

## Mayflies (Ephemeroptera) of the Far Western United States. Part 3: California

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### ABSTRACT

The mayfly fauna of California consists of 155 species in 44 genera among 15 families. Previous data and new data (from 23 major collections) are given for all species and include first published state data for 53 of the species. In addition, 1,720 new county records involving all 58 California counties are given for 140 of the species. Less than 10 percent of the species appear endemic to California

### INTRODUCTION

Eaton (1884, 1885) in his landmark monograph of world mayflies (Eaton 1883-88) was the first to report any mayflies from what is now the state of California. These included six species now known to be *Ameletus dissitus* Eaton, *Baetisca lacustris* McDunnough, *Rhithrogena hageni* Eaton, *Paraleptophlebia memorialis* (Eaton), *P. rufivenosa* (Eaton), and *Siphonurus occidentalis* (Eaton), with *P. memorialis* technically the first species reported from the state. The main contributors of first published state records of species in California during the 20<sup>th</sup> Century included Traver (1934, 1935a,b) with 27 first records, Day (1951, 1952, 1954a,b, 1955, 1956) with 19 first records, and Mayo (1939, 1951, 1952a,b) with 10 first records. Twenty-eight additional authors have contributed first published records for California, and 41 now valid species were originally described from California, bringing the total of published records of valid species previous to the present work to 102. Day (1956) offered the only historical faunal treatment of California mayflies, which included 85 now valid species.

The present work represents part three in our series on the mayflies of the far western conterminous USA, following our treatments of Washington state (Meyer and McCafferty 2007a) and Oregon (Meyer and McCafferty 2007b). Alaska was treated extensively by Randolph and McCafferty (2005). Our study of California has added 53 species to the previously published 102, bringing the current total number of valid mayfly species known from the state to 155. This includes the confirmation with extensive new data of four species that had been reported previously only in unpublished theses (see data below). Mayflies were found in all 58 California counties (Fig. 1) based on source data from 23 institutional and private collections. We provide 1,720 new county records for 140 species of the 155 species included in our account. Based on recent revisionary works and recent records of mayflies from other areas, there remain only 14 species of mayflies that are possibly endemic to California: *Ameletus imbellis* Day, *Baetis diablus*



Fig. 1. California counties.

Day, *B. palisadi* Mayo, *Choroterpes terratoma* Seemann, *Edmundsius agilis* Day, *Epeorus lagunitas* (Traver), *Paraleptophlebia altana* Kilgore and Allen, *P. associata* (McDunnough), *P. cachea* Day, *P. californica* Traver, *P. clara* (McDunnough), *P. helena* Day, *P. quisquilia* Day, and *P. zayante* Day.

All California species were verified via identification. The style of presentation is after Meyer and McCafferty (2007a, b). New data are based on larval samples unless "A" for alates, or "A.L" for both alates and larvae, are appended to the collection data. Only sir names of collectors are given when known. Records or listings unaccompanied by collection data are not recognized as previous data (see McCafferty 2000).

Material on which new records are based are housed at the following institutions or private collections, and are indicated by upper case acronyms as follows: Bureau of Land Management/Utah State University National Aquatic Monitoring Center BugLab, Logan, UT (BLAB); Monte L. Bean Life Science Museum, Brigham Young University, Provo, UT (BYU); Department of Entomology, California Academy of Sciences, San Francisco, CA (CAS); California Department of Fish and Game, Chico, CA (FGCH); California Department of Fish and Game, Sacramento, CA (FGSA); California Department of Fish and Game, Sonoma, CA

(FGSO); the Essig Museum of Entomology, University of California, Berkeley, CA (UCB); The Bohart Museum, University of California, Davis, CA (UCD); Entomology Research Museum, University of California, Riverside, CA (UCR); C. P. Gillette Museum, Colorado State University, Fort Collins, CO (CSU); Cornell University Arthropod Collection, Ithaca, NY (CUAC); Environmental Protection Agency [NHEERL/WED], Corvallis, OR (EPA); Illinois Natural History Survey, Urbana, IL (INHS); Natural History Museum of Los Angeles County, Los Angeles, CA (LACM); Oregon State Arthropod Collection, Oregon State University, Corvallis, OR (OSU); Purdue Entomological Research Collection, West Lafayette, IN (PERC); Oregon Department of Environmental Quality, Portland, OR (ODEQ); Department of Biology, Sacramento State University, Sacramento, CA (SSU); US Geological Survey, Menlo Park, CA (GSMP); National Water Quality Laboratory, US Geological Survey, Denver, CO (USGS); the private collection of Wayne C. Fields, Hydrozoology, Newcastle, CA (WCF); The James Entomological Collection, Washington State University, Pullman, WA (WSU).

## FAUNISTIC DATA

### Ameletidae

#### *Ameletus amator* Mayo

*Previous data.*—Mayo (1939): AMADOR (Dry Cr, Jackson Cr, Rancheria Cr), EL DORADO (American R).

*New data.*—AMADOR: Mokelumne R, Electra Rd, Hwy 49, 24-VI-2003, Meyer & Pfister (PERC); CALAVERAS: Angeles Cr, Hwy 4, Angeles Camp, and Calaveritas Cr, Calaveritas Rd, 11-V-2002, Meyer (PERC); FRESNO: Sample Mdws, Huntington L, 10-VII-1984, MacDonald, A (PERC); MARIPOSA: Mahoney Gulch, Hwy 132, and Mariposa Cr, Joe Howard St, Mariposa, 10-V-2002, Meyer, and Wildcat Cr, Hwy 41, Yosemite Natl Prk, 26-VI-2002, Meyer & Pfister (PERC); MENDOCINO: Russian R, 6 mi N Cloverdale, 10-IV-1979, Dare, A (UCB); MONO: Deadman Cr, Hwy 395, 27-VI-2003, Meyer (PERC), and 1 mi SW Tom's Pl, 14-VIII-1963, MacNeill & Lundgren, A, and Sonora Jct, Sonora Br Camp, 28-VII-1962, Rentz & MacNeill, A (CAS); SHASTA: McCloud R Pres, 18-IV-1976, Fields (SSU); SISKIYOU: Tate Cr, 4-VI-1954, Chandler, A (CAS); TULARE: Sillman Cr, Hwy 198, Sequoia Natl Prk, and Cabin Cr, Hwy 198, Sequoia Natl Prk, 2-VII-2003, and Marble Fork Kaweah R, Hwy 198, Sequoia Natl Prk, and Woodward Cr, Hwy 198, 3-VII-2003, Meyer (PERC); TUOLUMNE: Yosemite Cr, Hwy 120, Yosemite Natl Prk, 27-VI-2003 Meyer (PERC).

#### *Ameletus andersoni* Zloty

*New data.*—MENDOCINO Hopland Field Sta, 27-IV-1985, Normington, A (UCD).

#### *Ameletus bellulus* Zloty

*New data.*—AMADOR: Rancheria Cr, 3 mi S Sutter Cr, 18-III-1989, Lockhart, and Sutter Cr, 2-IV-1977, Hall (SSU); BUTTE: Big Chico Cr, Hwy 32, 14-V-2002, Meyer (PERC); EL DORADO: Pyramid Cr, Hwy 50, Twin Bridges, 21-III-1985, Baumann & Nelson (BYU); HUMBOLDT: Van Duzen R, Hwy 36, 15-V-2002, Meyer, and Van Duzen R, 13 mi N Eel R, 10-V-1988 (PERC); INYO:

Wyman Canyon, White Mtns, 20-VII-1967, Frommer & Frommer, and 2 mi E Big Pine, 5-V-76, Pinto, A (UCR), and Tuttle Cr, 2 mi SW Lone Pine, 6-V-1969, Haddock (UCB); KERN: Shirley Cr, Hwy 155, Wofford Heights, 2-IV-1981, Baumann & Stanger (BYU); MARIN: Cataract Cr, NW Rock Springs, Tamalpais, 28-III-1986, Barr (SSU), and Mt Tamalpais, 24-IV-1965, Ling, A, and Novato, 7-IV-1963, Rentz (CAS); MARIPOSA: 6 mi E Miami RS, 4-VII-46, Chandler (UCB), and Grouse Cr, Hwy 41, Yosemite Natl Prk, 26-VI-03, Meyer & Pfister (PERC); MENDOCINO: South Fork Eel R, 18-II-1985, Baumann & Nelson (BYU); MONO: Lower Rock Cr, Hwy 395, 19-IX-1969, Malin et al. (UCR), and Upper Deadman Cr, 17-VIII-1962, Leech (CAS); MONTEREY: Salmon Cr, Hwy 1, 7-V-2002, Meyer (PERC); NEVADA: Rush Cr, Hwy 49, and Jordan Cr, Bowman Rd, 18-V-2002, Meyer et al. (PERC); PLACER: Bear R, YMCA Camp, Hwy 20, 18-V-2002, and Fordyce Cr, 30-V-1977, Hall (SSU); SAN BERNARDINO: East Fork Barton Cr, Barton Flats, 18-II-1978, Nilsson (BYU), and Hwy 38, 20 mi SW Big Bear, 10-V-1970, Malin & Malin (UCR); SAN LUIS OBISPO: N Cuesta Pass, Santa Lucia Mtns, 14-IV-1963, Toschi, A (UCB); SANTA CLARA: Stevens Cr, 10, 20-VI-1978, Klee (CAS); SIERRA: North Fork Yuba R, 23-IV-1977, Hall (SSU), and North Yuba R, Hwy 49, and Ramsham Cr, Ramsham Rd/Hwy 49, 17-V-2002, Meyer (PERC); SISKIYOU: Cottage Grove, and Swillip Cr, 2-VII-1959, Allen (CAS); SONOMA: Fuller Cr, Gualala, 21-V-1983, Titus (SSU); STANISLAUS: Adobe Cr, Patterson, 2-V-1948, Day (CAS); TEHAMA: Big Chico Cr, Hwy 32, and Deer Cr, Hwy 32, and Gurnsey Cr, Hwy 36, and South Fork Calf Cr, Hwy 32, 14-V-2002, Meyer (PERC); TRINITY: Rattlesnake Cr, Hwy 36, and South Fork Trinity R, Hwy 36, 15-V-2002, Meyer (PERC); TULARE: Ash Mt, Kaweah Power Stat #3, 28-III-1983 (INHS), and Marble Fork Kaweah R, Lodgepole, Sequoia Natl Prk, 27-VIII-1969, Malin (UCR), and North Fork Kaweah R, North Fork Dr, 9-V-2002, Meyer (PERC).

***Ameletus celer* McDunnough**

*New data.*—CONTRA COSTA: 7 mi S Walnut Creek, 24-III-1968, Bell (UCB), and Las Trampas Cr, 3 mi W Danville, 17-II-198, Shepard (SSU); INYO: Division Cr, 9-III-1986, Giuliani, and Lone Pine Cr, 13-II-1986, Baumann & Giuliani (BYU); PLUMAS: Benner Cr, 6 mi N Chester, 25-VI-1980, Baumann & Stanger (BYU), and Thompson Cr, 4 mi SE Quincy, 15-V-1982, Buegler, A (UCB); SHASTA: Hat Cr, 1 mi S Old Station Picnic Area, 4-V-1973, Daly (UCB); SISKIYOU: Ash Cr RS, 9 mi E McCloud, 7, 9-VI-1974, Szerlip (UCB); SOLANO: Ulatris Cr, Mix Cyn Rd, 12-V-2002, Meyer (PERC).

***Ameletus cooki* McDunnough**

*New data.*—ALPINE: East Fork Carson R, Hwy 89, S Markleeville, 21-III-1985, Baumann & Nelson (BYU); AMADOR: Bear R, 21-X-2004, Fields (PERC); COLUSA: Mill Cr, 6 mi SW Stonyford, Doody (SSU); CONTRA COSTA: San Leandro Cr, 3 mi SE Moraga, 5-V-1976, Nowierski (UCB); HUMBOLDT: East Fork Willow Cr, 3-VI-1977, Furnish (INHS); MARIN: Lagunitas, 28-IV-1963, Rentz (CAS); MARIPOSA: Fish Camp, Rt 41, 2-VII-1946, Mulaik (CAS); PLUMAS: Betterton Cr, Hwy 70, 6 mi W Portola, 24-VI-1980, Baumann & Stanger (BYU); SISKIYOU: Ash Cr RS, 9 mi E McCloud, 7, 9-VI-1974, Szerlip (UCB).

*Ameletus dissitus* Eaton

*Previous data.*—Eaton (1885): MARIN (San Geronimo); Traver (1935a): ALAMEDA; Day (1952): NAPA (Sage Cr); Serpa (1986): SONOMA (Copeland Cr).

*New data.*—MARIN: Paradise Cove, 7-IV-1946, Chandler (CAS); NAPA: Sage Cr, 18-III-1951, Day, A (CAS); SOLANO: Mix Canyon, 5-IV-1951, Hall, A (UCD); STANISLAUS: Del Puerto Cyn, 23 mi W Patterson, 30-IV-1963, Powell, A (UCB); YOLO: Cache Cr trib, 6 mi N Rumsey, 19-IV-1953, Day, A (CAS).

*Ameletus edmundsi* Zloty

*New data.*—FRESNO: unnamed lake, Sierra Nevada Mtns, 28-VII-2003, Knapp, A,L (PERC).

*Ameletus imbellis* Day

*Previous data.*—Day (1952): COLUSA (Little Stoney Cr), NAPA (Sage Cr).

*New data.*—ALPINE: Markleville, 4-VII-1949 Day, A (CAS); KERN: Kernville, 30-V-1955, Day, A,L (CAS); MADERA: Willow Cr, Upper Landing, 26-VII-1951, Day, A,L (CAS); MONO: Frying Pan Cr, 18-VII-1952, Day, A,L (CAS); SANTA CLARA: Guadalupe Cr, 16-V-1953, Day, A (CAS); SHASTA: North Fork Battle Cr, 20-VII-1953, Day, A,L (CAS); YOLO: Cache Cr, Madison, 19-IV-1952, Day, A,L (CAS).

*Remarks.*—This species has not known outside of California.

*Ameletus majusculus* Zloty

*New data.*—HUMBOLDT: Van Duzen R, Hwy 36, 15-V-2002, Meyer (PERC); INYO: Owens R, 1.2 mi E Big Pine, 16-V-1969, Haddock (UCB); MADERA: Lewis Cr, Hwy 41, Yosemite Forks, 18-III-85, Baumann & Nelson (BYU); NAPA: Capell Cr, 2 mi NW Capell, 25-IV-1982, Shepard (SSU); SISKIYOU: McBride Springs, 9-VI-1974, Szerlie (UCB).

*Ameletus minimus* Zloty and Harper

*New data.*—HUMBOLDT: 10 mi N Arcata, 21-VII-1969, Show (UCB); MENDOCINO: Hopland Field Sta, 28-IV-1972, Coville & Slater (UCB).

*Ameletus pritchardi* Zloty

*New data.*—CONTRA COSTA: Bollinger Cr, 7 mi S Walnut Creek, 28-IV-1968, Bell (UCB).

*Ameletus shepherdii* Traver

*Previous data.*—Traver (1934): SANTA CRUZ (Waddell Cr); Day (1956): ALPINE.

*New data.*—MENDOCINO: Baechtel Cr, 3 mi W Willits, 15-VI-1948, Leech (CAS); SAN MATEO: San Gregorio Cr, 17-VI-1950, Day, A (CAS); SISKIYOU: Indian Cr, VIII-1949, Day, A (CAS); TEHAMA: Hwy 36, 2 mi E Childs Resort, 10-V-1968, Evans, A (PERC).

*Ameletus similior* McDunnough

*New data.*—AMADOR: Consumnes R, 3 mi NE Rancho Murietta, 30-III-1989, Doody (SSU); BUTTE: West Branch North Fork Feather R, 9-IX-1976, Hogue (LACM); INYO: Big Pine Cr, 6 mi W Big Pine, 3-VIII-1986, Shepard (SSU); MARIN: Liberty Gulch, Alpine L, 19-IV-1975, Benson (UCB); MENDOCINO: Hopland Exp Sta, 29-IV-1972, Coville & Slater (UCB); SHASTA: Pit R, Fender Crossing, 27-IV-1984, BW (PERC); SISKIYOU: 1 mi SE Bartle, Sorenson (UCB); VENTURA: Cherry Cr, 1-IV-1981, Baumann & Stanger (BYU).

