

OCCASIONAL PAPERS OF THE MUSEUM OF  
ZOOLOGY

UNIVERSITY OF MICHIGAN

ANN ARBOR, MICHIGAN

UNIVERSITY OF MICHIGAN PRESS

AN ANNOTATED LIST OF MICHIGAN TRICHOPTERA<sup>1</sup>

BY JUSTIN W. LEONARD and FANNIE A. LEONARD

ONLY scattered records of Trichoptera from Michigan had appeared in the literature until H. H. Ross in a series of papers (Ross, 1938, 1941, 1944, 1946) listed a total of 101 species from various Michigan localities, chiefly in the Lower Peninsula. Leonard and Leonard (1949) recorded seven additional species, including four described as new. The present list comprises 181 species, 66 of which are recorded from Michigan for the first time. Fifty-nine genera are represented. Adult specimens studied totaled 5,767.

The major part of the material on which this paper is based has been accumulated over a fifteen-year period during which the authors have devoted considerable time to field studies of the ecology and life histories of aquatic insects in Michigan trout streams in order to obtain facts fundamental to an evaluation of the economic position of such forms, and to learn how the abundance of the more important species might be increased through the installation of environmental control structures. Caddis flies in both immature and adult stages are a very significant component of the diet of stream-

<sup>1</sup> Contribution from the Institute for Fisheries Research, Michigan Department of Conservation co-operating with the University of Michigan.

inhabiting trout at all seasons of the year. Our efforts, which have been confined almost wholly to swift, cold-water streams, were directed chiefly at questions of seasonal occurrence, numerical abundance, and availability of immature and adult aquatic insects to trout. Extension of collecting activities to the trichopteran fauna of lakes, warm-water streams, and small springs and runlets would, undoubtedly, yield a list for the state well in excess of two hundred species. It is hoped that publication of this paper may serve to stimulate interest in the order among insect collectors in Michigan.

Valuable assistance in field collecting during 1948 was received from C. L. Hess, M.D., an enthusiastic and able amateur student of aquatic insects. In 1947 and 1948 various staff members of the Fish Division, Michigan Department of Conservation, supplied useful local collections. Through the courtesy of Professor T. H. Hubbell, Curator of Insects, we were permitted to study a small but interesting miscellaneous lot of undetermined caddis flies in the collection of the University of Michigan Museum of Zoology. A few records have been obtained from the private collections of Professor C. O. Berg and Mr. Y. J. McGaha. It is a pleasure to acknowledge the assistance of Dr. H. H. Ross, Illinois Natural History Survey, who has checked our determinations, and made available to us all his unpublished records of Michigan Trichoptera (many of them based on material collected by ourselves) for inclusion in this list. We have utilized his county records and collection dates, but have not included his specimens in the tally of specimens examined.

Space limitations render it impractical to present fully detailed entries of specific collecting localities and dates for all specimens recorded. In the pages to follow collections are listed by counties, earliest and latest dates for the capture of adults are provided, and the total number of specimens studied is given.

Species are listed alphabetically for convenience in reference. The arrangement of genera and families follows that

adopted by Ross (1944). Names of species not previously recorded for Michigan are preceded by asterisks.

A graphic presentation of periods of adult occurrence is provided in Figure 1 for ready reference.

All specimens were collected by the authors unless otherwise indicated. Material from the collection of the University of Michigan Museum of Zoology is designated by the abbreviation (U.M.M.Z.), without mention of individual collectors. Records made available by Ross bear the abbreviation (R), also without mention of individual collectors. We have recorded larval and pupal examples in our collection only when county records depend solely on immature forms and have not included date of collection for such material.

Genitalic characters of many of the species listed have been figured by Ross (1944) in his comprehensive treatment of Illinois Trichoptera. Under each species not adequately illustrated in that work, a reference is given to published figures, generally those which have appeared most recently and which are presumably most readily accessible to collectors.

#### FAMILY RHYACOPHILIDAE

##### \**Rhyacophila acropedes* Banks

Described from Utah (Banks, 1914). The apparently widespread distribution in Michigan represents a great extension of the known range of the species.

Records—Aleona (R), Benzie (R), Lake, Montmorency. May 26—June 5, August 30: 11 males, 6 females.

Published figure: Ross, 1938*b*, Pl. 1, Fig. 6, male.

##### *Rhyacophila fuscula* (Walker)

Record.—Ontonagon (R). August 24.

##### *Rhyacophila manistee* Ross

Originally described from Crawford County (Ross, 1938*a*). Our collections indicate that *manistee* is by far the commonest species of *Rhyacophila* in Lower Peninsula trout streams.

Records.—Crawford, Grand Traverse, Lake, Mason, Ogemaw, Otsego. May 19–June 24: 139 males, 123 females.

Published figure: Ross, 1938a, Fig. 5, male.

*Rhyacophila melita* Ross

Originally described from Crawford County (Ross, 1938a).

Records.—Crawford, Grand Traverse, Montmorency. June 22–July 1: 5 males, 5 females.

Published figure: Ross, 1938a, Fig. 6, male.

\**Rhyacophila vibox* Milne

Record.—Grand Traverse. June 11: 1 male.

\**Glossosoma nigrrior* Banks

This is probably the most abundant and widely distributed species of caddis fly in the gravel-bottomed trout streams of Michigan.

Records.—Allegan, Benzie, Crawford, Grand Traverse, Houghton, Iron, Lake, Mackinac (R), Manistee (R), Montmorency, Ogemaw, Ontonagon (R), Oscoda, Otsego, Van Buren (R). May 2–September 22: 51 males, 71 females.

Published figure: Denning, 1942, Pl. 74, Fig. 1, male (as *Eomystra unica*).

*Agapetus hessi* Leonard and Leonard

Known as yet only from the type locality.

Records.—Crawford. June 17–July 14: 5 males, 17 females.

Published figures: Leonard and Leonard, 1949, Pl. I, Figs. 1, 2, 5, 7, male and female.

\**Protophila erotica* Ross

Records.—Crawford, Oscoda. July 11–August 4: 4 males, 110 females.

\**Protophila tenebrosa* (Walker)

Records.—Benzie (R), Lake, Montmorency, Ogemaw, Os-

coda. June 10–26, August 4–September 16: 33 males, 8 females.

## FAMILY PHILOPOTAMIDAE

*Trentonius distinctus* (Walker)

This species is well known for its interesting habit of producing adults throughout the year.

Records.—Allegan, Benzie (R), Cheboygan, Crawford, Gogebic, Grand Traverse, Lake, Montmorency, Presque Isle. January 18–December 22: 129 males, 22 females.

*Chimarra aterrima* Hagen

This species ranks with *Glossosoma nigrior* as one of the most numerous and widely distributed of the trout-stream caddis fauna.

Records.—Allegan, Benzie, Cheboygan, Crawford, Dickinson, Grand Traverse, Lake, Montmorency, Newaygo, Ontonagon (R), Presque Isle, Washtenaw. May 2–September 3: 92 males, 56 females.

