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AN ANNOTATED LIST OF THE AQUATIC INSECTS OF SOUTHEASTERN IDAHO, PART III. EPHEMEROPTERA

Robert L. Newell¹ and G. Wayne Minshall²

ABSTRACT.— The study revealed representatives of 9 families, 22 genera, and 59 species occurring within the study area. No new species and no new state records were collected, but a number of new localities have been added.

This paper is the third in a series of publications designed to describe the aquatic insect fauna of southeastern Idaho. A map describing the study area is presented in Newell and Minshall (1977).

The Ephemeroptera, or mayflies, are perhaps the best known and most extensively studied group of aquatic insects. Mayflies are often a diverse and abundant component of the benthic fauna of streams in the western United States. In North America north of Mexico there are 60 genera and 622 species of mayflies (Edmunds et al. 1976).

Information on the geographical distribution of mayflies is widely scattered throughout published sources. Unfortunately, much of these data are useless for this report since many authors listed species only as "collected in Idaho" and did not supply definite locations. The mayfly fauna of Idaho was poorly known until Jensen's (1966) study "Mayflies of Idaho." Jensen's thorough work reviews the literature and provides keys to nymphs and adults of the 85 species of mayflies known from Idaho. However, the work remains unpublished and therefore is generally inaccessible to a wide number of workers. Hornung and Barr (1970) also reported some mayfly distribution data.

A total of 9 families, 22 genera, and 59 species are reported from southeastern Idaho. No new species and no new state records were collected, but a number of new localities were added. An undescribed species of *Stenonema* (Edmunds et al. 1976)

also is known from southeastern Idaho. The genus *Pseudocloeon* is reported here and not in the checklist, since the species are not identified.

The authors thank the many people who contributed time, effort, and specimens for this study. They also thank Dr. W. L. Peters for identifying some of the specimens.

FAMILY SIPHLONURIDAE

1. *Ameletus cooki* McDunnough.— Bannock Co.: Mink Cr.

2. *Ameletus oregonensis* Eaton.— Bannock Co.: Mink Cr. Bonneville Co.: Snake R. (S. Fk.). Butte Co.: Little Lost R. Teton Co.: Teton R.

3. *Ameletus sparsatus* McDunnough.— Bannock Co.: Rapid Cr. Bonneville Co.: Pine Cr. Custer Co.: Big Lost R. Fremont Co.: Snake R. (Henry's Fk.).

4. *Ameletus velox* Dodds.— Butte Co.: Little Cottonwood Cr.; Little Lost R.

5. *Siphonurus occidentalis* Eaton.— Bear Lake Co.: St. Charles Cr. Blaine Co.: Big Wood R. Bonneville Co.: Rainey Cr. Butte Co.: Big Lost R. Cassia Co.: Cassia Cr. Custer Co.: near Mackay. Fremont Co.: Snake R. (Henry's Fk.). Teton Co.: Teton R.

FAMILY BAETIDAE

6. *Baetis bicaudatus* Dodds.— Blaine Co.: Big Wood R. Bonneville Co.: Pine Cr.; Rainey Cr. Butte Co.: Little Lost R.; stream near Arco. Custer Co.: Big Lost R. Fremont Co.: Targhee Cr. Teton Co.: Badger Cr.

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7. *Baetis insignificans* McDunnough.—Butte Co.: Little Lost R. Gooding Co.: near Tuttle.

8. *Baetis intermedius* Dodds.—Bannock Co.: Indian Cr.; Mink Cr.; Portneuf R. Bingham Co.: Spring Cr. Gooding Co.: Niagara Springs; Riley Cr.

9. *Baetis parvus* Dodds.—Bingham Co. Blaine Co.: Big Wood R. Bonneville Co.: Brockman Cr.; Snake R. (S. Fk.). Jefferson Co.: near Roberts. Teton Co.: Teton R.

10. *Baetis propinquus* (Walsh).—Butte Co.: near Arco.

11. *Baetis quilleri* Dodds.—Gooding Co.

