie, Oceana; July 12-22. SLP: Berrien, Branch, Cass, Ingham, Lapeer, Livingston, Oakland, St. Clair, Washtenaw, Wayne; May 30-Aug. 26. H. xl: 13.

*Datana contracta* Wlk. NLP: Midland, Oceana; May 30-July 18. SLP: Livingston, Oakland, Washtenaw, Wayne; June 8-July 24.

*Hyperaeschra stragula* Grt. UP: Luce; July 5. NLP: Beaver Isls., Cheboygan, Midland, Oscoda; May 30-Aug. 20. SLP: Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 25-Aug. 30. H. xl: 1.

*Hyperaeschra georgica* H. S. UP: Mackinac; June 29. NLP: Arenac, Crawford, Newaygo; May 28-July 22. SLP: Ingham, Livingston, Oakland, Washtenaw, Wayne; May 16-Aug. 17. H. xl: 7.

*Odontosia elegans* Stkr. UP: Isle Royale, Mackinac; June 28-July 28. NLP: Beaver Isls., Cheboygan, Crawford, Lake, Midland, Montmorency, Oscoda; May 30-July 30. SLP: Clinton, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; June 20-July 31. H. xl: 3.

*Notodonta basitriens* Wlk. UP: Luce, Mackinac; July 6-30. NLP: Beaver Isls., Benzie, Cheboygan, Fox Isls., Newaygo, Oceana; June 12-Aug. 9. SLP: St. Clair, Washtenaw; June 20-July 30. H. xl: 5.

*Notodonta simplaria* Graef. NLP: Arenac, Cheboygan, Mason, Montmorency, Oceana; May 30-Aug. 9. SLP: St. Clair; Aug. 11. H. xl: 6.

*Pheosia rimosa* Pack. UP: Chippewa, Luce, Mackinac; July 6-Aug. 24. NLP: Arenac, Beaver Isls., Charlevoix, Cheboygan, Crawford, Midland, Newaygo, Oceana, Oscoda; May 28-Sept. 5. SLP: Berrien, Livingston, Macomb, Oakland, Washtenaw, Wayne; May 22-Aug. 12. H. xl: 9, as *dimidiata*.

*Lophodonta ferruginea* Pack. UP: Luce, Mackinac; June 20-July 25. NLP: Beaver Isls., Cheboygan, Midland, Oceana, Oscoda; June 12-Aug. 5. SLP: Sanilac, Washtenaw; July 5-6. H. xl: 8.

*Lophodonta angulosa* A. & S. UP: Mackinac; July 23. NLP: Beaver Isls., Cheboygan (Welch, 1915), Lake, Newaygo; June 12-Aug. 2. SLP: Berrien, Livingston, Oakland, Washtenaw, Wayne; June 5-Aug. 31. H. xl: 15.

*Nadata gibbosa* A. & S. UP: Isle Royale, Luce, Mackinac, Schoolcraft; June 28-July 20. NLP: Beaver Isls., Benzie, Cheboygan, Crawford, Fox Isls., Midland, Muskegon, Newaygo, Oceana; May 28-Aug. 16. SLP: Kent, Lapeer, Livingston, Oakland, St. Clair, Washtenaw, Wayne; May 13-Aug. 19. H. xxxix: 1.

*Nerice bidentata* Wlk. UP: Schoolcraft; July. NLP: Benzie, Cheboygan, Iosco, Midland; June 24-July 25. SLP: Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 16-Aug. 4. H. xxxix: 2.

*Symmerista albifrons* A. & S. NLP: Beaver Isls., Benzie, Cheboygan, Lake; June 28-July 30. SLP: Berrien, Lapeer; May 30-July 30. H. xxxix: 7, is not *albifrons* but is *canicosta*.

*Symmerista canicosta* Franclemont. NLP: Benzie, Cheboygan; June 17-July 27. SLP: Berrien, Lapeer, Livingston, Oakland, Washtenaw, Wayne; May 19-Aug. 7. H. xxxix: 7, as *albifrons*.

*Dasylophia thyatiroides* Wlk. NLP: Beaver Isls., Cheboygan, Oceana; June 18-Aug. 27. SLP: Berrien, St. Clair; July-Aug. 27. H. xxxix: 6.

*Heterocampa obliqua* Pack. NLP: Cheboygan; July 18. SLP: Berrien, Livingston, Oakland, Washtenaw, Wayne; July 1-Aug. 8. H. xl: 2.

*Heterocampa umbrata* Wlk. NLP: Beaver Isls., Cheboygan, Oceana, Oscoda; June 14-July 8. SLP: Livingston; June 10-Aug. 1. H. xxxix: 26.

*Heterocampa manteo* Dbldy. UP: Mackinac; July 26-Aug. 12. NLP: Beaver Isls., Cheboygan, Lake, Oceana, Oscoda; June 5-July 26. SLP: Livingston, Oakland; June 13-July 30. H. xxxix: 23.

*Heterocampa biundata* Wlk. UP: Mackinac; June 28-July 12. NLP: Beaver Isls., Benzie, Cheboygan, Fox Isls., Montmorency, Oceana; May 31-July 17. SLP: Berrien, Livingston, Oakland, Washtenaw; May 3-Aug. 5. H. xxxix: 25.

*Heterocampa guttivitta* Wlk. NLP: Beaver Isls., Benzie, Montmorency, Newaygo, Oceana, Oscoda; May 29-July 24. SLP: Berrien, Lapeer, Lenawee, Livingston, Oakland, Washtenaw; May 9-Aug. 21.

*Heterocampa bilineata* Pack. NLP: Midland, Oceana; July 18-26. SLP: Berrien, Ingham, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 20-Aug. 18. H. xxxix: 24.

*Misogada unicolor* Pack. NLP: Newaygo, June 11. SLP: Berrien, Livingston, Oakland, St. Clair, Washtenaw, Wayne; June 4-Aug. 11. H. xxxix: 21.

*Ianassa lignicolor* Wlk. NLP: Beaver Isls., Cheboygan; July 8-18. SLP: Lapeer, Livingston, Oakland, St. Clair, Washtenaw; May 29-Aug. 29. H. xxxix: 19.

*Ianassa semirufescens* Wlk. UP: Schoolcraft; July. NLP: Cheboygan, Oceana; July 6-22. SLP: Berrien, Livingston, St. Clair, Washtenaw; June 13-July 28. Determined by Gates Clark.

*Schizura ipomoeae* Dbldy. UP: Luce, Schoolcraft; July 6-13. NLP: Beaver Isls., Cheboygan, Lake, Midland, Oceana; June 24-Aug. 7. SLP: Berrien, Livingston, Oakland, St. Clair, Washtenaw, Wayne; July 13-Aug. 23. H. xxxix: 13.

*Schizura concinna* A. & S. NLP: Beaver Isls., ex larvae, Cheboygan (Welch, 1915). SLP: Livingston, Macomb, Oakland, Washtenaw; June 30-Aug. 12. H. xxxix: 15.

*Schizura badia* Pack. UP: Chippewa; July 29. NLP: Midland, Oceana, Oscoda; June 5-July 24. SLP: Berrien, Branch, Livingston, St. Clair, Washtenaw; June 10-Aug. 13. H. xxxix: 14.

*Schizura unicornis* A. & S. UP: Luce, Mackinac; June 16-July 28. NLP: Beaver Isls., Benzie, Cheboygan, Iosco, Midland, Newaygo, Oscoda, Presque Isle; May 29-Aug. 12. SLP: Berrien, Ingham, Lapeer, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 13-Aug. 19. H. xxxix: 17.

*Schizura apicalis* G. & R. NLP: Oscoda; June 12-July 19.

*Schizura leptinoides* Grt. UP: Mackinac; July 28. NLP: Beaver Isls.; July 16. SLP: Berrien, Livingston, Oakland, Washtenaw, Wayne; May 29-Aug. 11. H. xxxix: 16. Determined by Gates Clark.

*Hyparpax aurora* A. & S. NLP: Iosco, Newaygo; June 11-July 6. SLP: Berrien, Oakland, Washtenaw, Wayne; June 18-July 23. H. xxxix: 4.

*Cerura scitiscrupta multiscrupta* Riley. NLP: Cheboygan, Crawford, Midland, Oscoda; June 12-July 24. SLP: Cass, Ingham, Macomb; June 7-Sept. 3. H. xxxix: 12.

*Cerura borealis* Bdv. SLP: Livingston, Oakland, Washtenaw; June 1-Aug. 8. H. xxxix: 9.

*Cerura occidentalis* Lint. UP: Dickinson, Schoolcraft; July 21-25. NLP: Midland; July 26. SLP: Ingham, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; Apr. 30-Aug. 29. H. xxxix: 10, as *albicoma*.

*Cerura cinerea* Wlk. UP: Luce, Mackinac; June 16-July 6. NLP: Beaver Isls., Cheboygan, Lake, Midland, Newaygo, Oscoda; May 30-Aug. 3. SLP: Berrien, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 24-Aug. 19. H. xxxix: 8.

*Cerura scolopendrina* Bdv. NLP: Beaver Isls., Cheboygan, Oscoda; May 31-Aug. 3. SLP: Oakland, St. Clair, Washtenaw, Wayne; May 21-Aug. 5. H. xxxix: 11 is *modesta*.

*Cerura modesta* Hudson. SLP: Livingston, Macomb, Oakland, Washtenaw, Wayne; Apr. 22-June 30. H. xxxix: 11, as *scolopendrina*. Formerly listed as a race of *scolopendrina* but is now considered a valid species. (McDunnough, 1938).

