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**The Crane Flies of Maine**

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BULLETIN T4  
THE CRANE FLIES OF MAINE

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The state of Maine, occupying the extreme northeast of the United States, is of great importance in determining plant and animal distribution since many species with southern affinities reach their northernmost stations here. Conversely certain northern and subarctic species here attain their southern limits. Over the past half century I have been assembling distributional records covering the Dipterous family Tipulidae (the true crane-flies), together with a few smaller groups that commonly are classed as being crane-flies although actually only distantly related, such families being the Tanyderidae (primitive crane-flies), Ptychopteridae (phantom crane-flies), Trichoceridae (winter crane-flies) and Sylvicolidae or Anisopodidae (false crane-flies). The collections upon which these records are based are widely scattered and in many cases the actual specimens have been lost or discarded. I believe that a record of the species presently known from the state should be made available. My greatest incentive to proceed with the preparation of such a list has come from the unceasing help of Dr. A. E. Brower,<sup>2</sup> to whom my deepest thanks are extended.

Before proceeding with the listing of species to show their geographical and seasonal distribution, I have provided a short historical statement covering the chronological development of our knowledge of the subject, a section on the present location of important collections, a tabular listing of the chief collectors, and a short list of references. The last is of particular importance since it records further papers that consider crane-fly distribution within the state, the majority of all such records having been omitted from the present account because of space limitations. Special attention is called to the Johnson report on the Diptera of New England (1925 a) and to the Procter list for Mount Desert Island (1946). The Johnson list provides very few detailed records of species, New England having been subdivided into 35 faunal areas of which 10 are in Maine, and the various species in the Johnson list being recorded only from the general areas where found. These faunal areas in Maine are: 1, Upper Aroostook county; 2, Lower Aroostook county; 3, Mt. Katahdin; 4, Moosehead Lake; 5, Rangeley Lakes; 6, Lower Penobscot; 7, Washing'on county; 8, Mount Desert Island; 9, Lower Kennebec; and 10, the southwestern Maine area. In his report

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Johnson records 277 species of crane-flies as being found in New England; the present list for Maine alone includes 284 species. On various early trips to the then Boston Society of Natural History I had the opportunity to transcribe full data from these specimens, and for many of the rarer and more desirable species these data are provided. The Procter 1946 list is of great importance and should be used as a supplementary source of records.

**Historical Development.** The earliest collections of Diptera to be made in Maine seem to be those by John Randall, at Hallowell, in 1836. These specimens are still preserved in the Harris Collection, now in the Museum of Comparative Zoology, Harvard College, Cambridge, Mass. The Harris series is the oldest collection of North American insects still extant and assumes further importance in that certain of the included species had been examined by Thomas Say. Charles W. Johnson, leading student of the Diptera of this period, early was attracted to Maine, his first collections in the state having been made in 1907, with further trips in 1908, 1910 and 1913. In 1918 he began an intensive survey of the insects of Mount Desert Island, taking collecting trips thereto each summer from 1918 through 1923. Through the interest of Dr. William Procter, the Johnson list of Mount Desert insects was published in 1925 (Johnson, 1925 c). This basic work by Johnson stimulated Dr. Procter to undertake a more detailed study of the insect fauna of Mount Desert, the results of which were published by Procter in 1938 and in 1946 (Procter, 1938; 1946). The latter volume, Part VII of his series of reports on the fauna of the island, is the more complete and is the one cited throughout the present report. It includes 1626 species and subspecies of Diptera, of which more than 200 are crane-flies. Procter's first personal collections of insects were made on June 13, 1927 (his Stations 17 and 124), with work being continued each summer through June 1945 (Station 421), with scattered desultory collections made in the later years prior to his death on April 19, 1951. It should be noted that a considerable proportion of these records of Mount Desert insects was based on materials taken by Dr. Brower, chiefly in the 1930's, while he was engaged in forest entomological work at the Field Station near Bar Harbor. The present writer, with Mrs. Alexander and Walter H. Harrison, of Amherst, Mass., participated in this intensive survey of the crane-flies found on Mount Desert Island with field collecting in 1935 (June 14-24), 1937 (July 18-21), 1938 (July 25-28), 1940 (August 21-22), and 1941 (August 16-21). Still earlier, the writer and Mrs. Alexander had collected on Mount Desert between August 26 and September 12, 1926, while stationed in the ancestral home of the late Charles Henry Fernald on Fernald Point, near Southwest Harbor

(Johnson, 1925 c; Alexander, 1927). In recent years a few miscellaneous crane-flies have been taken on Mount Desert by Marion E. Smith and Frank R. Shaw, of the University of Massachusetts.

In 1913 the writer was invited to Orono to make a study of the crane-flies of the state. He was in the first group of specialists to come to Maine for summer research under the leadership of the then station entomologist, Dr. Edith M. Patch. Others in this group included A. D. MacGillivray (studying saw-fly larvae), A. P. Morse (Orthoptera), and Herbert Osborn (Cicadellidae). Although field work on the Tipulidae, especially on the immature stages (Alexander, 1920), was centered at and near Orono, collecting trips were taken to Mt. Katahdin (August 20-22), to and near Houlton, the vicinity of Fryeburg, and at the end of the season in early September to Mount Desert. This summer of 1913 provided a most rewarding experience for a young entomologist who was just beginning his studies on the immature stages of the crane-flies. Much appreciated help in collecting crane-flies in various parts of the state came from Morse and Osborn, and also from Dr. H. M. Parshley, at that time an instructor at the University of Maine. During the summer of 1913, many crane-flies were sent to me from Ellsworth. They were collected by Miss Cordelia J. Stanwood, while she was engaged in a study of insects that were being fed to nestling birds.

Probably the most valuable single series of crane-flies so far taken in Maine results from the conscientious collecting of Dr. Brower, including not only the many specimens from Mount Desert, as previously discussed but also numerous species from many other parts of the state. Particularly important specimens result from frequent collecting at and near Augusta, and from numerous trips to Mt. Katahdin over a period of many years. The survey of forest insects that was conducted in certain of the northern forested areas of Maine by means of light traps resulted in the capture of thousands of specimens of miscellaneous insects, including many Tipulidae. These were taken chiefly by summer assistants and associates of Dr. Brower and were later sorted and preserved for study by him. In recent years, Dr. John F. Hanson, of the University of Massachusetts collected a small series of these flies in northern Maine.

**Location of Collections.** The Harris and Johnson collections formerly were in the Boston Society of Natural History, which later became the New England Society of Natural History following the death of Johnson on July 19, 1932. At that time the Harris collection, together with the more valuable parts of the materials in the series of New England Diptera was transferred to the Museum of Comparative Zoology, various other specimens were presented to Boston University, while considerable numbers seem to have disappeared. It is most unfortunate

that this unparalleled series of New England Diptera and other insects assembled by Johnson and other interested persons over the years should have been scattered and lost in this manner. The Alexander and Brower collections are chiefly in the Alexander Collection, at Amherst, Mass., with representative series being placed in the Maine Agricultural Experiment Station at Orono and still others in Brower's possession. The great Procter collection of Mount Desert insects was bequeathed to the University of Massachusetts, where it is preserved in Fernald Hall. In the same institution are the remaining copies of the various volumes of the *Biological Survey of the Mount Desert Region*, of which Nos. 1, 6 and 7 pertain to insects. Such copies as are available are obtainable through suitable exchange from the Head, Department of Entomology and Plant Pathology, University of Massachusetts.

In order to conserve space in the following account of species, the names of the collectors Alexander (A), Brower (B), Johnson (J), and Procter (P) have been indicated by initials. Also, counties are omitted for those localities as are cited in atlases or postal guides. Other more obscure places, such as mountains, lakes and streams and similar natural areas, have been indicated by county only in the first included reference.

### Principal Collectors of Maine Crane-flies

Alexander, C. P. (A)	Morse, A. P.
Alexander, Mabel M.	Nylander, O. O.
Allen, G. M.	Osborn, Herbert
Brower, A. E. (B)	Packard, A. S.
Carson, D. L.	Parshley, H. M.
Cushman, J. A.	Patch, Edith M.
Flint, O. S., Jr.	Peirson, H. B.
Frost, C. A.	Procter, William (P)
Hanson, J. F.	Randall, John
Harrison, W. H.	Salman, K. A.
Hitchings, E. F.	Shaw, Earle
Johnson, C. W. (J)	Shaw, F. R.
Jones, F. M.	Smith, Marion E.
MacGillivray, A. D.	Stanwood, Cordelia J.
Minot, C. S.	

### Family TANYDERIDAE

#### Genus PROTOPLASA Osten Sacken

*itchii* O.S. Ashland, June 21-23, 1946 (B). Kingfield, dancing over river, 7:30 p.m., June 20-21, 1947 (B).

**Family PTYCHOPTERIDAE****Genus BITTACOMORPHA Westwood**

- clavipes** (Fabr.) Augusta, Sidney Bog, May 22, 1955 (B). Fort Kent, August 17, Lee, June 26, 1955 (B). Mount Desert, Dry Mt., August 31, 1913 (Osborn). Mt. Katahdin, mouth of Abol Stream, August 22, 1913 (A); 1000 ft., September 3, 1939 (B). Orono, June 10, August 8, 1913 (A). Veazie, Bangor Bog, August 5, 1913 (A).

**Genus BITTACOMORPHELLA Alexander**

- jonesi** (Johns.) Ellsworth, July 4, 31, 1913 (Stanwood). Machias, July 26 (J). Mount Desert, Great Pond, July 16, 1918 (J). Lower Breakneck Brook, August 21, 1941 (Harrison); Procter 1946. Orono, June 24, July 12, 29, 1913 (A).

**Genus PTYCHOPTERA Meigen**

- quadrifasciata** Say (*rufocincta* O. S.) Mount Desert, Bar Harbor, July 21-24 (P), Echo Lake, September 1-4, 1926 (A); Procter 1946. Orono, June 12, 1913 (A).

**Family TRICHOCERIDAE****Genus TRICHOCERA Meigen**

- bimacula** Walk. Recorded by Johnson, without more exact data; 1925 a.  
**brumalis** Fitch Woodland, December 17 (Nylander); Johnson 1925 a.  
**fernaldi** Alex. Mount Desert, Bar Harbor, October 15, 1938 (B).  
**garretti** Alex. Mount Desert, Bar Harbor, November 11, 1935, March 19, 1936 (B).  
**hiemalis** (de Geer) Mount Desert, Bar Harbor, Corfield, (P); Procter 1946.  
**regelationis** (Linn.) Mount Desert, Bar Harbor, November 11, 1935 (B). Orono, reared from decaying potatoes, June 1, 1907 (Edith M. Patch), determined by Coquillett; Johnson 1925 a.