\**Chimarra feria* Ross

Records.—Crawford, Lake. May 27–July 16: 2 males, 2 females.

*Chimarra obscura* (Walker)

Records.—Benzie (R), Crawford, Ingham (R), Ogemaw, Presque Isle, Van Buren (R). June 17–September 7: 7 males.

*Chimarra socia* Hagen

Records.—Arenac (R), Cheboygan (R), Crawford, Gogebic, Oscoda, Presque Isle, Tuscola (R). June 8–September 2: 24 males, 52 females.

## FAMILY PSYCHOMYIIDAE

*Phylocentropus placidus* (Banks)

Records.—Houghton (R), Ontonagon (R), Ottawa (R). May 26, August 20–22.

*Neureclipsis crepuscularis* (Walker)

Records.—Arenac (R), Branch (R), Crawford, Grand Traverse, Lake, Ogemaw. May 19–September 8: 14 males, 3 females.

*\*Polycentropus aureolus* (Banks)

Records.—Crawford, Lake. June 23–July 5: 6 males, 15 females.

*Polycentropus cinereus* Hagen

Although this species is widely distributed in the state, its comparatively infrequent occurrence in our own collections indicates that in Michigan it is more abundant in lakes than in streams.

Records.—Cheboygan (R), Crawford, Gogebic, Grand Traverse, Houghton (R), Kalkaska, Muskegon (R), Oceana (R), Ogemaw, Ontonagon (R), Roscommon (R), St. Joseph (R), Van Buren (R). May 28–September 16: 30 males, 5 females.

*Polycentropus confusus* Hagen

Records.—Crawford, Lake. June 13–August 5: 5 males, 6 females.

*Polycentropus crassicornis* Walker

Records.—Crawford, Lake, Newaygo (R). May 29–June 28: 1 male, 4 females.

*Polycentropus glacialis* (Ross)

Record.—St. Joseph (R). May 28.

*Polycentropus interruptus* (Banks)

Records.—Branch (R), Crawford, St. Joseph (R), Wash-tenaw. May 10–July 5: 2 males, 3 females.

*Polycentropus melanae* (Ross)

Records.—This species was described by Ross (1938a) from a unique male collected along the headwaters of the East

Branch of the Black River in Montmorency County on July 3. No further specimens have been taken.

Published figure: Ross, 1938*a*, Fig. 58, male.

\**Polycentropus pentus* Ross

Record.—Crawford. June 19: 1 male.

\**Polycentropus remotus* Banks

Record.—Lake. August 5: 1 female. We have also seen 2 males and 1 female taken in Emmet County on August 4 by Y. J. McGaha.

*Polycentropus sabulosus* Leonard and Leonard

Record.—Crawford (the type series). June 1–3: 3 males.

Published figures: Leonard and Leonard, 1949, Pl. II, Figs. 1–3, male.

\**Nyctiophylax uncus* Ross

This species was originally described from New York and New Hampshire (Ross, 1944). We found it common on the Pere Marquette River near Baldwin during the summer of 1947, but have not taken it elsewhere.

Record.—Lake. June 28–August 10: 31 males, 24 females.

*Nyctiophylax vestitus* (Hagen)

Records.—Crawford, Ingham (R), Kalkaska, Lake, Mackinac (R), Montmorency, Oceana (R), Ogemaw, Ottawa (R), Washtenaw. June 10–August 27: 74 males, 60 females.

*Cyrnellus marginalis* (Banks)

Records.—Allegan (R), Ottawa (R). June 20–July 26.

*Cernotina spicata* Ross

Records.—Two male paratypes of *spicata* were collected along the East Branch of the Black River in Montmorency County on July 3. We have no other Michigan records.

*Lype diversa* (Banks)

Records.—Crawford, Grand Traverse, Lake, Montmorency, Ogemaw. May 31–August 24: 179 males, 77 females.

*Psychomyia flavida* Hagen

Records.—Allegan, Crawford, Grand Traverse, Lake, Mason (R), Mecosta (R), Montmorency, Ogemaw, Oscoda, Otsego, Presque Isle, Van Buren (R). May 22–September 16: 3 males, 150 females.

## FAMILY HYDROPSYCHIDAE

*\*Parapsyche apicalis* (Banks)

Records.—Benzie, Lake (R), Montmorency, Oceana. May 14–September 2: 16 males, 7 females.

Published figures: Betten, 1934, Pl. 16, Figs. 14, 15, 17, male.

*\*Arctopsyche ladogensis* (Kolenati)

See *Diplectrona modesta*, below.

Record.—Marquette. September 6: 1 larva (determined by Ross).

Published figure: McLachlan, 1868, Pl. 14, Fig. 1, male.

*\*Diplectrona modesta* Banks

This species, like the preceding one, appears to be rare. We have taken four adults along a tiny, spring-fed brook which crosses the Lake-Mason county line, and one larva from a similar situation, Hunt Creek, in Montmorency County.

Records.—Lake, Mason, Montmorency. June 9: 1 male, 3 females.

*Potamyia flava* (Hagen)

This is a common, widely distributed species, but appears to be of much less frequent occurrence in trout streams than in larger, warmer waters.

Records.—Berrien (R), Crawford, Kent (R), Lake, Van Buren (R). May 23–September 17: 6 females.



*Hydropsyche aerata* Ross

Records.—Berrien (R), Kent (R). May 23.

*Hydropsyche betteni* Ross

Records.—Allegan, Branch (R), Ingham (R), Montmorancy, Oakland, Ogemaw, Van Buren (R), Washtenaw. May 19–August 29: many larvae, 2 males.

*Hydropsyche bidens* Ross

Records.—Kalamazoo (R), Kent (R), Ottawa (R), Van Buren (R). May 23–July 13.

*\*Hydropsyche bifida* Banks

Our record of this species is based on a larva taken from the Huron River.

Record.—Washtenaw. 1 larva.

*Hydropsyche bronta* Ross

Records.—Branch (R), Ingham (R), Lake (R), Mecosta (R), Ogemaw. May 19–28, July 26: 1 male.

*Hydropsyche cheilonis* Ross

Records.—Ingham (R), Ogemaw, Washtenaw. May 15–September 23: 3 males.

*Hydropsyche cuanis* Ross

Records.—Branch (R), Genesee (R). May 19–20.

*Hydropsyche dicantha* Ross

Record.—Van Buren (R). August 21.

*Hydropsyche frisoni* Ross

Records.—Branch (R), Crawford (R), Ingham (R). May 2–19, August 17.

*Hydropsyche leonardi* Ross

Records.—Crawford (R), Washtenaw. May 2–15: 1 male.  
Published figure: Ross, 1938a, Fig. 73, male.

*Hydropsyche morosa* Hagen

Records.—Crawford, Oscoda (R). May 29–September 16: 23 males, 1 female.

*Hydropsyche orris* Ross

Records.—Berrien (R), Kent (R), Oakland, Van Buren (R). May 23, August 19–September 17: 1 male.

