

AN ANNOTATED CHECKLIST OF THE CADDISFLIES (TRICHOPTERA) OF SE ALASKA

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ABSTRACT

An annotated checklist of the caddisflies (Trichoptera) of southeast Alaska is presented. The list contains 11 families, including 74 named, and 5 new species, 44 of which are new for the region. The Family Limnephilidae includes 38 species and Family Rhyacophilidae 14. The annotations cover locations, types of habitats and months of capture.

This paper brings together the few previous records of caddisflies (Trichoptera) collected from southeast Alaska (Banks 1900; Denning 1964, 1970; Ellis 1978a, 1978b; Yamamoto and Wiggins 1964) and the results of my recent studies there. The list contains 74 species, 44 of which are new for the region. This is the first attempt to collect and identify Trichoptera on a wide basis in southeast Alaska. Although many new records are included, we still know only about 60%-70% of the caddisfly fauna. Many species are known from a single adult specimen or by larvae only. Undoubtedly, future collecting will add many species to the present list.

METHODS

Southeast Alaska lies east of the 141st meridian, including the mainland strip from Dixon Entrance to Icy Bay and the islands of the Alexander Archipelago. Locations of collections within southeast Alaska are referenced by the U.S. Geological Survey (USGS) 1:63,360 topographic map quadrangles (fig. 1). The quadrangles within the region are:

- (AT) Atlin*
- (BC) Bradfield Canal
- (CR) Craig
- (DE) Dixon Entrance
- (JU) Juneau
- (KT) Ketchikan
- (MF) Mt. Fairweather
- (PB) Petersburg
- (PR) Prince Rupert*
- (PX) Port Alexander
- (SC) Skagway
- (SI) Sitka
- (SM) Sumdum
- (TR) Taku River
- (YT) Yakutat

*no collections from these quadrangles.

Within each quadrangle, maps are designated by row and column; i.e. A1 is row A, column 1. A collection made at a location on map C4 of the Sitka quadrangle would be designated SIC4. There are four rows (A to D) and five to seven columns in each quadrangle. The habitat types from which collections have been made and the time periods during which adults were collected are included for each species. Habitat type classifications are:

- Type I 1st to 3rd order glacial stream
- Type II 4th order and larger glacial stream

- Type III 1st and 2nd order, clearwater, high gradient (>2%) stream
- Type IV 1st and 2nd order, clearwater, low gradient ($\leq 2\%$) stream
- Type V 3rd and 4th order, clearwater, high gradient stream
- Type VI 3rd and 4th order, clearwater, low gradient stream
- Type VII 5th order and larger clearwater stream
- Type VIII muskeg drainage stream
- Type IX small, shallow pond
- Type X large, deep lake
- Type XI muskeg pond

During the summer and fall of both 1978 and 1980, and during the spring and summer of 1979, an extensive collection was made of southeast Alaska Trichoptera. Many collecting methods were employed depending on the type of habitat being sampled, availability of sampling equipment and the life stage sought. Larvae were collected in streams using kick screens, Surber and Hess samplers, or by hand picking from rocks and debris. Most collections from lentic habitats were made near shore by handpicking from floating or submerged debris and from emergent vegetation. Wire minnow traps baited with salmon eggs were also effective in capturing several taxa. Many adults were collected using light traps with a gasoline lantern as a light source. Others were collected by sweeping riparian vegetation and by hand picking from vegetation, bridges and culverts.

The arrangement of families, genera within families, and species within genera is alphabetical and is consistent with Wiggins (1977). The nomenclature follows Fischer (1960-73) except in cases where more recent work has indicated necessary changes.