12. *Baetis tricandatus* Dodds.—Bannock Co.: Portneuf R.; Rapid Cr. Blaine Co.: Big Wood R. Bonneville Co.: Rainey Cr. Butte Co.: Little Lost R.; near Arco. Clark Co.: Beaver Cr.; Birch Cr.; Camas Cr.; Medicine Lodge Cr. Custer Co.: Big Lost R. Fremont Co.: Snake R. (Henry's Fk.). Franklin Co.: Mink Cr. Gooding Co.: Niagara Springs; Snake R. Jefferson Co.: Birch Cr. Jerome Co. Lincoln Co.: N. Gooding Canal. Oneida Co.: Deep Cr. Twin Falls Co.: Salmon Falls Cr.

13. *Callibaetis coloradensis* Banks.—Bear Lake Co.: near Montpelier. Blaine Co.: Sawtooth Nat. Forest. Bonneville Co.: Rainey Cr. Fremont Co.: near St. Anthony. Franklin Co.: Cub R. Jefferson Co.: near Heise. Lincoln Co.: near Dietrich.

14. *Callibaetis montanus* Eaton.—Bannock Co.: near McCammon. Franklin Co.: Bear R. Gooding Co.: Riley Cr.

15. *Callibaetis nigrinus* Banks.—Bannock Co.: Mink Cr.; near Arimo; Portneuf R. Bear Lake Co.: near Ovid. Bingham Co.: Clear Cr. Butte Co.: near Howe. Caribou Co.: Portneuf R. Cassia Co.: near Burley. Gooding Co.: Niagara Springs; Riley Cr. Jerome Co.: near Jerome. Lincoln Co.: near Shoshone. Oneida Co.: Deep Cr. Twin Falls Co.: near Twin Falls.

16. *Centroptilum bifurcatum* McDunnough.—Gooding Co.: Twin Falls Co.

17. *Centroptilum selanderorum* Edmunds.—Bingham Co.: Aberdeen-Springfield Canal; Snake R. Blaine Co.: Big Wood R. Butte Co.: Big Lost R. Cassia Co.: at Burley. Custer Co.: Big Lost R. Lincoln Co.: N. Gooding Canal. Oneida Co.: Deep Cr.

FAMILY HEPTAGENIIDAE

18. *Cinygma integrum* Eaton.—Blaine Co.: ditch near Ketchum. Butte Co.: Little Cottonwood Cr.

19. *Cinygmula minus* (Eaton).—Bannock Co.: Gibson Jack Cr.; Mink Cr. Bonneville Co.: Jensen Cr.

20. *Cinygmula par* (Eaton).—Butte Co.: Little Lost R. Teton Co.: Badger Cr.

21. *Cinygmula ramaleyi* (Dodds).—Bannock Co.: Mink Cr. Cassia Co.: Cassia Cr.

22. *Cinygmula reticulata* McDunnough.—Clark Co.: Birch Cr.

23. *Cinygmula tarda* (McDunnough).—Custer Co.: near Mackay.

24. *Epeorus (Iron) albertae* (McDunnough).—Bannock Co.: Mink Cr. Blaine Co.: near Ketchum. Custer Co.: Big Lost R. Fremont Co.: Snake R. (Henry's Fk.).

25. *Epeorus (Iron) deceptivus* (McDunnough); Blaine Co. Butte Co.: Little Lost R.

26. *Epeorus (Iron) longimanus* (Eaton).—Bannock Co.: Mink Cr.; Portneuf R.; Rapid Cr. Bear Lake Co.: St. Charles Cr. Bonneville Co.: Pine Cr. Fremont Co.: Snake R. (Henry's Fk.). Franklin Co.: Cub R. Teton Co.: Badger Cr. Twin Falls Co.: Rock Cr.

27. *Epeorus (Ironopsis) grandis* (McDunnough).—Bonneville Co.: Pine Cr. Teton Co.: Moose Cr.

28. *Heptagenia criddlei* McDunnough.—Bingham Co.: Clear Cr. Blaine Co.: Richfield Canal. Butte Co.: Hagerman. Lincoln Co.: Gooding Canal.

29. *Heptagenia elegantula* (Eaton).—Lincoln Co.: Gooding Canal. Power Co.: Bannock Cr.

30. *Heptagenia simplicoides* McDunnough.—Bingham Co.: Aberdeen-Springfield Canal. Caribou Co.: Toponce Cr. Lincoln Co.: Big Wood R.