*Fentonia marthesia* Cram. NLP: Lake, Midland, Oceana; July 6-Sept. 4. SLP: Berrien, Livingston, Oakland, Washtenaw, Wayne; June 5-Aug. 12. H. xxxix: 30.

*Gluphisia septentrionalis* Wlk. UP: Chippewa, Dickinson, Houghton, Luce, Mackinac, Schoolcraft; June 30-Aug. 13. NLP: Alpena, Bay, Beaver Isls., Benzie, Charlevoix, Cheboygan, Crawford, Iosco, Lake, Midland, Montmorency, Muskegon, Newaygo, Ogemaw, Oscoda, Roscommon; May 25-

Aug. 28. SLP: Berrien, Lapeer, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 13-Sept. 1. H. xxxix: 28.

*Gluphisia lintneri* Grt. NLP: Beaver Isls., Crawford, Montmorency, Newaygo, Osceola, Oscoda, Roscommon; May 16-June 16. SLP: Livingston, Macomb, Wayne; Apr. 30-June 2.

*Ellida caniplaga* Wlk. SLP: Berrien, Lapeer, Livingston, Macomb, Oakland, St. Clair, Washtenaw; Apr. 24-July 27. H. xxxix: 31.

#### THYATIRIDAE

*Habrosyne scripta* Gosse. UP: Alger, Chippewa, Isle Royale, Mackinac; June 23-Aug. 3. NLP: Beaver Isls., Cheboygan, Iosco, Montmorency; May 31-July 21. SLP: Macomb, Oakland, St. Clair; June 10-Aug. 13. H. xl: 22.

*Habrosyne rectangulata* Ottol. UP: Mackinac, Schoolcraft; July 23-28. NLP: Beaver Isls., Charlevoix, Montmorency; May 31-July 28. SLP: Livingston, Oakland, Washtenaw; June 1-Sept. 10.

*Pseudothyatira cymatophoroides* Gn. UP: Alger, Chippewa, Dickinson, Mackinac, Schoolcraft; June 18-July 30. NLP: Beaver Isls., Benzie, Charity Isl., Cheboygan, Crawford, Iosco, Midland, Montmorency, Oceana, Osceola, Presque Isle; May 29-Oct. 6. SLP: Berrien, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; June 8-Sept. 23. H. xl: 25, 26.

*Euthyatira pudens* Gn. NLP: Beaver Isls., Lake; May 1-June 7. SLP: Livingston, Macomb, Oakland, Washtenaw; Apr. 21-June 4. H. xl: 23, 24.

#### LYMANTRIIDAE

*Notolophus antiqua* Linn. UP: Alger, Chippewa, Keweenaw, Mackinac, Schoolcraft; June 22-Sept. 24. NLP: Beaver Isls.; Aug. 19-Sept. 5. H. xxxviii: 18.

*Hemerocampa leucostigma* A. & S. UP: Alger, Dickinson, Schoolcraft; Aug. 7-29. NLP: Beaver Isls., Cheboygan, Midland, Osceola, Otsego; July 4-Oct. 6. SLP: Berrien, Lapeer, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; July 3-Oct. 17. H. xxxviii: 20, 21.

*Hemerocampa plagiata* Wlk. NLP: Charlevoix, Osceola, Otsego; Aug. 26-Sept. 8. SLP: Livingston, Macomb, Oakland, Washtenaw, Wayne; June 3-Oct. 18. H. xxxviii: 17, as *definita*.

*Porthetria dispar* Linn. SLP: Ingham. An infestation of larvae discovered in 1954.

*Olene vagans willingi* B. & McD. NLP: Charlevoix, Cheboygan, Iosco, Oceana, Oscoda; July 3-Aug. 29. SLP: Livingston; July 15.

*Olene atomaria* Wlk. UP: Schoolcraft; July. NLP: Cheboygan, Midland; July 10-Aug. 10. SLP: Livingston; July 30-Aug. 12.



*Olene cinnamomea* G. & R. NLP: Midland; July 24-31. SLP: Branch, Cass, Livingston, Macomb, Oakland, Washtenaw; July 1-Aug. 17.

*Olene plagiata* Wlk. NLP: Presque Isle, July 28. Determined by Benjamin.

## EUPTEROTIDAE

*Apatelodes torrefacta* A. & S. NLP: Midland, Newaygo; May 29-June 25. SLP: Berrien, Branch, Livingston, Oakland, St. Clair, Washtenaw, Wayne; May 20-July 17. H. xl: 20.

*Apatelodes angelica* Grt. NLP: Midland; July 16. SLP: Berrien, Washtenaw; June 20-July 5. H. xl: 21.

## LASIOCAMPIDAE

*Tolyte vellea* Stoll. NLP: Charlevoix, Crawford, Midland, Osceola, Oscoda; Sept. 5-26. SLP: Livingston, Macomb, Oakland, St. Clair, Van Buren, Washtenaw, Wayne; Aug. 26-Oct. 7. H. xi: 7, 8.

*Tolyte laricis* Fitch. NLP: Beaver Isls., Cheboygan; Aug. 9-Sept. 19. SLP: Livingston, Oakland, St. Clair; June 25-Sept. 5.

*Malacosoma americana* Fabr. UP: Alger, Chippewa, Mackinac, Schoolcraft; July 12-Aug. 12. NLP: Alpena, Bay, Beaver Isls., Benzie, Cheboygan, Crawford, Iosco, Lake, Midland, Montmorency, Oceana, Oscoda; July 3-Aug. 6. SLP: Branch, Huron, Ingham, Lapeer, Livingston, Macomb, Oakland, Ottawa, St. Clair, Washtenaw; June 13-July 23. H. x: 12.

*Malacosoma disstria* Hbn. UP: Chippewa, Dickinson, Mackinac, Schoolcraft; July 6-Aug. 9. NLP: Bay, Beaver Isls., Benzie, Charlevoix, Cheboygan, Midland, Montmorency, Oscoda; June 26-Aug. 21. SLP: Cass, Lapeer, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; June 12-Oct. 16. H. x: 9.

*Epicnaptera americana* Harris. UP: Isle Royale, Mackinac; June 5-Aug. 8. NLP: Beaver Isls., Cheboygan, Midland, Montmorency, Newaygo, Oscoda, Roscommon; May 14-July 29. SLP: Berrien, Cass, Huron, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; Mar. 27-Aug. 31. H. xli: 19, 20.

## DREPANIDAE

*Eudeilinia herminiata* Gn. UP: Dickinson, Mackinac; June 20-July 16. NLP: Beaver Isls., Cheboygan, Fox Isls., Midland, Montmorency, Oceana, Oscoda; May 11-Aug. 5. SLP: Huron, Lapeer, Livingston, Oakland, St. Clair, Washtenaw, Wayne; May 16-Sept. 27. H. text Fig. 194.

*Oreta rosea* Wlk. UP: Alger; Aug. (Pettit, 1901). NLP: Cheboygan, Iosco, Midland, Oceana, Osceola; June 18-Aug. 28. SLP: Ingham, Lapeer, Livingston, Macomb, Oakland, St. Clair, Washtenaw; June 4-Aug. 23. H. xli: 24.

*Oreta irrorata* Pack. NLP: Cheboygan; July 3, 4. H. xli: 6.

*Drepana arcuata* Wlk. UP: Alger, Chippewa, Isle Royale, Mackinac, Schoolcraft; June 5-Aug. 5. NLP: Beaver Isls., Charlevoix, Cheboygan, Fox Isls., Midland, Montmorency, Newaygo, Oscoda, Presque Isle; May 30-Aug. 30. SLP: Berrien, Cass, Livingston, Macomb, Oakland, St. Clair, Washtenaw; May 31-Aug. 19. H. xli: 22, 23.

*Drepana bilineata* Pack. UP: Mackinac; June 20-Aug. 1. NLP: Beaver Isls., Charlevoix, Cheboygan, Crawford, Midland, Newaygo, Oscoda; May 10-Aug. 25. H. xli: 7.

## GEOMETRIDAE

### Brephinae

*Brephos infans* Moesch. NLP: Lake; Apr. 11. H. xlii: 16.

### Oenochrominae

*Alsophila pometaria* Harris. UP: Mackinac; Nov. 2. SLP: Ingham, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; Mar. 17-May 4; Oct. 2-Dec. 3. H. xlii: 25, as *vernata*.

### Hemitheinae

*Nemoria brunnearia* Pack. SLP: Livingston, May 13-16.

*Nemoria mimosaria* Gn. UP: Dickinson, Mackinac, Schoolcraft; June 18-Aug. 1. NLP: Beaver Isls., Cheboygan, Crawford, Fox Isls., Midland, Montmorency, Ogemaw, Oscoda; May 27-July 22. SLP: Berrien, Lapeer, Livingston, Oakland, St. Clair, Washtenaw; May 24-Aug. 1.

*Nemoria rubrifrontaria* Pack. NLP: Alpena, Crawford, Montmorency, Newaygo, Oscoda, Roscommon; May 27-July 12. SLP: Livingston, May 16-July 27.

*Synchlora aerata* Fabr. UP: Chippewa, Mackinac, Schoolcraft; July 2-Aug. 16. NLP: Beaver Isls., Charlevoix, Crawford, Presque Isle; May 28-Sept. 15. SLP: Berrien, Branch, Lapeer, Livingston, Macomb, Oakland, Ottawa, St. Clair, Washtenaw, Wayne; May 30-Oct. 17.

*Synchlora rubrifrontaria* Pack. UP: Mackinac; July 20-Aug. 16. NLP: Beaver Isls.; July 22. SLP: Livingston, Oakland, Washtenaw; June 19-Aug. 12.

*Dichorda iridaria* Gn. SLP: Berrien, Livingston, Oakland, Washtenaw, Wayne; May 24-Aug. 21. H. xliii: 24.