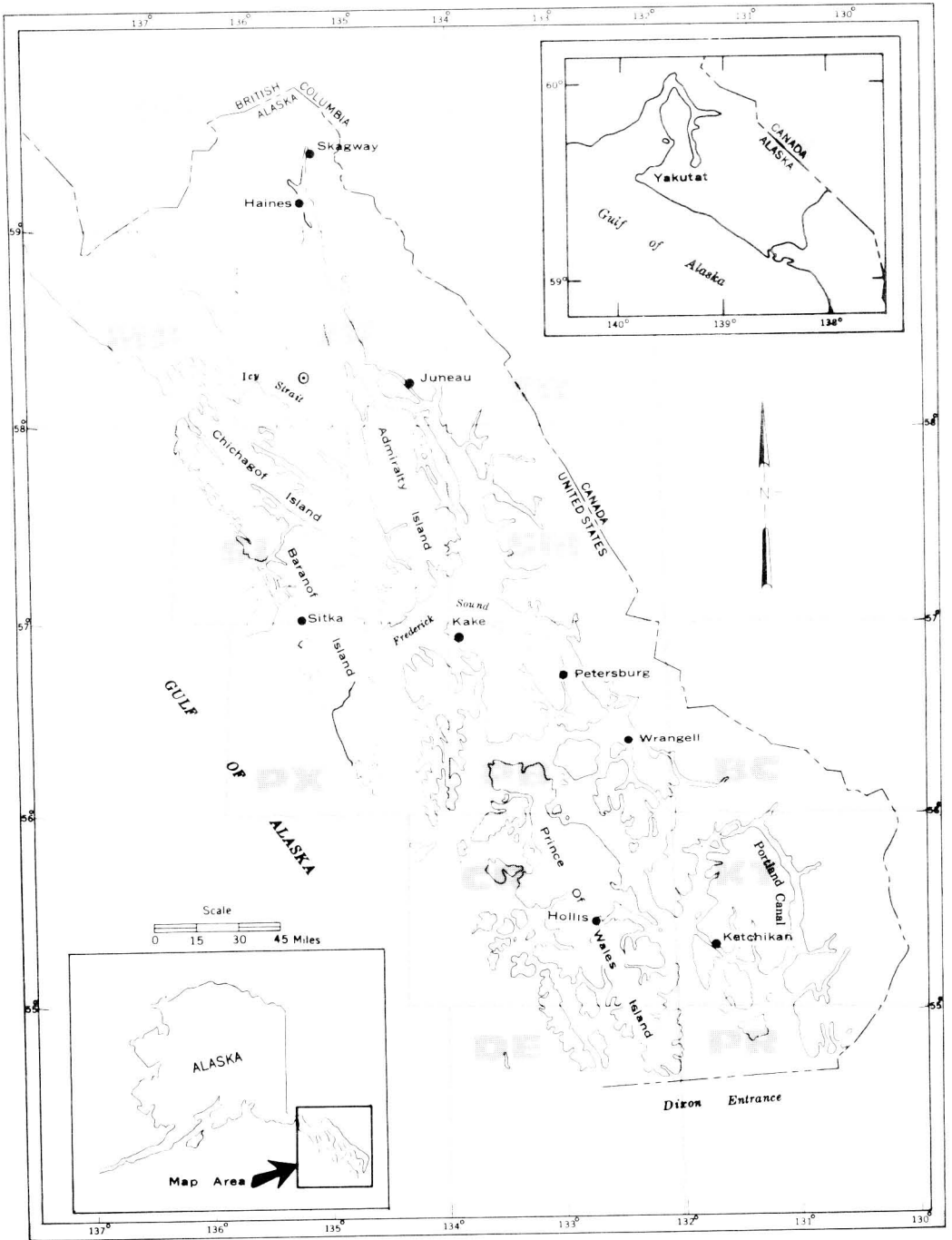


Fig. 1. Southeast Alaska, showing USGS map quadrangles.