31. *Heptagenia solitaria* McDunnough.—Franklin Co.: Bear R. Fremont Co.: Snake R. (Henry's Fk.). Jefferson Co.: Birch Cr. Teton Co.: Teton R.

32. *Rhithrogena futilis* McDunnough.—Twin Falls Co.: Rock Cr.

33. *Rhithrogena hageni* Eaton.—Bannock Co.: Rapid Cr. Bonneville Co.: Pine Cr. Clark Co.: Birch Cr.; Medicine Lodge Cr. Custer Co.: Big Lost R. Franklin Co.: Cub R. Fremont Co.: Snake R. (Henry's Fk.). Jef-

person Co.: Birch Cr. Teton Co.: Badger Cr.

34. *Rhithrogena morrisoni* (Banks).—Bannock Co.: Mink Cr. Bear Lake Co.: Thomas Fork Cr. Blaine Co.: Big Wood R. Butte Co.: Big Lost R. Fremont Co.: Snake R. (Henry's Fk.).

35. *Rhithrogena robusta* Dodds.—Bonneville Co.: Pine Cr. Butte Co.: Little Lost R. Fremont Co.: Teton R. Teton Co.: Moose Cr.

36. *Rhithrogena undulata* (Banks).—Custer Co.: near Mackay.

FAMILY LEPTOPHLEBIIDAE

37. *Choroterpes albiannulata* McDunnough.—Bingham Co.: Snake R. Franklin Co.: Bear R.

38. *Leptophlebia gravastella* (Eaton).—Bannock Co.: Mink Cr. Bonneville Co.: Brockman Cr.

39. *Paraleptophlebia debilis* (Walker).—Blaine Co.: Warm Springs Cr. Butte Co.: Big Lost R. Caribou Co.: Blackfoot R.; Portneuf R. Jerome Co.: near Jerome. Lincoln Co.: N. Gooding Canal.

40. *Paraleptophlebia heteronea* (McDunnough).—Bannock Co.: Mink Cr.; Portneuf R. Bear Lake Co.: Montpelier Cr. Blaine Co.: ditch near Big Wood R. Butte Co.: Little Lost R. Clark Co.: Beaver Cr.; Camas Cr. Custer Co.: Big Lost R. Franklin Co.: Mink Cr. Fremont Co.: Buffalo R. Teton Co.: Teton R.

41. *Paraleptophlebia memorialis* (Eaton).—Butte Co.: near Howe. Custer Co.: Big Lost R. Fremont Co.: Snake R. (Henry's Fk.).

FAMILY EPHEMERELLIDAE

42. *Ephemerella (Atenella) margarita* Needham.—Lincoln Co.: Big Wood R.

43. *Ephemerella (Caudatella) heterocaudata heterocaudata* McDunnough.—Blaine Co.: Trail Cr. Custer Co.: Big Lost R. Fremont Co.: Targhee Cr.

44. *Ephemerella (Caudatella) hystrix* Traver.—Butte Co.: Little Lost R. Fremont Co.: Teton R. (N. Fk.); Targhee Cr.

45. *Ephemerella (Drunella) coloradensis* Dodds.—Bannock Co.: Mink Cr. Blaine Co.: Big Wood R. Bonneville Co.: Pine Cr. Butte

Co.: Little Lost R. Clark Co.: near Orgona. Franklin Co.: Mink Cr. Fremont Co.: Howard Cr. Teton Co.: Moose Cr.

46. *Ephemerella (Drunella) doddsi* Needham.—Bannock Co.: City Cr.; Gibson Jack Cr.; Mink Cr.; Portneuf R.; Rapid Cr. Blaine Co.: Big Wood R. Bonneville Co.: Indian Cr.; Jensen Cr.; Pine Cr.; Rainey Cr. Butte Co.: Little Lost R. Franklin Co.: Cub R. Fremont Co.: Targhee Cr. Teton Co.: Moose Cr.; Trail Cr.; Warm Cr.

48. *Ephemerella (Drunella) flavilinea* McDunnough.—Blaine Co.: Big Wood R. Bonneville Co.: Indian Cr.; Rainey Cr. Butte Co.: Little Lost R. Custer Co.: Big Lost R. Fremont Co.: Warm R. Teton Co.: Teton R.

