

THE MAYFLIES OF UTAH

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THE list of the mayflies (Ephemeroptera) of Utah presented below is a result of more than ten year's study by the writer. A monographic report of this study is being prepared but until this is available a list of the species can be of use. This list is presented with two main purposes in mind: (1) to present a list of the species of mayflies known to occur in Utah, of which more than half are previously unrecorded for the state; and (2) to make more useful the previous reports on the Utah mayfly fauna, especially that of Needham and Christenson (1927), by including a synonymy of names used in earlier reports when such records were based on misidentifications or when the names differ from those currently used. The arrangement of families and subfamilies is one devised by the author and Jay R. Traver, and should be credited to both rather than to the present author only.

Superfamily Heptagenioidea

Family Siphonuridae

- ✓ *Siphonurus occidentalis* (Eaton)
- Genus et species incertus
- Parameletus columbiae* McDunnough
- ✓ *Ameletus velox* Dodds
- Ameletus* spp. — Two undescribed species present.

Family Isonychiidae

- ✓ *Isonychia campestris* McDunnough (? = *Chirotenetes* sp. [sic!] of Needham and Christenson, 1927:12)

Family Oligoneuriidae

- ✓ *Lachlania powelli* Edmunds

Family Heptageniidae

- Heptagenia criddlei* McDunnough
- Heptagenia simplicioides* McDunnough
- Heptagenia solitaria* McDunnough
- Heptagenia elegantula* (Eaton) (= *Rithrogena elegantula* [sic!] of Needham and Christenson, 1927:15)
- Stenonema* sp. - an undescribed species (= *Stenonema terminatum* of Edmunds, 1951:162)
- ✓ *Cinygmula tarda* (McDunnough)
- Cinygmula mimus* (Eaton) (= *Rithrogena mimus* [sic!] of Needham 1927:133, and Needham and Christenson, 1927:14, adult not nymph).
- Cinygmula ramaleyi* (Dodds)
- Cinygmula par* (Eaton)

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Family Ephemerellidae

- ✓ *Ephemerella inermis* Eaton (in part, not figure 1, Needham, 1927: 114; in part, Needham and Christenson, 1927:9)
- Ephemerella infrequens* McDunnough (= *Ephemerella inermis*, in part, of Needham, 1927:114; and Needham and Christenson, 1927:9)
- Ephemerella tibialis* McDunnough (= *Ephemerella angusta* Traver, 1934:211, and 1935:581, new synonymy)
- Ephemerella coloradensis* Dodds
- Ephemerella grandis* Eaton
- Ephemerella doddsi* Needham
- Ephemerella margarita* Needham
- Ephemerella hecuba* Eaton
- [*Ephemerella spinifera* of Needham 1927:110, apparently does not occur in Utah.]

Family Tricorythidae

- ✓ *Tricorythodes minutus* Traver (= *Tricorythus explicatus* of Needham and Christenson 1927:12)
- Tricorythodes* spp. — at least two additional species

Superfamily Caenoidea

Family Caenidae

- ✓ *Caenis simulans* McDunnough
- Brachycerus* sp. (probably *prutlens* McDunnough)

Superfamily Ephemeroidea

Family Ephemeridae

- ✓ *Ephemera simulans* Walker
- Hexagenia limbata* Serville
- Family Polymitaecidae
- ✓ *Ephoron album* Say

Literature Cited

- Edmunds, G. F., Jr. Oviviparous mayflies of the genus *Callibaetis*. Ent. News 56:169-171. 1945.
- Edmunds, G. F., Jr. Western records of the mayfly genus *Stenonema*. Kans. Ent. Soc. Jour. 24:162. 1951.
- Knowlton, G. F., and F. C. Harmston. Ephemerida, in Insects of Utah. Utah Agr. Exp. Sta. Mimeo. series 200. 1939. p. 3.
- Needham, J. G. A baetina mayfly nymph with tusked mandibles. Canad. Ent. 59:44-47. 1927. 1 fig.
- Needham, J. G. The life history and habits of a mayfly from Utah. Canad. Ent. 59:133-136. 1927. 1 fig.
- Needham, J. G. Rocky Mountain species of the mayfly genus *Ephemerella*. Ent. Soc. Amer. Ann. 20:107-117. 1927. 2 fig.
- Needham, J. G., and R. O. Christenson. Economic insects in some streams of northern Utah. Utah Agr. Exp. Sta. Bul. 201. 1927. p. 1-36. 44 fig.
- Traver, J. R. New North American species of mayflies. Elisha Mitch. Sci. Soc. Jour. 50:189-254. 1934. 1 pl.
- Traver, J. R. Systematic, pt. 2 in Needham, Traver, and Hsu. The biology of mayflies. Ithaca, New York, Comstock Pub. Co., 1935. p. 237-739.

- Cinygmula kootenai* McDunnough
Rhithrogena doddsi McDunnough (= *Rithrogena mimus* [sic] of Needham, 1927:133 and Needham and Christenson, 1927:13, nymph not adult).
Rhithrogena morrisoni (Banks) (? = *Rithrogena futillis* [sic] of Knowlton and Harmston, 1939:3)
Rhithrogena futilis McDunnough
Rhithrogena undulata (Banks)
Rhithrogena robusta Dodds
 [*Rhithrogena brunnea* (Hagen), reported by Needham and Christenson, 1927:13, probably does not occur in Utah.]
Epeorus (*Iron*) *longimanus* (Eaton) (= *Iron longimanus* of Needham and Christenson, 1927:15)
Epeorus (*Iron*) *deceptivus* (McDunnough)
Epeorus (*Iron*) *albertae* (McDunnough) (= *Epeorus* sp. of Needham and Christenson, 1927:15)
Anepeorus rusticus McDunnough
Pseudiron sp. — An undescribed species.

Family Ametropodidae

- ✓ *Ametropus albrighti* Traver

Family Baetidae

- ✓ *Callibaetis nigrinus* Banks (= *Callibaetis claudiae*, *nomen nudum*, of Edmunds, 1945:169)
Callibaetis fuscus Dodds
Callibaetis montanus Eaton
Callibaetis doddsi Traver
 [*Callibaetis pallidus* Banks, reported by Needham and Christenson, 1927:11, probably does not occur in Utah.]
 ✓ *Baetis parvus* Dodds
Baetis quilleri Dodds
Baetis tricaudatus Dodds
Baetis intermedius Dodds
Baetis bicaudatus Dodds
Baetis dardanus McDunnough
Baetis insignificans McDunnough
Baetis spp. — Three undescribed species
 ✓ *Centroptilum oreophilum* Edmunds
Centroptilum selanderorum Edmunds
Centroptilum conturbatum McDunnough
Centroptilum spp. — Some additional undetermined species present.
 ✓ *Pseudocloeon turbidum* McDunnough

Superfamily Leptophlebioidea

Family Leptophlebiidae

- ✓ *Paraleptophlebia heteronea* (McDunnough) (= *Leptophlebia pallipes* of Needham and Christenson, 1927:10)
Paraleptophlebia pallipes (Hagen)
Paraleptophlebia debilis (Walker)
Paraleptophlebia packii (Needham) (= *Leptophlebia packii* of Needham, 1927:44, and Needham and Christenson, 1927:10)
 ✓ *Leptophlebia* (*Blasturus*) *gravastellus* McDunnough
 ✓ *Choroterpes albiannulata* McDunnough
 ✓ *Traverella albertana* (McDunnough) (= *Thraulius albertanus* of Traver, 1935:544, and Knowlton and Harmston, 1939:3)