- Family Brachycentridae
Brachycentrus sp. (larvae)
 Taku River, British Columbia. Type II habitat.
- Micrasema bactro* Ross
 KTC5. Type X habitat. July.
- Micrasema* sp. (larvae)
 PXB2, CRD4, JUC3, SIA5, SIC7. Type III and IV habitats.
- Family Glossosomatidae
Glossosoma alascense Banks
 SGB2. Type VII habitat. July-August.
- G. penitum* Banks
 PBA2, JUB2. Type IV habitat. July-August.
- G. verdonia* Ross
 KTB2. Type VII habitat. April.
- Family Hydropsychidae
Cheumatopsyche sp. (larvae)
 CRC4, CRD4, SIB6, SIB7. Type VII habitats.
- Hydropsyche ambilis* Ross
 KTC5. Type X habitat. July.
- H.* sp. (Larvae)
 CRC4, KTB2. Type IV and VI habitats.
- Parapsyche elsis* Milne
 PXB2 (Ellis 1978a), JUB2, KTB2, MFB1, MFB2, PXC3, SGB2, SIC4, SID2. Habitat Types I, III, IV, V, and VII.
- Family Hydroptilidae
Agraylea saltsea Ross
 KTC5. Type X habitat. July.
- Hydroptila* sp. (larvae)
 CRC4. Type VI habitat.
- Oxyethira* sp.
 CRD4, PXB3. Type IV and X habitats. August.
- Stactobiella* sp.
 CRD4. Type III habitat. July.
- Family Lepidostomatidae
Lepidostoma roafi (Milne)
 PYB2 (Ellis 1978a), CRD4, PBA2. Type III and IV habitats. June-September.
- L.* n. sp.
 CRD4. Type IV habitat. August-September.
- Family Leptoceridae
Ceraclaea sp. (larvae)
 CRD4, SIC7. Type VI habitat.
- Mystacides alafimbriata* Hill-Griffin
 YTC4 (Banks 1900, Yamamoto and Wiggins 1964), BCC6, CRC3, CRD4, JUC3, MFD1, PXB2, PXB3, PXD4, SIC4, SID2, TRB6, YTC4. Type IX and X habitats. June-August.
- Oecetis inconspicua* (Walker)
 YTC4. Habitat type unknown. July.
- Family Limnephilidae
Apatania sp. (larvae)
- CRC2, CRC3, CRC4, PBA2, SID7. Type VI and X habitats.
- Chyranda centralis* (Banks)
 PXB2 (Ellis 1978a), CRD4, JUB2, JUB3, KTB5, PBA2, PXC3, SIC4, SID2, TRB6. Type III, IV, V, VI, and X habitats. July-August.
- Clistoronia flavicollis* (Banks)
 YTC4 (Banks 1900). June.
- C. magnifica* (Banks)
 YTC4. Habitat type unknown. July.
- Cryptochia* sp. (larvae)
 KTB2, PXB2, SIC4, SID2, SID4. Type II, V, VII, and X habitats.
- Dicosmoecus atripes* (Hagen)
 PXB2 (Ellis 1978a), CRD4, KTB2, KTC5, PBA2, SGB2, SIC4. Type II, III, IV, V, VI, and X habitats. June-October with a peak in August.
- Ecclisomyia conspersa* Banks
 PXB2 (Ellis 1978a), JUB2, KTB2, PBA2, PXB2, SGB2, SIC4, YTC4. All habitat types. April-September with a peak in August.
- Ecclisocosmoecus scylla* (Milne)
 PXB2 (Ellis 1978a), CRD4, JUA3, JUC3, PBA2, SIA5, SIC4. Type II, IV, V, and VII habitats. June-October.
- Glyphopsyche irrorata* (Fabricius)
 JUB2 (Ellis 1978b), BCC6, JUB2, JUB3, JUC3, KTB2, SIC4. Type II, III, and IX habitats. October-May.
- Grensia praeterita* (Walker) (larvae)
 CRD4, SIA5, SIC4. Type IV and VI habitats.
- Haleoschila taylori* (Banks)
 CRD4, JUA3, JUC3. Type III habitats. June-July.
- Hesperophylax* sp. (larvae & pupae)
 MFB2, MFC1, SID7. Type I and X habitats.
- Homophylax andax* Ross
 45 mi. S. of Petersburg (no other location data available) (Denning 1964), PXB2 (Ellis 1978a), CRD4. Type III and IV habitats. June-July.
- H.* n. sp.
 CRD4, SIC4. Type VI habitat. July-August.
- Imania tripunctata* (Banks)
 YTC4 (Banks 1900). June.
- Imania* sp. (larvae)
 CRC3, JUC3, MFB1, MFB2, SIB1, SIC4. Type I, III, and V habitats.
- Lenarchus rillus* (Milne)
 CRD4. July.
- L. vastus* (Hagen)
 PXB2 (Ellis 1978a), BCC6, CRD4, JUC3, SIB1, SIC4, YTC4. Type II, IV, V, VI, IX and X habitats. June-September.