*Hydropsyche phalerata* Hagen.

Records.—Washtenaw, Wayne (R). May 15, July 11: 1 male.

*Hydropsyche recurvata* Banks

Records.—Chippewa (R), Sanilac (U.M.M.Z). June 29, August 18: 1 male.

*Hydropsyche slossonae* Banks

This and the following species, *sparna*, are without question the most abundant and widely distributed species of the genus in Michigan trout streams. From May through September they appear on the wing in consistently large numbers. The females often congregate at light sources near streams; the males appear not to be strongly phototropic.

Records.—Alcona (R), Allegan, Benzie, Crawford, Kent, Lake, Montmorency, Ogemaw, Ottawa (R), Van Buren (R). May 22–August 25: 87 males, 84 females.

*Hydropsyche sparna* Ross

See note under *slossonae*, above.

Records.—Crawford, Emmet (R), Grand Traverse, Lake, Montmorency, Ogemaw, Otsego, Van Buren (R). May 14–September 16: 59 males, 46 females.

\**Hydropsyche vexa* Ross

Record.—Crawford. June 3–July 14: 3 males, 1 female.

\**Hydropsyche walkeri* Betten and Mosely

Records.—Crawford, Oscoda, Presque Isle. June 8–August 4: 7 males, 5 females.

*Cheumatopsyche analis* (Banks)

This species was recorded for Michigan by Denning (1943) as *C. pettiti*.

Records.—Benzie (R), Crawford, Genesee (R), Hillsdale (R), Ingham (R), Kent (R), Lake, Lapeer (R), Lenawee, Ogemaw, Ontonagon (R), Van Buren (R). April 25–“October”: 95 males, 73 females.

\**Cheumatopsyche aphantia* Ross

Record.—Crawford. June 24: 1 male, 1 female.

*Cheumatopsyche campyla* Ross

Records.—Berrien (R), Crawford, Ingham (R), Kent (R), Oakland (U.M.M.Z.), Ontonagon (R), Van Buren (R), Wash-tenaw (U.M.M.Z.), Wayne (U.M.M.Z.). May 2–October 3: 9 males, 2 females.

\**Cheumatopsyche gracilis* (Banks)

Records.—Crawford (R), Lake, Mecosta (R), Otsego. May 22–June 23: 24 males, 4 females.

*Cheumatopsyche oxa* Ross

Records.—Branch (R), Crawford, Iosco (R), Lake, Newaygo (R), Van Buren (R). May 19–September 7: 6 males, 1 female.

*Cheumatopsyche sordida* (Hagen)

Records.—Iosco (R), Van Buren (R). July 19–August 21.

*Macronemum zebratum* (Hagen)

Records.—Berrien (R), Ingham (R), Lenawee (R), Van Buren (R), Washtenaw (U.M.M.Z.), Wayne (U.M.M.Z.). June 21–August 25: 1 male, 1 female.

## FAMILY HYDROPTILIDAE

*Leucotrichia pictipes* (Banks)

Records.—Mason (R), Mecosta (R), Newaygo. May 22–June 6: 29 males, 10 females.

*Agraylea multipunctata* Curtis

Records.—Crawford, Kalamazoo (R), Roscommon (R). May 10–June 18, August 11–24: 2 males, 7 females.

*Oxyethira forcipata* Mosely

Described originally from "Michigan, U. S. A." (Mosely, 1934).

Record.—Oceana (R). August 26.

Published figures: Mosely, 1934, Figs. 41–42, male.

*Oxyethira michiganensis* Mosely

Described from "Michigan, U. S. A." (Mosely, 1934). We have seen no specimens of this species.

Published figures: Mosely, 1934, Figs. 38–40, male.

*Oxyethira serrata* Ross

Record.—Roscommon (R). June 15–18.

*Oxyethira zeronia* Ross

The male holotype of this species, the only specimen known to date, was collected by Ross from Twin Lake, in Houghton County. August 20–22.

*Orthotrichia cristata* Morton

Record.—Kalkaska. June 22: 1 male.

*Hydroptila armata* Ross

Records.—Branch (R), Genesee (R), Kent (R), Lenawee (R). May 19–30.

\**Hydroptila callia* Denning

This species was described from North Carolina (Denning,

1947). Its capture in Michigan suggests that it may occur over a wide range.

Record.—Crawford. August 23: 1 male.

Published figure: Denning, 1947, Pl. 4, Fig. 4, male.

\**Hydroptila consimilis* Morton

Records.—Crawford, Lake. July 12–September 16: 96 males, 34 females.

*Hydroptila hamata* Morton

Records.—Benzie (R), Crawford. August 11–“October”:  
2 males, 2 females.

*Hydroptila perdita* Morton

Records.—Benzie (R), Kent (R). May 23, “October.”

*Hydroptila spatulata* Morton

Record.—Kent (R). May 23.

\**Hydroptila valhalla* Denning

Record.—Crawford. August 11: 1 male.

Published figure: Denning, 1947, Pl. 15, Fig. 3, male.

*Hydroptila waubesiana* Betten

Record.—Benzie (R). “October.”

\**Hydroptila wyomia* Denning

Denning (1947) described this species from Wyoming material. The present record extends the range considerably.

Record.—Crawford. August 23: 1 male.

Published figure: Denning, 1947, Pl. 4, Fig. 5, male.

\**Mayatrichia ayama* Mosely

Record.—Crawford. August 24: 6 males.

FAMILY PHERYGANEIDAE

\**Agrypnia colorata* Hagen

Although long known from Canada, *colorata* appears not to

have been recorded previously from the United States.

Records.—Crawford, Charlevoix: Hog Island (U.M.M.Z.), Cheboygan (U.M.M.Z.). July 4–28: 6 males.

Published figures: Milne, 1931, Pl. 16, Figs. 10–15, male and female (as *Prophryganea bradorata*).

\**Agrypnia improba* (Hagen)

We have seen a single specimen of this species, collected by the Michigan Biological Survey in 1909.

Record.—Dickinson (U.M.M.Z.). July 10: 1 male.

Published figures: Milne, 1931, Pl. 15, Figs. 5, 6, 9, male.

*Agrypnia straminea* Hagen

Records.—Cheboygan (McGaha), Houghton (R), Ontonagon (R). August 20–22: 1 male, 2 females.

\**Agrypnia vestita* (Walker)

Records.—Lake, Livingston (U.M.M.Z.), Washtenaw (Berg), Wayne (U.M.M.Z.). July 7–24, November 14: 1 larva, 3 males.

\**Fabria inornata* (Banks)

Record.—Livingston (U.M.M.Z.). May 28: 1 male.

\**Oligostomis ocelligera* (Walker)

Record.—Washtenaw (R). May 20.

*Banksiola canadensis* (Banks)

Records.—Crawford, Ogemaw. June 11–July 25: 4 males.

Published figures: Leonard and Leonard, 1949, Pl. II, Figs. 4–5, male.