*Ameletus sparsatus* McDunnough

*New data.*—ALPINE: Silver Cr, 20-VIII-1972, Meyer (UCD); BUTTE: S Toadtown, Skyway Rd, and West Fork Feather R, Skyway Rd, 14-V-2002, Meyer (PERC); COLUSA: Mill Cr, 6 mi W Stonyford, 8-IV-1989, Glenn (SSU); CONTRA COSTA: San Leandro Cr, 1.5 mi SW Moraga, 3-V-1974, Green (UCB); FRESNO: Hwy 185, 1-V-1976, Klee (CAS); GLENN: Grindstone Cr, Rd 305 (N 162W), 13-V-2002, Meyer (PERC); MARIPOSA: East Fork Chowchilla R, Hwy 49, 10-V-2002, Meyer, and Merced R, 4 mi N Hwy 140 entrance, Yosemite Natl Prk, 25-VI-2003, Meyer & Pfister (PERC), and Yosemite Natl Prk, 5-VI-1931, A (UCB); MENDOCINO: Russian R, UC Hopland Field Sta, 5-IV-1968, Powell (UCB); MONO: Leavitt Mdw 12-VIII-1963, Leech, A (CAS); PLUMAS: Betterton Cr, Hwy 70, 6 mi W Portola, 24-VI-1980, and Warner Cr, 5 mi NW Chester, 25-VI-1980, Baumann/Stanger (BYU); SAN BERNARDINO: Mill Cr, 17-V-1970 Adams (UCR); SAN LUIS OBISPO: 2 mi W Atascadero, 27-IV-1986, Shepard (SSU); SANTA CRUZ: Hester Cr, San Jose Rd, 20-V-2002, Meyer (PERC); SHASTA: 2.6 mi W Viola, Hwy 44, 12-V-1968, Evans, A (PERC); SIERRA: Fiddle Cr, 23-IV-1977, Hall (SSU), and Fiddle Cr, Hwy 49, and North Yuba R, Hwy 49, 17-V-2002, Meyer (PERC); TUOLUMNE: Strawberry, 4-VII-1957, MacSwain (UCB); YUBA: Brandy Cr, Pendola Rd, and Willow Cr, Pendola Rd, 17-V-2002, Meyer (PERC).

*Ameletus subnotatus* Eaton

*New data.*—LAKE: North Fork Cache Cr, New Long Valley Rd, 16-V-2002, Meyer (PERC).

*Ameletus suffusus* McDunnough

*New data.*—COLUSA: Little Stoney Cr, Stonyford Rd, 13-V-2002, Meyer (PERC); CONTRA COSTA: San Leandro Cr, 1.5 mi SW Moraga, 3-V-1974, Sorensen, and Wildcat Cr, Tilden Park, 18-V-1983, Neyman (UCB); GLENN: Salt Cr, Alder Springs, 27-IV-1987, Baumann et al., A (BYU); HUMBOLDT: Redwood Cr, Bryce Thorne Rd, 16-V-2002, Meyer (PERC); LAKE: Benmoore Cr, Eel R, 28-IV-1979, and Middle Cr, 5 mi N Upper L, 25-III-1979, Dare, A (UCB); MADERA: Fresno R, Hwy 41, 10-V-2002, Meyer (PERC); MARIN: Woodacre, 28-III-1955, Hudson, A (UCB); MARIPOSA: South Fork Merced R, Wawona, Yosemite Natl Prk, 16-X-1976, Ulrich (UCB); MENDOCINO: Hopland Field Sta, 29-IV-1972, Coville & Slater, and Russian R, 6 mi N Cloverdale, 10-IV-1979, Dare, A (UCB); MONTEREY: Hastings Nat Hist Res, 22-IV-1966, Haddock (UCB); NAPA: N Howell Mtn, 2 mi NNE Angwin, 2-II-1974, Leech, A (CAS), and Pope Valley, 26-IV-1975, Lamberti, A (UCD); NEVADA: Sagehen Cr, 28-VIII-1951, RLU (UCB); SAN BERNARDINO: South Fork Santa Ana R,

Burro Flats, 25-V-1993, Al-Wahaibi (UCR); SANTA CLARA: Smith Cr, Mt Hamilton, 18-V-1953, Burns (UCB); SISKIYOU: Ash Cr RS, 9 mi E McCloud, 7,9-VI-1974, Szerlip (UCB); TULARE: Ash Mt, Kaweah Power Sta #3, 28-III-1983 (INHS); VENTURA: Cherry Cr, 1-IV-1981, Baumann & Stanger (BYU).

***Ameletus validus* McDunnough**

*Previous data.*—Day (1954b): NEVADA (Upper Truckee R); Hill and Knight (1987): MENDOCINO (Barnwell Cr).

*New data.*—ALPINE: East Fork Carson R, Hwy 4/Hwy 89 jct, and Silver Cr, Hwy 4, 1.5 mi W East Fork Carson R, 26-VIII-2003, Randolph (UCD); EL DORADO: Upper Truckee R, 30-IX-1953, Day, A,L (CAS); FRESNO: Blayne Meadows, South Fork San Joaquin R, VIII-1948, Day (CAS); HUMBOLDT: Salmon Cr, Salmon Cr Rd, 16-V-2002, Meyer (PERC); LAKE: Middle Cr, 5 mi N Upper L, 25-III-1979, Dare, A (UCB); NEVADA: Sagehen Cr, 7-VIII-1974, Fields (SSU); PLACER: North Fork American R, Yankee Jims Rd, 18-V-2002, Meyer et al. (PERC); SAN BERNARDINO: Barton Flats, 20-VII-53, Day (LACM); SAN MATEO: Pescadero Cr, 8-V-1953 (CAS); SANTA CLARA: Stevens Cr, 10,20-VI-1978, Klee (CAS); SISKIYOU: Ash Cr RS, 9 mi E McCloud, 7,9-VI-1974, Szerlip (UCB).

***Ameletus vancouverensis* McDunnough**

*Previous data.*—Day (1952) as *A. facilis* Day: NAPA (Sage Cr), SANTA CLARA (Smith Cr); Serpa (1986) as *A. facilis*: SONOMA (Copeland Cr); Zloty (1996): SISKIYOU.

*New data.*—LAKE: St Helena, 2-VI-1952, Day, A,L (CAS); SANTA CLARA: Guadalupe Cr, 4-IV-1954, Day, A,L (CAS), and Smith Cr, 7-IV-1951, Day, A,L (LACM); SISKIYOU: Castle L, 2-VII-1953, and Tate Cr, 24-VII-1954, Chandler, A (CAS).

***Ameletus velox* Dods**

*Previous data.*—Seemann (1927): LOS ANGELES (San Antonio Cyn), RIVERSIDE (Andreas Cyn), SAN BERNARDINO (Cucamonga Cyn).

*New data.*—NEVADA: Eure Valley, 4-VII-1948, Day (CAS); PLACER: Truckee R, 30-III-1979, Moore (SSU); SANTA CLARA: Smith Cr, Mt Hamilton, 24-V-1953, Burns (UCB); SISKIYOU: Talyor L, Salmon Mts, Etna Rd, 19-VIII-1972, Leech, A (CAS); TULARE: South Fork Kaweah R, South Fork Dr, 25-XII-2000, Meyer et al. (PERC).

***Ameletus vernalis* McDunnough**

*New data.*—ALAMEDA: Tilden Park, 11-IV-1985, Steggall (UCB); BUTTE: Big Chico Cr, Chico, 22-III-1968, Malin (UCR), and Big Chico Cr, 15-II-1985, Baumann & Nelson (BYU); LAKE: Middle Cr, 5 mi N Upper Lake, 25-III-1979, Dare, A (UCB); NAPA: N Howell Mtn, 3 km NNE Angwin, 11-II-1986, Leech, A (CAS); SANTA CLARA: Alum Rock Prk, 2-II-1976, Klee (CAS); SHASTA: Sacramento R, Sims Flat Campground, 16-II-1985, Baumann & Nelson (BYU); TULARE: Kern R, L Isabella, 15-III-1985, Baumann & Nelson (BYU).



## Ametropodidae

*Ametropus ammophilus* Allen

*Previous data.*—Allen (1977): EL DORADO (Upper Truckee R).

*New data.*—HUMBOLDT: Klamath R, 22-V-2002 (EPA).

## Baetidae

*Acentrella insignificans* (McDunnough)

*Previous data.*—Day (1956): Unknown county (Klamath); Morihara and McCafferty (1976): LOS ANGELES (San Gabriel R); Unknown county (Tuolumne R). Merz and Chan (2005): SAN JOAQUIN (Mokelumne R).

*New data.*—ALPINE: East Fork Carson R, Hwy 4/Hwy 89 jct, 26-VIII-2003, Randolph (UCD); BUTTE: Big Chico Cr, Chico, 6-VIII-1996 (USGS); COLUSA: Sacramento R, Colusa, 30-VII-1996 (USGS); DEL NORTE: Smith R, 31-VII-2003 (EPA); FRESNO: Kaiser Pass, 10-VII-1984, MacDonald (PERC), and Kings R, Trimmer, 15-IX-1993 (USGS); GLENN: Sacramento R, Hamilton City, 18-X-1999 (USGS); HUMBOLDT: Klamath R, 22-V-2002 (EPA); INYO: Horton Cr, 8 mi NW Bishop, Hwy 395, 18-IX-1969, Frommer et al. (UCR); KERN: Kern R, Kernville, 14-IX-1993 (USGS), and Sequoia Natl For, Edison Station, 31-VII-1965 (PERC); LOS ANGELES: West Fork San Gabriel R, N Rincon FS, 14-VI-1965, Vann (CAS); MENDOCINO: Pieta Cr, Russian R, 5 mi S Hopland, 23-V-1976, Nowierski (UCB); MERCED: Merced R, Merced Falls Rd, 11-V-2002, Meyer (PERC); MODOC: South Fork Pit R, 29-VIII-2000 (EPA); MONTEREY: Arroyo Seco Cr, 2003 (FGCH); PALCER: Middle Fork American R at Volcano Cr, 15-X-2007 (BLAB); SACRAMENTO: American R, Sacramento, 29-VII-1980, Dubbs (SSU), and Arcade Cr, Del Paso Heights, 12-X-1999 (USGS); SAN BENITO: San Benito R, 9.6 mi S Paicines, 3-V-1986, Shepard (SSU); SAN JOAQUIN: Mokelumne R, 1-XI-1981, Hill (SSU); SISKIYOU: Klamath R, Barkhouse Cr, 5-IX-2000 (FGSA), and North Fork Salmon R, 27-VIII-2003 (EPA), and Scott R, Roxbury, VIII-1949, Day, A (PERC); SONOMA: Russian R, Hwy 128, Geyserville, 21-VIII-2003, Randolph (UCD); STANISLAUS: Orestimba Cr, Orestimba Rd, 19-V-2000 (FGSA), and Stanislaus PG&E Power Plant Site, 5 mi N Turlock L, 17-IX-1976, Collins, A (UCB), and Stanislaus R, Goodwin Dam, 2003 (FGCH), and Tuolumne R, 3 mi E Shiloh, 8-V-1955, Day (PERC); TEHAMA: Deer Cr, Vina, 7-VIII-1996 (USGS); TRINITY: Browns Cr, 2.5 mi N Little Cr, 2001 (FGCH), and Stuart Fork, 2.4 mi E Hwy 36, 14-IX-2000 (FGSA), and Trinity R, Del Loma, 30-VIII-2000 (EPA); YOLO: Woodland, 7-VII-1973, Stroud (SSU); YUBA: South Fork Yuba R, 23-IV-1977, Hall (SSU), and Yuba R, Marysville, 13-X-1999 (USGS).

*Acentrella turbida* McDunnough

*New data.*—BUTTE: Big Chico Cr, Chico, 6-VIII-1996, and Butte Cr, Honey Run Rd, Paradise, 6-VIII-1997 (USGS); Butte Cr, Doe Mill Rd, and Butte Cr, Rich Bar Rd, and Concow Cr, Jordan Hill Rd, 2002 (FGCH); COLUSA: Sacramento R, Colusa, 30-VII-1996 (USGS); EL DORADO: Taylor Cr, Hwy 89, VI-1970, and Upper Truckee R, Hwy 50, 17-VIII-1970, Noble (CAS); FRESNO: Kings R, Trimmer, 15-IX-1993 (USGS); HUMBOLDT: North Fork Yager Cr, 31-VII-2002, and Van Duzen R, 10-VII-2001 (EPA); KERN: Kern R, Kernville,



14-IX-1993 (USGS); MARIPOSA: Merced R, Hwy 140, 15-IX-1994 (USGS); MERCED: Merced R, Merced Falls Rd, 2003 (FGCH); NEVADA: Truckee R, Cox-Delany Flat, 28-VIII-2000 (FGSA); SACRAMENTO: American R, Sacramento, 29-VII-1996 (USGS); SANTA BARBARA: West Fork Santa Cruz Cr, 2001 (FGCH); SHASTA: Clear Cr, Placer Rd, and Old Cow Cr, Fern Rd, 2002 (FGCH); SISKIYOU: Klamath R, 5 mi SE Seiad Valley, SR 96, 5-VII-1967, Allen (CAS), and North Fork Salmon R, 27-VIII-2003 (EPA); SONOMA: Russian R, Geyserville, 2-VIII-1967, Allen (CAS); STANISLAUS: Stanislaus PG&E Power Plant Site, 5 mi N Turlock L, 17-III-1976, Collins, A (UCB), and Stanislaus R, Knights Ferry, 19-IX-1994, and Tuolumne R, Modesto, 24-VIII-1995 (USGS); SUTTER: Feather R, Nicolas, 31-VII-1996 (USGS); TEHAMA: Deer Cr, Vina, 7-VIII-1996 (USGS), and North Fork Antelope Cr, and South Fork Antelope Cr, 2002 (FGCH); TRINITY: Browns Cr, 25-VII-2001, and East Fork Coffee Cr, 9-VII-2002, and Reading Cr, 12-IX-2002, and South Fork Trinity, 18-V-2002, and Stuart Fork, 4-X-2001, and Weaver Cr, 12-VII-2001 (EPA); YOLO: Cache Cr, Guinda, 12-IX-1997 (USGS); YUBA: Yuba R, Marysville, 8-X-1998 (USGS).

***Apobaetis etowah*** (Traver)

*Previous data.*—Day (1955) as *A. indepressus* Day: STANISLAUS (Tuolumne R); Meyer and McCafferty (2003): STANISLAUS (Tuolumne R).

*New data.*—LASSEN: 4 mi N Doyle, 22-VIII-1953, Lattin (UCB).

***Baetis adonis*** Traver

*Previous data.*—Traver (1935a): LOS ANGELES (San Gabriel Mtns); Day (1956): SONOMA: Collins (1970): LOS ANGELES (Bear Cr, Big Tujunga R, Cattle Cyn, Chantry Falls, Coldwater Cyn, East Fork San Gabriel R, Little Rock Cr, Millard Cyn, Monrovia Cyn, North Fork San Gabriel R, North Fork Tujunga R, Switzer's Camp, West Fork San Gabriel R); Morihara and McCafferty (1979) as *Baetis* sp A: CONTRA COSTA (Mt. Diablo), LOS ANGELES (Monrovia Cyn Cr); McCafferty and Silldorff (1998): SANTA BARBARA (Mission Cr).

*New data.*—COLUSA: Salt Cr, Hwy 20, 13-V-2002, Meyer (PERC); CONTRA COSTA: Marsh Cr, 3 mi E Clayton, 2-VI-1980, Cadematori (BYU); HUMBOLDT: 7 mi NE Arcata, 21-VII-1969, Goodman, A (UCB); INYO: Wildrose Spring, Death Valley Natl Prk, 25-I-1985, Baumann & Nelson (BYU); LOS ANGELES: Bouquet Cyn Cr, 30-IV-2002, and Piru Cr, 20-VI-2000 (EPA), and Mill Cr, Big Tujunga Cyn, 21-I-1985, Baumann & Nelson, and Placerita Cr, Placerita St Prk, 2-IV-1981, Bauman & Stanger (BYU); MARIPOSA: Mahoney Gulch, Hwy 132, Coulterville, 10-V-2002, Meyer (PERC); NAPA: Sage Cr, 18-III-1951, Day A (PERC); RIVERSIDE: Deep Cyn, PL Boyd Desert Research Center, 3.5 mi S Palm Desert, 20-VI-1969, Frommer (UCR); SAN BERNARDINO: Deer Cr, 16-V-2002, and Plunge Cr, 20-VI-2001 (EPA); SAN DIEGO: Arroyo Seco Cmpgd, Cuyamaca Rancho SP, 2-XII-1981, Baumann & Clark (BYU), and Escondido Cr, 23-V-2002, and Viejas Cr, 23-IV-2002 (EPA), and San Diego R, Old Mission Dam, Santee, 16-XI-1995, Roachell (CSU); SAN LUIS OBISPO: Alamo Cr, 2003, DPP, and Toro Cr, 2003, BR (FGCH), and Arroyo Grande Cr, Mason St, and San Luis Obispo Cr, San Luis Bay Dr, 6-V-2002, Meyer (PERC); SANTA BARBARA: Cachuma Cr, 7-V-2003, and Sisquoc R, 29-V-2002 (EPA, and Cuyama R, 1 mi NE Carrizo Cyn Cr, 2003, and Shuman Cr, 1.4 mi W Casmalia, 2001, BR (FGCH);, and El Jaro Cr, 11-VII-2000 (FGSA); SONOMA:

Russian R, Geyserville, 12-XI-1949, Day (PERC), and Sonoma Cr, 1.6 mi N Glen Ellen, 4-VI-1949, Day, A (CAS); STANISLAUS: Adobe Cr, Patterson, 9-V-1948, Day (CAS), and Del Puerto Cr, Frank Raines Pk, 19-III-1985, Baumann & Nelson (BYU), and Del Puerto Cr, Del Puerto Canyon Rd, 2002, DP, and Orestimba Cr, Orestimba Rd, 2003 (FGCH); VENTURA: Lockwood Cr, 2-V-2002, and Santa Paula Cr, 31-VII-2001 (EPA), and Sespe Cr, Hwy 33, 23-I-1985, Baumann & Nelson (BYU), and Ventura R, Casita Vista Rd, 6-V-2002, Meyer (PERC), and Piru Cr, 1.9 mi N Cedar Cr, 21-VI-2000 (FGSA).

