

STONEFLY (PLECOPTERA) RECORDS
FROM THE BASIN RANGES OF NEVADA AND UTAH

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ABSTRACT.— Distributional records are given for 40 stonefly species on 15 isolated mountain ranges in Nevada and Utah.

The isolated ranges within the Great Basin have attracted little attention from aquatic biologists, and the running water fauna of the region is very poorly known. Cather, Stark, and Gaufin (1975) summarized records of Nevada stoneflies, and Baumann, Surdick, and Gaufin (1977) cite a few additional records for Nevada and western Utah. The stonefly faunas of regions surrounding the Great Basin are described by Jewett (1959, 1960), Newell and Minshall (1976), and Stewart, Baumann, and Stark (1974).

In this paper I document stonefly distributions on 14 mountain ranges in Nevada and the Deep Creek Mountains, Utah, based on repeated collecting trips in 1974 and 1977. These and published data are to be used in a numerical analysis of stonefly distribution within the Great Basin. Records are listed by mountain range and but one record is given for each range. Records redundant with those of Cather et al. (1975) are not listed although I visited many of their localities. Nymphal records are included because the region is so little known and because these data are included in the quantitative analysis.

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NEMOURIDAE

Malenka sp. A.— NEVADA: Clark Co., Spring Mtns., Cold Cr., 2 ♂♂, 3-V-77. This species will be described by R. W. Baumann from these and previously collected speci-

mens from the Spring Mtns. I have *Malenka* nymphs from Deer Cr. and Willow Cr., Spring Mtns.

Malenka californica (Claassen).— NEVADA: Lander Co., Toiyabe Ra., Birch Cr., ♀, probably this species, 24-VI-77; White Pine Co., Schell Creek Ra., Kalamazoo Cr., ♂, 2 ♀♀, 26-VI-77.

Podmosta delicatula (Claassen).— NEVADA: Humboldt Co., Santa Rosa Ra., Dutch John Cr., 5 ♀♀, 19-VI-77.

Prostoia besametsa (Ricker).— NEVADA: Elko Co., Jarbidge Mtns., Canyon Cr., ♀, 11-VI-74; Ruby Mtns., Thomas Cr., ♂, 2 ♀♀, 12-VI-74.

Zapada cinctipes (Banks).— NEVADA: Elko Co., Ruby Mtns., Lamoille Cr., nymphs, 17-II-77; Esmeralda Co., White Mtns., Chiatovich Cr., 4 ♂♂, ♀, 10-II-77; Humboldt Co., Jackson Mtns., Bottle Cr., nymphs, 5-II-77; Pine Forest Ra., Alder Cr., 4 ♂♂, 2 ♀♀, 5-II-77; Santa Rosa Ra., Canyon Cr., ♀, 4-II-77; Lander Co., Toiyabe Ra., Kingston Cr., ♂, 8-II-77; Nye Co., Quinn Canyon-Grant Ra., Cherry Cr., 9 ♂♂, 3 ♀♀, 12-II-77; Pershing Co., Humboldt Ra., Star Cr., 2 ♀♀, 28-IV-77; Sonoma Ra., Sonoma Canyon Cr., nymphs, 6-II-77; White Pine Co., Schell Creek Ra., McCoy Cr., nymphs, 16-II-77; Snake Ra., Baker Cr., 2 ♂♂, ♀, 4-V-77; White Pine Ra., White R., nymphs, 13-II-77. UTAH: Juab Co., Deep Creek Mtns., Trout Cr., 5 ♀♀, 15-II-77.

Zapada frigida (Claassen).— NEVADA: Elko Co., Jarbidge Mtns., Canyon Cr., ♂, 11-VI-74.

Zapada haysi (Ricker).— NEVADA: Elko

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Co., Jarbidge Mtns., Bear Cr., ♀, 10-VI-74; Ruby Mtns., Thomas Cr., ♀, 12-VI-74; White Pine Co., Schell Creek Ra., McCoy Cr., ♂, 5-V-77.

Zapada oregonensis (Claassen).—NEVADA: Humboldt Co., Pine Forest Ra., Wood Canyon, ♂, 3 ♀♀, 20-VI-77.

TAENIOPTERYGIDAE

Doddsia occidentalis (Banks).—NEVADA: Elko Co., Ruby Mtns., Lamoille Cr., ♀, 6-V-77; White Pine Co., Schell Creek Ra., McCoy Cr., 2 ♂♂, ♀, 5-V-77; Snake Ra., Baker Cr., ♀, 4-V-77.

Taenionema nigripenne (Banks).—NEVADA: Humboldt Co., Jackson Mtns., Bottle Cr., ♀, 27-IV-77; Santa Rosa Ra., Lye Cr., ♂, 6 ♀♀, 19-VI-77; Sonoma Ra., Water Canyon, 8 ♂♂, 2 ♀♀, 28-IV-77; White Pine Co., Snake Ra., Baker Cr., ♂♂, ♀♀, 13-VI-74.