*Banksiola selina* Betten

Records.—Berrien (U.M.M.Z.), Charlevoix: Beaver and High Islands (U.M.M.Z.), Cheboygan (U.M.M.Z.), Chippewa (U.M.M.Z.), Crawford, Dickinson (U.M.M.Z.), Huron (U.M.M.Z.), Lake, Schoolcraft (U.M.M.Z.), Washtenaw (U.M.M.Z.). June 8–August 21: 16 males, 17 females.

*\*Banksiola smithi* (Banks)

Records.—Cheboygan, Dickinson (U.M.M.Z.). July 19–29: 3 males, 1 female.

Published figures: Banks, 1914, Pl. 7, Fig. 2.

*Ptilostomis angustipennis* (Hagen)

Records.—Crawford, Montmorency, Roscommon (R). June 15–July 16: 2 males.

*Ptilostomis ocellifera* (Walker)

Records.—Alpena (R), Berrien (U.M.M.Z.), Cheboygan (U.M.M.Z.), Crawford, Gratiot (U.M.M.Z.), Lake, Lapeer (U.M.M.Z.), Livingston (U.M.M.Z.), Oakland (U.M.M.Z.), Oceana (U.M.M.Z.), Ogemaw, Roscommon (R), Washtenaw (U.M.M.Z.), Wayne (U.M.M.Z.). May 22–August 13, November 19: 15 males, 10 females.

*Ptilostomis postica* (Walker)

Records.—Berrien (R), Kent (R), Lake. May 29–June 25, September 2: 1 male.

*Ptilostomis semifasciata* (Say)

Records. — Crawford, Dickinson (U.M.M.Z.), Ingham (U.M.M.Z.), Keweenaw (U.M.M.Z.), Marquette (U.M.M.Z.), Oscoda (U.M.M.Z.), Schoolcraft (U.M.M.Z.), Washtenaw (U.M.M.Z.), Wayne (U.M.M.Z.). May 23–August 25: 10 males, 10 females.

*Phryganea cinerea* Walker

Records.—Bay (U.M.M.Z.), Charlevoix: Beaver, High, and Hog Islands (U.M.M.Z.), Cheboygan (U.M.M.Z.), Crawford, Dickinson (U.M.M.Z.), Gogebic (U.M.M.Z.), Huron (U.M.M.Z.), Ioseo (U.M.M.Z.), Kalamazoo (R), Lake, Livingston (U.M.M.Z.), Mackinac (R), Muskegon (U.M.M.Z.), Washtenaw, Wayne (U.M.M.Z.). April 15–August 28: 25 males, 21 females.

*Phryganea sayi* Milne

Record.—Washtenaw (Berg). No date: 1 male.

## FAMILY LIMNEPHILIDAE

\**Dicosmoecus quadrinotatus* (Banks)

This species was originally described from Newfoundland. Its apparent rarity is attested by our collection of only a single specimen, which was taken at the Hunt Creek Experiment Station, scene of intensive year-round collecting for nearly four years.

Record.—Montmorency. September 3: 1 male.

Published figure: Banks, 1908, Pl. 2, Fig. 14, male.

\**Platycentropus indistinctus* (Walker)

Record.—Otsego (U.M.M.Z.). July 29: 1 male.

Published figure: Betten and Mosely, 1940, Fig. 80, male.

*Platycentropus plectrus* Ross

Records.—Benzie (R), Crawford, Dickinson (U.M.M.Z.). July 23–September 16: 5 males, 1 female.

Published figures: Ross, 1938*a*, Fig. 111, male; Leonard and Leonard, 1949, Pl. III, Fig. 3, female.

*Platycentropus radiatus* (Say)

Records. — Crawford, Dickinson (U.M.M.Z.), Gogebic (U.M.M.Z.), Keweenaw (U.M.M.Z.), Lake, Livingston (U.M.M.Z.), Menominee (U.M.M.Z.), Oakland (U.M.M.Z.), Washtenaw (U.M.M.Z.). May 22–August 13: 8 males, 20 females.

*Glyphotaelius hostilis* Hagen

Michigan Biological Survey.

The two specimens seen by us were collected in 1909 by the Record.—Dickinson (U.M.M.Z.). August 12–13, 2 females.

Published figure: Betten, 1934, Pl. 43, Fig. 3, male.

\**Astenophylax argus* (Harris)

This is the largest caddis fly in the state and the most strik-



ingly marked. Since the majority of our specimens were taken at light sources, the preponderance of females collected suggests that they are more strongly phototropic than the males.

Records.—Crawford, Lake, Luce (U.M.M.Z.), Oscoda (U.M.M.Z.). June 20–July 5: 2 males, 19 females.

Published figure: Betten, 1934, Pl. 44, Fig. 7, male.

*Hesperophylax designatus* (Walker)

Records.—Alcona (R), Crawford, Lake, Montmorency, Oceana (U.M.M.Z.), Oscoda, Wexford. May 14–August 30: 10 males, 1 female.

*Leptophylax gracilis* Banks

Records.—Ingham (R), Lenawee (R), Montmorency, Washtenaw (U.M.M.Z.). June 24–July 29: 2 males, 1 female.

\**Limnephilus* sp.<sup>1</sup>

Records.—Crawford, Livingston (U.M.M.Z.). May 3, June 5–26: 4 males.

\**Limnephilus bimaculatus* Walker

Records.—Crawford, Dickinson (U.M.M.Z.), Gogebic (R), Gratiot (U.M.M.Z.), Lake, Marquette (U.M.M.Z.), Ogemaw, Schoolcraft (U.M.M.Z.), Washtenaw (U.M.M.Z.). June 15–August 24: 10 males, 32 females.

*Limnephilus consocius* Walker

Records.—Cheboygan (R), Crawford, Gogebic, Ingham (R), Lake, Montmorency, Ogemaw, Ontonagon (R), Washtenaw (U.M.M.Z.). May 16–September 14: 25 males, 11 females.

\**Limnephilus externus* Hagen

Record.—Crawford. October 10: 1 male.

Published figure: Ross, 1938b, Pl. 9, Fig. 80, male.

<sup>1</sup> A description of this species will be published by H. H. Ross at an early date.

\**Limnephilus hyalinus* Hagen

A unique female in the collection of the University of Michigan Museum of Zoology agrees well with published descriptions and figures of *hyalinus*.

Record.—Cheboygan (U.M.M.Z.). “August”: 1 female.

\**Limnephilus indivisus* Walker

Records.—Charlevoix (U.M.M.Z.), Cheboygan (U.M.M.Z.), Crawford, Ingham (R), Kent (R), Keweenaw (U.M.M.Z.), Lake, Lapeer (U.M.M.Z.), Livingston (U.M.M.Z.), Macomb (U.M.M.Z.), Mason (R), Washtenaw (U.M.M.Z.), Wayne (U.M.M.Z.), Wexford. May 31–October 3: 27 males, 9 females.

Published figures: Betten and Mosely, 1940, Fig. 65, male; Ross, 1944, Fig. 668, female.