***Baetis alius* Day**

*Previous data.*—Day (1954a): SONOMA (Russian R); Morihara and McCafferty (1979): SONOMA (Russian R); McCafferty et al. (2008): MARIPOSA (Merced R).

*New data.*—EL DORADO: Pilot Cr, 30-VII-1938, Needham (INHS); MENDOCINO: South Fork Eel R, Piercy, 24-VIII-2001, Ogden (BYU); SONOMA: Russian R, Hwy 128, 21-VIII-2003, R Randolph (PERC); YOLO: Cache Cr, Guinda, Rd 57, 12-V-2002, Meyer (PERC).

***Baetis bicaudatus* Dodds**

*Previous data.*—Collins (1970): LOS ANGELES (East Fork San Gabriel R, Monrovia Cyn, West Fork San Gabriel R; Green (1976): SACRAMENTO (American R); Morihara and McCafferty (1979): ALPINE (West Fork Carson R), NEVADA (Eure Valley); Dudley et al. (1986): SANTA BARBARA (Rattlesnake Cr); Kratz et al. (1994): TULARE (Kaweah R).

*New data.*—EL DORADO: Upper Truckee R, Hwy 50, 21-VI-1970, Noble (CAS); FRESNO: Kaiser Cr, Huntington L, 29-V-1987, MacDonald (PERC); HUMBOLDT: 0.3 mi W Ruby Cr, 29-III-1989, Fiala (INHS); INYO: Division Cr, 9-III-1986, and Lone Pine Cr, 23-IV-1986, and North Fork Oak Cr, 24-V-1986, Giuliani (BYU); West Fork Coyote Cr, 2 mi NE Coyote L, 15,16-IX-1969, Frommer et al. (UCR); MONO: Deadman Cr, Hwy 395, 27-VI-2003, Meyer (PERC); SAN BERNARDINO: Barton Flats, 30-VI-1950 (LACM), and South Fork Santa Ana R, Angeles Oaks, 24-VII-2001 (USGS), and South Fork Mdws, 1.75 mi SE Poopout Trail, 30-VIII-1969, Frommer (UCR); SHASTA: Kings Cr, Lassen Natl Prk, 5-VII-1959, Allen (CAS); SISKIYOU: Ash Cr RS, 9 mi E McCloud, 7,9-VI-1974, Szerlip (UCB), and Irving Cr, 21-VI-2004, and Paynes Lake Cr, 5-VII-2003 (SLAB); TRINITY: Squirrel Gulch, 2.2 mi N East Side Rd, 15-VIII-2000 (FGSA).

***Baetis diablus* Day**

*Previous data.*—Day (1954a): CONTRA COSTA (Mt Diablo). Kennedy (1967): MONO (Convict Cr); McCafferty et al. (2008): MONO (Convict Cr).

*Remarks.*—This species is not known outside of California.

***Baetis flavistriga* McDunnough**

*New data.*—ALPINE: Charity Valley Cr, 27-VI-2002 (EPA); AMADOR: North Fork Mokelumne R, 30-VIII-2003, Fields (PERC); BUTTE: Little Chico Cr, Schott Rd, and Little West Fork, Skyway Rd, 14-V-2002, Meyer (PERC); CONTRA COSTA: 7 mi S Walnut Creek, 28-III-1968, Bell (UCB); DEL NORTE: Coldwater Cr, 0.6 mi N Smith R, 2003 (FGCH), and South Fork Winchuck R, 6-

VIII-2002, and Smith R, 22-VII-2003 (EPA); EL DORADO: 4 mi W Kyburz, 29-VIII-1953, Selander (PERC), and Consumnes R, 24-VIII-1971, Dubbs, and Kanaka Valley Cr, 5 mi NNW Rescue, 14-X-1983, Hosea (SSU), and General Cr, Sugar Pine St Prk, 19-VIII-1969, and Taylor Cr, Hwy 89, 19-IX-1968, Noble (CAS); FRESNO: Bear Cr, 87-VIII-2001 (EPA); GLENN: Cold Cr, 25-VI-2002 (EPA); HUMBOLDT: Backbone Cr, 25-IX-2003, and Canoe Cr, 22-VII-2003, and Elder Cr, 1-X-2003, and Fern Cyn Cr, 12-VIII-2000, and Grizzly Cr, 24-IX-2003, and Honeydew Cr, 22-VII-2003, and Horse Linto Cr, 14-VIII-2003, and Little Pine Cr, 21-VIII-2002, and Maple Cr, 20-VIII-2002, and Mill Cr, 17-VII-2002, and North Fork Yager Cr, 31-VII-2002, and Rattlesnake Cr, 5-VIII-2003, and Redwood Cr, 22-VII-2003, and Squaw Cr, 8-VIII-2002, and Trout Cr, 6-VIII-2003, and Van Duzen R, 10-VII-2001 (EPA), and Yager Cr, Hwy 36, W Carlotta, 15-V-2002, Meyer (PERC); LAKE: Skeleton Cr, 27-VI-2002 (EPA), and Rattlesnake Cr, and Trout Cr, 2003 (FGCH); LASSEN: Willard Cr, 7-VIII-1974, Fields (SSU); LOS ANGELES: Big Tujunga Cyn, 19-VI-2001 (EPA); MARIPOSA: Mariposa Cr, Joe Howard Rd, Mariposa, 10-V-2002, Meyer, and Merced R, El Portal, Yosemite Natl Prk, 2-X-1992, Fend, and South Fork Merced R, Yosemite Natl Prk, 2-X-1992 (PERC); MENDOCINO: Elder Cr, 2003 (FGCH), and Middle Fork Eel R, 9-VII-2002, and North Fork Noyo R, 3-IX-2003 (EPA), and 5 mi E Hopland, 4-V-1968, Haddock (UCB); MERCED: Merced R, Hwy 99, 2003 (FGCH); MODOC: South Fork Pit R, 29-VIII-2000 (FGSA); MONO: Convict Cr, 11-VIII-1938, Needham (INHS), and Long Valley Cr, 3-VII-2001 (EPA); MONTEREY: Nacimiento R, 2003 (FGCH), and Partington Cr, Hwy 1, and Salmon Cr, Hwy 1, 7-V-2002, Meyer (PERC); NEVADA: Squirrel Cr, 25-VIII-1938, Needham (INHS), and Yuba R, 0.9 mi S Indian Cr, 28-IX-2000 (FGSA); PLUMAS: Jamison Cr, 30-VIII-2000 (FGSA), and North Fork Feather R, 25-IX-2000, Fields (PERC); SAN BERNARDINO: Bear Cr, 5 mi W Big Bear L, 2001 (FGCH), and Santa Ana R, Running Springs, 19-VII-1999 (USGS); SANTA CLARA: Guadalupe Cr, VI-1978, A, and Stevens Cr, 12-X-1977, Klee, and Alum Rock Prk, 28-X-1974 (CAS), and Corte Madera Cr, V-1997 (PERC); SANTA CRUZ: Big Cr, Swanton Rd, 9-VII-2003, Meyer, and Hester Cr, San Jose Rd, 20-V-2002, and Waddell Cr, 10-VII-2003, Meyer (PERC); SHASTA: Burney Cr, 2001 (FGCH), and Pit R, Fender Crossing, 27-IV-1984 (PERC), and Squaw Valley Cr, 30-VII-2002 (EPA); SIERRA: Fiddle Cr, Downieville, 20-IX-1946, Chandler (CAS), and Ramsham Cr, Hwy 49, 17-V-2002, Meyer (PERC); SISKIYOU: Copper Cr, and Grouse Cr, and Wagon Cr, 4 mi N Davis Pl Rd, 2001 (FGCH), and McNeal Cr, 17-IX-2002, and North Fork Salmon R, 27-VIII-2003, and South Fork Salmon R, 13-VIII-2002, and Sugar Cr, 10-VII-2002 (EPA); SOLANO: Alamo Cr trib, Pleasant Valley Rd, 12-V-2002, Meyer (PERC); SONOMA: Big Sulphur Cr, The Geysers, 6-IX-1976, Ulrich (UCB), and Copeland Cr, 24-VI-1980, Serpa (PERC), and Forestville, 20-X-1961, Brown, A (CAS), and Fuller Cr, Gualala, 21-V-1983, Titus (SSU); TEHAMA: Deer Cr, Vina, 7-VIII-1996 (USGS); TRINITY: Backbone Cr, and Rattlesnake Cr, 2003 (FGCH); and Bear Cr, 11-VII-2002, and Browns Cr, 25-VII-2001, and Dark Cyn Cr, 18-IX-2003, and East Fork Coffee Cr, 28-VIII-2003, and Mumba Cr, 24-VII-2001, and Reading Cr, 12-IX-2002, and Weaver Cr, 12-VII-2001 (EPA), and Stuart Fork, 2.4 mi E Hwy 36, 9-VIII-2000 (FGSA); TULARE: Marble Fork Kaweah R, Hwy 198, Sequoia Natl Prk, 3-VII-2003, and North Fork Kaweah R, North Fork Dr, 9-V-2002, Meyer (PERC); TUOLUMNE: South Fork Tuolumne R, Rainbow Pool,

Hwy 120, 25-VI-2003, Meyer (PERC); YUBA: Middle Yuba R, Moonshine Rd, 17-V-2002, Meyer (PERC), and North Fork Yuba R, 1 mi E Shenanigan Flat, 23-VII-1968, Haddock (UCB).

***Baetis magnus*** McCafferty & Waltz

*New data.*—SAN DIEGO: Sentenac Cyn, 26-IV-1953 (LACM).

***Baetis notos*** Allen & Murvosh

*New data.*—EL DORADO: American R, Hwy 50/Icehouse Rd, 26-VIII-2003, Randolph (UCD), and General Cr, Sugar Pine St Prk, XII-1969, Noble (CAS); MARIPOSA: Merced R, El Portal, Yosemite Natl Prk, 2-X-1992, Fend (PERC), and South Fork Merced R, Wawona, Yosemite Natl Prk, 16-X-1976, Ulrich (UCB).

***Baetis palisadi*** Mayo

*Previous data.*—Mayo (1952a): INYO (Big Pine Cr); McCafferty et al. (2008): SONOMA (Little Sulphur Cr).

*Remarks.*—This species is not known outside of California.

***Baetis piscatoris*** Traver

*Previous data.*—Traver (1935a): SANTA CRUZ (Waddell Cr); Day (1956): NAPA; Serpa (1986): SONOMA (Copeland Cr); McCafferty et al. (2008): SONOMA (Copeland Cr).

*New data.*—ALPINE: Markleville, 19-VIII-1949, Day, A (CAS); CONTRA COSTA: 5-VII-1965, Denning, A (PERC); FRESNO Sanger, 10,11-VIII-1984, MacDonald, A (PERC); NAPA: Sage Cr, 13-V-1950, Day, A (CAS); SAN BERNARDINA: San Bernardino Natl For, 6100', 29-VI-1967, Evans (PERC).

***Baetis tricaudatus*** Dodds

*Previous data.*—Day (1956) as *B. intermedius* Dodds: PLUMAS (Feather R), SANTA CLARA, Unknown county (Truckee R); Collins (1970): LOS ANGELES (Santa Anita Cyn); Merz and Chan (2005): SAN JOAQUIN (Mokelumne R); Morihara and McCafferty (1979): FRESNO (San Joaquin R), LOS ANGELES (Little Rock Cr), NEVADA (Deer Cr), STANISLAUS (Tuolumne R), Unknown county (Coyote Cr, Darwin Cr); Serpa (1986): SONOMA (Copeland Cr); Leland et al. (1986): MONO (Convict Cr); Feminella et al. (1989): LAKE (Big Cyn Cr), MENDOCINO (Rice Fork trib Eel R); Kratz (1996): MONO (Convict Cr); McCafferty et al. (2008): MARIN (Lagunitas Cr), SONOMA (Russian R).

*New data.*—ALAMEDA: Niles Cyn, 25-I-1949, Chandler, A (CAS), and Tilden Park, 8-IV-1952 (UCB); ALPINE: Charity Valley Cr, 27-VI-2002 (EPA), and East Fork Carson R, Hwy 4/Hwy 89 jct, and Silver Cr, Hwy 4, 26-VIII-2003, Randolph (UCD), and Gabbot Mdw, 22-VIII-1974, Fields, and Shay Cr, 4 mi W Markleville, Boutler, and Heenan Cr, Heenan L, 8-VI-1983, Titus (SSU), and Markleville, 4-VII-1949 (CAS), and Mokelumne R, Electra Rd, Hwy 49, 24-VI-2003, Meyer & Pfister, and Upper Cascade Cr, Hwy 4, 1 mi E Kinney, 26-VIII-2003, Randolph (PERC), and West Fork Carson R, 1.6 mi N Blue Lakes Rd, 2002 (FGCH); AMADOR: Grass Valley Cr, Hwy 88, 24-VI-2003, Meyer & Pfister (PERC), and Silver Fork American R, Silver L, 23-VII-1981, Ludwig, and Sutter Cr, 2-IV-1977, Hall (SSU); BUTTE: Big Chico Cr, Butte Mdws, 16-IX-1997, and Butte Cr, Biggs Princeton Rd, Afton, 3-VIII-1998 (USGS), and Dry Cr, Dry