**Family SYLVICOLIDAE (ANISOPODIDAE)****Genus SYLVICOLA Moses Harris**

- alternata** (Say) Moosehead Lake, lower Penobscot and lower Kennebec areas; Johnson 1925 a. Mount Desert, Bar Harbor, Corfield, August 1-September 9 (P); Procter 1946.  
**fenestralis** (Scop.) Lower Penobscot and lower Kennebec areas; Johnson 1925 a. Mount Desert, Bar Harbor, Corfield, October 20 (P); Procter 1946.  
**punctata** (Say) Lower Aroostook and lower Penobscot areas; Johnson 1925 a. Mount Desert, lower Breakneck Brook, August 20 (P); Procter 1946.

**Family TIPULIDAE**

## Subfamily TIPULINAE

**Genus PRIONOCERA Loew**

- broweriana** Alex. Passadumkeag Bog, May 26, 1944 (B); type.

**Genus LONGURIO Loew**

- testaceus** Loew Boothbay Harbor, July 26, 1924 (G. M. Allen); Johnson 1925 a.

**Genus CTENOPHORA Meigen**

## Subgenus CTENOPHORA Meigen

*apicata* O.S. Harris Coll. No. 202; Hallowell, July 1836 (Randall); as *Ctenophora fuliginosa* ? Say; type material of *apicata*; Johnson 1925 b. Mount Desert, Bar Harbor, July 20-28 (B). Moosehead Lake, lower Penobscot, lower Kennebec and southwestern Maine areas; Johnson 1925 a.

## Subgenus TANYPTERA Latreille

*dorsalis* Walker (*succedens* Walker, *frontalis* O.S., *fumipennis* O.S.; color form *topazina* O. S.) Augusta, May 30, 1944 (B). Lower Penobscot area; Johnson 1925 a. Masardis, June 28 (B). Mount Desert, Bar Harbor, June 2-8 (P); Procter 1946. Great Head, June 15 (A), as *frontalis*. Rangeley, bred from logs of *Betula papyrifera*, June 29, 1948 (B). Saint Agatha, June 10 (B). Salem, Franklin County, June 21, 1947 (B). Woodstock, Oxford County, June 11 (B).

## Genus NEPHROTOMA Meigen

- brevicornis* (Doane) Augusta, June 22, 1946 (B). Mount Desert, Bar Harbor, campground, June 30, 1938 (B).
- eucera* (Loew) Fort Kent, August 17, 1910 (J); auct. Johnson; possibly an erroneous determination.
- euceroideus* Alex. Ashland, June 23, 1943 (B). Augusta, June 10, 1939, June 19, 1941 (B). Millinocket, July 12 (B). Mount Desert; Procter 1946. Oquossoc, June 28, 1946 (B). Passadumkeag, June 18, 1939 (B). Rangeley, July 8-14, 1943 (B). Veazie, Bangor Bog, June 6, 1936 (B).
- ferruginea* (Fabr.) Harris Coll., No. 269; Hallowell, July 1836 (Randall); as *Tipula ferruginea* Fabricius, teste Say; Johnson 1925 b. Augusta, pupa in forest duff, female emerged June 3, 1943; female emerged August 17, 1944; September 16, 1938; June 3, 1943; September 15, 1944 (B). Calais, July 10 (J). Capens, July 14 (J). Ellsworth, August 18, 1913 (Stanwood). Fort Fairfield, August 26, 1913 (Osborn). Fort Kent, August 28, 1913 (Osborn). Fryeburg, September 5, 1913 (A). Highmoor, August 16, 1913 (Osborn). Kittery, June 5 (J). Millinocket, July 2, 1946 (B). Mount Desert; Procter 1946. Mt. Kineo, August 17, 1913 (A). Oquossoc, July 23, 1942 (B). Orono, June 10, August 12, 1913 (A). Orrs Island, July 24 (Osborn).
- ineurva* (Loew) Augusta, June 22, 1942 (B). Ellsworth, August 8, 1913 (Stanwood). Millinocket, July 10-20, 1943 (B). Mt. Bigelow, Somerset County, 1800 ft., July 11, 1936 (B). Mount Desert, Northeast Harbor, June 20, 1908 (Minot).
- lugens* (Loew) Harris Coll. No. 333; Hallowell, 1836 (Randall); as *Tipula collaris* ? Say; Johnson 1925 b. Augusta, June 1, July 11, 1942; June 10, 1943; June 15, 1946, hemlock woods; June 17, 1956 (B). Mt. Coe, Piscataquis County, 2000 ft., June 25, 1939 (B). Oquossoc, July 15 (B). Orono June 6-7, 1913 (A). Saint Francis, June 24 (B). Sumner, Oxford County, June 3, 1953 (B).
- macrocera* (Say) (*virgata* Dietz) Casco Bay, July 1913; type of *virgata*; Dietz 1921.
- pedunculata* (Loew) Harris Coll., No. 334, Hallowell, July 1836 (Randall); as *Tipula collaris* ? Say; Johnson 1925 b. Eastport, July 14, 1909 (J). Ellsworth, August 10, 1913 (Stanwood). Grand Lake, August 15, 1913 (Morse). Machias, July 22, 1909 (J). Millinocket, July 7-17, 1946 (B). Mount Desert; Procter 1946. Mt. Katahdin, Basin Ponds, 2475 ft., July 6, 1957 (B).
- penumbra* Alex. Mt. Katahdin, Klondike Basin, 4600 ft., July 13, 1937; July 17, 1948; June 26, 1955 (B); 4000 ft., July 28, 1951 (Flint & Carson). Oquossoc, June 25, 1946 (B).
- punctum* (Loew) Maine, without exact data; Johnson 1925 a.
- sodalis* (Loew) Ashland, July 9 (B). Augusta, August 10, 1944 (B).
- tenuis* (Loew) Mount Desert, Bar Harbor, campground, July 30, 1935, July 18-25, August 19, 1936, August 28, 1937 (B); Southwest Harbor, August 3, 1943 (B); Procter 1946. Princeton, July 12 (J).
- vittula* (Loew) Capens, July 16 (J). Eastport, July 14 (J). Fort Kent, August 19 (J). Princeton, July 12, 1909 (J).

*xanthostigma* (Loew) Augusta, July 18-22, 1942 (B). Brownville, July 16 (B). Ellsworth, August 8, 1913 (Stanwood). Mount Desert; Procter 1946. Orono, July 29, August 13, 1913 (A). Veazie, Bangor Bog, August 5, 1913 (Earle Shaw).

### Genus DOLICHOPEZA Curtis

#### Subgenus DOLICHOPEZA Curtis

*americana* Needham Mount Desert; Procter 1946. Mt. Katahdin, base, 1100 ft., July 17; 4600 ft., July 11, 1934, July 9, 1939 (B). Orono, July 14, 1913 (A).

#### Subgenus OROPEZA Needham

*carolus* Alex. Augusta, July 5 (B). Mount Desert; Procter 1946.

*dorsalis* (Johnson) Capens, July 14, 15, 1907 (J); types. Mount Desert, Duck Brook, June 18 (A); Echo Lake, July 13-17 (P).

*obscura* (Johnson) Capens, July 17, 1907 (J); type material. Ellsworth, June 15, 23, 1913 (Frances Allen). Mount Desert; Procter 1946. Mt. Katahdin, base, 1250 ft., July 8, 1939 (B).

*sayi* (Johnson) Capens, July 17, 1907 (J). Mount Desert, Northeast Harbor, July 12 (J); Bar Harbor, Echo Lake; Procter 1946.

*similis* (Johnson) Mount Desert, Canyon Brook, Duck Brook, Long Pond; Procter 1946.

*subalbipes* (Johnson) Mount Desert, Sea Wall Bog, July 9 (B).

*tridenticulata* Alex. Augusta, at 4:00 p.m., July 9, 1944, in thick woods, swarming in hole between roots of hemlock (B).

*venosa* (Johnson) Capens, July 11, 1907 (J); type material. Eastport, July 15 (J). Ellsworth, June 15-22, 1913 (Stanwood). Machias, June 12, 1936 (B). Mount Desert, Southwest Harbor, bog, July 21, 1936 (B); Procter 1946. Mt. Katahdin, Klondike Basin, July 7, 1939 (B).

*walleyi* Alex. Horseshoe Mt., (30 miles west of Ashland), T 11, R 10, Aroostook County, June 26, 1942 (B).

### Genus TIPULA Linnaeus

#### Subgenus TRICHOTIPULA Alexander

*algonquin* Alex. Augusta, August 8, 10, 31 (B). Mount Desert, Northeast Harbor, August 29, 1908 (Minot); type material; Procter 1946.

*orozeoides* Johnson Ellsworth, June 15, 1913 (Stanwood). Mount Desert; Procter 1946. Oquossoc, July 9, 1946 (B). Orono, June 10, 1913 (A). Round Mt., T 11, R 8, Franklin County, July 17, 1946 (B).

*unimaculata* (Loew) Augusta, along Kennebec River, August 23, 1942 (B).

#### Subgenus SCHUMMELIA Edwards

*hermannia* Alex. (*fasciata* Loew) Capens, July 15 (J). Ellsworth, July 4, 1912, August 17, 1913 (Stanwood). Houlton, July 11, 1943 (B). Millinocket, July 30, 1943 (B). Mount Desert, Dry Mt., August 31, 1913 (A); Great Heath, September 6, 1935 (B); Northeast Harbor, July 12 (Minot); Southwest Harbor, August 3, 1943; Witch Hole, July 31, 1936 (B); Procter 1946. Mt. Katahdin, July 28, 1951 (Carson). Oquossoc, July 18 (B). Round Mt., T 11, R 8, July 15 (B).

#### Subgenus NOBILOTIPULA Alexander

*nobilis* (Loew) Ashland, Moro Plantation, Smyrna, June 17, 1946 (B). Augusta, May 30, 1944 (B). Mount Desert; Procter 1946. Oquossoc, July 6 (B).

#### Subgenus NIPPOTIPULA Matsumura

*abdominalis* (Say) Harris Coll., No. 133; Hallowell, July 1836 (Randall), as *Ctenophora abdominalis* Say; Johnson 1925 b. Augusta, September 1, 1946 (B). Charlotte, August 15, 1906. Monmouth, August (Frost). Mount Desert, Bar Harbor, campground, August 14, 1936 (B); Procter 1946. Oquossoc, June 25, 28, July 4, 23, 1946 (B).