*Chlorissa pistasciaria* Gn. NLP: Beaver Isls., Crawford, Montmorency, Oscoda, Roscommon; May 27-June 22. SLP: Berrien; Aug.

*Mesothea incertata* Wlk. UP: Mackinac, Schoolcraft; May 21-June 28. NLP: Beaver Isls., Crawford, Emmet, Gladwin, Iosco, Midland, Montmorency, Oscoda, Roscommon; Apr. 27-May 30. SLP: Livingston, Oakland, St. Clair, Washtenaw, Wayne; May 12-June 12. H. xliii: 18.

*Chlorochlamys chloroleucaria* Gn. UP: Mackinac, Schoolcraft; June 22-Aug. 20. NLP: Beaver Isls., Benzie, Cheboygan, Emmet, Midland, Muskegon, Newaygo, Oceana, Oscoda; June 1-Aug. 10. SLP: Berrien, Ingham, Lapeer, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 15-Sept. 13. H. xliii: 17.

#### Acidaliinae

*Euacidalia balistaria* Gn. SLP: Livingston, Oakland, Washtenaw; May 5-Aug. 9. Determined by Brower.

*Euacidalia peralbata* Pack. NLP: Montmorency; July 19.

*Xystrota hepaticaria* Gn. NLP: Crawford, Oscoda, Roscommon; May 27-June 31. Determined by Benjamin.

*Acidalia cacuminaria* Morr. SLP: Livingston, Macomb, Oakland, Washtenaw, Wayne; May 29-Aug. 20.

*Acidalia junctaria* Wlk. UP: Alger, Chippewa, Dickinson, Isle Royale, Luce, Mackinac, Schoolcraft; June 23-Aug. 14. NLP: Beaver Isls., Cheboygan, Fox Isls., Midland, Roscommon; June 22-Aug. 9. SLP: Berrien, Cass, Livingston, Oakland, St. Clair, Washtenaw, Wayne; June 10-Aug. 15. Determined by Swett.

*Acidalia enucleata* Gn. UP: Dickinson, Mackinac, Schoolcraft; June 10-Aug. 14. NLP: Alpena, Beaver Isls., Charity Isl., Cheboygan, Crawford, Fox Isls., Iosco, Mason, Midland, Montmorency, Muskegon, Oceana; June 25-Aug. 16. SLP: Berrien, Branch, Cass, Huron, Lapeer, Livingston, Oakland, Ottawa, Saginaw, St. Clair, Washtenaw, Wayne; May 22-Aug. 17. H. xliii: 5, as *alabastaria*.

*Ptychopoda demissaria* Hbn. NLP: Midland; July 23-26. SLP: Berrien, Ingham, Livingston, Macomb, Oakland, St. Clair, Washtenaw; May 28-Aug. 27.

*Ptychopoda inductata* Gn. UP: Chippewa, Mackinac, Schoolcraft; June 22-July 21. NLP: Benzie, Charlevoix, Cheboygan, Crawford, Iosco, Midland, Muskegon, Osceola, Oscoda, Roscommon; May 20-Sept. 16. SLP: Berrien, Branch, Huron, Ingham, Lapeer, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 16-Sept. 23. H. xliii: 6.

*Haematopis grataria* Fabr. UP: Alger (Pettit, 1901), Dickinson, Mackinac; Aug. 9-Sept. 6. NLP: Cheboygan, Midland, Montmorency, Ogemaw, Otsego; June 13-Sept. 14. SLP: Allegan, Berrien, Branch, Genesee, Huron, Ingham, Kalamazoo, Kent, Lapeer, Livingston, Macomb, Oakland, Sanilac, St. Clair, Washtenaw, Wayne; Apr. 30-Sept. 18. H. xliii: 2.

*Timandra amaturaria* Wlk. SLP: Berrien, Lenawee, Livingston, Washtenaw; June 2-Aug. 30. H. xliii: 22.

*Pleuroprucha insulsaria* Gn. UP: Mackinac; June 18-Sept. 20. NLP: Beaver Isls., Midland, Osceola, Oscoda; July 18-Sept. 5. SLP: Allegan, Berrien, Livingston, Macomb, Monroe, Oakland, St. Clair, Washtenaw, Wayne; June 20-Nov. 2.

*Cosymbia packardaria* Prout. SLP: Livingston, Washtenaw; May 16-July 22.

*Cosymbia lumenaria* Hbn. UP: Dickinson, Keweenaw, Mackinac; June 7-Aug. 4. NLP: Beaver Isls., Cheboygan (Welch, 1915), Clare, Crawford, Lake, Midland, Montmorency, Muskegon, Ogemaw, Osceola, Oscoda, Otsego, Presque Isle, Roscommon; May 24-Aug. 22. SLP: Livingston, Oakland, St. Clair, Washtenaw, Wayne; May 14-Aug. 20. H. xliii: 12.

#### Larentiinae

*Trichodesia albovittata* Gn. UP: Alger, Chippewa, Gogebic, Mackinac, Marquette; June 4-July 29. NLP: Beaver Isls., Cheboygan (Welch, 1915), Fox Isls., Midland, Osceola, Oscoda; May 11-Aug. 9. SLP: Berrien, Lenawee, Livingston, Oakland, St. Clair, Washtenaw, Wayne; June 9-Aug. 14. H. xliv: 19.

*Nyctobia limitaria* Wlk. UP: Isle Royale, Mackinac; May 15-Sept. 10. NLP: Benzie, Crawford; Apr. 29-May 30. SLP: Livingston, St. Clair, Washtenaw, Wayne; Apr. 29-June 1. H. xlii: 22.

*Cladara atroliturata* Wlk. NLP: Benzie; Apr. 17. SLP: Oakland; Apr. 23-May. H. xlii: 23.

*Lobophora nivigerata* Wlk. UP: Chippewa, Isle Royale, Luce, Mackinac, Schoolcraft; May 30-July 30. NLP: Arenac, Beaver Isls., Benzie, Cheboygan, Crawford, Emmet, Gladwin, Iosco, Midland, Montmorency, Newaygo, Oscoda, Roscommon; May 9-July 12. SLP: Lapeer, Livingston, Macomb, Oakland, Washtenaw; May 9-July 9.

*Heterophleps refusata* Wlk. UP: Schoolcraft; July. NLP: Midland, Montmorency; May 30-June 17. SLP: Berrien, Lapeer, Livingston, Monroe, Oakland, St. Clair, Washtenaw, Wayne; May 20-July 11. H. xlii: 31.

*Heterophleps triguttaria* H. S. NLP: Midland, Muskegon; June 30-Aug. 2. SLP: Berrien, Cass, Kent, Lapeer, Livingston, Oakland, St. Clair, Washtenaw, Wayne; May 30-Sept. 20. H. xlii: 29.

*Dyspteris abortivaria* H. S. NLP: Benzie, Cheboygan, Newaygo, Oceana; June 12-July 7. SLP: Berrien, Branch, Huron, Lapeer, Lenawee, Livingston, Oakland, St. Clair, Washtenaw, Wayne; May 13-Aug. 29. H. xlii: 21.

*Rachela bruceata* Hulst. NLP: Benzie, Osceola; Oct. 8-Nov. 8. SLP: Ingham, Macomb, St. Clair, Washtenaw, Wayne; Oct. 26-Nov. 8. H. xlii: 24.

*Triphosa affirmaria* Wlk. UP: Mackinac, Schoolcraft; Sept. 14-29. NLP: Beaver Isls., Charlevoix, Osceola, Presque Isle; July 23-Oct. SLP: Oakland, St. Clair, Washtenaw, Wayne; Apr. 28-Oct. 7.

*Calocalpe undulata* Linn. UP: Chippewa, Luce, Mackinac, Schoolcraft; June 10-July 27. NLP: Beaver Isls., Benzie, Cheboygan, Emmet, Leelanau, Midland, Montmorency, Oceana, Oscoda; May 31-Aug. 2. SLP: Berrien, Lapeer, Livingston, Oakland, St. Clair, Washtenaw; May 30-Aug. 26. H. xlii: 34.

*Coryphista meadi* Pack. SLP: Washtenaw, Wayne; May 8-Oct. 2.

*Lygris diversilineata* Hbn. NLP: Beaver Isls., Clare, Fox Isls.; July 13-Sept. 3. SLP: Berrien, Cass, Livingston, Oakland, St. Clair, Washtenaw; June 15-Aug. 10. H. xlii: 42.

*Lygris gracilineata* Gn. UP: Mackinac, Schoolcraft; Aug. 12-30. NLP: Beaver Isls., Charity Isl., Charlevoix, Cheboygan; July 6-Sept. 3. SLP: Berrien, Branch, Huron, Livingston, Oakland, St. Clair, Washtenaw, Wayne; June 15-Sept. 16.

*Lygris testata* Linn. UP: Alger, Luce, Mackinac, Schoolcraft; July 19-Sept. 14. NLP: Beaver Isls., Charlevoix, Cheboygan, Gladwin, Osceola, Presque Isle; July 3-Sept. 21. SLP: Livingston, Oakland, St. Clair, Washtenaw; July 11-Sept. 27.

*Lygris molliculata* Wlk. UP: Mackinac; Aug. 21. NLP: Beaver Isls., Charlevoix; Aug. 6-26. SLP: Berrien, Oakland, St. Clair, Washtenaw; July 7-Sept. 7. Determined by Benjamin.

*Lygris explanata* Wlk. UP: Alger, Chippewa; July 21-Aug. 3. NLP: Beaver Isls., Iosco, Montmorency, Oceana; July 4-Aug. 21. SLP: Oakland, Washtenaw; July 4-11.