Cr Rd, 2002, and Galen Cr, Galen Ridge Rd, 2002, and Martin Cr, Galen Ridge Rd, 2002 (FGCH), and French Cr, 5 mi N Madrone, 22-VII-1970 (UCR), and Little Chico Cr, Schott Rd, and Little West Fork, Skyway Rd, and West Fork Feather R, Skyway Rd, 14-V-2002, Meyer (PERC), and Little Dry Cr, 7-IX-2001 (EPA); CALAVERAS: Angels Cr, Hwy 4, Angels Camp, and Calaveritas Cr, Calaveritas Rd, and N Fork Calaveras R, Hwy 49, 11-V-2002, Meyer (PERC), and Mokelumne R, Electra Rd, Hwy 49, 24-VI-2003, Meyer & Pfister (PERC), and Oneil Cr, 15-VII-2003 (EPA), and San Antonio Cr, 3-VII-1974, Fields (SSU); COLUSA: Bear Cr, Hwy 16, and Little Indian Cr, Lodoga Rd, 13-V-2002, Meyer (PERC), and Sacramento R, Colusa, 30-VII-1996 (USGS); CONTRA COSTA: Bollinger Cr, 7 mi S Walnut Creek, 28-III-1968, Bell, and San Leandro Cr, 3-V-1974, Furneaux (UCB), and Lafayette Cr, 16-VII-2003, and Clarks Cr, 30-VII-2003, and Coldwater Cr, 29-VII-2003, and Eighteenmile Cr, 31-VII-2003 (EPA); Smith R, 24-V-2002, and South Fork Winchuck R, 6-VIII-2002 (EPA), and Tilden Park, 30-IV-1963 (CAS); DEL NORTE: 3 mi E jct Hwy 101/199, 16-IV-1967, Evans (PERC); EL DORADO: Bridal Veil Campground, 10-X-1976, Gelhaus, and General Cr, Sugar Pine St Prk, 3-VII-1969, and Taylor Cr, Hwy 89, 26-IX-1968, Noble (CAS), and Cyn Cr, 4 mi W Georgetown, 3-IV-1989, Doody, and Consumnes R, 24-VIII-1971, and ditch, Rock Cr Rd, 18-III-1974, Hoffman & Floerka, and Kanaka Valley Cr, 5 mi NNW Rescue, 14-X-1983, Hosea, and South Fork American R, Riverton, 24-VIII-1971, Darby & Hall, and Weber Cr, 17-X-1976, Corpus (SSU), and Greenwood Cr, Hwy 49, and New York Cr, Salmon Falls Rd, and Squaw Hollow Cr, Oak Hill Rd, 2002 (FGCH), and Pilot Cr, L Edson, 26-V-1979, Rude (UCB), and Sopiago Cr, 9-VIII-2001 (EPA), and Tells Cr, Ice House Rd, 22-VI-2003, Meyer, and Upper Truckee R, VIII-2003, Randolph (PERC); FRESNO: Bear Cr, 7-VIII-2001 (EPA), and Huntington L, Sample Mdw, 10-VII-1984, and Rancheria Cr, Huntington L, 31-VII-1984, MacDonald (PERC), and Kings R, Barton Flat, Kings Canyon Natl Prk, 25-VII-1967, Allen (CAS), and Kings R, Trimmer, 15-IX-1993 (USGS); GLENN: Butte Cr, Biggs Princeton Rd, Afton, 3-VIII-1998, and Sacramento R, Hamilton City, 18-X-1999 (USGS), and Cold Cr, 25-VI-2002, and North Fork Stony Cr, 10-X-2001, and Cottonwood Cr, 26-VI-2002 (EPA), and Elk R, Rd 306, and Grindstone Cr, Rd 305 (N 162W), and Stoney Cr, 13-V-2002, Meyer (PERC), and Salt Cr, N Stonyford, 29-III-1956 (CAS); HUMBOLDT: Backbone Cr, 25-IX-2003, and Bluff Cr, 30-IX-2003, and Brock Cr, 14-VIII-2002, and Butte Cr, 7-VIII-2001, and Canoe Cr, 22-VII-2003, and Corner Cr, 1-VIII-2002, and Eel R, 19-VI-2001, and Elder Cr, 1-X-2003, and Fern Canyon, 12-VIII-2003, and Fox Cr, 1-X-2003, and Grizzly Cr, 24-IX-2003, and Honeydew Cr, 22-VII-2003, and Horse Linto Cr, 14-VIII-2003, and Klamath R, 29-VII-2003, and Lawrence Cr, 23-VII-2003, and Little Pine Cr, 21-VIII-2002, and Maple Cr, 20-VIII-2002, and Mill Cr, 17-VII-2002, and North Fork Mill Cr, 16-VII-2002, and N Fork Yager Cr, 31-VII-2002, and Price Cr, 2-VIII-2000, and Rattlesnake Cr, 7-VIII-2003, and Sholes Cr, 10-IX-2002, and Squaw Cr, 8-VIII-2002, and Trout Cr, 6-VIII-2003, and Van Duzen R, 10-VII-2001, and West Fork Pecwan Cr, 22-VIII-2002, and West Fork Sproul Cr, 10-VII-2002 (EPA), and Bull Cr, and Redwood Cr, Brice Thorne Rd, and Salmon Cr, Salmon Cr Rd, 16-V-2002, and Yager Cr, Hwy 36, W Carlotta, 15-V-2002, Meyer (PERC), and Dean Cr, Garberville, and Mad R, Blue L, 2-VII-1959, Allen (CAS), and Oak Glen, 8-V-1976, Schneider, and South Fork Eel R, Rockerfeller Grove, 4-X-1969, Apperson & Davison (UCR); INYO: Big Pine Cr, 6-V-1986, and North Fork Oak Cr, 12-II-

1986, Baumann & Giuliani (BYU), and Division Cr, 9-III-1986, and Goodale Cr, 28-II-1986, and Lone Pine Cr, 23-IV-1986, South Fork Oak Cr, 28-II-1986, and Taboose Cr, 27-V-1986, Giuliani (BYU), and Darwin Falls, 14-V-1969, Haddock, and Deep Springs, Wyman Cyn, 15-VII-1953, Lattin, and North Lake, 18 mi W Bishop, 10-IX-1966, Rentz & Rentz (UCB), and Horton Cr, 8 mi NW Bishop, Hwy 395, 18-IX-1969, Frommer et al, and North Walker R, Hwy 395, 23 mi N Bishop, 10-IV-1968, Malin, and Surprise Cyn, Panamint Mtns, 29-III-1970, LePre, and West Fork Coyote Cr, 2.1 mi NE Coyote L, 15,16-IX-1969, Frommer, and Wyman Cyn, White Mtns, 20-VII-1967, Frommer & Frommer (UCR), and Darwin Cr, VIII-1948, Day, and Independence Cr, Onion Valley Rd, L Grays Mdw Cmpgrd, 28-VI-2003, Meyer & Pfister (PERC), and Pleasant Valley, 7-IV-1974, Fields (SSU); KERN: Antelope Cyn, Tehachapi Mtns, 15-IV-1976, Pinto (UCR), and Kern R, Hwy 178, and Spout Spring, Hwy 155, Alta Sierra, 2-IV-1981, Baumann & Stanger (BYU), and Sequoia Natl For, Edison Station 1, 31-VII-1965, Vann (PERC); LAKE: Benmoore Cr, Eel R, 28-IV-1979, and Middle Cr, 5 mi N Upper L, 25-III-1979, and St Helena Cr, Hwy 29, 13-V-1979, Dare, A (UCB), and North Fork Cache Cr, New Long Valley Rd, 16-V-2002, Meyer (PERC), and Rattlesnake Cr, and Trout Cr, 2003 (FGCH), and Skeleton Cr, 27-VI-2002 (EPA); LOS ANGELES: Arroyo Seco Cr, 25-VII-2000, and Boquet Cyn Cr, 30-IV-2002, and Elizabeth Cyn, 1-V-2002, and West Fork Alder Cr, 21-VI-2001, and West Fork San Gabriel R, 20-VI-2001 (EPA), and San Gabriel Cyn, 19-VII-1967, Davis, A, and Bear Cr, Hwy 39, 16-IX-1965, Vann, and East Fork San Gabreil R, 16-VI-1959, Allen, and Monrovia Cyn Cr, 21-VII-1968, Malone, and North Fork Tujunga R, 27-IV-1965 (CAS), and Big Tujunga Cyn, San Gabriel Mtns, 10-I-1953, and Elizabeth L canal, 28-III-1953, Ramsdell, and Santa Monica Mtns, 6-V-1951, and Topanga Cyn, 10-V-1953 (LACM), and Chantery Flats, 28-VI-1967, Collins, and Hidden Springs Rest Area, Hwy 143, 27-VI-1967, Evans, and Lower Cold Water Preserve, 27-I-1979, Dobry, and Lucas Cr, Big Tujunga Cyn, 21-I-1985, Baumann et al (BYU), and Sycamore Flats Campground, 24-VI-1968, Evans (OSU); MADERA: Coarsegold Cr, Hwy 41, and Fresno R, Hwy 41, 10-V-2002, Meyer (PERC), and Cora Cr, 26-VI-1934 (INHS), and Willow Cr, Kelty Mdws, 6 mi N Soquel, 29-VII-1967, Allen (CAS); MARIN: Arroyo Sausal, W Point Reyes-Pentaluma Rd, 18-IV-1981, Arnaud, A, and McClures Beach, Point Reyes, 6-VII-1961, Leech (CAS), and Lagunitas Cr, Sir Francis Drake Blvd, 19-V-2002, Meyer, A,L (PERC); MARIPOSA: 2 mi ESE Mariposa Grove, 27-VII-1946, Chandler (UCB), and Big Cr, 25-VII-1967, and East Fork Lee Vining Cr, 4 mi W Hwy 395, and South Fork Merced R, Wawona Camp, Yosemite Natl Prk, 26-VII-1967, Allen (CAS), and East Fork Chowchilla R, Hwy 49, and Joe Howard Rd, Mariposa, and West Fork Chowchilla R, Darrel Rd, 10-V-2002, Meyer, and Grouse Cr, Hwy 41, Yosemite Natl Prk, and Wildcat Cr, Hwy 41, Yosemite Natl Prk, 26-VI-2003, and Merced R, 4 mi N Hwy 140, Yosemite Natl Prk, 25-VI-2003, and Yosemite Cr, Hwy 120, Yosemite Natl Prk, 27-VI-2003, Meyer & Pfister (PERC), and Illilouette Cr, 3-X-2000 (EPA), and Tenaya Cr, Mirror L, Yosemite Natl Prk, 13-IX-1994 (USGS); MENDOCINO: Booneville, 15-VIII-1946, Chandler, and Russian R, Ukiah, 3-VIII-1967, Allen (CAS), nd East Fork Russian R, Potter Valley Rd, and Rattlesnake Cr, Hwy 101, 11 mi W Laytonville, 16-V-2002, Meyer (PERC), and Elder Cr, and Fox Cr, 2003 (FGCH), and Hoil Cr, 26-VII-2001, and Hollow Tree Cr, 23-VIII-2000, and Middle Fork Eel R, 9-VII-2002, and Mudd Cr, 24-VII-2001, and Navarro R, 18-VIII-2003, and North Fork Noyo R, 3-IX-2003, and



South Fork Big R, 4-IX-2003 (EPA), and Russian R, 6 mi N Cloverdale, 10-IV-1979, Dare, A, and Hopland Field Sta, 29-IV-1972, Szerlip, and Pieta Cr, Hwy 101, 29-IV-1972, Coville & Slater (UCB), and South Fork Eel R, Piercy, 24-VIII-2001, Ogden (BYU); MERCED: Edendale Cr, Hwy 59, and Merced Falls Rd, 11-V-2002, Meyer (PERC), and Salt Slough, Hwy 165, Stevinson, 9-IX-1993 (USGS); MODOC: 9 mi NE Adin, 12-VI-1974, Szerlip, and Cedar Pass Camp, N Cedarville, 5-VIII-1968, Rentz (UCB), and Mill Cr, 9-X-1976, Furnish (INHS), and South Fork Pit R, 29-VIII-2000 (EPA); MONO: 4 mi W Lee Vining, Rt 120, 7-V-1946, Mulaik & Mulaik, and Deadman Cr, Hwy 395, 27-VI-2003, Meyer (PERC), and Hilton Cr, 2-VII-2001, and Long Valley Cr, 3-VII-2001 (EPA), and Lower Rock Cr, Hwy 395, 19-IX-1969, Malin et al, and North Walker R, Hwy 395, Bodie Rd, 6 mi S Bridgeport, 10-IV-1968, Malin (UCR), and Mono L, N Shore Springs, 1-VIII-1979, Eng & Gaine, and Upper Deadman Cr, 17-VIII-1962, Leech (CAS); and Rush Cr, Hwy 395, S Grant L, 14-III-1985, Baumann & Nelson (BYU), and Slinkard Cr, 5-XI-1983, Titus (SSU); MONTEREY: Arroyo Seco Cr, 0.6 mi N Piney Cr, and Carmel R, and Garrapata Cr, and Rattlesnake Cr, and Tassajara Cr, 0.3 mi N Tassajara Hot Springs, 2003, and Nacimiento R, 0.7 mi N Slickrock Cr, 2003, and San Antonio R, N Del Venturi Rd, 2003 (FGCH), and Big Sur R, Pfeifer Big Sur St Prk, 30-VIII-2003, Randolph (UCD), and Big Sur R, Big Sur R Inn, 24-I-1992, Kondratieff (CSU), and Cachagua Cr, 5 mi SE Jamesburg, 4-IV-1953, Lattin, and Piney Cr, Arroyo Seco, 24-IV-1976, Ulrich (UCB), and Salmon Cr, Hwy 1, 8-VII-2003, Meyer (PERC); NAPA: Capell Cr, 19 mi W Monticello Dam, 13-IX-1967, Haddock (UCB), and Sage Cr, 2.5 mi E Rutherford, 1-III-1987, Shepard (SSU); NEVADA: Bear Cr, Nevada City, 20-VI-1948, and Eure Valley, 4-VII-1948, Day (CAS), and Clear Cr, Penn Valley Dr, and Rattlesnake Cr, Old Auburn Rd, and Squirrel Cr, Western Gateway, 2002 (FGCH), and Hobart Mills, 8-VII-1976, Otondo (UCD), and Humbug Cr, 9-III-1979, Cropper, and Prosser Cr, 5 mi N Truckee, 2-X-1983, Darby & Hall, and Wolf Cr, 11 mi N Auburn, 25-II-1988, Lockhart (SSU), and Kentucky Cr, Bridgeport, 31-VIII-1938, and Middle Fork Yuba R, 8-IX-1938, and South Fork Yuba R, 14-IX-1938, Needham (INHS), and Rush Cr, Hwy 49, 17-V-2002, and Yuba R, Purdin Rd, 26-VII-2002, Meyer, and Truckee R, Hwy 80, 29-III-1967, Miner (PERC), and Sagehen Cr, 25-VI-1966, Turner (UCB); PLACER: Arthur L, 30-III-1979, Moore (SSU); Blackwood Cr, X-1981 (SSU); conf N and S Fork American R, 29-X-1983, Nicol, and Truckee R, 30-III-1979, Moore (SSU). Bear R, YMCA Camp, Hwy 20, 18-V-2002, and Bunch Cr, Yankee Jims Rd, and Jordan Cr, Bowman Rd, and North Fork American R, Yankee Jims Rd, and Orr Cr, Bell Rd, 18-V-2002, Meyer et al, and South Yuba R, Cisco Grove, Hwy 80, 25-III-1966, Miner, and Squaw Cr, Squaw Valley, 1-VII-1968, Baumann (PERC); PLUMAS: Benner Cr, 6 mi N Chester, 25-VI-1980, Baumann & Stanger (BYU), and Jameson Cr, 30-VIII-2000 (EPA), and North Fork Feather R, 26-IV-1953, Chandler (CAS); RIVERSIDE: Andreas Cr, 24-V-1980, Hartman, and Deep Cyn, PL Boyd Desert Res Center, 3.5 mi S Palm Desert, 20-VI-1969, Frommer, and Horsethief Cr, Cactus Spring Trail, 26-III-1970, Frommer & LePre, and Santa Ana R, 8-IV-1978, Helmkamp (UCR), and Fuller Mill Cr, 9-V-2001, and Herkey Cr, 10-V-2001 (EPA), and Strawberry Cr, Hwy 74, W Mountain Center, 19-I-1985, Baumann & Nelson (BYU); SACRAMENTO: American R, Sacramento, 18-III-1977, Hall, and Willow Cr, 3-XII-1977, Boucher (SSU), and Dry Cr, 22-VIII-2001 (EPA); SAN BENITO: Pescadero Cr, Cienega Rd, 8-V-2002, Meyer (PERC), and San Benito R, 9.6 mi S Paicines,