CAPNIIDAE

Capnia sp. A.—NEVADA: Esmeralda Co., White Mtns., Middle Cr., 3 ♂♂, 14 ♀♀, 10-II-77. This species will be described by R. W. Baumann and myself.

Capnia gracilaria Claassen.—NEVADA: Elko Co., Ruby Mtns., Lamoille Cr., ♂, 17-II-77; Humboldt Co., Jackson Mtns., Bottle Cr., ♂, 5-II-77; Pine Forest Ra., Wood Canyon, ♂, ♀, 5-II-77; Santa Rosa Ra., Canyon Cr., ♂, 4-II-77; White Pine Co., Schell Creek Ra., McCoy Cr., 2 ♂♂, 2 ♀♀, 5-V-77; Snake Ra., Baker Cr., 10 ♂♂, 13 ♀♀, 5-V-77. UTAH: Juab Co., Deep Creek Mtns., Trout Cr., 4 ♂♂, 12 ♀♀, 15-II-77.

Capnia uintahi Gaufin.—NEVADA: Elko Co., Ruby Mtns., Lamoille Cr., ♂, 3 ♀♀, 17-II-77; Lander Co., Toiyabe Ra., Big Cr., 18 ♂♂, 6 ♀♀, 7-II-77; White Pine Co., Schell Creek Ra., McCoy Cr., 17 ♂♂, 4 ♀♀, 16-II-77.

Capnia utahensis Gaufin and Jewett.—NEVADA: Esmeralda Co., White Mtns., Chiatovitch Cr., 2 ♂♂, 2 ♀♀, 10-II-77; Lander Co., Toiyabe Ra., Ophir Cr., 7 ♂♂, 17 ♀♀, 9-II-77; Nye Co., Quinn Canyon-Grant Ra., Cherry Cr., 10 ♂♂, 4 ♀♀, 12-II-77; White Pine Co., Schell Creek Ra., McCoy Cr., 5 ♂♂, 4 ♀♀; Snake Ra., Baker Cr., 4 ♀♀, 4-

V-77; White Pine Ra., White R., 1 ♂, 2 ♀♀, 13-II-77. UTAH: Juab Co., Deep Creek Mtns., Granite Cr., ♂, 2 ♀♀, 15-II-77.

Capnia wanica Frison.—NEVADA: Nye Co., Toiyabe Ra., Peavine Cr., 2 ♂♂, ♀, 9-II-77; Pershing Co., Humboldt Ra., Buena Vista Cr., 10 ♂♂, 2 ♀♀, 6-II-77.

Eucapnopsis brevicauda (Claassen).—NEVADA: Humboldt Co., Santa Rosa Ra., Lye Cr., ♂, 26-IV-77; Pershing Co., Humboldt Ra., Star Cr., ♀, 18-VI-77.

Utacapnia lemoniana (Nebeker and Gaufin).—NEVADA: Elko Co., Ruby Mtns., Lamoille Cr., 3 ♂♂, 17-II-77; Lander Co., Toiyabe Ra., Birch Cr., 3 ♂♂, ♀, 8-II-77.

LEUCTRIDAE

Moselia infuscata (Claassen).—NEVADA: Humboldt Co., Pine Forest Ra., Wood Canyon, 5 ♂♂, 9 ♀♀, 20-VI-77.

Paraleuctra occidentalis (Banks).—NEVADA: Elko Co., Jarbidge Mtns., Jacks Cr., ♂, 2 ♀♀, 11-VI-74; Ruby Mtns., Thomas Cr., ♂, 12-VI-74; White Pine Co., Schell Creek Ra., McCoy Cr., ♂, 5-V-77; Snake Ra., Lehman Cr., ♂, 3 ♀♀, 15-VI-74.

Paraleuctra vershina Gaufin and Ricker.—NEVADA: Elko Co., Jarbidge Mtns., Jarbidge Ra., ♂, ♀, 9-VI-74; Humboldt Co., Jackson Mtns., Bottle Cr., ♂♂, ♀♀, 19-VI-77; Santa Rosa Ra., Lye Cr., 5 ♂♂, 5 ♀♀, 19-VI-77; Sonoma Ra., Water Canyon, 3 ♂♂, 4 ♀♀, 18-VI-77; Lander Co., Toiyabe Ra., Big Cr., 2 ♂♂, 4 ♀♀, 24-VI-77; White Pine Co., Schell Creek Ra., McCoy Cr., 2 ♂♂, ♀♀, 26-VI-77; Snake Ra., Baker Cr., 2 ♂♂, 2 ♀♀, 13-VI-74.