## Subgenus VESTIPLEX Bezzi

- balioptera** Loew Mount Desert, Northeast Harbor, June 26, 1909 (Minot); Southwest Harbor, June 21, 1921; Johnson 1925 a. I regard this identification by Johnson as being in question.
- canadensis** Loew Oquossoc, July 12, 1946 (B). Subarctic; type from Hudson Bay Territories.
- fultonensis** Alex. (includes *platymera* records) Ashland, on fir, June 17, 1946 (B). Chesuncook, 2 R 13, No. 43-3, emerged June 19, 1943 (B). Crawford, on fir, June 10, 1946 (B). Lincoln, May 25, 1944 (B). Mars Hill, No. 53 C 202, T 7 R 5, ex fir, June 12, 1953 (B). Mt. Bigelow, summit 4050 ft., July 11, 1936 (B). Mt. Coe, west end of Klondike Basin, Mt. Katahdin, 3730 ft., June 26, 1955 (B). Mount Desert, Bar Harbor, on tree at night, May 18-19, 1936 (B). Mt. Katahdin, 5267 ft., July 17, 1943 (B); Caribou Springs, 4400 ft., July 5-7, 1958 (B). Woodstock, June 11 (B).
- longiventris** Loew Maine, without data, 1 female, type material. Augusta, June 13, 1941; June 8, 1944; June 20, 1946, in birch-beech-maple woods (B). Mount Desert, Bar Harbor, July 4 (B); Procter 1946. Sebago, June 5 (B).

## Subgenus ANGARATIPULA Savtshenko

- illustris** Doane (*fuscipennis* Loew) Recorded in Procter List, 7:330, as a *Prionocera*. It now is realized that it is quite distinct from true *Prionocera* and is correctly placed in *Tipula*. Houlton, July 11-13, 1943 (B). Mount Desert, Southwest Harbor, July 15, 1918 (J). Orono, August 8, 1913 (Earle Shaw).

## Subgenus YAMATOTIPULA Matsumura

- aprilina** Alex. Augusta, sweeping marsh grass and ferns, May 31, 1946 (B).
- caloptera** Loew Bingham, July 17, 1937 (A). Houlton, June 28-July 5 (B). Mount Desert, Bar Harbor, July 21, 1935 (B); Procter 1946. Oquossoc, July 1-7 (B). Waterville, June 1906 (Hitchings).
- carsoni** Alex. Rangeley, July 21, 1961 (B); paratype; type Newfoundland.
- cayuga** Alex. Orono, June 5-14, 1913 (A); type material. Mount Desert; Procter 1946. Round Mt. T 11 R 8, July 15 (B).
- concaua** Alex. Bingham, July 17, 1937 (A).
- cluta** Loew Augusta, along Kennebec River, August 1, 1942; August 12, 1944 (B). Orono, June 5, 1913 (A).
- furca** (Walker) (*hella* Loew) Harris Coll., No. 332; Hallowell, 1836 (Randall); as *Tipula fuscifer* mi (Harris); Johnson 1925 b. Augusta, along Kennebec River, August 12, 1942 (B). Bingham, July 17, 1937 (A). Bristol, August 22, 1953 (B). Machias, July 21 (J). Mount Desert, Bar Harbor, August 9, 1935; campground, August 10-14, 1936; August 22, 1937; maple swamp, August 24-26, 1938 (B); Procter 1946. Orono, June 5, 1913 (A). Waterville, May 20, June, 1906 (Hitchings).
- iroquois** Alex. (*cincta* Loew) Mount Desert, Bar Harbor, Breakneck Brook, Long Pond; Procter 1946. Orono, June 8, 1913 (A).
- novaboracensis** Alex. Ashland, June 23 (B). Mount Desert, Otter Creek, June 15 (A); Procter 1946.
- sayi** Alex. (*costalis* Say) Augusta, August 21, 1943 (B). Cherryfield, August 9, 1913 (Morse). Fort Kent, August 17, 1910 (J). Grand Lake Stream, August 15, 1913 (Morse). Mount Desert, Bar Harbor, campground, August 17, 1948 (B). Mt. Katahdin, Abol Stream, August 22, 1913 (A). Orono, August 1, 1913 (Earle Shaw). Whitneyville, August 12, 1913 (Morse).
- strepsens** Loew Machias, July 19 (J). Mount Desert, Bar Harbor, June 8-17 (J); Procter 1946. Oquossoc, June 25, 28, 30, July 4, 1946 (B).
- sulphurea** Doane Orono, June 12, 1913 (A).
- tephrocephala** Loew Augusta, June 19, 1943; in shrubby ravine, June 9, 1946; June 15, 1946 (B). Capens, July 17 (J). Crystal, Aroostook County, in bog, June 6, 1941 (B). Eastport, July 15 (J). Hartford, June 3 (B). Mount Desert; Procter 1946. Nine-mile, near Lac Frontiere, Aroostook County, June 2, 1941 (B). Oquossoc, July 7 (B). Woodstock, June 11 (B).
- tricolor** Fabr. Kellyland, August 2 (B).
- vicina** Dietz Ashland, June 24 (B). Mount Desert; Procter 1946.

Subgenus **PLATYTIPULA** Matsumura

- maritima** Alex. Augusta, September 5, 19, October 7, 1942; September 7, 1943; September 20, 1946 (B). Enfield, September 18, 1944 (B). Mount Desert, Bar Harbor, Bliss Field, September 5, 1937; at light in maple swamp, September 16, 1938; September 17, 1941 (B); Procter 1946, Bar Harbor, The Narrows, in salt marsh, October 7, 1944 (B). Passadumkeag, sphagnum bog, October 6, 1939 (B).
- perhirtipes** Alex. Vassalboro Bog, September 30, 1961 (B); type.
- spenceriana** Alex. Augusta, September 23, 1941 (B).
- ultima** Alex. (*flavescens*, *flavicans* Fabr.) Augusta, September 13, 1939; August 30, September 14-17, 1942; September 18, 1944; September 6, 1946, emerging along a wet drain in field (B). Ellsworth, September 7-26, 1913 (Stanwood). Fort Kent, August 28, 1913 (Osborn). Indian Town (Princeton), September 15, 1944 (B). Mount Desert, Bar Harbor, campground, September 20, 1935; September 2-October 3, 1936; Rhodora Meadow, August 19, 1937; October 1, 1941 (B); Procter 1946, Orono, September 2, 1913 (Farle Shaw). Saco, in "The Heath," August 25, 1954 (B). South Portland, September 4, 1913 (A).

Subgenus **OREOMYZA** Pokorny

- angulata** Loew Greenville, July 7, 1943 (B). Mount Desert, Southwest Harbor, July 15 (J).
- borealis** Walker (*hebes* Loew) Maine: part of type series of *hebes*. Ashland, July 21, 1943 (B). Augusta, along Kennebec River, August 2, 1942, August 17, 1946; Sidney Bog, July 26, 1952 (B). Eastport, July 16 (J). Ellsworth, August 10-21, 1913 (Stanwood). Machias, July 19 (J). Mount Desert, Bar Harbor, campground, August 6, 1936 (B); Northeast Harbor, July 12, 1907 (Minot); Procter 1946, Mt. Kineo, August 17, 1913 (A). South Portland, September 4, 1913 (A). Waterville (Hitchings).
- broweri** Alex. Mt. Katahdin, 4800-5200 ft., September 2-3, 1939; types; Caribou Spring, October 4, 1939 (B).
- entomophthorae** Alex. (*simillissima* Dietz) Ashland, June 24 (B). Augusta, July 9, 1944 (B). Indian Town (Princeton), August 9, 1946 (B). Mount Desert; Procter 1946, Mt. Katahdin, July 9, 1939; 4600 ft., July 19, 1953 (B). Passadumkeag, May 26, 1944 (B). Seboomook, Somerset County, July 18 (B).
- fragilis** Loew Maine, without exact data; type. Augusta, October 25, November 7, 1939; September 24, 1941 (B). Ellsworth, September 24-30, October 5, 1913 (Stanwood). Mount Desert, Bar Harbor, September 22, 1938; campground, September 21, October 16, 1938; Cadillac Mt., 800 ft., October 27, 1938; Hunter's Beach, September 18, 1937 (B); Northeast Harbor, September 24 (Minot); Procter 1946, Orono, October 3-16, 1913, Princeton, September 16, 1944; September 29, 1945; Indian Town, September 16, 1944 (B). Waltham, in fir stand, September 19, 1946 (B). Winter Harbor, September 23, 1939 (B). Woodstock, November 4, 1935 (B).
- grata** Loew Harris Coll., No. 331; Hallowell, 1836 (Randall); Johnson 1925 b. Mount Desert, Northeast Harbor (Minot); Southwest Harbor, July 12-August 16 (J); Procter 1946.
- helderbergen-is** Alex. Rocky Mt., T 18 R 12, Allagash, Aroostook County, July 10, 1956 (B).
- ignobilis** Loew Mount Desert, Bar Harbor, July 5 (B); Northeast Harbor, July 17-August 4 (Minot); Procter 1946.
- in-significa** Alex. Mt. Katahdin, Baxter Spring to summit, 5200 ft., September 2, 1939 (B).
- latipennis** Loew Capens, July 19 (J). Eastport, July 14 (J). Machias, July 21 (J). Mount Desert; Procter 1946, Princeton, July 12 (J).
- penobscot** Alex. Mount Desert, Bubble Pond, June 2 (P); Procter 1946, Orono, June 14, 1913 (A); type.
- phoroctenia** Alex. Mount Desert, Bar Harbor, Bliss Field, September 3, 1936 (B); Procter 1946, Orono, October 3-16, 1913 (Parshley); types.
- senega** Alex. (*pallida* Loew) Guerette, Aroostook County, July 6, 1944 (B). Mount Desert, Bar Harbor, July 4, 1941 (B); Procter 1946, Oquossoc, June

- 28, 1946 (B). Orono, June 5, 1913 (A). Salem, in birch woods, June 20, 1947 (B). Sumner, Oxford County, June 3, 1953 (B).
- serta** Loew Ashland, June 27-28, 1946 (B). Eustis, June 8, 1956 (B). Masardis, June 16 (B). Orono, June 5, 1913 (A). Portage, June 3 (B). Springfield, T 5 N D, May 24, 1944 (B).
- sub-erta** Alex. Mt. Katahdin, 4600 ft., July 13, 1937; July 8, 1939; July 17-18, 1948; summit, 5267 ft., July 17-19, 1953; July 31-August 1, 1954; July 3, 28, 1956, 4700 ft., July 18, 1959; July 11, 1960 (B); 4000 ft., July 28, 1951 (Flint and Carson).
- In Dipt. Conn., Dipt., 1: 274, 1942, recorded as *Tipula neptun* Dietz, as a synonym. Now known to be distinct. Virtually all records are from Mt. Katahdin where it is the most numerous species of the genus at higher levels during July.
- ternaria** Loew Mount Desert, Bar Harbor, May 12 (B); Procter 1946.
- trivittata** Say Augusta, August 9, 1944 (B). Eastport, July 14 (J). Jonesport, August 14 (B). Kittery, June 5 (J). Mount Desert, Northeast Harbor, June 26 (Minot). Orono, June 6, 1913 (A). Prouts Neck (J).