3-V-1986, Shepard (SSU); SAN BERNARDINO Barton Cr, 6-VI-2002, and City Cr, 11-VI-2002, and Cold Cr, 27-VI-2000, and Deer Cr, 16-V-2002, and East Twin Cr, 13-VI-2002, and East Fork Barton Cr, 27-VI-2001, and Mill Cr, 15-V-2002, and Plunge Cr, 20-VI-2001, and Middle Fork Lytle Cr, 19-VI-2002, and South Fork Santa Ana R, 5-VI-2002 (EPA), and Bear Cr, 5 mi W Big Bear L, 2001 (FGCH), and Cajon Cr, Keenbrook, 12-IX-2000, and Santa Ana R, Running Springs, 8-VII-2002, and South Fork Santa Ana R, Angeles Oaks, 21-VII-1999 (USGS), and Cajon Wash, 21-VI-2004 (BLAB), and Crestline, 26-V-1951 (LACM), and Lytle Cr RS, 24-VI-1968, Evans (PERC), and Lytle Cr, 9-I-1988, Kondratieff & Baumann, A (CSU); SAN DIEGO: De Luz Cr trib, 2001 (FGCH), and Escondido Cr, 23-V-2002, and Santa Ysabel Cr, 25-IV-2002, and Sweet Water R, 16-V-2001, and West Fork San Luis Rey R, 17-V-2001 (EPA), and Sentenac Cyn, 26-IV-1953, A, and Palm Cyn, Borrego Valley, 28-IV-1953 (LACM); SAN JOAQUIN: San Joaquin R, Vernalis, 21-IX-2001, and Stanislaus R, Caswell SP, 2-IX-1994 (USGS); SAN LUIS OBISPO: Alamo Cr, and Chorro Cr, and Toro Cr, 2003 (FGCH), and San Luis Obispo Cr, San Luis Bay Dr, 6-V-2002, Meyer (PERC); SAN MATEO: Corte Madera Cr, V-1997, Fend (PERC), and Los Trancos Cr, Ford Prk, IX-1998, Fend (GSMP); SANTA BARBARA: Alamo Pintado Cr, 9-V-2002, and Cachuma Cr, 7-V-2003, and Coche Cr, 11-VII-2001, and Kelly Cr, 12-VI-2002, and Nojoqui Cr, 23-V-2001, and Santa Cruz Cr, 10-VII-2001, and Shuman Cr, 26-VI-2001, and Sisquoc R, 29-V-2002 (EPA), and Cachuma Saddle, 19-VI-1953 (LACM), and El Jaro Cr, 11-VII-2000 (FGSA), and West Fork Santa Cruz Cr, 2001 (FGCH); SANTA CLARA: Alamitos Cr, Mazzone Dr, and Barrett Cr, IX-1998, Fend (GSMP), and Alum Rock Prk, San Jose, 15-II-1974, and Stevens Cr Res, 18-II-1974, Ross, and Guadalupe Cr, VI-1978, and Stevens Cr, 12-X-1977, Klee (CAS); Bodfish Cr, 0.45 mi S Whitehurst Rd, and Uvas Cr, 0.4 mi S Thomas Rd, 2003 (FGCH), and Coyote Cr, 11-III-1950, Day, and Los Alamitos Cr, Camden Rd, 20-V-2002, Meyer, and Penitencia Cr, V-1997, Fend (PERC), and Little Author Cr, 28-VI-2001, and Smith Cr, 19-VI-2002 (EPA), and Madrone, 26-IV-1952, Lattin (UCB), and Sanborn Cr, 25-I-1992, Kondratieff, A (CSU); SANTA CRUZ: Branciforte Cr, De La Vega Prk, 21-XII-2000, Soquel Cr, Old San Jose Rd/Laurel Glen Rd jct, and Scott Cr, Swanton Rd, 9-VII-2003, Meyer (PERC), and San Vicente Cr, Davenport, 2003 (FGCH), and Scotts Valley, 8-IV-1977, Scott (SSU); SHASTA: Wagon Cr, 2001, and Brandy Cr, South Shore Dr, and Clear Cr, Hwy 273, and Clover Cr, Ponderosa Way, and Cow Cr, S Ponderosa Way, and Foster Gulch, Whiskeytown L, and French Gulch Cr, and Grizzly Gulch, Old Bridge, and Mad Ox Gulch, North Whiskey Cr, and Mill Cr, N El Dorado Stamp Mill, and New York Gulch, Hwy 299, and Orofino Cr, 2002, and South Fork Bear Cr, Ponderosa Way, and Whiskey Cr, and Willow Cr, and Willow Cr, Tower House, and Wiskey Cr, Whiskeytown L, 2002 (FGCH), and Burney Cr, 12-IX-2001, and North Fork Backbone Cr, 11-IX-2001, and Old Cow Cr, 28-VIII-2002, and South Fork Slate Cr, 23-VIII-2001, and Squaw Valley Cr, 30-VII-2002 (EPA), and Hat Cr, Sandy Public Camp, 2 mi N Old Station, 3-VII-1959, Allen (CAS), and Lost Cr, Lassen Natl Prk, 18-IX-1946, Chandler (UCB), and McCloud R, S Ladybug Cr, McCloud, 20-VIII-1996 (USGS), and Pit R, Fender Crossing, 27-IV-1988 (PERC), and Sacramento R, Flume Cr, 26-III-1956, Morrison (LACM); SIERRA: Big Springs, Hwy 49, N Sierra City, 24-VI-1980, Baumann & Stanger (BYU), and Fiddle Cr, Hwy 49, and North Yuba R, Hwy 49, and Ramsham Cr, Ramsham Rd/Hwy 49, 17-V-2002, Meyer (PERC), and

Goodyear Cr, and Little Truckee R, Hwy 89, 1-V-1977, and North Fork Yuba R, 23-IV-1977, Hall, and Oregon Cr, 3 mi N San Juan, 22-II-1989, Lockhart (SSU, and Yuba R, 28-IX-2000 (EPA). SISKIYOU: Ash Cr RS, 9 mi E McCloud, 7,9-VI-1974, Szerlip (UCB), and Beaver Cr, 1 mi E Klamath River, 3-VI-1959, Allen (CAS), and Buckhorn Cr, 2-X-2001, and Butte Cr, 26-IX-2002, and Copper Cr, 31-VII-2001, and Duck Lake Cr, 13-IX-2000, and Eddy Cr, 12-IX-2000, and East Fork Indian Cr, 8-VIII-2000, and Grouse Cr, 26-IX-2001, and Little Humbug Cr, 16-VII-2002, and McNeal Cr, 17-IX-2002, and North Fork Salmon R, 27-VIII-2003, and Seiad Cr, 26-VIII-2003, and South Fork Salmon R, 13-VIII-2002, and Shovel Cr, 15-VIII-2001, and Sugar Cr, 10-VII-2002, and Wagon Cr, 22-VIII-2001, and Yreka Cr, 17-VII-2002 (EPA); SOLANO: Alamo Cr, Gates Cyn Rd, and Putah Cr, S Monticello Dam, 12-V-2002, Meyer, and Green Valley, 10-V-1953, Downey (PERC); SONOMA: Austin Cr, 2003 (FGCH), and East Austin Cr, 19-VIII-2003 (EPA), and Fuller Cr, Gualala, 21-V-1983, Titus (SSU), and Russian R, Geyserville, 3-VIII-1967, Allen (CAS); STANISLAUS: Adobe Cr, Patterson, 9-V-1948, Day (PERC), and Del Puerto Cr, 1-IV-1979, Dare, A, and Del Puerto Cyn, North Fork Del Puerto Cr, 22-III-1986, Presnail, and North Fork Del Puerto Cr, 12-IV-1975, Kellner (UCB), and Orestimba Cr, N Orestimba Rd, 19-V-2000 (FGSA), and Stanislaus R, Horseshoe Bend Rec Area, 2003 (FGCH). SUTTER: Feather R, Nicolas, 31-VII-1996 (USGS); TEHAMA: Big Chico Cr, Hwy 32, and Deer Cr, Hwy 32, and Gurnsey Cr, Hwy 36, and Mill Cr, Hwy 36, and South Fork Calf Cr, Hwy 32, 14-V-2002, Meyer (PERC), and Dye Cr, 2001, and Cottonwood Cr, Powerline Rd, and Indian Cr, Payne Pl Campground, and Middle Fork Antelope Cr, Ponderosa Way, North Fork Antelope Cr, and Plum Cr, Tehama Wildlife Refuge, and South Fork Antelope Cr, 2002 (FGCH), and Soap Cr, 31-VII-1953, Chandler (CAS), and Little Dye Cr, 20-VIII-2001, and North Fork Elder Cr, 29-VIII-2001 (EPA); TRINITY: Mumba Cr, 1.8 mi E Little Bear Gulch, 2001, and South Fork Trinity R, and Van Duzen R, 1.2 mi N Zenia Rd, 2002, and Backbone Cr, North Trinity R Natl For, and Bluff Cr, 1.7 mi N Kettenpom Cr, and Potato Cr, 1.3 mi N East Fork Hayfork Cr, 2003 (FGCH), and Bear Cr, 11-VII-2002 Big Cr, 28-VIII-2001, and Browns Cr, 3-X-2001, and Corral Cr, 11-VII-2001, and Dark Canyon Cr, 19-IX-2003, and East Fork Coffee Cr, 28-VIII-2003, and East Fork South Fork Trinity R, 17-IX-2003, and Grassy Flat Cr, 16-VIII-2000, and Reading Cr, 12-IX-2002, and Weaver Cr, 12-VII-2001, and West Fork Van Duzen R, 11-VII-2002 (EPA), and Grass Valley Cr, Weaverville, 16-IX-1946, Chandler (CAS), and Rattlesnake Cr, Hwy 36, and South Fork Trinity R, Hwy 36, 15-V-2002, Meyer (PERC), and Squirrel Gulch, 2.2 mi N East Side Rd, 15-VIII-2000 (FGSA), and Stuart Fork, 2.4 mi E Hwy 36, 9-VIII-2000 (FGSA); TULARE: Dorst Cr, Dorst Camp, Sequoia Natl Prk, 25-VII-1967, Allen (CAS), and East Fork Kaweah R, Mineral King Rd, and Kaweah R, Dinely Bridge, Hwy 198, 24-XII-2000, Meyer et al, and Marble Fork Kaweah R, Hwy 198, Sequoia Natl Prk, 3-VII-2003, Meyer, and South Fork Kaweah R, S Fork Dr, 6.7 mi E Hwy 198, 25-XII-2000, Meyer et al, and Salmon Cr, Horsemeadow Campground, 31-VII-1965, Vann, and Silliman Cr, Hwy 198, Sequoia Natl Prk, 2-VII-2003, and Stoney Cr, Hwy 198, 3-VII-2003, and Suwanee Cr, Hwy 198, Sequoia Natl Prk, 2-VII-2003, Meyer, and Three Rivers, 4-VIII-1984, MacDonald, and North Fork Kaweah R, North Fork Dr, 4.2 mi N Hwy 198, 23-XII-2000, Meyer & McWherter, and Wolverton Cr, Wolverton Ski Area, Sequoia Natl Prk, 3-VII-2003, Meyer (PERC), and Monache Cr, 25-VI-2002, and Tule R, 20-VI-2002

(EPA), and Pear L Trail, 2 mi E Wolverton, Sequoia Natl Prk, 29-VIII-1969, Malin & Malin (UCR), and South Fork Middle Fork Tule R, Hwy 190, 15-III-1985, Baumann & Nelson (BYU); TUOLUMNE: First Cr, Blanchard Rd, and Rough and Ready Cr, Algerine Rd, and Sullivan Cr, Algerine Rd, 11-V-2002, and South Fork Tuolumne R, Rainbow Pool, Hwy 120, 25-VI-2003, Meyer (PERC), and North Fork Tuolumne R, 21-VIII-2001 (EPA); VENTURA: Agua Blanca Cr, 7-VI-2001 (EPA); Coyote Cr, 12-VI-2001, and North Fork Matilija Cr, 4-VI-2003, and Santa Paula Cr, 31-VII-2001, and Scholder Cr, 5-VI-2001 (EPA), and Howard Cr, 2001 (FGCH), Left Fork Matilija Cr, S Wheeler Gorge, 1-IV-1981, and Sespe Cr, 5 mi N Fillmore, and Tule Cr, Hwy 33, 1-IV-1981, Baumann & Stanger (BYU), and Matilija Cr, 14-VI-2000, and Piru Cr, 1.7 mi S L Piru, 13-VI-2000 (FGSA), and Reyes Cr, 3-VIII-2004 (BLAB); YOLO: Cache Cr, Guinda (Rd 57), 12-V-2002, Meyer (PERC), and Putah Cr, 8-XII-1981, Oback, A, and Cache Cr Prk, 23-X-1981, Hill (SSU); YUBA: Collins L, 2-II-1974, Wigglesworth, and South Fork Yuba R, 23-IV-1977, Hall (SSU), and Middle Yuba R, Moonshine Rd, and Willow Cr, Pendola Rd, 17-V-2002, Meyer (PERC), and Yuba R, Smartsville, 14-VIII-1938 (INHS).

***Callibaetis californicus* Banks**

*Previous data.*—Banks (1900): “So CA”; Seemann (1927): SAN BERNARDINO (Chino Res); Traver (1935a): ORANGE (Laguna Beach); Mayo (1939): AMADOR (Jackson); Collins (1970): LOS ANGELES (Arcadia, Coldwater Cyn, Crystal L, Hansen Dam); Serpa (1986): SONOMA (Copeland Cr); Walton et al. (1991): RIVERSIDE (Aquatic and Vector Control Res Sta).

*New data.*—ALAMEDA: Berkeley Hills, 2-IV-1973, Middlekauff, and Pleasanton, 31-VIII-1932, A (UCB); EL DORADO: Weber Cr, 24-X-1981, Hill & Wragg (SSU); INYO: Saratoga Springs, Death Valley Natl Prk, 30-V-1953 (LACM); KERN: Coles Levee, 26-V-1953, Warren, A (LACM); LAKE: St Helena Cr, Hwy 29, 11-VII-1979, Reichle & Hall (SSU), and Thurston L, 6-IX-1946, Chandler, L.A (CAS); LOS ANGELES: Baldwin Hills, 16-IX-1942, Martin, A (LACM); MARIN: Mill Valley, 20-V-1959, Leech, A (CAS); MENDOCINO: Hopland Field Sta, Headquarters L, 27-IV-1975, Wong, A (UCB); NAPA: Conn Cr, Rutherford, 24-IX-1949, Day, A (PERC), and N Howell Mt, 3 km NNE Angwin, 15-X-1982, Leech, A (CAS), and St Helena Cr, Hwy 29, 11-VII-1979, Reichle & Hall (SSU); NEVADA: Wolf Cr, 18-IV-1973, Meyer, A (UCD); PLACER: New Castle, 16-IX-2000, Ruiz, A (SSU); RIVERSIDE: Oasis, III-1970, Fanara, A (CAS), and PL Boyd Desert Research Center, 3.5 mi S Palm Desert, 7-IV-1973, Ward, A (UCR), and Riverside, 19-III-1938, A (LACM); SACRAMENTO: Bicentennial Cr, 10-X-1983, Boutler, and Prairie City, 20-XI-1977, Boucher, and Wilton, 22-IX-1979, Altop, A (SSU), and Sacramento, 27-V-1968, Meyer, A (UCD); SAN BERNARDINO: Cotton Rd Pond, Redlands, 5-XI-1931 (CUAC), and Whispering Lakes Golf Course, Chino, 12-III-1969, Malin/ & Borland (UCR), and Zzyzx Spring, 7 mi S Baker, 19-VIII-1987, Shepard (SSU); SAN FRANCISCO: San Francisco, Golden Gate Pk, 26-VIII-1963, Rubtsoff, A (CAS); SAN JOAQUIN: 6 mi W Tracy, 6-III-1950, MacSwain, A (UCB), and Molokume R, Clements, 1-XI-1981 (SSU); SANTA BARBARA: Carpinteria, 16-VI-1957, Benjamin (INHS), and Gaviota Pass, 20-VII-1981, Anderson (UCR), and Santa Cruz Is, Central Valley Hdqtrs, 26,28-IX-1978, Buegler, A (UCB); SANTA CLARA: Black Mtn, 19-X-1940, A (UCB); TULARE: Ivanhoe, 26-V-1971, Brawner, A

(FGCH); TUOLUMNE: North Fork Tuolumne R, 3 mi NE Tuolumne, 1-V-1961, Brown, A (CAS); VENTURA: Calleguas Cr, 25-IV-1977, Corpus (SSU), and Mt Mugu, 23-VI-1949 (LACM); YOLO: Putah Cr, Davis, 17-X-1956, Adelson (UCB).

***Callibaetis ferrugineus* Eaton**

*Previous data.*—Traver (1935a) as *C. carolus* Traver: SAN BERNARDINO (Big Bear L), SAN JOAQUIN (San Joaquin R); Upholt (1936) as *C. hebes* Upholt: ALAMEDA (Strawberry Cyn), MARIN (Alpine Dam); Day (1956) as *C. hageni* Eaton: SAN FRANCISCO (San Francisco).