- Limnephilus atercus* Denning
PBA2. July.
- L. externus* Hagen
CRD4, JUB2, PBA2, PBB1, SIC4, SID2,
YTC4. Type IV, VI, and X habitats. July-
August.
- L. fagus* Ross
TRA5. Type X habitat. August.
- L. fumosus* Banks
MFB1 (Banks 1900). June.
- harrimani* Banks
SIA5, (Banks 1900), PXB2 (Ellis 1978a),
CRD4, JUB3, SIC4. Type III, IV, and VI
habitats. July-September with a peak in
August.
- L. lunonus* Ross
SID2, YTC4. Type X habitat. July-August.
- L. nogus* Ross
PBX2 (Ellis 1987a), JUA3, JUC3, KTB2,
PBA2, PXB4, SIC4. Type II, III, IV, VI,
and VII habitats. June-September.
- L. partitus* Walker
TRA5. Type X habitat. August.
- L. saltus* Denning
JUB3, PBC1, SID2. Type IX and X habitats.
July-August.
- L. sericeus* (Say)
JUB2, PBA2, SIC4, SID2, TRA5. Type IV,
VI, and X habitats. July-August.
- L. sitchensis* Kolenati
PXB2 (Ellis 1978a). Type V habitat. August.
- Nemotaulius hostilis* (Hagen) (larvae)
JUD3, PBC1, SIC4. Type IX and X habitats.
- Neophylax rickeri* Milne
CRD4. Type IV habitat. August-September.
- N.* sp. (larvae)
CRD4, JUB2, JUC3, PBA4, SIB1, SIC4,
SID2. Type III, IV, and VI habitats.
- Neothremma* sp. (larvae)
JUB2. Type III and IV habitats.
- Oligophlebodes sierra* Ross
JUA3. Type III habitat. July.
- O.* sp. (larvae)
KTC5, SGB2. Habitat types unknown.
- Onocosmoecus unicolor* Banks
PXB2 (Ellis 1978a), CRD4, JUB2, JUB3,
KTB2, PBA2, SGB2, SIC4, TRA5. All
habitat types except XI. July-September
with a peak in August.
- Psychoglypha alaskensis* (Banks)
YTC4 (Banks 1900), BCC6, CRD4, JUB3,
JUC4, PBA2, PBC1, SIC4. Type II, III, IV,
VI, and IX habitat. June-December.
- P. subborcalis* (Banks)
KTB2 (Denning 1964), JUB2 (Ellis 1978b),
PBA2 (Ellis 1978a), JUB2, JUC3, JUC4,
KTB2. Type II, III, IV, V, and VII habitat.
September-June.
- Family Philopotamidae
Dolophilodes pallidipes (Banks)
PBA2. Habitat type unknown. July.
- D.* n. sp.
CRD4. Type IV habitat. August.
- Wormaldia* sp.
PBA2. Habitat type unknown. July.
- Family Phryganeidae
Agrypnia glacialis Hagen
JUB2, MFB1, PBC1. Type II and IX
habitats. June.
- Ptilostomis ocellifera* (Walker)
CRD4, JUB2, JUC3, CRD4. Type IV
habitat. June-August.
- Family Polycentropodidae
Polycentropus flavus Banks
BCC6. Type IX habitat. July.
- P. halidus* Milne
PXB2 (Ellis 1978a). Type V habitat. August.
- P. remotus* Banks
CRD4. Habitat type unknown. July.
- Family Rhyacophilidae
Rhyacophila alberta Banks
PXB2 (Ellis 1978a). Type V habitat. April-
May and August-October.
- R. chilsia* Denning
JUB2. Type III habitat. September.
- R. grandis* Banks
PXB2 (Ellis 1978a), CRD4, PXB2. Habitat
types unknown. June-August.
- R. kincaidi* Schmid
SIC4. Type III habitat. August.
- R. narvae* Navas
PXB2 (Ellis 1978a). Type V habitat. April
and July-August.
- R. rickeri* Ross
PXB2 (Ellis 1978a), SIC4. Type III and V
habitats. July.
- R. tucula* Ross
JUB2, PXB2, SID2. Type III and V habitats.
August-September.
- R. vacua* Milne
PXB2 (Ellis 1978a), CRD4, JUB2, PBA2.
Type III and IV habitats. July-September.
- R. vagra* Milne
JUB2. Type III habitat. September.
- R. valuma* Milne
British Columbia, Nakina River. Type II
habitat. August.
- R. vao* Milne
PXB2 (Ellis 1978a), JUA3, JUB2, PBA2,
SIC4. Type III, IV, and VI habitats. May-
September.
- R. verrula* Milne
PXB2 (Ellis 1978a), JUA3, JUB2, PBA2,
Type III, IV, and V habitats. July-October.
- R. vobara* Milne
SIC4. Type III habitat. August.
- R. vofixa* Milne
SIC4. Type VI habitat. August.

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**THE APHIDS (HOMOPTERA:APHIDIDAE) OF
BRITISH COLUMBIA
10. FURTHER ADDITIONS**

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ABSTRACT

Five species of aphids and new host records were added to the taxonomic list of the aphids of British Columbia.

INTRODUCTION

Six previous lists of the aphids of British Columbia (Forbes, Frazer and MacCarthy 1973; Forbes, Frazer and Chan 1974; Forbes and Chan 1976, 1978, 1980, 1981) recorded 336 species. This includes aphids collected from 636 hosts and comprises 1173 aphid-host plant associations.

The present list adds 5 species of aphids (indicated with an asterisk in the list) and 125 aphid-host plant associations to the previous lists. Seventy-two of the new aphid-host plant associations are plant species not in the previous lists. The additions bring the number of known aphid species in British

TABLE 1. Localities where aphids were collected, with airline distances from reference points.

Locality	Reference Point	Dir.	Distance	
			km	mi
Enderby	Kamloops	SE	85	53
Fraser Lake	Prince George	NW	139	87
Haney	Vancouver	S	48	30
Hudson's Hope	Prince George	NE	237	148
Lytton	Kamloops	SW	102	64
MacKenzie	Prince George	NW	157	98
Moricetown Falls	Prince George	NW	325	203
108 Mile House	Williams Lake	SE	78	49
Osoyoos	Kelowna	S	93	58
Parksville	Victoria	NW	128	80
Westbridge	Kelowna	SE	85	53
White Lake	Kelowna	SW	62	39
Wilson Creek	Vancouver	NW	42	26
Wilson Landing	Kelowna	NW	14	9