### Subgenus LUNATIPULA Edwards

- apicalis** Loew Maine, without exact data; type. Ashland, July 10, 1943 (B). Augusta, June 7, 1944 (B). Mount Desert, Bar Harbor, July 2, 1935; July 1-14, 1936 (B); Northeast Harbor, June 30, July 4, 1908 (Minot); Procter 1946. Orrs Island, July 25 (J). Sugar Island, Moosehead Lake, July 17 (J).
- bicornis** Forbes Harris Coll., No. 300 ?; Hallowell, July 1836 (Randall); as *Tipula marginalis* mi (Harris); Johnson 1925 b. Greenville, July 2 (B). Mount Desert, Southwest Harbor, June 21 (J); Procter 1946. Oquossoc, June 25-29, 1946 (B).
- dorsimacula** Walker (*angustipennis* Loew) Harris Coll., No. 267; Hallowell, 1836 (Randall); Johnson 1925 b. Brunswick, type material of *angustipennis* (Packard). Augusta, May 15, 1944, May 25, 1946 (B). Ellsworth, June 17-18, 1913 (Stanwood). Kezar Falls, May 17, 1944 (B). Mount Desert; Procter 1946. Mount Porter, Devils Den, Oxford County, May 16, 1944 (B). Naples, May 16, 1944 (B). Orono, June 15, 1913 (A). Richmond, Swan Island, May 19, 1943 (B). Waterville, May 20, 1906 (Hitchings).
- mainensis** Alex. Ashland Jct., August 16, 1910 (J); type material. Fort Kent, August 19, 1910 (J); type material. Mount Desert, August 31, 1913 (A); type; Western Mt., August 12, 1938 (B). Speckled Mt., Oxford County, July 31, 1936 (B).
- monticola** Alex. Mount Desert, Bubble Pond Inlet, Duck Brook, Pemetic Mt., June 16; Rhodora Meadow; Procter 1946.
- parshleyi** Alex. Clayton Lake, July 5 (B). Crystal, June 18, 1936 (B). Eastport, July 15 (J). Millinocket, July 7-11 (B). Mount Desert, Rhodora Meadow; Procter 1946. Orono, June 6, 1913 (A and Parshley); types. Oquossoc, July 1 (B). Rocky Mt., Allagash, July 10, 1945 (B).
- submaculata** Loew Mount Desert, Northeast Harbor, July 12 (Minot); Procter 1946.
- triplex** Walker (*inermis* Doane) Augusta, August 13, 1946 (B). Fort Kent, August 19, 1910 (J). Mount Desert, Bar Harbor, campground, September 16, 1936 (B); Western Mt. August 12, 1938 (B); Procter 1946.
- valida** Loew Greenville, July 19 (B). Mount Desert, Bar Harbor, Corfield, July 21 (P); Procter 1946.
- youngi** Alex. Capens, July 19 (J); Johnson 1925 a, as *macrolabis*.

### Subfamily CYLINDROTOMINAE

### Genus PHALACROCERA Schiner

- tipulina** O.S. Eastport, July 15, 1909 (J). Ellsworth, June 17-22, 1913 (Stanwood). Enfield, June 7, 1941 (B). Mount Desert, North end, sphagnum bog, August 23, 1938 (B); Bar Harbor, July 4, 1936 (B); Procter 1946. Nine-Mile, T 12 R 16, Aroostook County, June 2, 1941 (B). Old Spec Mt., Grafton, 4000 ft., August 1, 1936 (B). Passadumkeag, June 15, 1929 (B).

Genus *CYLINDROTOMA* Macquart

*americana* O.S. Capens, July 11, 1907 (J).

Genus *LIOGMA* Osten Sacken

*nodicornis* (O.S.) Augusta, June 15-21, 1946 (B). Capens, July 11, 1907 (J). Eastport, July 15, 1909 (J). Ellsworth, June 15, 18, July 4, 1913 (Stanwood). Machias, July 25, 1907 (J). Mount Desert; Procter 1946. Orono, June 8, 12, 1913 (A).

## Subfamily LIMONIINAE

## Tribe LIMONIINI

Genus *LIMONIA* MeigenSubgenus *LIMONIA* Meigen

- defuncta* (O.S.) (*simulans* of authors) Mount Desert, Canyon Brook, June 23, July 20; Procter 1946.
- fusca* Meigen (*pubipennis* O.S.) Ellsworth, July 3-13, 1913 (Stanwood) Mount Desert; Procter 1946. Orono, June 14, July 8, 1913 (A).
- globithorax* (O.S.) Augusta, August 30, 1942 (B). Mt. Katahdin, August 22, 1913 (A). Orono, July 12, 1913 (A).
- indigena* (O.S.) Capens, July 18 (J). Holeb, Somerset County, July 19 (B). Mount Desert; Procter 1946. Oquossoc, July 2 (B).
- indigenoides* Alex. Masardis, October 13, 1939 (B). Agrees closely with the type from Alaska.
- macateei* Alex. Mount Desert, Bar Harbor, September 7 (B); Gorge Trail, July 28 (A); Procter 1946.
- parietina* (O.S.) Mount Desert, Bar Harbor, September 5-8, 1935; beech woods, September 9-13, 1946 (B). Prout's Neck (J).
- simulans* Walker (*pemetica* Alex., auct. Byers) Mount Desert, Hunter's Beach, September 24, 1935 (B); type of *pemetica*; Canyon Brook, July 23, 1935 (B); Procter 1946 as *pemetica*. Oquossoc, July 11 (B).
- tristigma* (O.S.) Ashland, July 17-23, 1943 (B). Ashland Jct., August 16, 1910 (J). Ellsworth, July 31-September 14, 1913 (Stanwood). Fort Kent, August 17-19, 1910 (J). Houlton, August 24, 1913 (A). Mount Desert; Procter 1946. Mt. Katahdin, foot, August 23, 1913 (A). Orono, July 29, 1913 (A). Princeton, July 29, 1943 (B); Indian Town, August 10, 1946 (B). Speckled Mt., Oxford County, July 31, 1936 (B).

Subgenus *METALIMNOBIA* Matsumura

- cinctipes* (Say) Capens, July 21, 1907 (J). Greenville, July 29, 1943 (B). Mount Desert; Procter 1946. Mount Vernon, May 29, 1943 (B). Orono, June 8, 1913 (A). Prout's Neck (J).
- hudsonica* (O.S.) Eastport, July 15 (J). Machias, July 22 (J). Mount Desert, Bar Harbor, August 10 (J); Procter 1946. Orrs Island, July 24 (J).
- immatura* (O.S.) Augusta, at light, May 23, 1941; September 21, 1946 (B). Mount Desert, Bar Harbor, campground, September 15, 1936 (B); Procter 1946.
- novae-angliae* Alex. Hog Island, Muscongus Bay, Lincoln County, August 22 (B).
- solitaria* (O.S.) Capens, July 20 (J). Eastport, July 14, 1909 (J). Ellsworth, July 13, August 5-16, 1913 (Stanwood). Fort Kent, August 17, 1910 (J). Houlton, August 24, 1913 (A). Mount Desert, Bar Harbor, campground, August 16, 1942 (B); Western Mountain, August 12, 1938; Procter 1946. Mt. Katahdin, Abol Camp, August 19, 22, 1913 (A). Orono, June 14, 29, July 8, 29, 1913 (A). Pemaquid Harbor, August 30, 1943 (B). South Portland, September 4, 1913 (A). Speckled Mt., Oxford County, July 31, 1936 (B).
- triocellata* (O.S.) Augusta, July 18, September 4, 1942; June 5, August 28, 1943 (B). Eastport, July 14, 1909 (J). Ellsworth, July 29-August 21, 1913 (Stan-

wood). Fort Kent, August 19, 1910 (J). Machias, July 21, 1909 (J). Mount Desert, Bar Harbor, August 22, September 11, 1935; September 8, 1936; August 7, 1938; Witch Hole, July 31, 1936 (B); Procter 1946. Orono, July 29, 1913 (A). Pemaquid Harbor, August 30, 1943 (B). Princeton, July 12, 1909 (J).

#### Subgenus DISCOBOLA Osten Sacken

- annulata** (Linnaeus) (*argus* Say) Ashland Jct., August 16 (J). Augusta, along Kennebec River, August 2, 1942 (B). Ellsworth, August 14-17, September 7-24, 1913 (Stanwood). Fort Kent, August 19, (J). Machias, July 17 (J). Millinocket, July 22, 1937 (B). Mount Desert, Bar Harbor, September 22, 1942, in beech woods, September 12, 1946; Western Mt., August 12, 1938 (B); Procter 1946. Mt. Katahdin, foot, August 20-22, 1913 (A). Orono, August 25, 1913 (Earle Shaw); July 29, 1913 (A). Saint Francis, September 9, 1954 (B). White Cap Mt., T 7 R 10, August 17 (Jones).
- nigroclavata** Alex. Mount Desert, Bar Harbor, in beech woods, September 11-13, 1946 (B); Deer Brook, September 4 (P); Procter 1946. Pemaquid Harbor, August 30, 1943 (B).