*New data.*—ALAMEDA Berkeley, Strawberry Pool, 2-V-1946, Chandler, A, and L Temescal, 10-IV-1949, Day, A,L (CAS), and Niles Cyn, 26-XI-1950, Day, A,L (LACM), and Temescal L, Oakland, 10-IV-1949, Day, A,L (PERC); ALPINE: Monitor Pass, 18-IX-1971, Kimset (UCD); AMADOR: Silver L, VIII-1982, Ludwig, A (SSU); CALAVERAS: 4.8 km S West Point, 26-VI-1980, Williams, A (CAS); COLUSA: Indian Cr, SW Lodoga, 8-IV-1971, Leech, A (CAS); CONTRA COSTA: Jewel L, 2-V-1950, A (UCB); DEL NORTE: Elk Valley, 4-VII-1965, Ross, A (CAS); EL DORADO: 2 mi N Kelsey, 23-VI-1967, A (UCB), and Tahoe Keys Marina, 20-VIII-1969, Noble (CAS); FRESNO: Frog Pond, Florence L, VII-1931, and San Joaquin R, Jackass Fork, 20-VII-1931 A, and South Fork San Joaquin R, Jackass Mdw, VII-1931, Michener (CUAC), and Jackass Mdw, 0.75 mi N Florence L, 29-VIII-1971, Leech, A (CAS); GLENN: Orland, 27-VI-1961, Malkin, A (CAS); HUMBOLDT: Fish L, Fish L Campground, 24-IV-1987, Baumann et al., A (BYU), and Trinidad, 7-IV-1967, Drewien, S (CAS); INYO: 1.2 mi E Big Pine, 16-V-1969, Haddock, and Lone Pine, 5-V-1937, A (UCB); LAKE: Anderson Springs, 8-IV-1955, Bauer & Bulkett, A (FGCH); LASSEN: 4 mi N Doyle, 22-VIII-1953, Lattin (UCB), and Eagle L, 18/21-VII-1990, Ward, A (UCD), and Honey L, 26-VII-1970, Frommer, A (UCR); LOS ANGELES: Crystal L, 11-VII-1949, Chandler (CAS), and Pine Cyn, Angeles NF, 26-VI-1967, Evans (PERC), and San Gabriel Cyn, 12-VI-1932, A (CUAC); MARIN: 1 mi SE Inverness, 24-III-1962, O'Brien, and Inverness, 17-III-1966, and Liberty Gulch, Alpine L, 17-IV-1976, Novak, and Novato, 8-III-1951, Kessel, and Redwood Cr, 23-X-1966, Kleinjam (UCB), and Phoenix L, 31-III-1960, Cavagnaro, A (CAS); MARIPOSA: Siesta L, Tioga Rd, Yosemite Natl Prk, 26-VII-1967, (CAS); MENDOCINO: 4.2 mi NE Hopland, 30-VI-1963, Leech (CAS), and Hopland Field Sta, 6-V-1978, DeBenedictis, A (UCB); MERCED: Dos Palos, 16-X-1959, Hagen, A (UCB); MODOC: Pit R, Canby, 5-VII-1983, Hill, A (SSU); MONO: Bodie Cr, 1 mi NE Bodie, 13-VIII-1963, and Convict Cr, 22-VII-1963, A, and North Falls Cr, 13-VIII-1963, Leech, (CAS), and Casa Diablo Hot Springs, 9-V-1969, Haddock (UCB), and Crowley L, 18-IX-1969, Frommer et al. (UCR), and MONTEREY: Salinas, 11-IV-1966, Drewien, A (CAS); NAPA: N Howell Mtns, NNE Angwin, 5-IV-1982, Leech, A (CAS), and Putah Cyn, 27-IV-1958, Moore, A (UCD); NEVADA: Grouse Ridge Campground, Island L, 2-IX-2002, Shepard, A (SSU), and Martis Cr, 14-VII-1979, Daly (UCB), and Lake Tahoe, Glenbrook, 16-VIII-1954, Usinger, A (PERC), and Truckee R, 28-VIII-1946, Chandler (CAS); PLACER: Cascade L, 25-IX-1983, Devorak (SSU), and Loomis, 1991, Henderson, S (PERC); PLUMAS: Bucks L, 13 mi W Quincy, 24-VII-1970, Frommer & LePre, A (UCR), and Chikoot Campground, S Frenchman L, 10-XII-1991, Baumann/Clark (BYU), and Thompson Cr, 4 mi SE Quincy, 15-V-1982, Buegler, A (UCB); SACRAMENTO: American R, Sacramento, 31-I-1979, Cripe

(SSU); SAN BERNARDINO: Cushenbury Grade, 21-VI-1983, Unruh, A (UCR), and San Bernardino Mtns, 30-VIII-1932, Michener, A (PERC); SAN FRANCISCO: Golden Gate Pk, III-1948, Ross, A (CAS); SAN LUIS OBISPO: Oso Flaco L, 5 mi S Oceano, 22-IV-1966, Powell, A (UCB); SAN MATEO: Skyline Blvd, La Honda Rd, 21-V-1960, Arnaud, A (CAS); SANTA CLARA: Campbell, 31-VII-1956, Burdick, A (UCB), and Guadalupe Cr, and Stevens Cr, 10,20-VI-1978, Klee, A (CAS); SHASTA: Big Springs, 26-VI-1947, A (UCB), and Redding, 1-VI-1972, Denning, A, and Britton L, 1949, Chandler (CAS), and Magee L, Magee Glacier, VIII-1948, Day, A (PERC); SIERRA: Kyburz Flat, 30-VI-1976, Nixon, A (UCD); SISKIYOU: Ash Cr RS, 0.9 mi E McCloud, 11-VI-1974, Green, A (UCB), and Butte Cr, 28-IV-1966, Denning, A (PERC), and Castle Crags St Prk, Grass L, 8-VII-1972, A, and Grass Lake, 14-VIII-1971, Denning, A, and NE Upper Boulder L, Scott Mtns, S Callahan, 25-VIII-1970, Leech, A (CAS), and Weed, 10-VII-1975, Denning, A (BYU); SONOMA: Forestville, 12-X-1961, Brown, A, and Bennett Mtn, W Kenwood, 26-V-1963, Leech (CAS), and Petaluma, 15-IX-1961, Trenam, A (UCD); STANISLAUS: Del Puerto Cyn, 8-IV-1978, Tozer, and Stanislaus PG&E Power Plant Site, 5 mi N of Turlock L, 26-V-1976, Collins, A (UCB), and Manzanita L, Lassen Natl Prk, 27-VII-1959, Alexander, A (PERC); TRINITY: Lewiston L, Trinity R, 28-IV-1968, Geldern, and Mud Lake, W Trinity Center, 10-VIII-1972, Leech, A (CAS); VENTURA: Chuchupate RS, 2-V-1959, O'Brien (UCB); YOLO: Davis, 10-IX-1975, Iverson, A (CAS), and Putah Cr, 5-XII-1981, Hill (SSU).

***Callibaetis fluctuans* (Walsh)**

*Previous data.*—Upholt (1937) as *C. traversae* Upholt: FRESNO (Kingsburg).

*New data.*—ALAMEDA: Berkeley, 28-VIII-1965, A (UCB); COLUSA: Colusa, 18-VII-1955, Schuster, A (UCB), and Little Stony Cr, 6 mi S Stonyford, Doody, and Mill Cr, 6 mi W Stonyford, 8-IV-1989, Glenn (SSU), and N Grimes, 7,8-IX-1965, Washino & Hokama (UCD); CONTRA COSTA: Byron, 3-II-1982, Eng & Mayer (CAS); EL DORADO: Weber L, 24-X-1981, Hill & Wragg (SSU); FRESNO: San Joaquin Valley, 16/31-VII-1955, Schick (LACM), and Tranquility, 3-VII-1937, Upholt, A (PERC); GLENN: Orland, 14-V-1953, Hansen & MacSwain, A (UCB); INYO: Beatty, 18-III-1948, Coleman, and Saratoga Springs, Death Valley Natl Prk, 6-IV-1963, O'Brien (UCB), and China Ranch, 29-X-1955, Blodgett & McDonald, and Shephard Cr, Manzaner, 23-IV-1955, Hogue (LACM), and Deep Springs, 19-VIII-1963, and Grimshaw L, Tecopa, and N Tecopa Hot Springs, 24-III-1964, Leech (CAS); LASSEN: Eagle L, Merrillsville, 19-IX-1946, Nelson (INHS), and Susanville, 6-IX-1957 (UCB); LOS ANGELES: Tapia Prk, 5-VI-1978, Dobry (BYU), and West Fork San Gabriel R, 30-VIII-1965, Vann (CAS); MARIN: Lily Gulch, Alpine L, 17-IV-1976, Ulrich (UCB); MENDOCINO: 0.6 mi SE of Hopland Field Sta, 29-IV-1972, Szerlip, A (UCB), and South Fork Eel R, Piercy, 24-VIII-2001, Ogden (BYU); MERCED: Merced, 16-VII-1947, Waltz, A, and Flying M Ranch, Haystack Mtn, 23-II-1982 (CAS); MONO: Mono L, 18-IX-1969, Frommer & LePre (UCR); MONTEREY: Pinnacles Natl Mon, 10 mi E Soledad, 16-II-1985, Seybold (UCB); SACRAMENTO: American R, Sacramento, 19-X-1997, Liu, A (BYU), and Citrus Heights, 5-X-1971, Peurifoy, A, and Galt, 26-VII-1986, and Howe Ave, 5-V-1977, Hall, and L Greenhaven, 25-III-1979, Wang, and Rancho Murieta, 2-XI-1973, Wilcox, and Rancho Seco L, 20-IX-1981, Hill (SSU), and Fair Oaks, 19-VII-1969, Meyer, A, and Sacra-



mento, 7-X-1954, Kurtz (UCD); SAN BENITO: Pinnacle NM, 24-IV-1948, Wirth (UCB); SAN DIEGO: Oakzanita Springs Pk, 26-V-1971, Arnaud & Arnaud, A (CAS); SAN JOAQUIN: 6 mi SE Tracy, 11-V-1965, Rubtzott, A (CAS); SAN LUIS OBISPO: Cholame Cr, 1 mi S Cholame, 1-V-1963, Leech (CAS); SANTA CLARA: San Antonio Valley, 2.5 mi N Del Puerto Cyn Rd, 17-VII-1975, Rude (UCB); SHASTA: Hat Cr, Fall R Mills, 1-IX-1969, Apperson (UCR), and Redding, 1-VIII-1947, A, and Keswick, 28-VII-1947, Chandler (CAS), and Logan L, 10-X-1976, Furnish (INHS); STANISLAUS: Colorado Cr, 2.3 mi N San Antonio RS, 15-X-1979, and Stanislaus PG& E Power Plant Site, 5 mi N Turlock L, 28-V-1976, Collins (UCB); SUTTER: Knights Landing, 9-VII-1949, Day, A (PERC); VENTURA: Calleguas Cr, 25-IV-1977, Corpus (SSU); YOLO: Davis, 15-VII-1938, A (LACM), and Knights Landing, 9-VII-1949, Day, A (PERC), and Woodland, 7-VII-1973, Stroud, A (SSU); YUBA: Brockman Cyn, Sutter Buttes, 24-VIII-1986, Shepard, A (SSU).

***Callibaetis pallidus* Banks**

*Previous data.*—McCafferty and Meyer (2007a): ALAMEDA (Tilden Park), NEVADA (Sagehen Cr), SAN DIEGO (Julian).

*New data.*—SONOMA Bennett Mtn L, W Kenwood, 26-V-1963, Leech, A (CAS).

***Callibaetis pictus* (Eaton)**

*Previous data.*—Traver (1935a) as *C. pacificus* Seemann: LOS ANGELES (Claremont, Pasadena, San Dimas Cyn, San Gabriel Mtns), MARIN (Woodacre), RIVERSIDE (San Jacinto Mtns), SAN BERNARDINO (San Bernardino Mtns), SAN DIEGO (San Diego); Day (1956) as *C. pacificus*: SAN BERNARDINO (Redlands); Collins (1970) as *C. pacificus*: LOS ANGELES (Big Tujunga R, Cattle Cyn, Chantry Falls, Coldwater Cyn, Crystal L, East Fork San Gabriel R, Monrovia Cyn, Rio Hondo R, Switzer's Camp, W Fork San Gabriel R).

*New data.*—ALAMEDA: Arroyo Mocho, 17.5 mi S Livermore, 27-VI-1965, Arnaud, and Berkeley, 20-V-1947, Chandler (CAS); AMADOR: Lockford, 1-IV-1950, Day, A.L. (CAS); BUTTE: Oroville, 9-XI-1955, Schuster, A (UCB); CALAVERAS: 4 mi E Murphey's, 17-VII-1963, A (UCB), and Esperanza Cr, 4-VII-1974 (SSU); COLUSA: Indian Cr, SW Lodoga, 8-IV-1971, Leech, A (CAS), and N Grimes, 2,3-VIII-1965, Washino/Hokama (UCD); CONTRA COSTA: 1 mi S Lafayette, 22-V-1952, and Marsh Cr, 11-III-1967, Zuparko, and Orinda Village, 30-VI-1970, Schlinger, A (UCB), and Rock City, Mt Diablo, 23-IV-1939, Ross, and Walnut Cr, 6-XI-1967, Bell, A (CAS); DEL NORTE: Smith R, 15-IV-1935, A (CAS); EL DORADO: 2 mi S Nashville, 28-III-1941, Mulaik (PERC), and Kanaka Valley Cr, 5 mi NNW Rescue, 14-X-1983, Hosea, and New York Cr, 2-VII-1956 (SSU), and Rubicon R, Georgetown-Ralston Rd, 28-VII-1963, Leech (CAS); FRESNO: Dry Cr, Humphrey's Station, 29-VIII-1953 (LACM); GLENN: Salt Cr, N Stonyford, 29-III-1956 (CAS); HUMBOLDT: 10 mi N Arcata, 21-VII-1969, Show (UCB), and Eel R, 24-VIII-1958, Truxal, A (LACM), and North Fork Yager Cr, Bridgeville-Kneeland Rd, 8-VIII-1966, Leech, A (CAS), and Van Duzen R, 1 mi E Densmore, 13-X-1969, Apperson & Davison (UCR); INYO: Haiwee Springs, Coso Range, 27-V-1997, Pratt & Savary, S (CAS), and Independence, 23-VIII-1952, A, and Saratoga Springs, Death Valley Natl Prk, 30-V-1953 (LACM); KERN: Antelope Cyn, Tehachapi Mtns, 22-VI-1975, Hlavac, A (UCR),

and Bakersfield, 12-VII-1946, and Kern R, Station 1, 1-VIII-1947, A (UCB); LAKE: Boggs L, 24-VI-1975, Buegler & Schlenger (UCB); LOS ANGELES: Tanbark Flat, 26-VI-1952, Anderson, A, and 8 mi N Castaic, 30-III-1976, Morrison (UCB), and Agoura, 7-IV-1954, and Malibu Cr, 17-VII-1953, A, L, and Altadena, 28-V-1959, Northern, and Baldwin Hills, 2-VIII-1942, Culver City, 31-VII-1937, Mathews, and Eagle Rock, 19-IX-1966, Hogue, Hollenberk Pk, 1-V-1952, Morris, and Los Angeles, 2-VIII-1944, Dulcus, and Los Angeles R, 20-VII-1930, Grant, and Santa Monica Cyn, 22-VII-1952, McDonald, and Sunland, 6, 12-X-1954, Schick, and Tapia Prk, 19-V-1962, and Topanga Cyn, 30-V-1951, and UCLA campus, 8-X-1930, Howland, A, and Crater Camp, 22-IV-1953, and Topanga, 17-V-1952, and Elizabeth L Cyn, 16-V-1951 (LACM), and La Puente, 11-V-1975, Manley, A, and Bear Cr, Hwy 39, 23-VIII-1965, Vann (CAS), and Cold Cr Cyn, Stunt Ranch, 2-IX-1980, Dobry, and W Santa Monica Mtns, Stunt Ranch, 21-VII-1978, Dobry, A (BYU), and LaVerne, 19, 21-VII-1967, A (OSU), and Narrows, Whittier, 17-V-1960, Bay (UCR); MARIN: Lily L, Alpine L, 15-IV-1972, Rogers, and Iverness, 26-VIII-1961, A (UCB), and Mill Valley, 427 Rose Ave, 13-IX-1948, Leech, and W Novato, 16-IV-1961, Rentz, A (CAS); MARIPOSA: Miami RS, 24-VII-1946, Chandler, A, and Coe Cr, 4 mi S Coulterville, Hwy 49, 1-II-1964, Leech (CAS), and Yosemite Natl Prk, 28-V-1931, A (UCB); MENDOCINO: 7 mi W Eel R RS, 10-VI-1972, Veirs, A, and UC Hopland Field Sta, 3-IV-1968, Munroe (UCB), and Bloody Run Cr, Longvale-Dos Rios Rd, 7 mi E Hwy 101, 18-VII-1968, Leech, and Los Flores Rd, Summit, 6-XI-1965, A (CAS); NAPA: L Berryessa, Wragg Cyn Resort, 9-V-1964, Arnaud, and N Howell Mt, 2 mi NNE Angwin, 30-III-1976, Leech, A, and Sage Cr, 9-IX-1950, Day, A, L (CAS); PLACER: Lincoln, 22-VII-1976, Melnicoe, and Newcastle, 30-V-1974, Fields, A, and Colfax, 31-X-1982, Ranlett (SSU), and Foresthill, V-1976, Klee, and South Fork American R, Placerville, 27-X-1974 (CAS); PLUMAS: Feather R, 30-V-1948, Day, A (CAS); RIVERSIDE: 1000 Palms Cyn, 21-III-1954, Belker, and Cottonwood Cyn, San Bernardino Mtns, 30-VII-1969, Frommer & LePre, and Coyote Cr, PL Boyd Desert Research Center, 3.5 mi S Palm Desert, 6-IV-1974, Kaul, and Midgeville, 10-III-1963, Anderson, and NE Black Hill, 16-IV-1974, Frommer, and Norco, 2-IV-1971, Caton, and Priester Ranch, 16-III-1971, Caton, A, and Santa Ana R, 8-IV-1978, Helmkamp (UCR), and Riverside, 14-VIII-1963, Fromnier, A (CAS); SACRAMENTO: American R, 1-VII-1966, Belmont, A (UCD), Orangevale, 13-IV-1938, A (UCB); SAN BENITO: Gem Mine, 6 mi S Idria, 29-VI-1955, Wasbauer (UCB), Larious Cr, SW Idria, 20-VII-1963, Leech (CAS); SAN BERNARDINO: Barton Flats, 24-V-1956, Ruckes & Adelson, A (UCB), and Cottonwood Spring, Granite Mtns, 26-IV-1950, Covey, and Granite Mtns, 4-V-1926, Reeder, A (LACM), and Dry L (3.5 mi SE trail 1E05, Poopout Hill), 30-VIII-1969, Frommer et al, and Stoddard Cyn Cr, 27-VII-1969, Malin & Malin (UCR), and Grout Cr, Big Bear L, 7-IX-1932 (CUAC), and North Fork Deer Cr, Rt 18, Arrowhead L, 23-IX-1946, Nelson (INHS), and New York Mtns, 1939, VanDuzee, A (CAS); SAN DIEGO: La Mesa, 13-IV-1959, A, and 2 mi W Barrett L, 17-VII-1969, Williams & Lee (CAS), and Escondido Cr, Harmony Grove Rd, Olivenhain, 12-I-1985, Polhemus (PERC), The Willows, 14-VI-1957, Shick, A, and Palm Cyn, Borrego Valley, 26-IV-1953 (LACM), and Sky Oaks Biological Field Sta, 4-VI-1995, Anderson, A (CSU); SAN LUIS OBISPO: 5 mi W Atascadero, 8-X-1976, Hogue, A (LACM); SANTA BARBARA: Cachuma Saddle, 19-VI-1953, A (LACM), and Central Valley, Santa Cruz Is, 27-IV-1966,