*Diactinia silaceata albolineata* Pack. UP: Luce, Mackinac; July 6-Aug. 8. NLP: Beaver Isls., Charlevoix, Fox Isls.; June 24-Sept. 3.

*Thera contractata* Pack. UP: Isle Royale, Mackinac; July 20-Sept. 10. NLP: Alpena, Beaver Isls.; July 8-Sept. 18. SLP: Oakland; June 22.

*Dysstroma truncata* Hufn. UP: Alger, Mackinac; July 2-Aug. 28. NLP: Beaver Isls., Charlevoix, Cheboygan, Fox Isls., Osceola; Aug. 23-Oct. 4.

*Dysstroma hersiliata* Gn. UP: Alger, Isle Royale, Mackinac; July 22-Aug. 1. NLP: Beaver Isls., Charlevoix; July 16-28. SLP: Jackson, Lapeer, Livingston, Macomb, Oakland, St. Clair, Washtenaw; June 17-July 20. H. xlii: 46.

*Hydriomena perfracta* Swett. UP: Luce, Mackinac; June 28-July 5. NLP: Beaver Isls., Fox Isls.; June 16-July 7.

*Hydriomena divisaria* Wlk. NLP: Oscoda; June 4-6.

*Hydriomena frigidata* Wlk. NLP: Oscoda; June 5. SLP: Livingston, Oakland, Washtenaw, Wayne; Apr. 26-June 17.

*Hydriomena renunciata* Wlk. UP: Alger, Chippewa, Keweenaw, Mackinac, Schoolcraft; July 6-Aug. 1. NLP: Beaver Isls., Benzie, Cheboygan, Fox Isls., Iosco, Midland, Montmorency, Newaygo, Oceana, Oscoda, Roscommon; May 27-July 28. SLP: Huron, Livingston, Oakland, St. Clair, Washtenaw, Wayne; June 6-July 24.

*Hydriomena ruberata* Frey. NLP: Beaver Isls., Montmorency, Oscoda; May 30-July 8.

*Xanthorhoe lacustrata* Gn. UP: Luce, Mackinac, Schoolcraft; July 5-Aug. 9. NLP: Beaver Isls., Cheboygan, Iosco, Midland; June 21-Aug. 6. SLP: Berrien, Branch, Lapeer, Livingston, Macomb, Oakland, Washtenaw, Wayne; May 2-Aug. 30. H. xlii: 50, as *intermediata*.

*Xanthorhoe designata* Hufn. UP: Alger, Chippewa, Dickinson, Isle Royale, Schoolcraft; July 27-Aug. 3. NLP: Beaver Isls., Benzie, Charlevoix, Cheboygan (Welch, 1915), Fox Isls., Montmorency; May 29-Aug. 13. SLP: Berrien, Oakland, St. Clair, Washtenaw, Wayne; Apr. 29-Sept. 13. H. xlii: 44.

*Xanthorhoe ferrugata* Clerk. UP: Mackinac; June 22. NLP: Midland, Oscoda; May 29-Aug. 13. SLP: Berrien, Jackson, Lapeer, Lenawee, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 2-Aug. 28.

*Xanthorhoe munitata* Hbn. SLP: Oakland, Washtenaw; June 9-Aug. 1.

*Xanthorhoe convallaria* Gn. UP: Alger, Chippewa, Schoolcraft; July 22-29. NLP: Beaver Isls.; July 16. Determined by Swett.

*Xanthorhoe iduata* Gn. UP: Alger, Chippewa, Schoolcraft; July 18-26. NLP: Beaver Isls., Charlevoix, Cheboygan, Iosco; July 9-Aug. 12. SLP: Washtenaw; June 2-Aug. 9. H. xlii: 49 is *intermediata*, not *iduata*.

*Xanthorhoe abrasaria* H. S. UP: Chippewa, Schoolcraft; July 7-27.

*Orthonama obstipata* Fabr. UP: Alger, Chippewa, Dickinson, Mackinac, Schoolcraft; June 17-Sept. 20. NLP: Bay, Beaver Isls., Charlevoix, Cheboygan, Iosco, Lake, Midland, Montmorency, Oceana, Oscoda, Presque Isle, Roscommon; May 31-Sept. 9. SLP: Allegan, Berrien, Branch, Cass, Huron, Lapeer, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; Apr. 25-Oct. 27. H. xlii: 48, as *fluviata*.

*Orthonama evansi* McD. UP: Mackinac; June 29.

*Entephria aurata* Pack. UP: Isle Royale; Aug. 1.

*Spargania magnoliata* Gn. UP: Chippewa, Mackinac, Marquette; June 24-July 30. NLP: Beaver Isls., Cheboygan, Fox Isls.; June 14-Sept. 7. SLP: St. Clair; July 25.

*Oporinia dilutata* Schiff. UP: Mackinac; Oct. 5. SLP: Livingston, Washtenaw, Wayne; Oct. 10-Nov. 13.

*Euphyia intermediata* Gn. UP: Alger, Chippewa, Mackinac, Schoolcraft; July 1-27. NLP: Beaver Isls., Benzie, Cheboygan, Oceana, Oscoda; May 31-Sept. 3. SLP: Berrien, Lapeer, Livingston, Oakland, St. Clair, Washtenaw, Wayne; May 2-Aug. 24. H. xlii: 50, as *lacustrata*; 49 is *iduate*.

*Euphyia centrostrigaria* Woll. UP: Chippewa, Dickinson, Mackinac, Schoolcraft; June 22-July 31. NLP: Beaver Isls., Benzie, Charlevoix, Cheboygan, Emmet, Fox Isls., Midland, Montmorency, Newaygo, Oceana, Roscommon; May 22-Sept. 3. SLP: Allegan, Berrien, Branch, Cass, Huron, Lapeer, Livingston, Macomb, Monroe, Oakland, St. Clair, Washtenaw, Wayne; May 5-Oct. 12. H. xlii: 35, as *latirupta*.

*Euphyia multiferata* Wlk. NLP: Beaver Isls., Newaygo; June 12-July 10. SLP: Lapeer, Livingston, Oakland, St. Clair, Washtenaw; May 6-June 8.

*Camptogramma stellata* Gn. NLP: Beaver Isls.; Aug. 25. SLP: Livingston, Washtenaw; Sept. 9-Oct. 6. H. xlii: 37, as *sitellata*.

*Mesoleuca ruficillata* Gn. UP: Chippewa, Isle Royale, Mackinac; June 24-Aug. 3. NLP: Beaver Isls., Lake, Montmorency, Newaygo, Oceana, Oscoda; June 11-Aug. 6. SLP: Berrien, Lapeer, Lenawee, Oakland, St. Clair, Washtenaw; May 21-Aug. 11.

*Eulype hastata* Linn. UP: Dickinson, Isle Royale, Luce, Mackinac, Marquette; June 5-July 31. NLP: Beaver Isls., Charity Isl., Cheboygan, Crawford, Fox Isls., Midland, Oscoda; May 17-July 10. SLP: Berrien, Oakland, Washtenaw, Wayne; June 23-July 9. H. xlii: 40.

*Epirrhoe alternata* Mull. UP: Alger, Chippewa; July 7-24. NLP: Cheboygan (Welch, 1915). SLP: Livingston, Oakland, St. Clair, Washtenaw, Wayne; June 1-Aug. 30.

*Perizoma basaliata* Wlk. UP: Alger, Isle Royale, Mackinac; July 24-Aug. 9. NLP: Beaver Isls., Cheboygan, Iosco; July 24-Sept. 3.

*Earophila vasilata* Gn. SLP: Livingston, Macomb, Oakland; Apr. 18-May 14.

*Venusia cambrica* Curt. UP: Alger, Chippewa, Isle Royale, Mackinac; July 12-Aug. 8.

*Venusia comptaria* Wlk. NLP: Benzie, Oscoda; May 30-June 26. SLP: Macomb, Oakland, Washtenaw; Apr. 23-May 15. H. xliii: 15, as *duodecemlineata*.

*Hydrelia lucata* Gn. UP: Mackinac, June 5-July 29. NLP: Beaver Isls., July 7. H. xliiv: 6.

*Hydrelia inornata* Hulst. UP: Chippewa, Luce, Mackinac; June 28-July 18. NLP: Iosco (no date). SLP: Berrien, St. Clair; July 7-28. H. xlii: 33, as *comptaria*.

*Hydrelia albifera* Wlk. UP: Alger, Mackinac; July-Aug. 4. NLP: Cheboygan, Midland; June 8-Aug. 16. SLP: Berrien, Lapeer, Livingston, Oakland, Washtenaw, Wayne; May 25-Sept. 12.

*Eudule mendica* Wlk. UP: Alger, Chippewa, Dickinson, Luce, Mackinac, Marquette, Schoolcraft; June 16-July 27. NLP: Beaver Isls., Benzie, Charlevoix, Cheboygan, Crawford, Iosco, Midland, Montmorency, Oceana, Otsego; June 3-Aug. 12. SLP: Berrien, Huron, Jackson, Kent, Lapeer, Livingston, Monroe, Oakland, St. Clair, Washtenaw, Wayne; June 2-July 30. H. xlii: 27.

*Eupithecia miserulata* Grt. NLP: Benzie, Branch, Cheboygan, Emmet, Oceana, Oscoda; June 9-Aug. 26. SLP: Berrien, Branch, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; June 2-Nov. 6. Determined by Swett.

*Eupithecia russeliata* Swett. NLP: Oscoda; June 5. Determined by McDunnough.

*Eupithecia affinata* Pears. SLP: Washtenaw; Aug. 12. Determined by McDunnough.

*Eupithecia filmata* Pears. UP: Isle Royale; May 13-15. Determined by McDunnough.

