

An annotated checklist of the Ephemeroptera (Insecta) of
British Columbia

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This paper brings together all published records of the mayflies (Ephemeroptera) in British Columbia; new records are also included. A total of 92 species is reported from the Province, 13 for the first time.

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Introduction

There is no list of the Ephemeroptera of British Columbia. The records are scattered in the literature.

This paper presents an annotated checklist of the species so far recorded from British Columbia. Fourteen species are reported from the Province for the first time. Material of most of these is located in the Canadian National Collection [CNC] in Ottawa.

The systematic arrangement, in general, follows Edmunds (1962).

Order EPHEMEROPTERA

SUPERFAMILY HEPTAGENIOIDEA

Family Siphonuridae

Ameletus celer McDunnough

Dunn Peak, N. Thompson R., 1937 (J. K. Jacob) [CNC].

A. celeroides McDunnough

Hedley, Penticton (McDunnough, 1934).

A. connectina McDunnough

Blue L. west of Lytton (McDunnough, 1939).

A. connectus McDunnough

Shingle Cr. (Penticton) (McDunnough, 1936).

A. cooki McDunnough

Shingle Cr. near Keremeos (McDunnough, 1935).

A. monta Mayo

McGuogan Cr., Paino Mt. near New Denver (Mayo, 1952).

A. oregonensis McDunnough

Chase, 1937 (J. K. Jacob); Powers Cr. (Westbank), 1935 (A. N. Gartrell); Shingle Cr. (Penticton), 1935 (A. N. Gartrell) [CNC].

A. querulus McDunnough

Trepanier Cr. (Peachland) (McDunnough, 1938).

A. similior McDunnough

Mt. Apex near Hedley, Shingle Cr. near Keremeos (McDunnough, 1935).

A. sparsatus McDunnough

Oliver (McDunnough, 1935).

A. suffusus McDunnough

Shingle Cr. (Penticton) (McDunnough, 1936).

A. tuberculatus McDunnough

Blue L. west of Lytton (McDunnough, 1939).

A. validus McDunnough

Shingle Cr. near Penticton (McDunnough, 1935).

A. vancouverensis McDunnough

Courtenay (McDunnough, 1933).

A. velox Dodds

Barkerville (Criddle, 1927).

A. vernalis McDunnough

Oliver (McDunnough, 1924; Criddle, 1925); Seton L. (Lillooet) (Criddle, 1927).

Parameletus columbiæ McDunnough

Dunn Peak (N. Thompson R.) (McDunnough, 1938).

Siphonurus autumnalis McDunnough

Fernie (McDunnough, 1938); Barkerville (Filmer, 1964).

S. columbianus McDunnough

Agassiz (McDunnough, 1925); Agassiz, Alta L., Mons (Criddle, 1927).

S. occidentalis Eaton

Fernie as *S. inflatus* (McDunnough, 1931); Shuswap L. (Clemens *et al.*, 1938); Jesmond (Filmer, 1964).

Family Bætidæ

Bætis bicaudatus Dodds

Seton L. (Lillooet) (Criddle, 1927).

B. insignificans McDunnough

Seton L. (Lillooet) (McDunnough, 1926; Criddle, 1927).

B. intermedius Dodds

Barkerville, Seton L. (Lillooet) (Criddle, 1927).

B. jesmondensis McDunnough

Jesmond, Porcupine Cr. (McDunnough, 1938).