\**Limnephilus infernalis* (Banks)

Individuals of this species have been taken only at Lake Roland in the Keweenaw Peninsula.

Record.—Houghton. September 8: 1 male, 4 females.

Published figure: Banks, 1914, Pl. 8, Fig. 7, male (as *Anisogamus*).

\**Limnephilus moestus* Banks

Records.—Crawford, Dickinson (U.M.M.Z.), Montmorency, Ogemaw. May 26–August 17: 5 males, 2 females.

\**Limnephilus ornatus* Banks

Records.—Crawford, Montmorency. May 26–July 26: 2 males, 1 female.

*Limnephilus ozburni* (Milne)

Records. — Crawford, Dickinson (U.M.M.Z.), Gratiot (U.M.M.Z.). June 23–July 21: 10 males, 14 females.

Published figures: Leonard and Leonard, 1949, Pl. III, Figs. 1–2, 4–6, male and female.

*\*Limnephilus rhombicus* (Linnaeus)

Records.—Barry, Cheboygan (U.M.M.Z.), Crawford, Montmorency (U.M.M.Z.). June 5–August 30: 5 males, 9 females.

*Limnephilus rossi* Leonard and Leonard

Records.—Crawford, Montmorency. September 17–October 6: 16 males.

Published figures: Leonard and Leonard, 1949, Pl. IV, Figs. 1–2, male.

*\*Limnephilus sericeus* (Say)

This was the most prevalent species of *Limnephilus* seen along the Au Sable River during the 1948 season. Adults occurred in large numbers throughout the summer.

Records.—Dickinson (R), Crawford. May 31–September 12: 103 males, 32 females.

*Limnephilus submonilifer* Walker

Records.—Branch (R), Crawford, Genesee (R), Grand Traverse (R), Hillsdale (R), Ingham (R), Keweenaw (U.M.M.Z.), Lake, Lapeer (R), Lenawee (R), Livingston (U.M.M.Z.), Montmorency, Muskegon (R), Oakland (U.M.M.Z.), Ogemaw, Roscommon (R), St. Joseph (R), Washtenaw, Wayne (U.M.M.Z.). March 28, May 8–October 12: 13 males, 9 females.

*Pycnopsyche antica* (Walker)

Records.—Crawford, Macomb (U.M.M.Z.), Montmorency, Washtenaw (U.M.M.Z.). July 16–September 3: 16 males.

*Pycnopsyche guttifer* (Walker)

Records.—Cheboygan (U.M.M.Z.), Crawford, Ingham (Banks, 1907, as *P. similis*), Lake, Montmorency, Schoolcraft (Banks, 1907, as *P. similis*), Van Buren (R). August 15–October 8: 37 males, 10 females.

*Pycnopsyche lepida* (Hagen)

Records.—Benzie (U.M.M.Z.), Charlevoix: Hog Island

(U.M.M.Z.), Crawford, Dickinson (U.M.M.Z.), Gogebic (U.M.M.Z.), Lake, Macomb (U.M.M.Z.), Montmorency, Oakland (U.M.M.Z.), Van Buren (R), Washtenaw (U.M.M.Z.). July 3–October 15: 78 males, 73 females.

Published figures: Betten and Mosely, 1940, Figs. 77, 78, male and female.

*Pycnopsyche subfasciata* (Say)

No individuals of this species were collected. Dr. Ross supplied records from two counties.

Records.—Ingham (R), Mason (R). September 15.

*Caborius punctatissimus* (Walker)

Records.—Crawford, Lake, Macomb (U.M.M.Z.). August 23–September 3: 7 males, 2 females.

Published figures: Betten and Mosely, 1940, Fig. 57, male; Ross, 1944, Figs. 685, 688, male and female.

*Frenesia missa* (Milne)

Adults of this species, frequently in evidence on mild days in winter, have been taken by us in greatest numbers during November and December. All the adult material was collected between October and February except for a single male from East Fish Lake, Montmorency County, taken in late June.

Records.—Crawford, Lake, Montmorency. October 27–February 2, June 29: 43 males, 51 females.

\**Glyphopsyche irrorata* (Fabricius)

This species and the one following appear to be members of the winter fauna, which may explain their rarity in collections.

Record.—Montmorency. March 12: 1 male, 1 female.

Published figures: Ross, 1944, Fig. 693, male; Betten and Mosely, 1940, Fig. 86, female.

*Psychoglypha subborealis* (Banks)

See note on *Glyphopsyche irrorata*, above.

Record.—Montmorency. January 18–March 30: 3 males.  
Published figure: Banks, 1924, Pi. 3, Fig. 32, male.

*Neophylax autumnus* Vorhies

Records.—Alcona (R), Crawford, Gladwin, Lake, Montmorency, Oscoda. August 23–November 6: 32 males, 9 females.

*Neophylax fuscus* Banks

Records.—Crawford, Ingham (Banks, 1903), Lake. September 14–October 27: 19 males, 11 females.

*Neophylax oligius* Ross

This species was originally described (Ross, 1938*a*) from Michigan, the holotype from Ontonagon County, and paratypes from Benzie County.

Records.—Benzie (R), Crawford, Kalamazoo (R), Ontonagon (R). August 23–October 3: 1 male.

Published figure: Ross, 1938*a*, Fig. 108, male.

\**Oligophlebodes minutus* (Banks)

Previous records for this species and its congeners have been from various Rocky Mountain states.

Record.—Montmorency. “1940”: 5 males.

FAMILY MOLANNIDAE

\**Molanna blenda* Sibley

Record.—Crawford. July 26: 1 male.

*Molanna flavicornis* Banks

Records.—Charlevoix: Hog Island (U.M.M.Z.), Cheboygan (U.M.M.Z.), Crawford, Gogebic, Houghton (R), Mackinac (R), Roscommon (R), Wexford. June 15–August 24: 15 males, 5 females.

*Molanna tryphena* Betten

Records.—Branch (R), Crawford, Grand Traverse (R), Van Buren (R). May 19–August 21: 6 males.

*Molanna uniophila* Vorhies

Records.—Antrim (R), Branch (R), Charlevoix: Hog Island (U.M.M.Z.), Crawford, Grand Traverse, Houghton (R), Ingham (R), Kalkaska, Kent (R), Lake, Mackinac (R), Marquette (U.M.M.Z.), Ogemaw, Ontonagon (R), Roscommon (R), St. Joseph (R). May 19–September 7: 37 males, 9 females.

## FAMILY LEPTOCERIDAE

\**Leptocerus americanus* (Banks)

Records.—Crawford, Lake, Lenawee (R), Ottawa (R), Van Buren (R). June 28–August 11: 22 males, 26 females.

*Leptocella albida* (Walker)

Records.—Benzie (R), Charlevoix: Beaver Island (U.M.M.Z.), Cheboygan (U.M.M.Z.), Crawford, Gogebie, Grand Traverse, Ingham (R), Kalamazoo (R), Kalkaska, Lake, Mackinac (R), Presque Isle (R), Roscommon (R), St. Joseph (R), Washtenaw (U.M.M.Z.). May 28–September 16: 72 males, 44 females.