*Eupithecia cemicifugata* Pears. SLP: Livingston, Oakland, Washtenaw; June 22-July. Determined by Swett.

*Eupithecia catskillata* Pears. UP: Luce, Mackinac, Schoolcraft; June 29-July 5. NLP: Fox Isls., Aug. 16. SLP: Livingston; June 13. Determined by Swett.

*Eupithecia palpata* Pack. NLP: Beaver Isls., Cheboygan, Montmorency; May 29-July 1. Determined by Swett.

*Eupithecia erpata* Pears. SLP: Macomb; May 16. Determined by McDunnough.

*Eupithecia coagulata* Gn. UP: Mackinac; July 28. NLP: Cheboygan, Fox Isls., Montmorency; May 29-July 14. SLP: Washtenaw; Aug. 12. Determined by Swett.

*Eupithecia geminata* Pack. UP: Mackinac, Schoolcraft; Aug. 26. NLP: Beaver Isls., Fox Isls., Midland; Aug. 5-22. SLP: Livingston, Macomb, Oakland, Washtenaw, Wayne; July 29-Sept. 12. Determined by Swett.

*Eupithecia strattonata* Pack. NLP: Oscoda; June 1. SLP: Huron; May 29. Determined by McDunnough.

*Eupithecia latipennis* Hulst. NLP: Beaver Isls., Fox Isls., Oscoda; June 1-Aug. 16. Determined by Swett.

*Eupithecia interruptofasciata* Pack. UP: Mackinac; Sept. 26. NLP: Alpena, Beaver Isls., Lake; June 15-Sept. 20. SLP: Livingston, Oakland, Washtenaw; June 9-Oct. 12. Determined by Swett.



*Eupithecia gelidata* Moesch. NLP: Cheboygan; June 27. Determined by McDunnough.

*Eupithecia ravocostaliata* Pack. NLP: Montmorency, Oscoda; May 29-31. SLP: Livingston, Macomb, Washtenaw; Apr. 28-May 11.

*Eupithecia cognizata* Pears. UP: Schoolcraft; July. Determined by Swett.

*Eupithecia fumata* Taylor. NLP: Beaver Isls.; July 18. SLP: Oakland, Wayne; June 14-Sept. 3. Determined by Swett.

*Eupithecia anticaria* Wlk. UP: Mackinac; July 3-27. NLP: Beaver Isls.; July 7. Determined by Swett.

*Horisme intestinata* Gn. UP: Chippewa, Mackinac, Schoolcraft; July 20-30. NLP: Beaver Isls., Charlevoix, Cheboygan, Lake, Midland, Roscommon; May 27-Sept. 5. SLP: Berrien, Lapeer, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; Apr. 24-Sept. 5. H. xlii: 30.

#### Geometrinae

*Isturgia truncataria* Wlk. UP: Chippewa, Mackinac, Schoolcraft; May 19-June 14. NLP: Crawford, Ogemaw, Oscoda, Roscommon; May 25-June 1. SLP: Livingston; May 17-Aug. 28. H. xliii: 26.

*Isturgia amitaria* Gn. UP: Alger, Chippewa, Schoolcraft; June 15-July 30. NLP: Beaver Isls., Cheboygan, Crawford, Emmet, Iosco, Mecosta, Montmorency, Ogemaw, Oscoda, Roscommon; May 25-June 25. SLP: Oakland, Wayne; June 16.

*Eufidonia notataria* Wlk. UP: Chippewa, Mackinac, Schoolcraft; June 8-July 24. NLP: Cheboygan, Crawford, Midland, Montmorency, Newaygo, Ogemaw, Oscoda; May 22-June 25. SLP: Livingston, Oakland; May 25-June 12. This may include *E. discospilata* Wlk. now considered a valid species. H. xliii: 25.

*Orthofidonia tinctoria* Wlk. NLP: Crawford, Oscoda; May 28-July 19.

*Bapta semiclarata* Wlk. UP: Chippewa, Dickinson, Mackinac, Schoolcraft; May 22-July 5. NLP: Beaver Isls., Benzie, Cheboygan, Crawford, Midland, Montmorency, Ogemaw, Oscoda, Roscommon; May 23-July 4. SLP: Oakland, St. Clair, Wayne; Apr. 24-June 24. H. xliii: 30.

*Bapta vestaliata* Gn. UP: Mackinac, Schoolcraft; June 10-17. NLP: Beaver Isls., Benzie, Charity Isl., Charlevoix, Cheboygan, Crawford, Midland, Oscoda; May 18-July 24. SLP: Berrien, Branch, Huron, Lapeer, Livingston, Oakland, St. Clair, Washtenaw, Wayne; Apr. 24-June 24. H. xliii: 31.

*Bapta glomeraria* Grt. SLP: Livingston, Macomb, Oakland; Apr. 23-May 7. H. xliiv: 3.

*Heliomata cycladata* Grt. SLP: Branch, Lapeer, Livingston, St. Joseph, Washtenaw; May 30-June 30. H. xliii: 29.

*Mellilla xanthometata* Wlk. SLP: Livingston; Aug. Determined by Benjamin.

*Physostegania pustularia* Gn. UP: Alger, Isle Royale, Mackinac, Marquette, Schoolcraft; July 20-Aug. 25. NLP: Beaver Isls., Benzie, Cheboygan, Lake, Midland, Oceana, Otsego, Presque Isle, Roscommon; June 25-Sept. 3. SLP: Berrien, Branch, Livingston, Oakland, Ottawa, St. Clair, Washtenaw, Wayne; May 9-Aug. 25. H. xliii: 35.

*Gueneria basiararia* Wlk. NLP: Cheboygan (Welch, 1915), Midland; June 1. SLP: Berrien, Livingston, Oakland; May 17-June 22.

*Cabera variolaria* Gn. UP: Alger, Chippewa, Dickinson, Mackinac, Schoolcraft; June 10-Sept. 24. NLP: Beaver Isls., Charity Isl., Cheboygan, Iosco, Midland, Muskegon, Oscoda, Otsego; June 25-Aug. 11. SLP: Huron, Lapeer, Livingston, Oakland, St. Clair, Washtenaw, Wayne; May 16-Sept. 2. H. xliii: 36 is *erythemaria* not *variolaria*.

*Cabera erythemaria* Gn. UP: Dickinson, Isle Royale, Mackinac, Schoolcraft; June 12-Aug. 28. NLP: Arenac, Beaver Isls., Charity Isl., Charlevoix, Cheboygan, Iosco, Midland, Montmorency, Oscoda; May 29-July 20. SLP: Berrien, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 18-Sept. 5. H. xliii: 36, as *variolaria*.

*Drepanulatrix liberaria* Wlk. NLP: Osceola; Sept. 18. SLP: Ingham, Livingston, Oakland, Washtenaw, Wayne; Aug. 4-Oct. 3.

*Philobia aemulataria* Wlk. SLP: Allegan, Berrien, Lapeer, Livingston, Oakland, Washtenaw, Wayne; May 8-Aug. 22. H. xliii: 39, as *enotata*.

*Philobia ulsterata* Pears. UP: Alger, Isle Royale, Mackinac, Schoolcraft; July 3-Aug. 5. NLP: Beaver Isls., Cheboygan; June 11-July 30.

*Macaria minorata* Pack. NLP: Beaver Isls., Cheboygan; June 25-July 30. SLP: Berrien, Ottawa, St. Clair, Washtenaw; May 31-Aug. 1.

*Macaria bisignata* Wlk. UP: Isle Royale, Mackinac, Menominee; July 25-Aug. 5. NLP: Beaver Isls., Benzie, Cheboygan, Midland, Muskegon, Newaygo, Oceana, Oscoda; June 1-Aug. 5. SLP: Berrien, Huron, Oakland, St. Clair, Washtenaw; June 3-Sept. 22.

*Macaria bicolorata* Fabr. UP: Chippewa, Schoolcraft; July 14-29. NLP: Iosco; Aug. 6. H. xliii: 40, as *praeatomata*. Determined by Benjamin.

*Macaria punctolineata* Pack. SLP: Washtenaw; Oct. 11.

*Macaria granitata* Gn. UP: Chippewa, Isle Royale, Luce, Mackinac, Schoolcraft; May 24-July 28. NLP: Alpena, Beaver Isls., Benzie, Charity Isl., Cheboygan, Fox Isls., Iosco, Lake, Montmorency, Newaygo; May 29-Aug. 29. SLP: Allegan, Berrien, Cass, Huron, Livingston, Oakland, St. Clair, Washtenaw; May 13-Aug. 22. H. xliii: 37.

*Macaria abruptata* Wlk. SLP: Livingston; July 1.

*Phasiane nigrocomina* Warr. NLP: Cheboygan, Leelanau, Muskegon; June 23-Aug. 16. SLP: Berrien, Livingston, Oakland, Washtenaw, Wayne; May 12-Sept. 5. H. xliii: 41, as *helioidata*.

*Phasiane neptaria* Gn. UP: Dickinson, Mackinac; July 31-Aug. 9. NLP: Beaver Isls., Benzie, Cheboygan, Crawford, Iosco, Newaygo, Oscoda; May 28-Aug. 12.

*Phasiane mellistrigata* Grt. UP: Houghton, Luce, Schoolcraft; July 8-Aug. 7. NLP: Cheboygan, Midland, Montmorency, Oscoda; May 29-Aug. 24. SLP: Berrien, Livingston, Oakland, St. Clair, Washtenaw, Wayne; May 9-Sept. 5. H. xliii: 42.

*Phasiane snoviata* Pack. SLP: Berrien, Washtenaw; May 14-Aug. 1.