- B. moffati* Dodds
Barkerville (Criddle, 1927).
- B. parallelus* Banks
Oliver (Criddle, 1927).
- B. parvus* Dodds
Alta L., Mons, Oliver (Criddle, 1927).
- B. persecuta* McDunnough
Kwieek Cr. near Lytton (McDunnough, 1939).
- B. tricaudatus* Dodds
Salmon Arm (Criddle, 1925).
- Callibætis carolus* Traver
Lytton, Vernon (Filmer, 1964).
- C. coloradensis* Banks
Kaslo (Criddle, 1925).
- C. hageni* Eaton
Kaslo, Keremeos, Nicola, Oliver, Revelstoke as *C. tessellatus* (Criddle, 1927).
- C. nigrinus* Banks
Chilcotin, Springhouse (Filmer, 1964).
- Centroptilum album* McDunnough
Cultus L., 1938 (J. K. Jacob); Seton L. (Lillooet), 1926 (J. McDunnough) [CNC].
- C. bellum* McDunnough
Williams L. (Filmer, 1964).
- C. bifurcatum* McDunnough
Summerland, 1933 (A. N. Gartrell) [CNC].
- C. conturbatum* McDunnough
Cranbrook, 1930 (J. H. Pepper); Hope Mt., 1932 (A. N. Gartrell); Garnet Valley (Summerland), 1933 (A. N. Gartrell), 1934 (J. McDunnough) [CNC].
- Clæon implicatum* McDunnough
Vernon (McDunnough, 1924; Criddle, 1927).
- Family Heptageniidae**
- Cinygma integrum* Eaton
Alta L., Mons (McDunnough, 1926; Criddle, 1927).
- Cinygmula gartrelli* McDunnough
Deep Cr. (Peachland) (McDunnough, 1934).
- C. kootenai* McDunnough
Nixon Cr., Kootenay R., Kootenay National Park (McDunnough, 1943).
- C. mimus* (Eaton)
Alta L., Mons as *Cinygma* (Criddle, 1927).
- C. par* (Eaton)
Barkerville, Seton L. (Lillooet) as *Cinygma hyalina* (Criddle, 1927); Fernie, 1930 (J. H. Pepper); Mt. Apex (Hedley), 1933-34 (A. N. Gartrell); Shingle Cr., 1933 (A. N. Gartrell) [CNC].
- C. ramaleyi* (Dodds)
Barkerville, Mt. Cheam as *Cinygma* (Criddle, 1927).
- C. uniformis* McDunnough
Powers Cr. (Westbank), Shingle Cr. (Penticton) (McDunnough, 1934).
- Epeorus albertæ* McDunnough
Trout Cr. at Summerland (G. F. Edmunds, Jr., *in litt.*).
- E. deceptivus* (McDunnough)
Barkerville as *Iron* (McDunnough, 1926; Criddle, 1927).
- E. dulciana* (McDunnough)
Trepanier Cr. (Peachland) as *Iron* (McDunnough, 1935).
- E. grandis* (McDunnough)
Hedley as *Iron* (McDunnough, 1924; Criddle, 1925); Seton L. (Lillooet) as *Iron* (Criddle, 1927); Deep Cr. (Peachland), Mt. Apex (Hedley) (Needham *et al.*, 1935).
- E. longimanus* (Eaton)
Alta L., Mons, Seton L. (Lillooet) as *Iron* (Criddle, 1927).
- E. permangus* (Traver)
Alouette R. (Filmer, 1964).
- Heptagenia elegantula* (Eaton)
Oliver, Osoyoos (Criddle, 1925).
- H. simplicioides* McDunnough
Okanagan Landing, 1933 (A. N. Gartrell); Robson (H. R. Foxlee); Summerland, Lakeshore, 1934 (A. N. Gartrell); Summerland, 1935 (A. N. Gartrell) [CNC].
- H. solitaria* McDunnough
Waterton Park (Criddle, 1925); Nicola, Oliver (Criddle, 1927).
- Ironodes flavipennis* Traver
Keremeos, Oliver, Peachland, Summerland (Traver, 1935).
- Rhithrogena hageni* Eaton
Faulder (Summerland), 1934 (A. N. Gartrell); Steelhead, 1933 (H. B. Leech) [CNC].
- R. morrisoni* (Banks)
Qualicum R. (L. Lambuth, *in litt.*).
- R. robusta* Dodds
Shingle Creek Road (Keremeos), 1935 (A. N. Gartrell) [CNC].
- R. virilis* McDunnough
Faulder near Summerland (McDunnough, 1934).
- Stenonema terminatum* (Walsh)
B.C. (Edmunds, 1951): now thought not to be *terminatum*, but an unnamed species (G. F. Edmunds, Jr., *in litt.*).