#### Subgenus DICRANOMYIA Stephens

- brevivena** (O.S.) Augusta, June 27, 1941; July 10, 1943, in pasture (B). Popham Beach, Sagadahoc County, on sand dunes, August 5, 1941 (B).
- broweriana** Alex. Richardson Lake, near Oquossoc, August 4, 1940 (B); type material.
- gladiator** (O.S.) Boothbay Harbor, September 12, 1941 (B). Capens, July 21; Johnson 1925 a. Mount Desert, Bar Harbor, August 23, 1938 (B); Procter 1946.
- haeretica** (O.S.) (*gibsoni* Alex.) Mount Desert, August 16, 1942; The Narrows, in salt marsh, October 7, 1944 (B); Procter 1946. A characteristic form of coastal and inland saline habitats.
- halterata** (O.S.) (*cincereipennis* Lundstrom) Augusta, sweeping brush, July 2, 1939 (B). Boothbay Harbor, September 12, 1941 (B). Ellsworth, July 10, September 11-October 5, 1913 (Stanwood). Mount Desert, Bar Harbor, July 1, 1936; in spruce woods, September 7, 1938; October 1, 1941 (B); Procter 1946. Orono, September 7, 1913 (A).
- halterella** Edwards (*gracilis* Doane) Springfield, Penobscot County, September 18, 1944 (B).
- humidicola** (O.S.) (includes records of *badia* Walker to about 1930) Rocky Mt., Allagash, July 8, 1956 (B). Orono, June 10-25, 1913 (A).
- immodesta** (O.S.) Augusta, September 4, 1942 (B). Capens, July 20 (J). Eastport, July 14 (J). Ellsworth, July 18-September 24, 1913 (Stanwood). Fort Kent, August 29, 1913 (Osborn). Fryeburg, September 5, 1913 (A). Houlton, August 24, 1913 (A). Kokadjo, Piscataquis County, August 3 (B). Machias, July 17 (J). Millinocket, July 24, 1943 (B). Mount Desert; Procter 1946. Mt. Katahdin, August 20-23, 1913 (A). Mt. Kineo, August 17, 1913 (A). Orono, June 12, July 8, September 7, 1913 (A). Princeton, July 12 (J). South Portland, September 4, 1913 (A).
- immodestoides** (Alex.) (*iowensis* Rogers) Augusta, May 25, 1941; October 11, 1942; September 23, 1943; September 4, 9, 24, 1946 (B). Millinocket, July 29, 1946 (B). Mount Desert, November 5, 1938 (B).
- liberta** (O.S.) Augusta, June 10, September 8, 1939; at light, June 29, 1941; in old pasture, August 21, 1943; July 11, 1944 (B). Fort Fairfield, August 26, 1913 (Osborn). Fort Kent, August 28, 1913 (Osborn). Houlton, August 24, 1913 (A). Mount Desert, Bar Harbor, campground, August 17, 1937; August 10, 1938 (B); Procter 1946. Orono, June 5, 1913 (A); August 12, 1913 (Earle Shaw). Princeton, July 25, 1943 (B).
- longipennis** (Schummel) (*immemor* O.S.) Augusta, August 18, 1938; June 13, 1939; September 13, 1942; June 16, 1944; June 22, 1946 (B). Easton, August 26, 1913 (Osborn). Fort Kent, August 17 (J). Monmouth, Highmoor Farm, August 16, 1913 (Osborn). Mount Desert; Procter 1946. Mount Kineo, August 17, 1913 (A). Orono, June 10-August 5, 1913 (A).

- morioides** (O.S.) Mount Desert; Procter 1946. Orono, June 10-July 29, 1913 (A).
- piscataquis** Alex. (*vibei* Nielsen; Greenland) Sourdnamunk Lake, Piscataquis County, October 12, 1940 (B); type.
- profunda** Alex. Ellsworth, July 30, 1913 (Stanwood); type material. Kokadjio, July 14 (B). Mt. Coe, 3000 ft., T 3 R 10, June 26, 1939 (B). Mount Desert; Procter 1946. Passadumkeag, June 15, 1929 (B). Rangeley, July 3, 1943 (B).
- pubica** (O.S.) Augusta, June 15-18, 1942; May 30, 1953 (B). Ellsworth, June 21, 1913 (Stanwood). Houlton, July 5 (B). Mount Desert; Procter 1946. Orono, June 5-14, 1913 (A).
- pubicoides** Alex. Mount Desert, Canyon Brook, July 20-25; Procter 1946.
- rostrifera** (O.S.) Fort Kent, August 28, 1913 (Osborn). Mount Desert, Seal Cove Brook, August 24 (P); Procter 1946.
- rufiventris neomorio** Alex. Mount Desert, lower Breakneck Pond; Procter 1946.
- sphagnicola** (Alex.) Augusta, September 22, 1946 (B). Millinocket, July 24, 1943 (B). Mount Desert, Bar Harbor, October 1, 1941; Procter, 1946.
- spinifera** Alex. Mount Desert; Procter 1946.
- stulta** (O.S.) (*monticola* Alex.) Mount Desert; Procter 1946.
- walleyi** Alex. Mount Desert, Great Heath, October 5, 1944 (B); Procter 1946. Vassalboro Bog, September 24, 1961 (B).

#### Subgenus RHIPIDIA Meigen

- bryanti** (Johnson) Orono, June 30, 1913 (A).
- fidelis** (O.S.) Augusta, June 13-23, 1947, emerged from beneath bark of logs of black locust. *Robinia* (B).
- lecontei** Alex. (*maculata* Meigen) Ashland Jct., August 16 (J). Boothbay Harbor, September 12, 1941 (B). Caucumgomac Lakes, Piscataquis County, September 5, 1936 (B). Dallas Plantation, near Rangeley, October 31, 1935 (B). Ellsworth, August 5-16, October 5, 1913 (Stanwood). Fort Kent, August 17-19, 1910 (J). Friendship, November 19, 1943 (B). Houlton, August 24, 1913 (A). Indian Town, Princeton, August 10, 1946 (B). Kokadjio, July 11 (B). Lincoln, October 11 (B). Machias, July 7 (J). Masardis, October 13, 1939 (B). Matinicus Island, May 4, 1915. Millinocket, July 29 (B). Mount Desert, Hunter's Beach, October 22, 1939 (B); Northeast Harbor, June 30, 1900 (Minot); Procter 1946. Mt. Katahdin, summit, July 9, 1939 (B). Orono, June 21, 1913 (MacGillivray); September 7, 1913 (A).

#### Subgenus GERANOMYIA Haliday

- canadensis** (Westwood) Mount Desert, Bar Harbor, campground, July 8, 1936 (B); Echo Lake, September 4 (A); Procter 1946.
- distincta** (Doane) Mount Desert, Bar Harbor, June 29-July 4, 1935 (B); Procter 1946. Oquossoc, June 26, July 6, 1946 (B).
- diversa** (O.S.) Orono, September 7, 1913 (A).
- rostrata** (Say) Harris Collection; Sutton, 1836 (Randall). Ashland Jct., August 16, 1910 (J). Augusta, June 15, 1946 (B). Fort Kent, August 28, 1913 (Osborn).

#### Genus HELIUS St. Fargeau

##### Subgenus HELIUS St. Fargeau

- mainensis** (Alex.) Orono, June 12, 1913 (A); types.

#### Genus ANTOCHA Osten Sacken

##### Subgenus ANTOCHA Osten Sacken

- opalizans** O.S. Ashland, at light, June 16, 23, July 17, August 1, 1943 (B). Augusta, August 21, 1943 (B). Some records may be confused with the next species.
- saxicola** O.S. Fort Kent, August 28, 1913 (Osborn). Houlton, August 24, 1913 (A). Mt. Katahdin, Abol Trail, portage, August 22, 1913 (A).

**Genus DICRANOPTYCHA** Osten Sacken**germana** O.S. Dennistown, July 17, 1961 (B).

Tribe PEDICIINI

**Genus ULA** Haliday**Subgenus ULA** Haliday**elegans** O.S. Fort Kent, August 17 (J.) Mount Desert, Sand Beach, July 11 (J).**paupera** O.S. Fort Kent, August 17-19, 1910 (J); August 28, 1913 (Osborn).  
Mount Desert; Procter 1946. Orono, June 8, 1913 (A).**Genus PEDICIA** Latreille**Subgenus PEDICIA** Latreille**albivitta** Walker Augusta, August 29, 1942; September 2, 1946; October 5, 1946 (B). Ellsworth, July 31-August 17, 1913 (Stanwood). Five Islands, August 30 (B). Houlton, July 13-19, 1946 (B). Kokadjo, August 5, 1947 (B). Little Deer Island, August 29, 1898 (Zabriskie). Mount Desert, Bar Harbor, campground, August 17, 1938; maple swamp, September 8, 1938 (B); Northeast Harbor, August 23 (Minot); Procter 1946. Mt. Katahdin, August 22, 1913 (A). Orono, September. Prout's Neck (J). Roque Bluffs, August 13, 1913 (Morse). South Portland, September 4, 1913 (A). White Cap Mt., T 7 R 10, August 17 (Jones).**contermina** Walker Ashland, June 21, 24 (B). Seboomook, June 24 (B). Traveler Mt., July 29 (Cushman); Johnson 1925 a.**margarita** Alex. Ashland, July 28, 1956 (B). Mount Desert, Hunter's Beach, September 23 (B). Round Mt., T 11 R 8, July 26 (B).**procteriana** Alex. Ashland, June 25 (B). Mount Desert, Bar Harbor Corfield, July (P); type; May 18, 1936 (B); Procter 1946. Oquossoc, June 22-24, 1946 (B).**Subgenus TRICYPHONA** Zetterstedt**auripennis** (O.S.) Mount Desert, Duck Brook, June 24 (Harrison); Procter 1946.**autumnalis** (Alex.) Augusta, September 9, 1939; September 5, 1942; August 22, September 1, 1946 (B). Ellsworth, August 21-September 13, 1913 (Stanwood); type material. Fort Kent, August 19 (J). Mount Desert, Bar Harbor, maple swamp, August 27-29, 1938; campground, August 27, 1936; Western Mt., August 12, 1938 (B); Procter 1946. Mt. Katahdin, foot, August 22, 1913 (A); type material. Orono, August 14, 1913 (A); type material. Roque Bluffs, August 13, 1913 (Morse); type material. Shin Pond, Patten, Penobscot County, July 29, 1945 (B). South Portland, September 4, 1913 (A); type material. White Cap Mt., T 7 R 10, August 17, 1905 (Jones).**calcar** (O.S.) Ashland, June 22, 27, 1946 (B). Augusta, June 11, 1942 (B). Mount Desert; Procter 1946. Mt. Katahdin, Klondike Basin, 3000 ft., June 26, 1955 (B). Oquossoc, July 6 (B). Orono, June 10-14, 1913 (A). Rocky Mt., Allagash, July 7, 1956 (B). Seboomook, June 26, 1946 (B). Veazie, Bangor Bog, June 5, 1913 (A). Wales, May 26 (J).**inconstans** (O.S.) Ashland, July 16 (B). Augusta, September 11, 1939; May 22, 1941; along Kennebec River, August 2, 1942; May 30, 1944; June 15, 1946 (B). Capens, July 20, 1907 (J). Ellsworth, June 15-August 18, 1913 (Stanwood). Fort Kent, August 17, 1910 (J); August 25, 1913 (Osborn). Machias, July 25, 1909 (J). Mount Desert; Procter 1946. Mt. Kineo, August 17, 1913 (A). Old Spec Mt., 4000 ft., August 1, 1936 (B). Orono, June 7, 1913 (Parshley); September 7, 1913 (A). Seboomook, July 6 (B). South Portland, September 4, 1913 (A).**katahdin** (Alex.) Ellsworth, September 1, 1913 (Stanwood); type material. Mt. Katahdin, August 22, 1913 (A and Morse); type material.**paludicola** (Alex.) Augusta, Sidney Bog, May 17, 1941 (B). Mount Desert; Procter 1946.**vernalis** (O.S.) Ellsworth, June 17, July 18, 1913 (Stanwood). Machias, July 17 (J). Mount Desert; Procter 1946.