*Leptocella diarina* Ross

Record.—Berrien (R). July 13.

*Leptocella exquisita* (Walker)

Records.—Berrien (R), Cheboygan (U.M.M.Z.), Crawford, Oceana (R). July 5–August 26: 2 males, 2 females.

*Leptocella pavidata* (Hagen)

Records.—Cheboygan (R), Houghton (R), Oscoda. July 26–August 22: 1 male.

*Athripsodes alagmus* Ross

Records.—Barry, Crawford, Van Buren (R). July 9–August 24: 6 males, 5 females.

*Athripsodes angustus* (Banks)

Records.—Crawford, Ingham (R), Lake. July 8–September 5: 24 males, 1 female.

\**Athripsodes annulicornis* (Stephens)

Record.—Lake. June 4: 1 male.

\**Athripsodes arielles* Denning

This species, originally described from Minnesota (Denning, 1942), was one of the most abundant members of the midsummer caddis fauna along the Au Sable River in 1948.

Records.—Crawford, Lake. July 7–August 24: 37 males, 2 females.

Published figure: Denning, 1942, Pl. 6, Fig. 3, male.

\**Athripsodes cancellatus* (Betten)

Record.—Crawford. July 5, August 11: 2 males.

\**Athripsodes dilutus* (Hagen)

Records.—Antrim (R), Berrien (U.M.M.Z.), Crawford, Lake, Washtenaw. July 3–August 11: 48 males, 16 females.

\**Athripsodes flavus* (Banks)

Record.—Ingham. No date: 10 larvae.

\**Athripsodes nephus* Ross

Record.—Crawford. July 26: 2 males.

\**Athripsodes pfadti* Denning

Record.—Crawford. July 22–August 2: 8 males, 2 females.

Published figure: Denning, 1948, Pl. 3, Fig. 2, male.

\**Athripsodes punctatus* (Banks)

Record.—Crawford. July 5: 1 male, 4 females.

*Athripsodes resurgens* (Walker)

Records.—Berrien (U.M.M.Z.), Crawford, Lake, Mackinac (R). June 3–August 13: 51 males, 5 females.

*Athripsodes tarsi-punctatus* (Vorhies)

Records.—Cheboygan (U.M.M.Z.), Crawford, Ingham (R), Lake, Mackinac (R), Marquette (R), Oceana (R), Ottawa (R), Van Buren (R). June 20–August 26: 35 males, 10 females.

\**Athripsodes transversus* (Hagen)

Record.—Crawford. August 24: 2 males.

*Athripsodes scopulosus* Leonard and Leonard

Record.—Gogebic. June 17: 1 male (holotype).

Published figures: Leonard and Leonard, 1949, Pl. V, Figs. 1–4, 9, male.

\**Athripsodes wetzeli* Ross

Record.—Crawford. July 26–August 11: 20 males, 2 females.

Published figure: Ross, 1941, Pl. 10, Fig. 74, male.

*Oecetis anara* (Banks)

Records.—Crawford, Kalamazoo (R), Lake, Ontonagon (R). June 5–July 3, August 22: 83 males, 10 females.

*Oecetis cinerascens* (Hagen)

Records.—Cheboygan (U.M.M.Z.), Crawford, Dickinson (U.M.M.Z.), Gogebic, Ingham (R), Lake, Livingston (U.M.M.Z.), Montmorency, Ottawa (R), St. Joseph (R), Van Buren (R), Washtenaw (R). May 28–September 7, November 14: 12 males, 7 females.

*Oecetis immobilis* (Hagen)

Record.—Houghton (R). August 20.

*Oecetis inconspicua* (Walker)

Records.—Cheboygan (U.M.M.Z.), Crawford, Gogebic, Grand Traverse, Houghton (R), Huron (U.M.M.Z.), Ingham (R), Keweenaw (R), Lake, Mackinac (R), Menominee (R),



Oceana (R), Ontonagon (R), Otsego, Ottawa (R), Roscommon (R), Van Buren (R), Wayne (U.M.M.Z.). June 5–October 3: 53 males, 65 females.

*Oecetis osteni* Milne

Records.—Crawford, Grand Traverse, Oceana (R), Van Buren (R), Washtenaw. June 22–August 21: 3 males, 45 females.

\**Oecetis persimilis* (Banks)

Records.—Crawford, Lake. June 24–September 16: 7 males.

*Triaenodes aba* Milne

Records.—Ingham (R), Lake, Ottawa (R), Washtenaw (R). June 20–July 18, November 14: 4 females.

\**Triaenodes baris* Ross

Record.—Crawford. June 26–July 4: 1 male, 6 females.

*Triaenodes ignita* (Walker)

Records.—Crawford, Lake. July 12–August 15: 8 males, 6 females.

\**Triaenodes injusta* (Hagen)

Records.—Crawford, Ingham (R), Van Buren (R), Wayne (R), Washtenaw (Berg). June 23–August 25: 1 larva, 2 males, 1 female.

*Triaenodes marginata* Sibley

Records. — Cheboygan (R), Crawford, Dickinson (U.M.M.Z.), Ingham (R), Lake, St. Clair (R), Van Buren (R). June 27–September 7: 36 males, 79 females.

\**Triaenodes tarda* Milne

Records. — Crawford, Kalamazoo (R), Livingston (U.M.M.Z.), Oceana (R), Van Buren (R), Washtenaw (R). May 14–August 26: 100 males, 21 females.

*Mystacides longicornis* (Linnaeus)

Records.—Cheboygan (R), Crawford, Gogebic, Roscommon (R), St. Joseph (R). June 17–August 29: 5 males, 1 female.

*Mystacides sepulchralis* (Walker)

Records.—Alger (U.M.M.Z.), Benzie (R), Branch (R), Cheboygan (U.M.M.Z.), Crawford, Dickinson (U.M.M.Z.), Gogebic, Houghton (R), Ingham (R), Kalkaska, Keweenaw (R), Lake (U.M.M.Z.), Montmorency, Oceana (U.M.M.Z.), Ontonagon (R), Oscoda, Presque Isle, Roscommon (R), St. Joseph (R). May 18–September 23: 64 males, 35 females.

*\*Setodes incerta* (Walker)

Records.—Cheboygan (R), Crawford, Lake. July 9–August 20: 53 males, 48 females.

*Setodes oligia* (Ross)

Records.—Antrim (R), Cheboygan (R), Crawford, Wayne (R). July 11–August 24: 1 male, 1 female.

## FAMILY GOERIDAE

*Goera stylata* Ross

Records.—Crawford, Gogebic, Grand Traverse, Lake. May 24–June 26: 4 males, 11 females.

## FAMILY LEPIDOSTOMATIDAE

*\*Lepidostoma bryanti* (Banks)

Records.—Benzie, Crawford, Grand Traverse, Lake, Montmorency, Ogemaw. June 2–27: 27 males, 22 females.