Family *Metretopodidae**Metretopus borealis* (Eaton)

Rolla (Edmunds, 1957).

SUPERFAMILY LEPTOPHLEBIOIDEA

Family *Leptophlebiidæ**Leptophlebia cupida* (Say)Lakes above Beaver L., Okanagan (Clemens *et al.*, 1939).*L. gravastella* (Eaton)Osoyoos as *Blasturus* (Criddle, 1925).*L. nebulosa* (Walker)Aspen Grove as *Blasturus* (Criddle, 1925); Lac la Hache, Nicola (Filmer, 1964).*Paraleptophlebia bicornuta* (McDunnough)Shawnigan L. as *Leptophlebia* (McDunnough, 1926; Criddle, 1927); Alouette R. (Filmer, 1964).*P. debilis* (Walker)Agassiz, Seton L. (Lillooet) as *Leptophlebia* (Criddle, 1927); Okanagan L. (Clemens *et al.*, 1939); Nicola Cr. (Filmer, 1964).*P. gregalis* (Eaton)Departure Bay as *Leptophlebia invalida* (McDunnough, 1926; Criddle, 1927).*P. heteronea* (McDunnough)Nicola as *Leptophlebia* (Criddle, 1925).*P. memorialis* EatonSeton L. (Lillooet) as *Leptophlebia pallipes* (Criddle, 1927); Oliver as *Leptophlebia pallipes* (Criddle, 1925).*P. rufivenosa* (Eaton)Vancouver I. as *Leptophlebia* (McDunnough, 1924); Goldstream as *Leptophlebia* (Criddle, 1927).*P. temporalis* (McDunnough)Alta L., Mons as *Leptophlebia* (McDunnough, 1926; Criddle, 1927).*P. vaciva* (Eaton)

Clinton, 1938 (J. K. Jacobs); Mt. Apex (Hedley), 6,000–7,000 ft and 4,500–6,000 ft, 1933 (A. N. Gartrell); Mt. Apex, 5,800 ft, 1934 (A. N. Gartrell); Mt. Hope, 6,000 ft, 1932 (A. N. Gartrell); Shingle Creek Road (Keremeos), 1934 (A. N. Gartrell) [CNC].

Family *Ephemerellidæ**Ephemerella aurivillii* (Bengtsson)Cache Cr., junction of Bonapart R. at north bridge (G. F. Edmunds, Jr., *in litt.*).*E. coloradensis* DoddsShuswap L. (Clemens *et al.*, 1938); Wilson Cr. near New Denver as *E. wilsoni* (Mayo, 1952); Capilano R. (W. Vancouver), Brexton, Wilson Cr. (near New Denver), Trepanier Cr. (Peachland) (Allen and Edmunds, 1962).*E. doddsi* NeedhamScotch Cr., Shuswap L. (Clemens *et al.*, 1938); Capilano R. (N. Vancouver) (Allen and Edmunds, 1962); Alouette R., Loon Creek (Filmer, 1964); Kispiox R. at 10-mi marker, Forest Service Road (G. F. Edmunds, Jr., *in litt.*); Spawning Channel near Jones Cr., v–vi. 1971 (D. McKone); Skagit River (U.B.C.).*E. flavilinea* McDunnough

Waterton (Criddle, 1927); Seton L., Shingle Cr. (near Penticton) (McDunnough, 1935); Steelhead Cr. (Stave Falls) (Allen and Edmunds, 1962); Alouette R., creek above Hell's Gate, Fraser River Canyon (Filmer, 1964); Spawning channel near Jones Creek, v–vi. 1971 (D. McKone) (U.B.C.).