Genus *NASITERNELLA* Wahlgren

*hyperborea* (O.S.) Mt. Coc, west end of Klondike Basin, Mt. Katahdin, 3730 ft., June 26, 1955 (B).

Genus *DICRANOTA* ZetterstedtSubgenus *EUDICRANOTA* Alexander

*pallida* Alex. Mount Desert, Canyon Brook, campground, June 20-30 (B); Procter 1946.

Subgenus *RHAPHIDOLABINA* Alexander

*flaveola* (O.S.) (subg. *Amalopina* Brun. in early records) Augusta, May 22, 1941; June 11, 1944; June 24, 1947 (B). Ellsworth, June 22, September 10, 1913 (Stanwood). Fort Kent, August 19, 1910 (J). Mount Desert; Procter 1946. Mt. Katahdin, foot, August 20-22, 1913 (A). Oquossoc, July 7 (B). Orono, June 8-July 29, 1913 (A). Rocky Mt., Allagash, July 7-10, 1956 (B). Round Mt., T 11 R 8, July 28 (B). Salem, June 19, 1947 (B).

Subgenus *PLECTROMYIA* Osten Sacken

*modesta* (O.S.) Oquossoc, July 15 (B).

Subgenus *RHAPHIDOLABIS* Osten Sacken

*avis* (Alex.) Mount Desert, Seal Harbor Brook, July 14 (P); Procter 1946.

*cayuga* (Alex.) Mount Desert, Southwest Harbor, August 30-September 11 (A); Procter 1946.

*forceps* (Alex.) Augusta, May 22, 1941 (B). Mount Desert; Procter 1946.

*rubescens* (Alex.) Mount Desert; Procter 1946.

*tenuipes* (O.S.) Augusta, May 22, 1941 (B). Ellsworth, August 31-September 1, 1913 (Stanwood). Mount Desert, Jordan Pond Creek, August 20, 1941 (Harrison); Procter 1946. Mt. Katahdin, foot, August 20-22, 1913 (A). Orono, September 7, 1913 (A).

## Tribe HEXATOMINI

Genus *PARADELPHOMYIA* AlexanderSubgenus *OXYRHIZA* de Meijere

*americana* (Alex.) (*Oxydiscus* de Meijere) Fryeburg, September 5, 1913 (A). Houlton, August 24, 1913 (A). Mount Desert; Procter 1946. Orono, July 8, September 7, 1913 (A).

*cayuga* (Alex.) (*Oxydiscus* de Meijere) Houlton, August 24, 1913 (A). Mount Desert, Southwest Harbor, August 30-September 11 (A); Procter 1946. Orono, September 7, 1913 (A).

*minuta* (Alex.) (*Oxydiscus* de Meijere) Ashland, July 17, 1943. June 16-18, 1946 (B). Mount Desert; Procter 1946. Oquossoc, July 7 (B). Orono, June 14, 1913 (A).

*pleuralis* (Dietz) (*Oxydiscus* de Meijere) Mount Desert, July 11, 1936 (B).

Genus *EPIPHRAGMA* Osten SackenSubgenus *EPIPHRAGMA* Osten Sacken

*fascipennis* (Say) Harris Coll., No. 336; Hallowell 1836 (Randall) as *Limnobia fascipennis* ?; Johnson 1925 b. Ashland, July 15 (B). Augusta, July 6, 1940; July 12, 1941; June 19, 1943; in birch-beech-maple forest, June 20, 1946 (B). Belfast, June 14, 1929 (B). Capens, July 14 (J). Ellsworth, June 15-18, 1913 (Stanwood). Gardiner, in thickets near Kennebec River, July 3 (B). Greenville, July 7, 13, 1943 (B). Kokadjo, July 14 (B). Mount Desert; Procter 1946. Oquossoc, June 22, 28, July 7, 15 (B). Orono, June 14, 1913 (A). Round Mt., T 11 R 8, July 17 (B). Seboomook, July 6, 9, 19 (B). South China, June 26 (B). Veazie, Bangor Bog, June 5, 1913 (A).



**Genus DACTYLOLABIS** Osten Sacken

- hudsonica** Alex. Mount Desert; Procter 1946.  
**montana** (O.S.) Mount Desert, Canyon Brook, June 23, 1935 (A); Northeast Harbor, June 30, 1908 (Minot); Procter 1946. South China, May 24, 1949 (B).  
**pemeticæ** Alex. Mount Desert, Canyon Brook, June 23, 1935 (A and B); type locality; Procter 1946.  
**supernumeraria** Alex. Mount Desert; Procter 1946. Mt. Katahdin, north slope, July 8, 1939 (B).

**Genus PHYLLOLABIS** Osten Sacken

- lagganensis** Alex. Mt. Katahdin, July 28, 1951 (Carson). Most easterly known station.

**Genus AUSTROLIMNOPHILA** Alexander**Subgenus AUSTROLIMNOPHILA** Alexander

- toxoneura** (O.S.) Ashland, June 24 (B). Augusta, sweeping brush, July 2, 1939 (B). Capens, July 11 (J). Eastport, July 14, 1909 (J). Ellsworth, June 22-July 31, 1913 (Stanwood). Mount Desert; Procter 1946. Oquossoc, July 9, 15, 1946 (B).

**Subgenus ARCHILIMNOPHILA** Alexander

- unica** (O.S.) Mount Desert; Procter 1946. Oquossoc, June 22, 1946 (B). Orono, May 4, 1897 (Maine Expt. Sta.); June 8, 1913 (Parshley). Rangeley, July 3, 1943 (B). Waterville, June 20 (Hitchings).

**Genus PROLIMNOPHILA** Alexander

- areolata** (O.S.) Augusta, in birch-beech-maple forest, June 20, 1946 (B). Eastport, July 14-15, 1909 (J). Ellsworth, June 22, 1913 (Stanwood). Houghton, Oxford County, June 25-July 5 (Eddington). Machias, July 19, 1909; July 9, 1910 (J). Mount Desert, Bar Harbor, July 4, 1941 (B); Procter 1946. Mt. Katahdin, 1250 ft., July 8, 1939; South Brother Mt., 3500 ft., June 25, 1955; Klondike Basin, 3000 ft., June 26, 1955 (B).

**Genus PSEUDOLIMNOPHILA** Alexander**Subgenus PSEUDOLIMNOPHILA** Alexander

- contempta** (O.S.) (*nigripleura* A & L) Bingham, July 17, 1937 (A). Millinocket, July 13, 1946 (B). Mount Desert, lower Breakneck Brook, August 21, 1941 (Harrison); Procter 1946. Orono, July 8-29, 1913 (A).  
**inornata** (O.S.) Ashland, June 19, 1946 (B). Augusta, June 13, 1941 (B). Mount Desert, Southwest Harbor, bog, July 21, 1936; Witch Hole, July 27, 1935 (B); Procter 1946. Orono, June 5-12, 1913 (A). Tim Pond, Eustis, Franklin County, July 28 (B).  
**luteipennis** (O.S.) Augusta, September 14, 1939, September 18, 1941 (B). Houlton, August 24, 1913 (A). Orono, June 10-12, 1913 (A).  
**novaboracensis** (Alex.) Ashland, July 11, 30, 1943 (B). Augusta, August 27, 1943, July 9, 1944 (B). Ellsworth, August 18, 1913 (Stanwood). Mount Desert, Bar Harbor, October 1, 1941 (B); lower Breakneck Brook, August 21, 1941 (Harrison); Procter 1946. Mt. Katahdin, foot, August 22, 1913 (A). Orono, July 29-August 1, 1913 (A). Portland, August 14, 1913 (Osborn). Princeton, July 25, 1943 (B). Veazie, Bangor Bog, August 5 (A); August 30 (Osborn). York, September, 1891.

**Genus LIMNOPHILA** Macquart

- brevifurca** O.S. Augusta, May 22, 1941 (B). Mount Desert; Procter 1946. Orono, June 10, 1913 (A); Johnson 1925 a.  
**laricicola** Alex. Holeb, July 23 (B). Mount Desert, lower Breakneck Swamp, July 6, 1941; Southwest Harbor, bog, July 21, 1936 (B). Oquossoc, July 20, 1946 (B).

**Subgenus DICRANOPHRAGMA Osten Sacken**

- angustula* Alex. Greenville, July 22 (B). Mount Desert, Southwest Harbor, bog, July 21, 1936 (B); Procter 1946.
- fuscovaria* O.S. Ashland, July 10, 1943 (B). Augusta, pine grove, July 3, 1939; June 13, 1941; June 15, 1946 (B). Bingham, July 17, 1937 (A). Capens, July 20 (J). Eastport, July 16 (J). Ellsworth, July 15-August 16, 1913 (Stanwood). Greenville, July 20, 1942 (B). Mount Desert; Procter 1946. Orono, June 8-July 29, 1913 (A). Wales, June 18, 1907 (Frost).

**Subgenus IDIOPTERA Macquart**

- fasciolata* O.S. Bingham, in spider web, July 17, 1937 (A). Oquossoc, July 6 (B). Orono, June 8-24, 1913 (A).

**Subgenus LASIOMASTIX Osten Sacken**

- macrocera* (Say) Capens, July 18 (J). Cherryfield, August 9, 1913 (Morse). Ellsworth, July 3, 1913 (Stanwood). Machias, July 20 (J). Mount Desert; Procter 1946. Mt. Kineo, August 17, 1913 (A). Orono, June 10-August 8, 1913 (A). Wales, June 18 (Frost).

- tenuicornis* O.S. Mount Desert; Procter 1946. Orono, June 8-14, 1913 (A).

**Subgenus ELAEOPHILA Rondani**

- johnsoni* Alex. Mount Desert, Bubble Pond Inlet, June 16 (A); Procter 1946.
- solstitialis* Alex. Mount Desert, Echo Lake, September (A); Procter 1946.

**Subgenus PRIONOLABIS Osten Sacken**

- munda* O.S. Eastport, July 15, 1909 (J). Greenville, July 19 (B). Mt. Bigelow, 3000 ft., July 11, 1936 (B). Mount Desert; Procter 1946. Mt. Katahdin, South Brother Mt., 3500 ft., June 25, 1955 (B).