Published figures: Leonard and Leonard, 1949, Pl. IV, Figs. 3–4, male and female.

*\*Lepidostoma costalis* (Banks)

Records.—Crawford, Montmorency. May 26, August 10–30: 18 males, 3 females.

Published figures: Ross, 1946, Pl. 2, Fig. 15, male; Pl. 3, Fig. 31, female.

\**Lepidostoma griseum* (Banks)

Records.—Crawford, Montmorency. August 9–September 7: 3 males.

Published figures: Ross, 1946, Pl. 2, Fig. 17, female; Pl. 3, Fig. 32, male.

\**Lepidostoma sackeni* (Banks)

Records.—Crawford, Montmorency. August 11–14: 2 males.

Published figures: Ross, 1946, Pl. 2, Fig. 19, male.

*Lepidostoma strophis* Ross

Records.—Benzie (R), Crawford, Montmorency. August 24–September 21: 32 males, 10 females.

Published figures: Ross, 1938*a*, Fig. 120, male; Ross, 1946, Pl. 3, Fig. 24, female.

*Lepidostoma togatum* (Hagen)

Records.—Cheboygan (R), Crawford, Lake, Mackinac (R), Montmorency, Oscoda. June 6–August 23: 83 males, 103 females.

Published figures: Betten, 1934, Pl. 65, Figs. 1–8, male and female; Ross, 1946, Pl. 3, Fig. 20, female.

FAMILY BRACHYCENTRIDAE

*Micrasema rusticum* (Hagen)

Records.—Benzie, Branch (R), Cheboygan, Crawford, Grand Traverse, Lake, Montmorency, Oscoda, Presque Isle. May 2–August 30: 50 males, 148 females.

*Brachycentrus americanus* (Banks)

Records.—Benzie, Crawford, Gogebic, Grand Traverse, Iron, Lake. May 27–September 9: 22 males, 45 females.

*Brachycentrus fuliginosus* Walker

Records.—Crawford, Lake. May 30–June 10: 3 males, 11 females.

Published figures: Leonard and Leonard, 1949, Pl. V, Figs. 5–8, male; Betten and Mosely, 1940, Fig. 85, female.

*Brachycentrus incanus* Hagen

Record.—St. Clair (Denning, 1941). No date.

Published figures: Denning, 1941, Fig. 8, male.

*Brachycentrus lateralis* (Say)

Records.—Crawford, Lake, St. Clair (R). May 2–June 4: 26 males, 19 females.

\**Brachycentrus numerosus* (Say)

Records.—Allegan (larva only), Crawford, Grand Traverse, Lake, Otsego. May 14–August 15: 5 males, 45 females.

*Helicopsyche borealis* (Hagen)

Records.—Benzie, Branch (R), Cheboygan, Crawford, Delta (R), Genesee (R), Gogebic, Grand Traverse, Ingham (R), Lake, Lenawee (R), Mackinac (R), Mason (R), Otsego, Presque Isle, Roscommon (R), Van Buren (R), Wexford. May 24–August 23: 259 males, 114 females.

## LITERATURE CITED

## BANKS, NATHAN

- 1903 Some New Neuropteroid Insects. Journ. N. Y. Entomol. Soc., 11: 236–43.
- 1907 Descriptions of New Trichoptera. Proc. Wash. Entomol. Soc., 8(3–4): 117–33, Pls. 8–9.
- 1908 Some Trichoptera, and Allied Insects, from Newfoundland. Psyche, 15(4): 61–67, Pl. 2.
- 1914 American Trichoptera—Notes and Descriptions. Can. Entomol., 46: 149–56, 201–5, 252–58, 261–68, Pls. 9, 10, 15, 20.
- 1924 Descriptions of New Neuropteroid Insects. Bull. Harvard Univ. Mus. Comp. Zool., 65: 421–55, 4 pls.

## BETTEN, CORNELIUS

- 1934 The Caddis Flies or Trichoptera of New York State. Bull. N. Y. State Mus., 292: 1–576, 61 figs., 67 pls.

## BETTEN, CORNELIUS, and MARTIN E. MOSELY

- 1940 The Francis Walker Types of Trichoptera in the British Museum. London: Brit. Mus. Nat. Hist. 248 pp., 122 figs.

## DENNING, DONALD G.

- 1941 Descriptions and Notes of New and Little Known Species of Trichoptera. *Ann. Entomol. Soc. Amer.*, 34(1): 195-203, 12 figs.
- 1942 Descriptions of New Trichoptera from the United States. *Can. Entomol.*, 74(3): 46-51, 6 figs.
- 1943 The Hydropsychidae of Minnesota (Trichoptera). *Entomol. Amer.*, 23(2): 101-71, 41 figs.
- 1947 New Species and Records of Nearctic Hydroptilidae (Trichoptera). *Bull. Brooklyn Entomol. Soc.*, 42(5): 145-58, 11 figs.
- 1948 New and Little Known Species of Nearctic Trichoptera. *Psyche*, 55(1): 16-27, Pls. 3-4.

## LEONARD, JUSTIN W., and FANNIE A. LEONARD

- 1949 Noteworthy Records of Caddis Flies from Michigan, with Descriptions of New Species. *Occ. Papers Mus. Zool. Univ. Mich.*, 520: 1-8, 5 pls.

## MCLACHLAN, ROBERT

- 1868 Contributions to a Knowledge of European Trichoptera. *Trans. Entomol. Soc. London*, pp. 289-308, 1 pl.

## MILNE, LORUS J.

- 1931 Three New Canadian *Prophryganea*. *Can. Entomol.*, 63: 228-32, 21 figs.

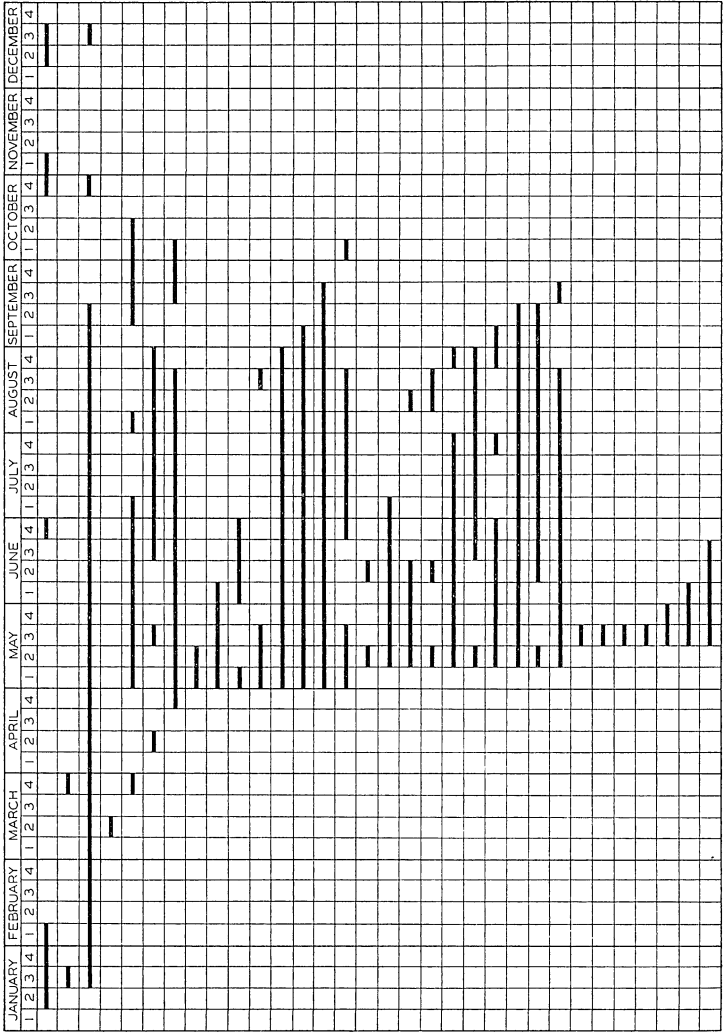
## MOSELY, MARTIN E.