E. grandis flavitincta McDunnoughTerrace (G. F. Edmunds, Jr., *in litt.*); spawning channel near Jones Creek, v–vi. 1971 (D. McKone); Skagit R. (U.B.C.).*E. grandis ingens* McDunnoughOliver as *E. ingens* (McDunnough, 1934); Faulder (Summerland), Oliver, Penticton, Trepanier Cr. (Peachland) (Allen and Edmunds, 1962); Loon Cr. (Filmer, 1964).*E. hecuba hecuba* Eaton

Faulder (Summerland) (McDunnough, 1935).

E. heterocaudata heterocaudata McDunnoughTrepanier Cr. (Peachland) as *E. columbiella* (McDunnough, 1935); Keremeos, New Denver, Shuswap Falls, Trepanier Cr. (Allen and Edmunds, 1961a).*E. hystrix* Traver

Shingle Cr. (near Keremeos) (McDunnough, 1935); Keremeos (Allen and Edmunds, 1961a); Alouette R. (Filmer, 1964).

E. inermis Eaton

Nicola (Criddle, 1925); Penticton, Shuswap L. (Criddle, 1927); Alouette R. (Filmer, 1964).

E. infrequens McDunnough

Seton L. (Lillooet) (Criddle, 1927; McDunnough, 1928).

E. jacobi McDunnough

Kwieek Creek near Lytton (McDunnough, 1939).

E. lodi Mayo

Alouette R. (Allen and Edmunds, 1963b; Filmer, 1964).

E. pelosa Mayo

Spawning channel near Jones Cr., v–vi. 1971 (D. McKone) (U.B.C.).

E. spinifera NeedhamShingle Cr. near Keremeos as *E. autumnalis* (McDunnough, 1934); Wilson Creek near New Denver (Mayo, 1952); Keremeos, Shephard Cr. (Brexton), Wilson Cr. (New Denver) (Allen and Edmunds, 1962); Alouette R. (Filmer, 1964); Spawning channel near Jones Creek, v–vi. 1971 (D. McKone) (U.B.C.).

E. teresa Traver

Alouette R. (Filmer, 1964).

E. tibialis McDunnoughBeaver L. (Clemens *et al.*, 1939); Cook Cr. near Bowser, Mosquito Cr. (Vancouver), Shingle Cr. (Penticton), Wilson Cr. (New Denver) (Allen and Edmunds, 1963a); Alouette R. (Filmer, 1964).

Family Tricorythidae

Tricorythodes minutus TraverWilliams L. as *T. fallacina* (McDunnough, 1939); 100 Mile House, 1938 (G. S. Walley) [CNC].

SUPERFAMILY CÆNOIDEA

Family Cænidæ

Cænis similans McDunnoughShuswap L. (Needham *et al.*, 1935); Penticton (G. F. Edmunds, Jr., *in litt.*).

SUPERFAMILY EPHEMEROIDEA

Family Ephemeridæ

Ephemerella simulans WalkerOliver, Penticton (Criddle, 1925); Kalamalka L., Okanagan L. (Clemens *et al.*, 1939); Nicola Cr. (Filmer, 1964).*Hexagenia limbata* (Serville)Penticton (Criddle, 1925); southern British Columbia (McDunnough, 1927); Shuswap L. (Clemens *et al.*, 1938); Okanagan L. (Clemens *et al.*, 1939; Saether, 1970); Oliver, Penticton, Robson, Salmon Arm, Sumnerland, Vernon (Spieth, 1941).

Species of Ephemeroptera Excluded From the British Columbia List

Heptagenia flavescens (Walsh)

This species was recorded from Peachland by Gibson (1912). Since it is an eastern species, this record is almost certainly incorrect.

Rhithrogena jejuna Eaton

Recorded from Deadmans Cr., Oliver, by Criddle (1927). Probably a misidentification as this is an eastern species.

Ephemerella attenuata McDunnoughCriddle (1927) records this from Deadman's Creek, British Columbia, but this is an eastern species and so this appears to be a misidentification. Allen and Edmunds (1961b) report *E. attenuata* as a boreal eastern North American species, distributed from Nova Scotia, New Brunswick, and Quebec austral to Alabama and northern Florida.

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