*Phasiane infimata* Gn. NLP: Charlevoix, Midland, Oscoda; June 11-Aug. 25. SLP: Berrien, Branch, Cass, Lapeer, Livingston, Oakland, St. Clair, Washtenaw, Wayne; May 12-Aug. 19. H. xlii: 32, as *absynthiata*.

*Phasiane orillata* Wlk. UP: Chippewa, Mackinac, Schoolcraft; June 20-July 11. NLP: Beaver Isls., Cheboygan, Iosco, Montmorency, Oscoda; June 14-Aug. 15. SLP: Oakland; Aug. 30.

*Phasiane eremiata* Gn. UP: Schoolcraft; July 22. NLP: Beaver Isls., Benzie, Emmet, Iosco; June 17-July 18. SLP: Berrien, Livingston, Oakland, Washtenaw; June 2-Aug. 5.

*Phasiane ordinata* Wlk. SLP: Oakland; May 20-July 14. Determined in U.S.N.M.

*Hesperumia sulphuraria* Pack. UP: Chippewa; July 22-28. NLP: Cheboygan, Oscoda; July 9-12. H. xliv: 1, form *baltearia*.

*Itame ribearia* Fitch. NLP: Beaver Isls., Charity Isl., Cheboygan, Midland, Oceana; July 16-Aug. 6. SLP: Livingston, Oakland, St. Clair, Washtenaw; June 14-July 27. H. xliii: 45.

*Itame sulphurea* Pack. UP: Chippewa, Dickinson, Mackinac, Schoolcraft; July 10-Aug. 3. NLP: Montmorency, Presque Isle; July 15-23. SLP: Huron, Oakland; July 15-29. Determined by Swett.

*Itame occiduaria* Pack. NLP: Cheboygan; July 18.

*Itame evagaria* Hlst. SLP: Hillsdale, Lenawee, Livingston; June 3-12.

*Itame inceptaria* Wlk. UP: Alger, Chippewa, Mackinac, Schoolcraft; June 20-Aug. 3. NLP: Alpena, Beaver Isls., Benzie, Charity Isl., Cheboygan, Crawford, Iosco, Lake, Montmorency, Muskegon, Newaygo, Oscoda, Presque Isle, Roscommon; May 31-Aug. 5. SLP: Huron, Livingston, Oakland, St. Clair, Washtenaw; June 8-July 22. Determined by Swett and by Brower. H. xliii: 46.

*Itame brunneata* Thun. UP: Alger, Chippewa, Dickinson, Luce, Mackinac, Marquette, Schoolcraft; July 5-Aug. 5. NLP: Beaver Isls., Benzie, Crawford, Oscoda; May 30-July 24. SLP: Livingston; June 30.

*Itame coortaria* Hlst. NLP: Alpena, Cheboygan, Midland, Presque Isle; July 8-23. SLP: Livingston, Oakland, St. Clair, Washtenaw; June 2-22. H. xliii: 49.

*Itame anataria* Swett. UP: Mackinac; Aug. 1. NLP: Beaver Isls.; July 23-Aug. 6. SLP: Berrien, Livingston; July 7-20.

*Itame bitactata* Wlk. UP: Alger, Chippewa, Gogebic; July. SLP: Cass, Macomb, St. Clair, Washtenaw; June 26-July 27.

*Itame pustularia* Hbn. UP: Luce, Mackinac, Schoolcraft; June 7-July 6. NLP: Beaver Isls., Cheboygan, Crawford, Midland, Montmorency, Newaygo, Oscoda, Roscommon; May 27-July 24.

*Itame virginalis* Hlst. UP: Dickinson, Luce; July 5-24. NLP: Charlevoix, Cheboygan, Crawford, Lake, Montmorency, Oceana, Oscoda, Otsego; May 15-Aug. 27. SLP: Lapeer, Livingston, Macomb, Oakland, Washtenaw; May 22-Aug. 30. Determined by U.S.N.M.

*Dysmigia loricaria* Evers. UP: Alger, Chippewa, Mackinac, Schoolcraft; June 24-July 25. NLP: Cheboygan, Midland, Oscoda; June 18-July 24. SLP: Lapeer, Oakland, St. Clair, Washtenaw; June 20-July 4. Determined by Forbes.

*Homochlodes fritillaria* Gn. UP: Chippewa, Luce, Mackinac, Schoolcraft; June 17-July 28. NLP: Beaver Isls., Benzie, Cheboygan, Iosco, Kalkaska, Midland, Montmorency, Oscoda; May 31-July 10. SLP: Berrien, Livingston, Oakland, Washtenaw, Wayne; May 20-July 15.

*Apaecasia deterrentata* Gn. UP: Schoolcraft; May 24-June 17. NLP: Bay, Crawford, Midland, Oscoda, Roscommon; May 28-June 18.

*Apaecasia atropunctata* Pack. UP: Schoolcraft; June 9-July. NLP: Oscoda; June 1-15.

*Apaecasia subaequaria* Wlk. UP: Alger, Chippewa, Mackinac, Schoolcraft; May 22-June 29. NLP: Bay, Beaver Isls., Charity Isl., Cheboygan, Crawford, Emmet, Oscoda; May 23-July 2. SLP: Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 1-July 6. H. xliii: 52, as *defluata*.

*Catopyrrha coloraria* Fabr. NLP: Iosco, Newaygo, Ogemaw, Oscoda; May 25-July 8. SLP: Huron, Livingston, St. Clair; June 29-July 14. H. xliii: 53, 54.

*Caripeta divisata* Wlk. UP: Chippewa, Mackinac, Marquette, Schoolcraft; June 30-July 28. NLP: Beaver Isls., Cheboygan, Emmet, Iosco, Oceana, Oscoda; June 27-Aug. 6. SLP: Berrien, St. Clair; July 4-Aug. 13. H. xliii: 58.

*Caripeta piniata* Pack. UP: Chippewa, Schoolcraft; July 8-22. NLP: Beaver Isls., July 1-15. H. xliiv: 2, as *angustiorata*.

*Caripeta angustiorata* Wlk. UP: Chippewa, Mackinac, Schoolcraft; July 8-22. NLP: Alpena, Beaver Isls., Cheboygan, Crawford, Iosco, Oceana, Oscoda; June 4-Aug. 6. H. xliiv: 2 is *piniata*, not *angustiorata*.

*Nepytia canosaria* Wlk. UP: Mackinac, Schoolcraft; July 25-Sept. 24. NLP: Beaver Isls., Cheboygan, Otsego; Aug. 21-Sept. 17. SLP: Oakland, St. Clair, Van Buren; Aug. 7-Sept. 1. H. xliii: 60, as *semiclusaria*.

*Paraphia unipuncta* Haw. SLP: Livingston, Oakland, Washtenaw, Wayne; June 11-Aug. 20. H. xliv: 11 (?).

*Paraphia subatomaria* Wood. UP: Isle Royale, Schoolcraft; July 18-27. NLP: Beaver Isls., Charlevoix, Cheboygan, Lake, Midland, Montmorency, Muskegon, Newaygo, Oceana; May 31-Aug. 6. SLP: Lapeer, Lenawee, Livingston, Macomb, Oakland, St. Clair, St. Joseph (Forbes, 1948), Washtenaw, Wayne; May 22-Aug. 30. H. xliv: 10(?). Determined by Forbes.

*Lytrosis unitaria* H. S. NLP: Lake, Midland, Muskegon, Ogemaw; July 10-Aug. 4. SLP: Berrien, Lapeer, Livingston, Washtenaw; June 17-Aug. 1.

*Cleora buckholzaria* Lemm. NLP: Newaygo, June 12.

*Cleora indicataria* Wlk. UP: Alger, Dickinson, Mackinac, Schoolcraft; July 12-28. NLP: Beaver Isls., Charity Isl., Cheboygan, Crawford, Iosco, Montmorency, Oceana, Oscoda; May 30-Sept. 3. SLP: Livingston; June 5-Aug. 15.

*Cleora cribataria* Gn. SLP: Oakland, St. Clair; June 7-23.

*Cleora manitoba* Grossb. NLP: Montmorency; May 29.

*Cleora pampinaria* Gn. UP: Mackinac; June 22. NLP: Beaver Isls., Benzie, Cheboygan, Crawford, Midland, Muskegon, Oceana, Osceola, Oscoda, Roscommon; May 27-July 24. SLP: Berrien, Branch, Cass, Ingham, Lapeer, Livingston, Oakland, Saginaw, St. Clair, Washtenaw, Wayne; Apr. 28-Sept. 13. H. xliv: 4.

*Cleora polygrammaria* Pack. NLP: Crawford; June 24.

*Cleora humaria* Gn. UP: Mackinac; May 20. SLP: Huron; June. Determined by Swett.

*Cleora vellivolata* Hlst. UP: Luce; July 5. NLP: Crawford, Montmorency, Newaygo, Oscoda, Roscommon; May 27-July 24. SLP: Cass, Livingston, Oakland, Washtenaw, Wayne; May 18-July 19.

*Cleora ephyraria* Wlk. UP: Alger; July 25-Aug. 6. SLP: Berrien, Huron, Livingston, Oakland, St. Clair, Washtenaw; June 28-Aug. 15.

*Cleora larvaria* Gn. UP: Chippewa, Luce, Mackinac, Schoolcraft; June 15-July 12. NLP: Beaver Isls., Midland, Montmorency, Oscoda; May 31-Aug. 20. SLP: Washtenaw; July 8.

*Melanolophia canadaria* Gn. NLP: Oscoda; June 4. SLP: Washtenaw; June 9. H. xliv: 7.