A (UCB), and Frys Harbor, Santa Cruz Is, 28-VIII-1938, Cockerell (INHS), and Santa Ynez R, Solvang, 16-I-1985, Polhemus, L, and Santa Barbara, 1997, A (PERC); SANTA CLARA: 26 mi SE Livermore, 1-X-1976, Doyen & Rude, A (UCB), and Arroyo Mucho Cr, 4 mi N San Antone RS, 3-VII-1973, Turner (WSU), and Rock City, Mt Hamilton, 18-V-1948, Day, A, and SJSC, San Jose, 3-IV-1965, Kavanaugh, and Stevens Cr, 12-X-1977, A, and Guadalupe Cr, VI-1978, Klee (CAS); SANTA CRUZ: Santa Cruz, 8-VI-1958, Truxal & Martin, A (LACM); SHASTA: Castle Crags St Prk, 8-VIII-1970, Denning, A, and Clear Cr, W Redding, 17-VI-1948, and Keswick, 3-VII-1947, Chandler (CAS), and Hat Cr, Fall R Mills, 1-IX-1969, Apperson (UCR); SISKIYOU: Shasta R, N Yreka, 5-IV-1968, Jewett, A (OSU); SONOMA: Boyes Spring, 27-V-1972, Arnaud, and Russian R, Guerneville, 22-VIII-1963, Rubtsoff, A, and 0.5 mi N Stony Point Cr, 10-X-1965, Rubtsoff (CAS); STANISLAUS: Del Puerto Cr, Del Puerto Cyn, 10-IV-1972, Gregory, and Stanislaus PG&E Power Plant Site, 5 mi N Turlock L, 25-V-1976, Collins (UCB), and Frank Raines Pk, 18 mi W Patterson, 3-IV-1970, Williams (CAS); TRINITY: Trinity R, 12 mi SE Weaverville, Hwy 299, 29-VII-1970, Frommer & LePre (UCR); TULARE: Kern R Campground, 11-V-1971, Arnaud & Arnaud, A (CAS); TUOLUMNE: Deadman Cr, Hwy 108, 26-VI-1980, Baumann & Stanger, A (BYU), and Hatch Cr, Blanchard Rd, 11-V-2002, Meyer, and South Fork Tuolumne R, Yosemite Natl Prk, 22-VIII-2002, Silldorff (PERC); VENTURA: Chuchupate RS, 2-V-1959, Powers (UCB); YOLO: Davis, 20-III-1951, Schlinger, and Rumsey, 21-X-1976, Kurtz, A (UCD); YUBA: Collins L, 2-XI-1974, Wigglesworth, A (SSU), and Sierra Foothill Field Sta, 3 mi N Smartville, 6-V-1980, DeBenedictis, A (UCB).

***Camelobaetidium maidu*** Jacobus & McCafferty

*Previous data.*—McCafferty et al. (2002) as *C. similis* Lugo-Ortiz & McCafferty: PLUMAS (North Fork Feather R).

*New data.*—LOS ANGELES: West Fork San Gabriel R, 13-VIII-1965, Vann (CAS); MERCED: Merced R, River Rd, Newman, 17-VIII-1995 (USGS); RIVERSIDE: Santa Ana R, 26-VII-1999 (USGS); SAN JOAQUIN: Stanislaus R, Caswell SP, 2-IX-1994 (USGS); STANISLAUS: Stanislaus R, Ripon, 30-VIII-1994, and Tuolumne R, Modesto, 25-VIII-1995 (USGS); TEHAMA: Deer Cr, Vina, 11-VIII-1998 (USGS).

***Camelobaetidium warreni*** (Traver and Edmunds)

*Previous data.*—Traver and Edmunds (1968) as *Dactylobaetis cepheus* Traver and Edmunds: STANISLAUS (Tuolumne R).

*New data.*—BUTTE: Upper North Fork Feather R, IX-2001, Fields (PERC); KERN: Edison Station #1, 31-VII-1965 (PERC); MERCED: Merced R, Rte 99, 2003 (FGCH); PLACER: Dry Cr, Roseville, 11-VII-2002, Fields (PERC), and North Fork American R, Oronoas Bridge, 10-X-2007 (BLAB); PLUMAS: Upper North Fork Feather R, IX-2001, Fields (PERC), and East Branch North Fork Feather R, 14-VII-2003, and Indian Cr, 7-VII-2003, and Spanish Cr, 30-VI-2003 (BLAB); RIVERSIDE: Santa Ana R, 18-VI-2002 (EPA); SACRAMENTO: Dry Cr, 3-X-2003, Fields (PERC); SONOMA: Russian R, Hwy 128, Geyserville, 21-VIII-2003, Randolph (UCD); STANISLAUS: Stanislaus R, Ripon, 1-IX-1993 (USGS); YOLO: Cache Cr Pk, 23-X-1981, Hill (SSU).

***Centroptilum album* McDunnough**

*Previous data.*—Day (1956) as *C. convexum* Ide: CONTRA COSTA, SONOMA; Feminella et al. (1989) as *C. convexum*: SONOMA (Big Sulphur Cr); Wood et al. (1996) as *C. convexum*: SONOMA (Big Sulphur Cr).

*New data.*—CONTRA COSTA: San Ramon Cr, 11-V-1949, Day, A (CAS); EL DORADO: Upper Truckee R, VIII-2003, Randolph (PERC); MARIPOSA: Illilouette Cr trib, 11-VII-2001, Silldorff (PERC); PLACER: Dry Cr, 12-VI-2002, Silldorff (PERC); NAPA: Sage Cr, 5-IV-1953, Day, A (CAS); RIVERSIDE: Thousand Palms Canal, 21-III-1954, Belkin, A (LACM); SANTA CRUZ: Waddell Cr, 16-VI-1951, Day, A (CAS); SONOMA: Russian R, 1/2-VIII-1970, Frommer & LePre, A (UCR); TUOLUMNE: South Fork Tuolumne R, Yosemite Natl Prk, 22-VIII-2001, Silldorff (PERC).

***Centroptilum asperatum* Traver**

*Previous data.*—Traver (1935a): SAN BERNARDINO (Big Bear Lake); Day (1956): NAPA, SAN BERNARDINO (San Bernardino Mtns), SANTA CRUZ; Wiersema and McCafferty (2004): NAPA (Capelle Cr), SAN BERNARDINO (Big Bear L).

*New data.*—ALPINE: Markleville, 19-VIII-1949, Day, A (CAS); AMADOR: Sutter Cr, 1-IV-1950, Day, A (CAS); CONTRA COSTA: Rock City, Mt Diablo, 17-IV-1949, Day (CAS); EL DORADO: Weber Cr trib, Placerville, 21-X-1981 (SSU); GLENN: Salt Cr at Stony Cr, N Stonyford, 29-III-1956 (CAS); LOS ANGELES: San Gabriel Mtns, 0.5 mi E Horse Flat Rd, 6-III-1977, Hogue, and Sullivan Cyn, 25-IV-1971, Howard (LACM); MARIN: Mill Valley, 23-IV-1952, Leech (PERC), and Upper Salmon Cr, Wilson Hill Rd, 22-II-1964, Leech (CAS); MARIPOSA: Coe Cr, 4 mi S Coulterville, Hwy 49, 1-II-1964, Leech (CAS); MENDOCINO: Hopland Field Sta, 28-IV-1972, Coville & Slater (UCB), and South Fork Eel R, Piercy, 24-VIII-2001, Ogden (PERC); NAPA: Capelle Cr, Rt 128, 27-I-1993, Kondratieff (CSU); RIVERSIDE: Deep Cyn, Palm Desert, 22-IV-1969, Malin & Frommer, and Deep Cr, 19-VIII-1975, Clark, and PL Boyd Desert Research Center, 3.5 mi S Palm Desert, 26-IV-1975, Egan, and Spillway Cyn, Thomas Mtn, 1-VII-1993, Al-Wahaibi (UCR); SACRAMENTO: American R, Sacramento, 31-I-1980 (SSU); SANTA BARBARA: Prisoner's Harbor, Santa Cruz Is, 27-II-1957, Dixon, A (LACM); SANTA CRUZ: Zayante Cr, 21-X-1950, Day, A (LACM); SHASTA: French Gulch, Hwy 299, 20-VII-1967, Evans (PERC); SONOMA: Russian R, 2-VIII-1970, Frommer & LePre, A (UCR); STANISLAUS: Tuolumne R, 3 mi N Shiloh, 11-VI-1955, Day, A (CAS).

***Centroptilum bifurcatum* McDunnough**

*New data.*—BUTTE: Chico Cr, Chico, 10-V-1968, Evans, A (PERC); EL DORADO: Weber Cr, 24-X-1981, Hill/Wragg (SSU); MENDOCINO: Russian R, 0.5 mi E Hopland, 5-V-1968, Haddock (UCB); NAPA: Capell Cr, 14-VI-1952, Day, A (CAS); SACRAMENTO: American R, Sacramento, 21-X-1982 (SSU); SONOMA: Russian R, Geyserville, 2-VIII-1967, Allen (CAS); STANISLAUS: Tuolumne R, 3 mi E Shiloh, 10-VII-1954, Day, A, and Tuolumne R, Hughson Tanks, 7-VIII-1954, Day (CAS).

***Centroptilum conturbatum* McDunnough**

*Previous data.*—Traver (1935a): SANTA CRUZ (Waddell Cr).

*New data.*—EL DORADO: Rubicon Bay, 18-IX-1968, Noble (CAS); HUMBOLDT: Little Sprowel Cr, 27-IX-1996, Yee (PERC); LOS ANGELES: Lovejoy L, 27-II-1954, McDonald (LACM); MADERA: North Fork Willow Cr, 7-X-2001, Silldorff (PERC); MARIN: Lagunitas Cr, 23-VIII-2004, Fields (PERC); MARIPOSA: Mariposa Cr, Joe Howard Rd, Mariposa, 10-V-2002, Meyer, and Yosemite Cr trib, 3-VIII-2001, Silldorff (PERC), and South Fork Merced R, Wawona, Yosemite Natl Prk, 16-X-1976, Ulrich (UCB); MENDOCINO: 7 mi W Eel River RS, 10-VI-1972, Szerlip, and 1 mi N Piercy, 20,23-V-1976, Wharton, A (UCB); MONTEREY: San Antonio R, Pleyto Rd, 9-IV-1963, Rentz (CAS); SANTA CLARA: Guadalupe Cr, VI-1978, Klee, A, and Stevens Cr, 12-X-1977, Klee (CAS); SONOMA: Big Sulphur Cr, 12-IX-1976, Ulrich (UCB); TULARE: Horse Mdw Campground, SNF, 1-VIII-1965, Vann (CAS); TUOLUMNE: First Cr, Blanchard Rd, 11-V-2002, and South Fork Tuolumne R, Rainbow Pool, Hwy 120, 25-VI-2003, Meyer (PERC); VENTURA: Santa Clara R, S Mountain Rd, 6-V-2002, Meyer (PERC); YOLO: Putah Cr, 5-XII-1981, Hill, A.L (SSU).

***Cloeodes excogitatus* Waltz and McCafferty**

*Previous data.*—Waltz et al. (1998): MENDOCINO (Williams Cr).

*New data.*—ALPINE: Highland Cr, Fields (SSU); AMADOAR: North Fork Mokelumne R, 30-VIII-2003, Fields (PERC); BUTTE: Fall R, Feather Falls, 2002, and Little Dry Cr, 2 mi S Paradise, 2001 (FGCH); CALAVERAS: Oneil Cr, 15-VII-2003 (EPA); EL DORADO: American R, Icehouse Rd, 26-VIII-2003, Randolph (UCD), and Consumnes R, Amador Co, 24-VIII-1971, Dubbs, and Kanaka Valley Cr, 5 mi NNW Rescue, 14-X-1983, Hosea (SSU); MARIPOSA: Mahoney Gulch, Hwy 132, 10-V-2002, Meyer, and Merced R, Bridalveil, Yosemite Natl Prk, 5-X-1995, Fend (PERC); MENDOCINO: South Fork Eel R, Piercy, 24-VIII-2001, Ogden (BYU), and York Cr, 2002 (FGCH); NEVADA: Wolf Cr, Kiwi Rd, 2002 (FGCH); SANTA BARBARA: Coche Cr, 11-VII-2001, and Sisquoc R, 29-V-2002 (EPA), and El Capitan, Cmpgd Spring, and Mission Cr, Hwy 192, 2002 (FGCH); SHASTA: Bear Cr, VIII/IX-2003 (FGCH); SONOMA: Big Sulphur Cr, 2002 (FGCH); VENTURA: Piru Cr, and Sespe Cr, 2001 (FGCH), and Santa Paula Cr, 8-V-2002 (EPA).

***Dipheter hageni* (Eaton)**

*Previous data.*—Traver (1935a) as *Baetis devinctus* Traver: SANTA CRUZ (Waddell Cr); Day (1956) as *B. devinctus*: NAPA; Leland et al. (1986) as *B. devinctus*: MONO (Convict Cr); Serpa (1986) as *B. devinctus*: SONOMA (Copeland Cr); Meyer and McCafferty (2001): NAPA (Sage Cr), MARIN (Lagunitas Cr).