- rufibasis* O.S. Ashland, June 17, 27, 1946 (B). Augusta, in hemlock woods, July 15, 1946 (B). Bridgewater, June 23 (B). Capens, July 15 (J). Eastport, July 14, 1909 (J). Ellsworth, June 15-17, 1913 (Stanwood). Lincoln, June 15, 1929; May 30, 1936 (B). Mount Desert, Bar Harbor, May 26, 1936; Cadillac Mt., June 10, 1936; Eagle Lake, June 5, 1941 (B); Procter 1946. Norway, June 16 (B). Orono, June 5-14, 1913 (A). Princeton, on fir, June 18 (B). Seboomook, June 8, 26, July 6, 9 (B). Smithfield, June 22 (B).

**Subgenus PHYLIDOREA Bigot**

- adusta* O.S. Augusta, June 8, 1944; June 8, 1946 (B). Ellsworth, May 10, August 5, 1913 (Stanwood). Greenville, July 7, 1943 (B). Mount Desert, Bar Harbor, July 7, 1936 (B); Procter 1946. Mt. Katahdin, July 28, 1951 (Carson). Mt. Kineo, August 17, 1913 (A). Orono, June 6, 1913 (A). Princeton, July 12, 1909 (J).

- auripennis* Alex. Augusta, August 16, 1941; June 5, 12, 1943; June 23, September 20, 22, 1946 (B). Kokadjo, July 11 (B). Millinocket, July 17 (B). Mount Desert; Procter 1946. Mt. Katahdin, September 2, 1939 (B). Oquossoc, June 27, 1946 (B). Princeton, July 29, 1943 (B).

- caudifera* Alex. Augusta, May 22, 1941 (B).

- consimilis fumidicosta* Alex. Mount Desert, Bar Harbor, Corfield, June 16 (P); in maple swamp, July 24 (B); Procter 1946.

- fratria* O.S. Mount Desert, Bar Harbor, June 3-14 (J); Duck Brook, June 24 (A); Procter 1946.

- lutea* Doane Ashland, June 5, 1943 (B). Augusta, June 5, 1943 (B). Mount Desert; Procter 1946. Orono, May 31, 1914 (Parshley).

- novae-angliae* Alex. Augusta, in hemlock woods, June 15, 1946 (B). Ellsworth, July 9-August 10, 1913 (Stanwood); types. Mount Desert, Bar Harbor, campground, June 21, 1935 (A); Tramway T 8 R 13, July 15 (B); Procter 1946.

- paenadusta* Alex. Chester, May 29, 1936 (B); type.

- platyphallus* Alex. Ashland, June 19, 1946 (B). Mount Desert, Sea Wall Bog, June 19, 1935 (A); Procter 1946. Oquossoc, June 27, 1946 (B). Passadumkeag Bog, June 1, 1936 (B). Patten, Camp Colby, July 13 (B). Tim Pond, Eustis, July 28 (B).

*similis* Alex. Oquossoc, July 20, 1946 (B).

*subcostata* Alex. Mount Desert, Bar Harbor, July 4 (Salman); Procter 1946.

#### Genus SHANNONOMYIA Alexander

*lenta* (O.S.) Augusta, July 14, 1947 (B). Boothbay Harbor, September 12, 1941 (B). Ellsworth, July 4-August 31, 1913 (Stanwood). Machias, July, 1922 (J). Mount Desert, Bar Harbor, campground, July 19, 1935; July 23, 1936; September 6, 1945; Western Mt., August 12, 1938; Witch Hole, July 27, 1935; in beech woods, September 13, 1946 (B); Procter 1946. Mt. Katahdin 2900 ft., August 20, 1913 (A); 4600-5267 ft., July 24, 1953 (B). Orono, July 29, 1913 (A).

#### Genus ULOMORPHA Osten Sacken

*pilosella* (O.S.) Ellsworth, July 26, 1913 (Stanwood). Orono, June 12, 13, 1913 (A).

#### Genus PILARIA Sintenis

*imbecilla* (O.S.) Augusta, June 27 (B).

*meridiana* (Staeger) (*osbornii* Alex.) Phair (Easton), August 26, 1913 (Osborn). Veazie, Bangor Bog, August 30, 1913 (Osborn); type material of *osbornii*.

*quadrata* (O.S.) Augusta, June 12, 19, 1943, in wet meadow, June 14, 22, 1946, in hemlock woods, June 15, 1946 (B). Eastport, July 14, 1909 (J). Ellsworth, June 17-August 10, 1913 (Stanwood). Mount Desert, Bar Harbor, July 1, 1936 (B); Procter 1946. Orono, June 6, 1913 (A). South China, May 24, 1949 (B).

*recondita* (O.S.) Harris Coll., No. 335, Hallowell, July 1836 (Randall), as *Limnobia tenuipes*? Say; Johnson 1925 b. Ashland, August 1, 1943 (B). Augusta, July 18, 1942 (B). Grand Island Stream, August 15, 1913 (Morse). Holeb, July 19, 23 (B). Kokadjo, July 11 (B). Mount Desert; Procter 1946. Mt. Katahdin, foot, August 20, 1913 (A). Orono, June 12-July 29, 1913 (A). Tim Pond, Eustis, July 28 (B).

*stanwoodae* (Alex.) Augusta, July 1, 1939 (B). Ellsworth, June 21-July 23, 1913 (Stanwood); type material. Mount Desert; Procter 1946.

*tenuipes* (Say) Harris Coll., Hallowell, 1836 (Randall). Bingham, July 17, 1937 (A). Mount Desert; Procter 1946. Oquossoc, July 19 (B).

#### Genus HEXATOMA Latreille

##### Subgenus ERIOCERA Macquart

*brachycera* (O.S.) Mount Desert; Procter 1946. Speckled Mt., 1100 ft., Oxford County, July 31, 1936 (B).

*cinerea* (Alex.) Mount Desert, Somes Sound Inlet, June 22, 23 (P); Procter 1946.

*longicornis* (Walker) Ashland, June 17, 21; July 17, 1946 (B).

*spinosa* (O.S.) Ashland, June 21, 28, 30; July 12, 1946 (B). Penobscot County, Sec. 4, Range 7, August 1, 1910 (Cushman). Rockwood, July 19 (B).

#### Genus ELEPHANTOMYIA Osten Sacken

##### Subgenus ELEPHANTOMYIA Osten Sacken

*westwoodi* O.S. Capens, July 17, 1907 (J). Ellsworth, July 31-August 13, 1913 (Stanwood). Mount Desert, Bar Harbor, campground, August 2, 1935; July 4, 1941 (B); Great Pond, July 16, 1918 (J); Procter 1946. Oquossoc, July 6 (B). Princeton, July 12, 1909 (J). Speckled Mt., 1200 ft., Oxford County, July 31, 1936 (B).

*westwoodi adirondacensis* Alex. Mount Desert, Tremont, May 31 (P); Procter 1946.

#### Tribe ERIOPTERINI

##### Genus CLADURA Osten Sacken

##### Subgenus CLADURA Osten Sacken

*flavoferruginea* O.S. Augusta, in mixed growth along Kennebec River, Sep-

tember 29, 1946 (B). Fort Kent, August 28, 1913 (Osborn). Mount Desert; Procter 1946. Springfield, September 16, 1944 (B).

**Subgenus NEOCLADURA Alexander**

*delicatula* Alex. Mount Desert, Bar Harbor, maple swamp, September 16, 1938; October 1, 1941 (B); Procter 1946.

**Genus CHIONEA Dalman**

*valga* Harris Mount Desert, Bar Harbor, February 16, 1934 (B). Indian Town (Princeton), on snow, December 9, 1942 (B). December, January (Nylander); Johnson 1925 a.

**Genus NEOLIMNOPHILA Alexander**

*ultima* (O.S.) Augusta, September 20, 1941; along Kennebec River, August 23, 1942; September 4, October 9, 1942; in mixed growth near Kennebec River, September 7, 20, 22, 29, 1946 (B). Easton, August 26, 1913 (Osborn). Fryeburg, September 5, 1913 (A). Houlton, August 24, 1913 (A). Monmouth, Highmoor Farm, August 16, 1913 (Osborn). Mount Desert, September 21, 1936 (B). South Portland, September 4, 1913 (A).

**Genus GNOPHOMYIA Osten Sacken**

**Subgenus GNOPHOMYIA Osten Sacken**

*tristissima* O.S. Ashland, August 1, 1943 (B). Lower Kennebec area; Johnson 1925 a. Mount Desert, Bar Harbor, July 27, 1936 (B); Procter 1946. Veazie, Bangor Bog, August 5, 1913 (A).

**Genus LIPSOTHRIX Loew**

*sylvia* (Alex.) Mount Desert, Bubble Pond Inlet, June 16 (A); Procter 1946.

**Genus GONOMYIA Meigen**

**Subgenus GONOMYIA Meigen**

*bidentata* Alex. Mount Desert, Beech Mt., Echo Lake, Salisbury Cove; Procter 1946.

*florens* Alex. Orono, July 12, 1913 (A).

*mainensis* Alex. Fort Kent, August 29, 1913 (Osborn); type.

*subcinerea* O.S. Ellsworth, July 10-September 24, 1913 (Stanwood). Fort Kent, August 28, 1913 (Osborn). Mount Desert, Bar Harbor, July 18 (J); Procter 1946. Mt. Katahdin, August 22, 1913 (A). Orono, June 8-September 7, 1913 (A).

**Subgenus IDIOCERA Dale**

*mathesoni* Alex. Bingham, July 17, 1937 (A). Round Mt., T 11 R 8, July 28 (B).

**Subgenus LIPOPHLEPS Bergroth**

*sulphurella* O.S. Augusta, June 28, August 22, 1941 (B). Fryeburg, September 5, 1913 (A). Mount Desert, Bar Harbor, campground, August 1, 1938 (B); Procter 1946.

**Subgenus SACANDAGA Alexander**

*flava* (Alex.). Ashland, June 26, 1946 (B). Oquossoc, June 27, July 6, 1946 (B).

**Genus CRYPTOLABIS Osten Sacken**

**Subgenus CRYPTOLABIS Osten Sacken**

*paradoxa* O.S. Ashland, July 26, 1943 (B). Millinocket, July 17 (B). Mt. Katahdin, Penobscot River at Abol Carry, August 22, 1913 (A).