*Melanolophia signataria* Wlk. UP: Mackinac; July 1. NLP: Beaver Isls., Benzie, Cheboygan, Crawford, Montmorency, Oscoda, Roscommon; May 28-July 16. SLP: Berrien, Lapeer, Livingston, Oakland, St. Clair, Washtenaw, Wayne; May 2-Aug. 1.

*Aethaloptera anticaria* Wlk. NLP: Cheboygan, Crawford, Midland, Montmorency, Newaygo, Oscoda, Roscommon; May 9-July 17. SLP: St. Clair; May 30-July 4.

*Ectropis crepuscularia* D. & S. UP: Chippewa, Luce, Mackinac, Schoolcraft; June 18-July 27. NLP: Beaver Isls., Benzie, Cheboygan, Montmorency, Osceola, Oscoda; May 29-Oct. 10. SLP: Berrien, Cass, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 20-Sept. 21. H. xlv: 9.

*Epimecis virginaria* Cram. SLP: Berrien, Livingston, Macomb, Washtenaw, Wayne; May 2-July 8. H. xlv: 28, 29.

*Lycia ursaria* Wlk. NLP: Benzie, Crawford; Mar.-May 9. SLP: Livingston, Oakland, St. Clair, Washtenaw, Wayne; Mar. 22-May 8.

*Amphidasis cognataria* Gn. UP: Chippewa, Isle Royale, Mackinac; June 29-July 30. NLP: Alpena, Arenac, Beaver Isls., Benzie, Cheboygan, Crawford, Manistee, Midland, Montmorency, Oceana, Oscoda, Presque Isle; May 29-Aug. 21. SLP: Ingham, Lapeer, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; May 16-Sept. 2. H. xlv: 13.

*Nacophora quernaria* A. & S. NLP: Cheboygan, Midland, Newaygo; May 22-July 12. SLP: Livingston, Oakland, St. Clair, Washtenaw, Wayne; May 20-July 20. H. xlv: 14.

*Phigalia olivacearia* Morr. SLP: Livingston, Macomb, Oakland, Washtenaw; Mar. 14-May 7.

*Phigalia titea* Cram. NLP: Benzie, Crawford, Oscoda; Mar.-May 9. SLP: Ingham, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; Mar. 17-May 8. H. xlv: 16.

*Palaecrita vernata* Peck. NLP: Midland; Mar. 16-18. SLP: Ingham, Livingston, Oakland, Washtenaw, Wayne; Mar. 14-May 25. H. xlv: 25 is *pometaria*, not *vernata*.

*Erannis tiliaria* Harris. UP: Mackinac; Oct. 5-19. NLP: Beaver Isls., Crawford, Fox Isls., Osceola; Oct. 1-16. SLP: Ingham, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; Sept. 20-Nov. 30. H. xlv: 17.

*Cingilia catenaria* Dru. UP: Keweenaw, Schoolcraft; Sept. 12-25. NLP: Beaver Isls., Cheboygan, Midland, Oscoda; Sept. 6-Oct. SLP: Livingston, Oakland, St. Clair, Washtenaw, Wayne; Sept. 11-Oct. 14. H. xlv: 21.

*Anagoga pulveraria* Linn. UP: Chippewa, Mackinac; June 17-July 21. NLP: Beaver Isls., Benzie, Cheboygan, Crawford, Fox Isls., Oscoda; May 28-June 25. SLP: Berrien, Macomb; Apr. 29-Aug. 15.

*Sicya macularia* Harris. UP: Alger, Chippewa, Isle Royale, Mackinac; July 22-Aug. 25. NLP: Beaver Isls., Benzie, Cheboygan, Midland, Roscommon; July 6-Aug. 14. SLP: Ingham, Livingston, Oakland, St. Clair, Washtenaw, Wayne; June 9-Aug. 5. H. xlv: 22, 23.

*Ellopia endropiaria* G. & R. UP: Mackinac; June 28. NLP: Charlevoix, Fox Isls.; June 16-22. SLP: Berrien; Aug. H. xliv: 26.

*Ellopia fiscellaria* Gn. UP: Keweenaw, Mackinac, Schoolcraft; Aug. 30-Sept. 23. NLP: Alpena, Beaver Isls., Benzie, Charlevoix, Cheboygan, Crawford, Emmet, Osceola, Otsego; Aug. 23-Oct. 8. SLP: Livingston, Montcalm, Oakland; Sept. 11-20. H. xliv: 25.

*Ellopia turbataria* B. & McD. NLP: Beaver Isls.; Sept. 7. SLP: Livingston, Washtenaw, Wayne; Sept. 6-Oct. 12.

*Campaea perlata* Gn. UP: Alger, Chippewa, Isle Royale, Mackinac, Marquette, Schoolcraft; July 12-Aug. 30. NLP: Alpena, Benzie, Charity Isl., Charlevoix, Cheboygan, Midland, Montmorency, Newaygo, Osceola, Oscoda; June 4-Sept. 4. SLP: Lenawee, Lapeer, Livingston, St. Clair, Washtenaw; May 30-Sept. 6. H. xliv: 30, as *praegrandaria*.

*Eugonobapta nivosaria* Gn. UP: Alger, Chippewa; July 17-21. NLP: Arenac, Charity Isl.; July 17-19. SLP: Berrien, Branch, Jackson, Livingston, Oakland, St. Clair, Washtenaw, Wayne; June 25-July 27. H. xliv: 31.

*Ennomos subsignarius* Hbn. UP: Isle Royale, Mackinac, Marquette, Schoolcraft; July 20-Sept. 10. NLP: Beaver Isls., Benzie, Cheboygan, Fox Isls., Newaygo, Oceana; June 28-Aug. 12. SLP: Cass, Ingham, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; June 19-Aug. 4. H. xliv: 35.

*Ennomos magnarius* Gn. UP: Mackinac, Schoolcraft; Aug. 29-Sept. 13. NLP: Beaver Isls., Charlevoix, Cheboygan, Iosco, Midland, Osceola, Oscoda, Presque Isle; July 28-Oct. 10. SLP: Ingham, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; Aug. 3-Oct. 21. H. xliv: 34.

*Xanthotype sospeta* Dru. UP: Alger, Chippewa, Mackinac, Menominee, Schoolcraft; June 18-July 24. NLP: Alpena, Beaver Isls., Charity Isl., Charlevoix, Cheboygan, Lake, Midland, Montmorency; June 28-July 23. SLP: Berrien, Lapeer, Livingston, Oakland, St. Clair, Washtenaw, Wayne; May 13-Sept. 21. H. xliv: 40, as *caelaria*.

*Xanthotype urticaria* Swett. UP: Dickinson, Luce, Mackinac, Schoolcraft; June 28-July 24. NLP: Beaver Isls., Cheboygan, Clare; July 2-18. SLP: Branch, Cass, Livingston, Oakland, St. Clair, Washtenaw, Wayne; June 11-Aug. 24.

*Plagodis serinaria* H. S. UP: Mackinac; June 28. NLP: Benzie, Newaygo, Roscommon; May 27-June 11. SLP: Berrien, Livingston, Oakland, St. Clair, Washtenaw; May 16-June 9. H. xliv: 33.

*Plagodis keutzingeria* Pack. NLP: Benzie, Newaygo; June 12-July 4. SLP: Washtenaw; May 15. H. xliv: 36, as *keutzingeri*.

*Plagodis approximaria* Dyar. UP: Mackinac; June 18-July 3. NLP: Beaver Isls.; June 16-July 1. SLP: Macomb, Washtenaw; Apr. 20-May 14.

*Plagodis purpuraria* Pears. SLP: Berrien; May 31.

*Plagodis fervidaria* H. S. NLP: Benzie, Newaygo; May-June 12. SLP: Livingston, Oakland, Washtenaw, Wayne; May 1-July 18.

*Plagodis alcoolaria* Gn. UP: Mackinac; June 18. NLP: Benzie, Crawford, Newaygo, Oceana, Oscoda; May 24-June 28. SLP: Berrien, Lapeer, Lenawee, Livingston, Macomb, Oakland, Washtenaw, Wayne; May 8-Aug. 20. H. xlv: 32, as *emargataria*.

*Plagodis phlogosaria* Gn. NLP: Charlevoix, Crawford; May 30-Aug. 1. SLP: Berrien, Branch, Cass, Livingston, Macomb, Oakland, St. Clair, Washtenaw; June 25-Aug. 9.

*Plagodis arrogaria* Hlst. NLP: Montmorency, Oscoda; May 29-30. SLP: Livingston, Oakland, Washtenaw, Wayne; July 9-Aug. 6.

*Hyperetis amicaria* H. S. UP: Mackinac, Schoolcraft; June 15-July 3. NLP: Beaver Isls., Benzie, Charlevoix, Cheboygan, Crawford, Emmet, Midland, Montmorency, Newaygo, Oceana, Oscoda; May 26-July 23. SLP: Berrien, Cass, Lapeer, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; Apr. 18-Aug. 11. H. xlv: 38.

*Nematocampa limbata* Haw. UP: Alger, Dickinson, Mackinac; June 26-Aug. 6. NLP: Beaver Isls., Charity Isl., Cheboygan, Clare, Crawford, Iosco, Midland, Montmorency, Oceana, Presque Isle; June 25-Aug. 20. SLP: Berrien, Branch, Ingham, Lapeer, Livingston, Oakland, St. Clair, Van Buren, Washtenaw, Wayne; June 7-Sept. 16. H. xlv: 37.

*Gonodontis hypochraria* H. S. UP: Schoolcraft; June 17. NLP: Beaver Isls., Benzie, Charity Isl., Cheboygan, Midland, Newaygo, Oscoda; June 1-26. SLP: Berrien, Ingham, Lapeer, Livingston, Monroe, Oakland, St. Clair, Washtenaw, Wayne; May 27-June 29. H. xlv: 1.