PELTOPERLIDAE

Yoraperla brevis (Banks).—NEVADA: Esmeralda Co., White Mtns., Middle Cr., ♂♂, ♀♀, 25-VI-77; Humboldt Co., Pine Forest Ra., Big Cr., 2 ♂♂, ♀, 19-VI-77.

PTERONARCYIDAE

Pteronarcella badia? (Hagen).—NEVADA: Elko Co., Jarbidge Mtns., Bear Cr., nymph, 10-VI-74; Humboldt Co., Jackson Mtns., Trout Cr., nymphs, 5-IX-74, Pine Forest Ra.,

Wood Canyon, 2 ♀ ♀, 20-VI-77; Santa Rosa Ra., North Fork Little Humboldt R., nymphs, 4-II-77; Nye Co., Toiyabe Ra., Reese R., nymphs, 8-IX-74; White Pine Ra., Currant Cr., nymphs, 13-II-77; White Pine Co., Snake Ra., Snake Cr., nymphs, 14-II-77. The two females, and all the nymphs, appear to be the interior *P. badia* rather than *P. regularis* of the Cascades and Sierra Nevada. The two adult females were collected in the Pine Forest Ra. of northwestern Nevada where unequivocal Sierran species (*Moselia infusca*, *Yoraperla brevis*) occur. The presence of apparent *P. badia* so far west suggests that the contact zone (Ricker 1964) of the *Pteronarcella* vicariants lies very close to the eastern front of the Sierra Nevada. Obviously more adult material is needed to substantiate this suggestion.

Pteronarcys princeps Banks.—NEVADA: Elko Co., Jarbidge Mtns., Jarbidge R., nymphs, 9-VI-74; Esmeralda Co., Chiatovich Cr., nymphs, 10-II-77; Humboldt Co., Jackson Mtns., Bottle Cr., ♀, 19-VI-77; Pine Forest Ra., Big Cr., nymphs, 5-II-77; Santa Rosa Ra., Cabin Cr., nymphs, 26-IV-77; Sonoma Ra., Water Canyon, ♀, 18-VI-77; Nye Co., Toiyabe Ra., North Twin R., nymphs, 8-II-77; Pershing Co., Humboldt Ra., Star Cr., nymphs, 6-II-77; White Pine Co., Schell Creek Ra., Cleve Cr., nymphs, 16-II-77; UTAH: Juab Co., Deep Creek Mtns., Trout Cr., nymphs, 15-II-77.

PERLODIDAE

Isoperla ebria (Hagen).—NEVADA: Humboldt Co., Sonoma Ra., Water Canyon, nymphs, 28-IV-77.

Isoperla patricia Frison.—NEVADA: Humboldt Co., Pine Forest Ra., Alder Cr., 2 ♂ ♂, 20-VI-77; Nye Co., Toiyabe Ra., Peavine Cr., 1 ♂, 3 ♀ ♀, 24-VI-77; White Pine Ra., Currant Cr., nymphs, 13-II-77; White Pine Co., Schell Creek Ra., Kalamazoo Cr., 9 ♂ ♂, 3 ♀ ♀, 26-VI-77.

Cultus sp.—NEVADA: Elko Co., Jarbidge Mtns., Jarbidge R., nymphs, 9-VI-74; Ruby Mtns., Lamoille Cr., nymphs, 17-II-77; Nye Co., Toiyabe Ra., South Twin R., nymphs, 1-V-77.

Diura knowltoni (Frison).—NEVADA: Humboldt Co., Jackson Mtns., Bottle Cr., nymphs,

5-II-77; Santa Rosa Ra., Canyon Cr., nymphs, 4-II-77.

Frisonia picticeps (Hanson).—NEVADA: Esmeralda Co., White Mtns., Middle Cr., nymphs, 2-V-77.

Kogotus sp.—NEVADA: Esmeralda Co., White Mtns., Middle Cr., nymphs, 2-V-77.

Megarays signata (Hagen).—NEVADA: Elko Co., Jarbidge Mtns., Jacks Cr., nymphs, 11-VI-74; Ruby Mtns., Thomas Cr., nymphs, 12-VI-74; White Pine Co., Schell Creek Ra., McCoy Cr., 3 ♂ ♂, 3 ♀ ♀, 26-VI-77; Snake Ra., Lehman Cr., nymphs, 14-II-77.

Skwala parallela (Frison).—NEVADA: Humboldt Co., Jackson Mtns., Bottle Cr., nymphs, 5-II-77; Santa Rosa Ra., North Fork Little Humboldt R., 2 ♂ ♂, 1 ♀, 26-IV-77.