**Genus RHABDOMASTIX Skuse****Genus ERIOPTERA Meigen****Subgenus SYMPLECTA Meigen**

*cana* Walker) (*Symplecta hybrida* Meigen, early records) Ashland, July 10, 16, 1943 (B). Fort Kent, August 17, 1910 (J). Fryeburg, September 5, 1913 (A). Matinicus Island, October 27, 1915. Mount Desert, Southwest Harbor, July 11 (J); September 25, 1942 (B); Procter 1946. Rangeley, July 8, 1943 (B).

**Subgenus ERIOPTERA Meigen**

*chlorophylla* O.S. Ashland, July 21, 1943 (B). Mount Desert; Procter 1946. Smithfield, July 12, 1941 (B). Tim Pond, Eustis, July 5 (B).

*chlorophylloides* Alex. Ashland, July 18, 1943 (B). Augusta, June 27, 1941 (B). Millinocket, July 18, 1946 (B). Mount Desert; Procter 1946. Rangeley, July 16, 22, 1943 (B). Tim Pond, Eustis, July 5 (B).

*chrysocoma* O.S. Ashland, at light, July 17, 26, 1943 (B). Jonesboro, July 10, 16 (B). Machias, July 1917 (J); Johnson 1925 a. Mount Desert, Bar Harbor, July 19, 1936; July 2, 8, 1936 (B); Procter 1946. Rocky Mt., Allagash, July 21, 1956 (B).

*megophthalma* Alex. Mount Desert, Bubble Pond Inlet, June 21, 1935 (A); Rhodora Meadow, June 14 (A); Procter 1946.

*septentrionis* O.S. Ashland, July 10, 17, August 1, 1943 (B). Augusta, September 16, 1941; October 5, 1943 (B). Ellsworth, July 18, 1913 (Stanwood). Holeb, July 19 (B). Millinocket, July 29 (B). Mount Desert, Bar Harbor, September 7, 1937 (B); Procter 1946. Oquossoc, June 28, August 4, 1943 (B). Rangeley, at light, July 14-18, 1943 (B). Rockwood, July 20 (B). Rocky Mt., Allagash, July 21, 1956 (B).

*straminea* O.S. Washington County; Johnson 1925 a.

*subfurcifer* Alex. Millinocket, July 18, 29 (B). Mount Desert, Bar Harbor, campground, July 21 (B); Procter 1946. Oquossoc, July 6, 11, 1946 (B).

*uliginosa* Alex. Mount Desert, Witch Hole, July 27 (B); Procter 1946.

*vespertina* O.S. Ashland, July 17, 1943 (B). Capens, July 18; Johnson 1925 a. Mount Desert, Rhodora Meadow, June 14 (A); Procter 1946.

*viridula* Alex. Ashland, July 10, 14, 17, 1943 (B). Belgrade, July 5, 1960 (B). Greenville, July 20, 1943 (B). Millinocket, July 10, 1943 (B). Mount Desert; Procter 1946. Oquossoc, July 18 (B). Tim Pond, Eustis, July 13 (B).

**Subgenus MESOCYPHONA Osten Sacken**

*caliptera* Say (*caloptera* of recent usage) Augusta, June 28, 1941; June 16, 1944 (B). Gardiner, in thickets along Kennebec River, July 3 (B). Greenville, July 7, 13, 1943 (B). Holeb, July 19 (B). Millinocket, July 11 (B). Mount Desert, Rhodora Meadow, June 14 (A); Procter 1946.

*needhami* Alex. Augusta, June 27, 1941; June 16, 17, 1944, July 11 (B). Holeb, July 19 (B). Millinocket, July 29 (B). Mount Desert, Bar Harbor, July 11 (J); Procter 1946.

**Subgenus PSILOCONOPA Zetterstedt**

*armillaris* O.S. (*Ilisia* of recent usage) Augusta, August 2, 1942 (B). Mount Desert; Procter 1946. Penobscot area; Johnson 1925 a.

*laevis* Alex. (*Ilisia* of recent usage) Augusta, June 27, 1941; July 12, 1947 (B).

*venusta* O.S. (*Ilisia* of recent usage) Mount Desert, Beaver Dam, June 13 (A); Procter 1946.

**Subgenus HOPLOLABIS Osten Sacken**

*armata* O.S. Holeb, July 19 (B). Mount Desert; Procter 1946.

**Genus CHEILOTRICHIA Rossi****Subgenus EMPEDA Osten Sacken**

*stigmatica* (O.S.) (*Erioptera* (*Empeda*); former usage) Ashland, July 20, 1943 (B). Belfast, June 14, 1929. Mount Desert, Bar Harbor, bred from spruce

duff, emerged June 5, 1939 (B); in maple swamp, September 16, 1938 (B); Procter 1946.

### Subgenus GONEMPEDA Alexander

*nyctops* (Alex.) Mount Desert, Bubble Pond Inlet, June 21 (P); Upper Hadlock Pond, June 10 (P); Procter 1946. Winthrop (without exact data).

### Genus ORMOSIA Rondani

#### Subgenus ORMOSIA Rondani

*adirondacensis* Alex. Mount Desert, Breakneck Brook, Bubble Pond Inlet, Canyon Brook, June 16-23 (A); Procter 1946.

*arcuata* (Doane) Mount Desert, Bar Harbor, campground, September 12 (B); Procter 1946. Orono, May 10, 1914 (Parshley).

*bilineata* Dietz Augusta, May 31, 1939 (B).

*broweri* Alex. Mount Desert, Bar Harbor, May 15, 1935, May 16, 1937 (B); types.

*dentifera* Alex. Mount Desert, Bar Harbor, May 18 (B); Procter 1946. Orono, June 5-10, 1913 (A).

*luteola* Dietz Houlton, August 24, 1913 (A). Mount Desert, Echo Lake (J); Southwest Harbor, August 28-September 8 (A); Procter 1946. Orono, July 29, 1913 (A).

*manicata* (Doane) (*deviata* Dietz) Augusta, September 13, 1941 (B). Boothbay Harbor, September 12, 1940 (B). Mount Desert, Bar Harbor, September 5, 1937; September 20, 22, 1942 (B); Procter 1946 as *deviata*. Orono, June 5-8, 1913 (A).

*megaecera* Alex. Mount Desert, Cadillac Mt., Duck Brook, Eagle Lake, Witch Hole (A); Procter 1946.

*meigenii* (O.S.) Lower Penobscot area; Johnson 1925 a. Mount Desert; Procter 1946.

*mesocera* Alex. Mount Desert, Canada Brook, June 17 (A); Procter 1946 Mt. Katahdin, July 28, 1951 (Carson).

*monticola* (O.S.) Boothbay Harbor, September 12, 1941 (B). Ellsworth, August 10-21, 1913 (Stanwood). Mount Desert, Dry Mt., August 31, 1913 (A); Johnson 1925 a; Procter 1946. Mt. Katahdin, foot, August 22, 1913 (A). South Portland, September 4, 1913 (A).

*nigripila* (O.S.) Ellsworth, September 11, 1913 (Stanwood). Fryeburg, September 5, 1913 (A). Orono, September 7, 1913 (A). South Portland, September 4, 1913 (A). (Some records may be confused with *pygmaea*.)

*nimbipenni*- Alex. Mount Desert, Bar Harbor, September 7, 1938; August 16, 1942. Hunter's Beach, August 17, 1942 (B); Procter 1946. Mt. Katahdin, July 28, 1951 (Carson).

*nubila* (O.S.) Augusta, September 7, 1946 (B). Fort Kent, August 17, 1910 (J). Houlton, August 24, 1913 (A). Mount Desert; Procter 1946.

*pygmaea* (Alex.) Augusta, August 5, 1942 (B). Boothbay Harbor, September 12, 1941 (B). Ellsworth, July 4-August 17, 1913 (Stanwood). Goose Eye Mt., Oxford County, 3600 ft. July 24, 1956 (B). Holeb, July 19 (B). Mount Desert, Bar Harbor, September 17, 1936; on beach, September 18, 1937 (B); Procter 1946. Mt. Katahdin, 2900 ft., August 23, 1913 (A). Orono, June 12-July 29, 1913 (A). Round Mt., T 11 R 8, July 7, 1956 (B).

*rubella* (O.S.) Augusta, September 13, 1941 (B). Ellsworth, September 24, 1913 (Stanwood). Fort Kent, August 28, 1913 (Osborn). Fryeburg, September 5, 1913 (A). Houlton, August 24, 1913 (A). Mount Desert; Procter 1946. Mt. Kineo, August 17, 1913 (A). Orono, September 5, 1913 (A). South Portland, September 4, 1913 (A).

### Genus TASIOCERA Skuse

#### Subgenus DASYMOLOPHILUS Goetzghebuer

*ursina* (O.S.) Mount Desert, Witch Hole Brook, June 18, July 25 (A); Procter 1946.

## Genus MOLOPHILUS Curtis

## Subgenus MOLOPHILUS Curtis

- ei-ainpluni Alex. Mount Desert; Procter 1946. Oquossoc, July 15 (B)
- forcipulus (O.S.) Mount Desert, Procter 1946.
- fullonensis Alex. Mount Desert; Procter 1946.
- liiriipennis O.S. Mount Desert, Southwest Harbor, July 11; Procter 1946.  
Orono, June 10-14, 1913 (A).
- lariricolus Alex. Mount Desert, Sea Wall Bog, June 19 (A); Procter 1946.  
Mt. Katahdin, foot. June 19, 1936 (B).
- paludieolus Alex. Augusta. July 18, 22, 1942 (B) Mount Desert, Bar Harbor,  
July 3, 1936 (B); Procter 1946. Speckled Mt., Oxford County, July 31,  
1936 (B).
- pubipennis (O.S.) Augusta, July 11 (B). Bingham, July 17, 1937 (A). Capens,  
July 19 (J). Eastport, July 15, 1910 (J). Ellsworth, July 4-September 12,  
1913 (Stanwood). Mount Desert, Dry Mt., August 31, 1913 (A); Procter  
1946. Mt. Katahdin, foot, August 22, 1913 (A). Mt. Kineo, August 17,  
1913 (A). Orono, June 29-July 29, 1913 (A).
- soror Alex. Ellsworth, September 14, 1913 (Stanwood). Houlton, August 24,  
1913 (A); type material. Mount Desert, Southwest Harbor, September 11,  
1926 (A); type material.

## Genus TOXORHINA Loew

## Subgenus TOXORHINA Loew

- muliebris (O.S.) Augusta, July 18, 1942 (B). Ellsworth. July 18, 1913 (Stan-  
wood). Mount Desert, Breakneck Ponds, July 4, 1936; Southwest Harbor,  
bog, July 21, 1936 (B); Procter 1946. Veazie, Bangor Bog, August 5, 1913  
(A). Wales, July 9, 1913 (Frost).

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