- 1934 New Exotic Hydroptilidae. *Trans. Royal Entomol. Soc. London*, 82(1): 137-63, 58 figs.

## ROSS, HERBERT H.

- 1938a Descriptions of Nearctic Caddis Flies (Trichoptera) with Special Reference to the Illinois Species. *Bull. Ill. Nat. Hist. Surv.*, 21(4); 101-83, 123 figs.
- 1938b Lectotypes of North American Caddis Flies in the Museum of Comparative Zoology. *Psyche*, 45(1): 1-61, 10 pls.
- 1941 Descriptions and Records of North American Trichoptera. *Trans. Amer. Entomol. Soc.*, 67(1084): 35-126, 98 figs.
- 1944 The Caddis Flies or Trichoptera of Illinois. *Bull. Ill. Nat. Hist. Surv.*, 23(1): 1-326, 961 figs.
- 1946 A Review of Nearctic Lepidostomatidae (Trichoptera). *Ann. Entomol. Soc. Amer.*, 39(2): 265-91, 37 figs.

FIGURE 1. SEASONAL DISTRIBUTION OF MICHIGAN CADDIS FLY ADULTS



SPECIES

- FRENESIA MISSA
- PSYCHOGLYPHA SUBBOREALIS
- TRENTONIUS DISTINCTUS
- GLYPHOPSYCHE IRRODATA
- LIMNEPHILUS SUBMONILIFER
- PHRYGANEA CINEREA
- CHEUMATOPSYCHE ANALIS
- HYDROPSYCHE LEONARDI
- BRACHYCENTRUS LATERALIS
- LIMNEPHILUS N. SP. \*
- LIMNEPHILUS FRISONI
- MICRASEMA RUSTICUM
- CHIMARRA ATERRIMA
- GLOSSOSOMA NIGRIOR
- CHEUMATOPSYCHE CAMPYLA
- HYDROPSYCHE PHALERATA
- POLYCENTROPUS INTERRUPTUS
- BRACHYCENTRUS NUMEROSUS
- AGRAYLEA MULTIPUNCTATA
- HESPEROPHYLAX DESIGNATUS
- TRIENODES TARDA
- PARAPSYCHE APICALIS
- HYDROPSYCHE SPARNIA
- LIMNEPHILUS CONSOICIUS
- HYDROPSYCHE CHEILONIS
- HYDROPSYCHE AERATA
- HYDROPSYCHE CUANIS
- HYDROPTILA SPATULATA
- OLIGOSTOMIS OCELLIGERA
- HYDROPTILA ARMATA
- LEUCOTRICHIA PICTIPES
- CHEUMATOPSYCHE GRACILIS

	FEBRUARY			MARCH			APRIL			MAY			JUNE			JULY			AUGUST			SEPTEMBER			OCTOBER			NOVEMBER			DECEMBER				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3
RHYACOPHILA MANISTEE																																			
HYDROPSYCHE BIDENS																																			
GOERA STYLATA																																			
HYDROPSYCHE BRONTA																																			
PLATYCENTROPUS RADIATUS																																			
MOLANNA TRYPHENA																																			
HELICOPSYCHE BOREALIS																																			
HYDROPSYCHE BETTENI																																			
HYDROPSYCHE SLOSSONAE																																			
PTILOSTOMIS SEMIFASCIATA																																			
NEURECLIPSIS CREPUSCULARIS																																			
CHEUMATOPSYCHE OXA																																			
MOLANNA UNIOPHILA																																			
PSYCHOMYIA FLAVIDA																																			
POTAMYIA FLAVA																																			
HYDROPSYCHE ORRIS																																			
MYSTACIDES SEPULCHRALIS																																			
HYDROPTILA PERDITA																																			
PTILOSTOMIS OCELLIFERA																																			
POLYCENTROPUS GLACIALIS																																			
FABRIA INORNATA																																			
BRACHYCENTRUS FULIGINOSUS																																			
POLYCENTROPUS CRASSICORNIS																																			
CHIMARRA FERIA																																			
LIMNEPHILUS ORNATUS																																			
PHYLOGENTROPUS PLACIDUS																																			
LYPE DIVERSA																																			
LIMNEPHILUS MOESTUS																																			
OCETIS AVARA																																			
RHYACOPHILA ACROPEDES																																			
LEPIDOSTOMA COSTALIS																																			
PTILOSTOMIS POSTICA																																			
POLYCENTROPUS CINEREUS																																			
HYDROPSYCHE MOROSA																																			

- RHYACOPHILA MANISTEE  
 HYDROPSYCHE BIDENS  
 GOERA STYLATA  
 HYDROPSYCHE BRONTA  
 PLATYCENTROPUS RADIATUS  
 MOLANNA TRYPHENA  
 HELICOPSYCHE BOREALIS  
 HYDROPSYCHE BETTENI  
 HYDROPSYCHE SLOSSONAE  
 Ptilostomis semifasciata  
 NEURECLIPSIS CREPUSCULARIS  
 CHEUMATOPSYCHE OXA  
 MOLANNA UNIOPHILA  
 PSYCHOMYIA FLAVIDA  
 POTAMYIA FLAVA  
 HYDROPSYCHE ORRIS  
 MYSTACIDES SEPULCHRALIS  
 HYDROPTILA PERDITA  
 Ptilostomis ocellifera  
 POLYCENTROPUS GLACIALIS  
 FABRIA INORNATA  
 BRACHYCENTRUS FULIGINOSUS  
 POLYCENTROPUS CRASSICORNIS  
 CHIMARRA FERIA  
 LIMNEPHILUS ORNATUS  
 PHYLOGENTROPUS PLACIDUS  
 LYPE DIVERSA  
 LIMNEPHILUS MOESTUS  
 OCETIS AVARA  
 RHYACOPHILA ACROPEDES  
 LEPIDOSTOMA COSTALIS  
 Ptilostomis postica  
 POLYCENTROPUS CINEREUS  
 HYDROPSYCHE MOROSA