PERLIDAE

Doroneuria baumanni? Stark and Gaufin.—NEVADA: Elko Co., Jarbidge Mtns., Snowslide Gulch, nymphs, 10-VI-74; Humboldt Co., Jackson Mtns., Bottle Cr., nymphs, 27-IV-77; Pine Forest Ra., Big Cr., nymphs, 27-IV-77; Santa Rosa Ra., Lye Cr., nymphs, 26-IV-77; Pershing Co., Humboldt Ra., Star Cr., nymphs, 6-II-77. Stark and Gaufin (1974) considered all Great Basin *Doroneuria* to be coastal *D. baumanni*. Adults of this late-emerging genus are needed to confirm the identity of the Jarbidge populations because Newell and Minshall (1976) reported both *D. baumanni* and interior *D. theodora* from southeastern Idaho.

Hesperoperla pacifica (Banks).—NEVADA: Clark Co., Spring Mtns., Willow Cr., nymphs, 3-V-77; Elko Co., Jarbidge Mtns., Snowslide Gulch, nymphs, 10-VI-74; Humboldt Co., Jackson Mtns., Bottle Cr., ♀, 19-VI-77; Pine Forest Ra., Big Cr., ♂, 19-VI-77; Santa Rosa Ra., Canyon Cr., nymphs, 4-II-77; Lander Co., Toiyabe Ra., Kingston Cr., nymphs, 8-II-77; Nye Co., Quinn Canyon-Grant Ra., Troy Canyon, nymphs, 12-II-77; Pershing Co., Humboldt Ra., Buena Vista Cr., nymphs, 6-II-77; Sonoma Ra., Sonoma Canyon, nymphs, 6-II-77; White Pine Co., Schell Creek Ra., Kalamazoo Cr., nymphs, 16-II-77; Snake Ra., Baker Cr., nymphs, 13-II-77; White Pine Ra., White R., nymphs, 13-II-77; UTAH: Juab Co., Deep Creek Ra., Granite Cr., nymphs, 15-II-77.

CHLOROPERLIDAE

Alloperla severa (Hagen).—NEVADA: Humboldt Co., North Fork Little Humboldt R., ♂♂, ♀♀, 19-VI-77; White Pine Co., Schell Creek Ra., Kalamazoo Cr., 3 ♂♂, 1 ♀, 26-VI-77; White Pine Ra., Illipah Cr., 3 ♂♂, ♀, 13-VI-74.

Suwallia pallidula (Banks).—NEVADA: Humboldt Co., Santa Rosa Ra., North Fork Little Humboldt R., ♂♂, ♀♀, 19-VI-77; Nye Co., Toiyabe Ra., Peavine Cr., ♂♂, ♀♀, 24-VI-77.

Sweltsa borealis (Banks).—NEVADA: Humboldt Co., Jackson Mtns., Bottle Cr., 2 ♂♂, 3 ♀♀, 19-VI-77.

Sweltsa coloradensis (Banks).—NEVADA: Elko Co., Jarbidge Mtns., Canyon Cr., ♂, 11-VI-74; Humboldt Co., Pine Forest Ra., Big Cr., 10 ♂♂, 10 ♀♀, 19-VI-77; Santa Rosa Ra., Dutch John Cr., 3 ♂♂, 7 ♀♀, 19-VI-77; Sonoma Ra., Water Canyon, ♂♂, ♀♀, 18-VI-77; Nye Co., Currant Cr., 6 ♂♂, 3 ♀♀, 26-VI-77; White Pine Co., Schell Creek Ra., McCoy Cr., ♂♂, ♀♀, 26-VI-77.

Sweltsa townesi (Ricker).—NEVADA: Esmeralda Co., White Mtns., Middle Cr., 3 ♂♂, 3 ♀♀, 25-VI-77.

Triznaka diversa (Frison).—NEVADA: Esmeralda Co., White Mtns., Middle Cr., ♀, 25-VI-77.

Triznaka pintada (Ricker).—NEVADA: Humboldt Co., Jackson Mtns., Bottle Cr., ♂♂, ♀♀, 19-VI-77; Santa Rosa Ra., Cabin Cr., ♂♂, ♀♀, 18-VI-77; Sonoma Ra., Water Canyon, 2 ♂♂, ♀, 18-VI-77; Lander

Co., Toiyabe Ra., Big Cr., 2 ♂♂, 24-VI-77; Nye Co., Quinn Canyon-Grant Ra., Cherry Cr., ♂♂, ♀♀, 25-VI-77; Pershing Co., Humboldt Ra., Star Cr., 3 ♂♂, 2 ♀♀, 18-VI-77; White Pine Co., White Pine Ra., Illipah Cr., 5 ♂♂, 3 ♀♀, 13-VI-74. Two forms differing in the shape of the female subgenital plate are present in this material. Specimens from northwestern Nevada are readily separable from those from the Toiyabe Ra. and eastern and southern ranges.

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