48. *Ephemerella (Drunella) grandis grandis* Eaton.—Bannock Co.: City Cr.; Gibson Jack Cr.; Mink Cr.; Pocatello Cr.; Portneuf R.; Rapid Cr. Bear Lake Co.: St. Charles Cr. Bonneville Co.: Rainey Cr. Butte Co.: Little Lost R. Clark Co.: Beaver Cr.; Birch Cr.; Camas Cr.; Medicine Lodge Cr. Custer Co.: Big Lost R. Franklin Co.: Cub R. Fremont Co.: Snake R. (Henry's Fk.). Teton Co.: Teton R. (N. Fk.).

49. *Ephemerella (Drunella) spinifera* Needham.—Blaine Co.: Big Wood R. Butte Co.: Little Lost R. Fremont Co.: Targhee Cr.

50. *Ephemerella (Ephemerella) inermis* (Eaton).—Bannock Co.: Mink Cr.; Portneuf R.; Rapid Cr. Bear Lake Co.: Salt Cr. Bingham Co.: Snake R. Blaine Co.: Big Wood R.; Silver Cr. Bonneville Co.: Pine Cr. Rainey Cr. Butte Co.: Little Lost R. Cassia Co.: Cassia Cr. Clark Co.: Beaver Cr.; Birch Cr.; Camas Cr.; Medicine Lodge Cr. Custer Co.: Big Lost R. Franklin Co.: Cub Cr.; Mink Cr. Fremont Co.: Warm R. Jefferson Co.: Birch Cr. Lincoln Co.: Little Wood R. Teton Co.: Teton R.; Trail Cr.

51. *Ephemerella (Ephemerella) infrequens* McDunnough.—Bear Lake Co.: Thomas Fork Cr. Bingham Co.: Clear Cr.; Spring Cr. Blaine Co.: Big Wood R. Bonneville Co.: Rainey Cr.; Snake R. (S. Fk.). Clark Co.: Birch Cr. Custer Co.: Big Lost R. Fremont Co.: Warm R.

52. *Ephemerella (Serratella) tibialis* McDunnough.—Bonneville Co.: Pine Cr. Butte Co.: Little Lost R.; Big Lost R. Custer Co.: near Mackay. Franklin Co.: Cub R.

53. *Ephemerella (Timpanoga) hecuba hecuba* (Eaton).—Bingham Co.: Snake R. Custer Co.: Big Lost R. Franklin Co.: Cub R.

FAMILY TRICORYTHIDAE

54. *Tricorythodes minutus* Traver.—Bannock Co.: near Pocatello; Portneuf R. Bingham Co.: Clear Cr.; Spring Cr. Bonneville Co.: Willow Cr. Butte Co.: Big Lost R.; Little Lost R. Cassia Co.: Snake R. Caribou Co.: Blackfoot R.; Portneuf R. Franklin Co.: Bear R. Gooding Co.: Niagara Springs. Jerome Co.: at Hazelton. Lincoln Co.: N. Gooding Canal. Minidoka Co.: Snake R. Oneida Co.: Deep Cr. Power Co.: Snake R. Twin Falls Co.: Salmon Falls Cr.

FAMILY CAENIDAE

55. *Brachycercus prudens* (McDunnough).—Lincoln Co.: N. Gooding Canal.

56. *Caenis simulans* McDunnough.—Bannock Co.: Portneuf R. Butte Co.: Craters of the Moon Nat. Monument. Caribou Co.: Portneuf R. Jerome Co.: near Milner. Lincoln Co.: near Shoshone; N. Gooding Canal. Oneida Co.: Deep Cr.

FAMILY EPHEMERIDAE

57. *Ephemera simulans* Walker.—Fre-

mont Co.: Buffalo R.; Snake R. (Henry's Fk.).

58. *Hexagenia limbata limbata* Serville.—Cassia Co.: near Burley; Snake R. Gooding Co.: at Hagerman; near Gooding. Lincoln Co.: at Shoshone. Minidoka Co.: at Rupert. Power Co.: Snake R.

FAMILY POLYMITARCIDAE

59. *Ephoron album* (Say).—Bannock Co.: Portneuf R. Cassia Co.: Raft R. Franklin Co.: Bear R. Jerome Co.: near Jerome. Lincoln Co.: near Shoshone. Twin Falls Co.: at Twin Falls; near Murtaugh.

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