*Gonodontis warneri* Harvey. NLP: Charlevoix, Cheboygan, Crawford, Midland, Montmorency, Ogemaw, Oscoda; May 25-July 24. SLP: Oakland, St. Clair, Washtenaw; May 27-June 20. Determined by Benjamin.

*Gonodontis duaria* Gn. UP: Mackinac, Schoolcraft; June 10-July 5. NLP: Beaver Isls., Charlevoix, Crawford, Iosco, Montmorency, Newaygo, Oscoda; May 28-June 26. SLP: Berrien, Lapeer, Livingston, Oakland, Washtenaw, Wayne; May 10-June 14. H. xlv: 2.

*Gonodontis angularia* B. & McD. UP: Dickinson; Aug. 10.

*Gonodontis franclemonti* Rupert. UP: Schoolcraft; June 19. NLP: Oscoda, Crawford; May 31-June 12. SLP: Berrien, Livingston, Oakland; May 18-June 12.

*Gonodontis obfirmaria* Hbn. NLP: Crawford, Iosco, Ogemaw, Oscoda, Roscommon; May 25-June 1. SLP: Livingston, Oakland, St. Joseph; May 18-June 12. H. xlv: 14.

*Euchlaena serrata* Dru. NLP: Beaver Isls., Charlevoix, Cheboygan, Iosco, Midland, Oceana, Oscoda; June 24-July 30. SLP: Berrien, Cass, Lapeer, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; June 16-July 27. H. xlv: 4.



*Euchlaena obtusaria* Hbn. NLP: Alpena, Midland; June 28-July 13. SLP: Ingham, Lapeer, Livingston, Oakland, Washtenaw; June 14-July 31. H. xlv: 3.

*Euchlaena effecta* Wlk. UP: Alger, Dickinson, Luce, Mackinac, Menominee, Schoolcraft; July 5-Aug. 1. NLP: Alpena, Beaver Isls., Benzie, Cheboygan, Crawford, Kalkaska, Lake, Midland, Oceana, Oscoda, Presque Isle; May 30-Aug. 10. SLP: Berrien, Ingham, Lapeer, Livingston, Oakland, St. Clair, Washtenaw, Wayne; May 30-July 27. H. xlv: 24.

*Euchlaena johnsonaria* Fitch. UP: Alger, Chippewa, Mackinac, Schoolcraft; July 12-Aug. 14. NLP: Alpena, Beaver Isls., Cheboygan, Iosco, Midland, Montmorency, Newaygo, Oceana, Oscoda, Otsego, Roscommon; June 24-Aug. 6. SLP: Berrien, Ingham, Livingston, Oakland, Ottawa, St. Clair, Washtenaw, Wayne; June 4-Sept. 4.

*Euchlaena vinulentaria* G. & R. NLP: Iosco, Oscoda; June 14-Aug. 6.

*Euchlaena astylusaria* Wlk. UP: Chippewa; July 22 (listed by McAlpine, 1918, as *obtusaria*). NLP: Beaver Isls., Crawford, Iosco, Midland, Montmorency, Oscoda; June 14-July 18. SLP: Berrien, Ingham, Lapeer, Livingston, Oakland, Washtenaw; May 23-Aug. 31. H. xlv: 8.

*Euchlaena marginata* Minot. UP: Mackinac, Schoolcraft; June 22-July 3. NLP: Beaver Isls., Benzie, Cheboygan, Crawford, Midland, Montmorency, Newaygo, Oscoda, Roscommon; May 22-July 2. SLP: Livingston, Oakland, Washtenaw, Wayne; May 21-June 20.

*Euchlaena tigrinaria* Gn. NLP: Charlevoix; June 23. SLP: Berrien, Livingston, Washtenaw; June 5-Aug. 15. H. xlv: 25, as *pectinaria*.

*Selenia alciphearia* Wlk. UP: Mackinac; June 18-July 3. NLP: Montmorency; May 30. SLP: Berrien; Aug. 13.

*Selenia kentaria* G. & R. SLP: Berrien; July 20.

*Metanema inatormaria* Gn. UP: Chippewa, Dickinson, Isle Royale, Luce, Mackinac; June 15-Aug. 4. NLP: Beaver Isls., Cheboygan, Crawford, Iosco, Midland, Montmorency, Newaygo, Oceana, Oscoda; May 28-Aug. 10. SLP: Berrien, Ingham, Livingston, Oakland, St. Clair, Washtenaw, Wayne; Apr. 27-Aug. 15. H. xlv: 13.

*Metanema determinata* Wlk. UP: Dickinson, Mackinac, Schoolcraft; June 18-Aug. 1. NLP: Beaver Isls., Benzie, Cheboygan, Crawford, Midland, Montmorency, Oscoda; May 30-Aug. 6. SLP: Berrien, Lapeer, Livingston, Macomb, Oakland, St. Clair, Washtenaw; Apr. 30-Aug. 26. H. xlv: 12.

*Metanema quercivoraria* Gn. UP: Mackinac; June 28. NLP: Beaver Isls., Lake, Newaygo; May 29-July 31. SLP: Livingston, Oakland, St. Clair, Washtenaw; May 5-Aug. 25. H. xlv: 28.

*Priocycla armataria* H. S. NLP: Cheboygan, Oceana; June 24-July 3. SLP: Berrien, Livingston, Oakland, Sanilac, St. Clair, Washtenaw; June 1-July 12. H. xlv: 6.

*Priocyclus decoloraria* Hlst. NLP: Cheboygan, Muskegon; July 5-Aug. 16. SLP: Livingston, Macomb, Washtenaw; June 2-July 23. Determined by Benjamin.

*Pero honestarius* Wlk. NLP: Benzie, Charlevoix, Crawford, Midland, Newaygo; May 19-Aug. 16. SLP: Ingham, Livingston, Macomb, Oakland, Sanilac, St. Clair, Washtenaw, Wayne; Apr. 30-Sept. 18. H. xlv: 23, as *ancetaria*.

*Pero morrisonarius* Hy. Edw. UP: Mackinac; June 28-July 6. NLP: Beaver Isls., Crawford, Midland; May 29-July 3. SLP: Berrien, Branch, Lapeer, Livingston, Macomb, Oakland, Washtenaw; May 20-Aug. 12.

*Pero marmoratus* Grossb. UP: Luce; July 6. NLP: Beaver Isls., Benzie, Cheboygan, Crawford, Midland, Newaygo; May 29-July 8. SLP: Berrien, Ingham, Livingston, Macomb, Oakland, Washtenaw, Wayne; May 6-Sept. 5.

*Pero barnesi* Swett & Casino. SLP: Washtenaw; May 15. This species has probably been rejected by collectors mistaking it for other species of the genus.

*Apica confusaria* Hbn. NLP: Alpena, Beaver Isls., Benzie, Charity Isl., Cheboygan, Midland, Muskegon, Oceana, Presque Isle; June 18-Aug. SLP: Berrien, Branch, Cass, Livingston, Macomb, Monroe, Oakland, St. Clair, Washtenaw, Wayne; June 19-Aug. 20. H. xlv: 29.

*Apica irraria* B. & McD. NLP: Beaver Isls., Cheboygan, Midland, Montmorency, Oceana, Oscoda, Presque Isle; May 30-July 16. SLP: Lapeer, Livingston, Oakland, Washtenaw, Wayne; June 4-July 4. H. xlv: 31, as *majoraria*.

*Tetracis crocallata* Gn. UP: Mackinac; May 30-July 3. NLP: Beaver Isls., Benzie, Crawford, Midland, Montmorency, Oceana, Oscoda; May 29-July 31. SLP: Berrien, Kent, Lapeer, Livingston, Oakland, St. Clair, Washtenaw, Wayne; May 23-Aug. 2. H. xlv: 16.

*Sabulodes arcasaria* Wlk. UP: Mackinac; June 20. NLP: Cheboygan, Crawford, Roscommon; May 27-June 30. SLP: Berrien, Washtenaw; June 9-Aug. 16. H. xlv: 17, female 18 as *sulphurata*.

*Sabulodes lorata* Grt. UP: Alger, Chippewa, Luce, Mackinac; June 18-July 21. NLP: Beaver Isls., Benzie, Crawford, Midland; June 11-July 8. SLP: Berrien, Ingham, Lapeer, Livingston, Oakland, Sanilac, St. Clair, Washtenaw, Wayne; May 16-July 17. H. xlv: 19.

*Sabulodes transversata* Dru. UP: Dickinson, Mackinac, Marquette, Schoolcraft; July 9-Sept. 24. NLP: Alpena, Beaver Isls., Charlevoix, Cheboygan, Crawford, Fox Isls., Iosco, Lake, Midland, Montmorency, Oceana, Oscoda, Otsego; July 8-Sept. 27. SLP: Allegan, Berrien, Cass, Huron, Ingham, Livingston, Macomb, Oakland, St. Clair, Washtenaw, Wayne; June 27-Sept. 23. H. xlv: 34.

*Abbottana clemataria* A. & S. UP: Ontonagon; June 23. NLP: Arenac, Beaver Isls., Benzie, Cheboygan, Crawford, Midland, Newaygo, Ogemaw,

Oscoda; May 10-June 24. SLP: Berrien, Cass, Lapeer, Livingston, Macomb, Oakland, Sanilac, Washtenaw, Wayne; Apr. 17-Sept. 12. H. xlv: 32, 33.

*Sphacelodes vulneraria* Hbn. SLP: Wayne; Aug. 9. A stray from the south. H. xlii: 20.

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*Callizzia amorata* Pack. UP: Mackinac; June 18-July 6. NLP: Beaver Isls.; June 11-July 17.

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