*New data.*—ALPINE: Charity Valley Cr, 27-VI-2002, and West Fork Carson R, 26-VI-2002 (EPA), and Coyote Valley Cr, 2-VII-2007 (BLAB); AMADOR: Cole Cr, 7-VIII-2001 (BLAB), and Stoney Cr, Rd 306, 3-XI-2000 (FGSA), and Sutter Cr, 2-IV-1977, Hall (SSU); BUTTE: Big Chico Cr, Hwy 32, and Butte Cr, Doe Mill Rd, and Butte Cr, Rich Bar Rd, and Dry Cr, Dry Cr Rd, and Fall R, N Feather Falls, and Feather R, N L Oroville, and Galen Cr, Galen Ridge Rd, and Little Chico Cr, Schott Rd, and Martin Cr, Galen Ridge Rd, and Sucker Run Cr, Forbestown, 2002, (FGCH), and Butte Cr, Cherry Hill Cmpgd, and Butte Cr,

Honey Run bridge, 26-X-2000, and Little Butte Cr, Skyway, 7-XI-2000 (FGSA), and Little Dry Cr, 7-IX-2001 (EPA); CALAVERAS: Blue Cr, 9-VII-1989 (BLAB), and Oneil Cr, 15-VII-2003 (EPA); CONTRA COSTA: 7 mi S Walnut Creek, 24-III-1968, Bell, and San Leandro Cr, 4 mi S Orinda, 3-V-1974, Wherton (UCB), and Mitchell Cr, Mitchell Cyn Fire Trail, 2003 (FGCH); DEL NORTE: Clarks Cr, 30-VII-2003, and Coldwater Cr, 29-VII-2003, and Eighteenmile Cr, 31-VII-2003, and Middle Fork Smith R, 15-IX-200, and South Fork Winchuck R, 6-VIII-2002, and Smith R, 31-VII-2003 (EPA); EL DORADO: Blodget Forest, Georgetown, 26-VI-1967, Stolth, A (UCB), and Butte Cr, N Fork Cosumnes R, VII-2003, and Clear Cr, VIII-2003, and Martinez Cr, 2003, and Greenwood Cr, Hwy 49, and Squaw Hollow Cr, Oak Hill Rd, 2002, and Sweetwater Cr, Salmon Falls Rd, 2002 (FGCH), and Consumnes R, Amador Co, 24-VIII-1971, Dubbs, and Kanaka Valley Cr, 5 mi NNW Rescue, 14-X-1983, Hosea (SSU), and Sopiago Cr, 9-VIII-2001 (EPA), and Taylor Cr, Hwy 89, VI-1970, Noble (CAS), and Tells Cr, Ice House Rd, 22-VI-2003, Meyer (PERC), and Upper Truckee R, S L Tahoe, 8-IX-1993 (USGS); FRESNO: Bear Cr, 7-VIII-2001 (EPA), and Huntington L, Rancheria, 30-VII-1984, MacDonald, A (PERC), and Mill Flat Cr, 15-VII-2003 (BLAB); GLENN: Cold Cr, 25-VI-2002 (EPA), and North Fork Stony Cr, N Ida Cr, 2001 (FGCH), and Upper Black Butte, 23-VI-2002 (BLAB); HUMBOLDT: 3.3 mi N Orick, Hwy 101, 7-IV-1966, Leech, A (CAS), and Dean Cr, Garberville, 2-VII-1959, Allen (CAS), and Bluff Cr, 30-IX-2003, and Brock Cr, 14-VIII-2002, and Butte Cr, 7-VIII-2001, and Canoe Cr, 22-VII-2003, and Corner Cr, 1-VIII-2002, and Elder Cr, 1-X-2003, and Fern Cyn, 12-VIII-2003, and Fox Cr, 1-X-2003, and Grizzly Cr, 24-IX-2003, and Honeydew Cr, 22-VII-2003, and Horse Linto Cr, 14-VIII-2003, and Lawrence Cr, 23-VII-2003, and Little Freshwater Cr, 8-VIII-2001, and Little Pine Cr, 21-VIII-2002, and Maple Cr, 20-VIII-2002, and Mill Cr, 17-VII-2002, and North Fork Mill Cr, 16-VII-2002, and North Fork Yager Cr, 31-VII-2002, and Price Cr, 2-VIII-2000, and Rattlesnake Cr, 5-VIII-2003, and Sholes Cr, 10-IX-2002, and Squaw Cr, 8-VIII-2002, and Trout Cr, 6-VIII-2003, and Van Duzen R, 10-VII-2001, and West Fork Sproul Cr, 10-VII-2002 (EPA), and Freshwater Cr, and Jacoby Cr, Brookwood Rd, and Van Duzen R, Dinsmore, 2001 (FGCH), and Redwood Cr, HWY 299, 19-IX-2000 (FGSA), and Van Duzen R, Hwy 36, 15-V-2002, Meyer (PERC); INYO: Big Pine Cr, 16-VI-1986, and Goodale Cr, 27-V-1986, Giuliani (BYU), and Bishop Cr, IX-2001, and Rawson Cr, 2002 (FGCH); KERN: Ice House Cr, 25-VIII-2003 (BLAB); LAKE: Anderson Cr, Mira Vista, 2002, and Rattlesnake Cr, 0.5 mi N Eel R, and Trout Cr, 0.1 mi N Eel R, 2003 (FGCH), and Skeleton Cr, 27-VI-2002 (EPA), and St Helena Cr, Hwy 29, 29-IV-1979, Dare, A (UCB); LASSEN Ash Cr, 1.7 mi N Ash Valley, 2003 (FGCH), and Piute Cr, 13-IX-2001 (EPA), and S Milford, US 395, 19-IX-1946, Nelson (INHS); LOS ANGELES: Arroyo Seco Cr, 25-VII-2000, and Elizabeth Cyn, 1-V-2002, and West Fork Alder Cr, 21-VI-2001 (EPA), and Bear Cr, Switzer Campground, 29-III-1981, Baumann & Stanger (BYU), and West Fork San Gabriel R, 2001 (FGCH); MADERA: Big Cr, North Fork Sierra, 23-VI-1989 (BLAB); MARIN: Bear Valley Cr, Point Reyes NS, 22-IV-1987, Baumann et al., A (BYU), and Lagunitas Cr, 23-VIII-2004, Fields (WCF), and Lily L, Alpine L, 19-IV-1975, Benson (UCB); MARIPOSA: Illilouette Cr, 3-X-2000 (EPA), and Merced R, Hwy 140, 15-IX-1994 (USGS), and Merced R, Yosemite Natl Prk, 16-VIII-1933 (INHS); MENDOCINO: 7 mi West Eel River RS, 10-VI-1972, Szerlip, and Hopland Field Station, 28-IV-1972, Coville & Slater

(UCB), Elder Cr, and Fox Cr, 2003, and Gibson Cr, and Duncan Cr, Mill Cr, and Morrison Cr, and Noyo R, 2002, and Salt Hollow Cr, and York Cr, 2002 (FGCH), and and Eel R, 14-VIII-2001, and Hayshed Gulch, 22-VIII-2000, and Hoil Cr, 26-VII-2001, and Hollow Tree Cr, 23-VIII-2000, and and Middle Fork Eel R, 9-VII-2002, and Mudd Cr, 24-VII-2001, and Navarro R, 18-VIII-2003, and North Fork Navarro R, 24-VIII-2000, and North Fork Noyo R, 3-IX-2003, and South Fork Big R, 4-IX-2003 (EPA), and Rattlesnake Cr, Hwy 101, 11 mi W Laytonville, 16-V-2002, Meyer (PERC); MODOC: North Fork Pit R, Hwy 395, and Pit R, Hwy 299, 2001, and Ash Cr, Adin Bridge, and East Cr, Patterson Mdw, and Rush Cr, Rush Cr Cmpgd, 2003 (FGCH), and Cedar Pass, 12-VI-1961, Hanna (CAS), and South Fork Pit R, 29-VIII-2000 (EPA); MONO: Convict Cr, 11-VIII-1936, Needham (INHS), and East Walker River R, X-2001, and Mammoth Cr/Hot Cr conf, 2003 (FGCH), and Glass Cr, 2.5 mi WSW Crestview, 11-VII-1989, Giuliani, A (BYU), and Long Valley Cr, 3-VII-2001 (EPA); MONTEREY: Big Cr, Hwy 1, 2001, and Big Sur R, Hwy 1, 2001, and Garrapata Cr, and Salinas R, Davis Rd, 2002, and Nacimiento R, 0.7 mi N Slickrock Cr, and Arroyo Seco Cr, 0.6 mi N Piney Cr, and North Fork San Antonio R, N Carrizo Cr, and Rattlesnake Cr, 0.4 mi N Pinal Cr, and Tassajara Cr, Tassajara Hot Springs, 2003 (FGCH), and Salmon Cr, Hwy 1, 8-VII-2003, Meyer (PERC); NAPA: Capell Cr, 20-V-1950, Day, A (CAS); NEVADA: Deer Cr, Broad St, and Gray Cr, Truckee R conf, 2001, and Bear R, Hwy 20, and Bear R, Steephollow, and Clear Cr, Penn Valley Dr, and Rattlesnake Cr, Old Auburn Rd, and Squirrel Cr, Western Gateway, and Wolf Cr, Kiwi Rd, 2002 (FGCH), and Truckee R, Farad, 10-IX-1993 (USGS), and Yuba R, 0.9 mi S Indian Cr, 28-IX-2000 (FGSA); ORANGE: Arroyo Trabuca Cr, 18-V-2001 (BLAB); PLACER: Bear R, YMCA Camp, Hwy 20, 18-V-2002, Meyer et al. (PERC), and Martis Cr, and Squaw Cr, 2002 (FGCH); PLUMAS: Big Blackhawk Cr, 5-VIII-2002, and Butt Cr, 17-VII-2003, and Clark Cr, 10-VII-2003 (BLAB); RIVERSIDE: Dark Cyn Cr, Dark Cyn Campground, 21-VI-1977, Baumann & Hogue (BYU), and Fuller Mill Cr, Idyllwild Panoramic Hwy, 2001 (FGCH), and North Fork San Jacinto R, E Hemet, 29-VII-1967, Evans, A (PERC), and San Jacinto R, 11-V-1952 (LACM), and Stone Cr, 19-VII-2000 (EPA); SACRAMENTO: American R, Sacramento, 29-VII-1980, Dubbs, A (SSU), and American R, Harrington Bar, 9-XI-2000 (FGSA); SAN BERNARDINO: Barton Cr, 6-VI-2002 (EPA); Bear Cr, 28-VI-2001, and City Cr, 11-VI-2002, and Cold Cr, 27-VI-2000, and East Twin Cr, 13-VI-2002, and East Fork Barton Cr, 27-VI-2001, and Middle Fork Lytle Cr, 19-VI-2002 (EPA), and Hwy 138, 11 mi E Cajon, 13-X-1967, Nakakihara (UCR), and Santa Ana R, Running Springs, 19-VII-1999, and South Fork Santa Ana R, Angeles Oaks, 10-VII-2000 (USGS); SAN DIEGO: Devils Canyon Cr, VIII-2005, and Long Canyon Cr, 19-V-2003 (BLAB, and Kitchen Cr, S Cibbets Flat Campground, 20-IV-2000 (FGSA); SAN LUIS OBISPO: Dairy Cr, and Walters Cr, and Pennington Cr, Hwy 1, V-2001, and Coon Cr, and Los Osos Cr, Clark Valley Rd, and Old Cr, San Luis Obispo Cr, and San Simeon Cr, Hwy 1, 2002, adn Alamo Cr, 0.8 mi S Br Cr, and Arroyo De La Cruz, Hwy 1, and Chorro Cr, and Santa Rosa Cr, and Toro Cr, 2003 (FGCH), and Tassajara Cr, 4 mi W St Marguerita, 20-V-1972, Pinto, A (UCR); SAN MATEO: Alpine Cr, Heritage Grove Prk, and Alpine Cr, Sam McDonald Prk, and Butano Cr, Bean Hollow Rd, and Butano Cr, Butano Falls, and Butano Cr, Canyon Rd, and Butano Cr, Cloverdale Rd, and El Corte de Madera Virginia Mill Trail, and Harrington Cr, La Honda Rd, and Honsinger Cr, N Pescadero Cr, and Jones Gulch,

Jones Gulch Rd, and La Honda Cr, N Alpine Cr, and Little Butano Cr, Butano St Prk, and Mindego Cr, N Alpine Cr, and Oil Cr, N Pescadero Cr, and Pescadero Cr, N Peters Cr, and Peters Cr, Portola St Prk Rd, and San Gregorio Cr, Stage Rd, and San Gregorio Cr, La Handa Rd, and Slate Cr, N Pescadero Cr, and Tareater Cr, Tarwater Cr Trail, and Waterman Cr, N Pescadero Cr, 2002, and San Mateo Cr, Pilarcitos Ridge Rd, 2003 (FGCH), and Los Trancos Cr, Ford Pk, IX-1998, Fend (GSMP); SANTA BARBARA: Alamo Pintado Cr, 9-V-2002, and Cachuma Cr, 7-V-2003, and Coche Cr, 11-VII-2001, and Kelly Cr, 12-VI-2002, and Santa Cruz Cr, 10-VII-2001, and Sisquoc R, 30-V-2002 (EPA), El Jaro Cr, 0.3 mi S Ytias Cr, 2000, and Arroyo Burro Cr, Hope St, and Carpinteria Cr, Hwy 192, and El Capitan, Campground, nd Refugio Cr, Refugio State Beach, and Rincon Cr, Bates Rd, Hwy 1, and West Fork Santa Cruz Cr, 3 mi N Coche Cr, 2001, and Mission Cr, Hwy 192, 2002 (FGCH); SANTA CLARA: Guadalupe Cr, and Stevens Cr, 10,20-VI-1978, Klee, A., and Alum Rock Prk, 11-III-1970, Real (CAS), and Barrett Cr, IX-1998, Fend (GSMP), and Bodfish Cr, 0.45 mi S Whitehurst Rd, 2003, and West Fork Permanente Cr, Maryknoll Rd, 2002 (FGCH), and Little Author Cr, 28-VI-2001, and Smith Cr, 19-VI-2002 (EPA); SANTA CRUZ: Aptos Cr, Winfield Street Spring, and Little Sur R, VIII-2002, and Queseria Cr, Swanton Rd, and San Lorenzo R, and San Vicente Cr, Davenport, and Soquel Cr, Laurel Glen Rd, 2003 (FGCH), Hester Cr, San Jose Rd, 20-V-2002, and Big Cr, Swanton Rd, and Scott Cr, Swanton Rd, 9-VII-2003, and Waddell Cr, 1.3 mi E Hwy 1, 10-VII-2003, Meyer (PERC); SHASTA: Wagon Cr, 1.6 mi N Slate Cr, 2001, and Bear Cr, Hwy 44, 2002, and Clover Cr, Ponderosa Way, and Brandy Cr, South Shore Dr, and Clear Cr, Hwy 299, and Foster Gulch, Whiskeytown L, and French Gulch Cr, French Gulch, and Grizzly Gulch, Old Bridge, and Mad Ox Gulch, N Whiskey Cr, and Mill Cr, S Stamp Mill, S Fork Bear Cr, Ponderosa Way, and Wiskey Cr, 2002, and Clover Cr, N Clover Cr Rd, Cow Cr, Old Fern Rd, and Oak Run Cr, Oak Run Rd, 2003 (FGCH), and Old Cow Cr, 28-VIII-2002, and Burney Cr, 12-IX-2001, and North Fork Backbone Cr, 11-IX-2001, and South Fork Slate Cr, 23-VIII-2001, and Squaw Valley Cr, 30-VII-2002 (EPA), and Cow Cr, Whitmore Rd, 26-X-2000 (FGSA), and McCloud R, Ladybug Cr, McCloud, 22-VIII-1996 (USGS); SIERRA: Fiddle Cr, Hwy 49, 17-V-2002, Meyer (PERC), and Independence Cr, 9-VIII-2005 (BLAB); SISKIYOU: Butte Cr, 26-IX-2002, and Duck Lake Cr, 13-IX-2000, and Eddy Cr, 12-IX-2000, and East Fork Indian Cr, 8-VIII-2000, and Little Humbug Cr, 16-VII-2002, and McNeal Cr, 17-IX-2002, and North Fork Salmon R, 27-VIII-2003, and Seiad Cr, 26-VIII-2003, and South Fork Salmon R, 13-VIII-2002, and Sugar Cr, 10-VII-2002 (EPA), and Copper Cr, N Rough Cr, and Wagon Cr, 4 miles N Davis Pl Rd, 2001, and McNeal Cr, 1 mi SW S Fork Salmon R, 2002 (FGCH), and South Fork Sacramento R, 9-IX-1953, Chandler (CAS); SOLANO: Suisun Cr, 3-IV-2007 (BLAB); SONOMA: Big Sulfur Cr, and Brown Cr, and Frasier Cr, and Jonive Cr, and Kidd Cr, and Little Sulphur Cr, and Mt. Jackson Cr, Westside Rd, and Oat Valley Cr, 2.2 mi N Hwy 101, and Redwood Cr, 2002, and Sexton Cr, N Jonive Cr, and Squaw Cr, and Wine Cr, 2002, and Adobe Cr, Ely Blvd, and Austin Cr, and San Antonio, D St, 2003 (FGCH), and East Austin Cr, 19-VIII-2003 (EPA), and Sonoma Cr, 1.6 mi N Glen Ellen, 4-VI-1949, Day, A (CAS); TAHOE: South Fork Rock Cr, 20-VI-2002 (BLAB); TEHAMA: Dye Cr, 0.4 S N Fork Dye Cr, 2001, and Cottonwood Cr, Powerline Rd, and Indian Cr, N Payne Pl Campground, and Middle Fork Antelope Cr, Ponderosa Way, and North Fork Antelope Cr, Ponderosa Way, and Plum Cr, and South



Fork Antelope Cr, S Antelope Campground, 2002 (FGCH), and Deer Cr, Ponderosa Way, 25-X-2000 (FGSA), and Deer Cr, Vina, 8-VIII-1996 (USGS), and North Fork Elder Cr, 29-VIII-2001 (EPA); TRINITY: Bear Cr, 11-VII-2002, and Browns Cr, 3-X-2001, and Corral Cr, 11-VII-2001, and Dark Canyon Cr, 18-IX-2003, and Grassy Flat Cr, 16-VIII-2000, and Mumba Cr, 24-VII-2001, and Big Cr, 28-VIII-2001, and Reading Cr, 12-IX-2002, and South Fork Trinity R, 18-V-2002, and Squirrel Gulch, 15-VIII-2000, and Stuart Fork, 9-VIII-2000, and Weaver Cr, 12-VII-2001, and West Fork Van Duzen R, 11-VII-2002 (EPA), Stuart Fork, 2.4 mi E Hwy 36, 14-IX-2000 (FGSA); Van Duzen R, 1.2 mi N Zenia Rd, 2002, and Bluff Cr, 1.7 mi N Kettenpom Cr, and Rattlesnake Cr, 1 mi N Eel R, 2003 (FGCH); TULARE: Cabin Cr, Hwy 198, Sequoia Natl Prk, 2-VII-2003, and Marble Fork Kaweah R, Hwy 198, Sequoia Natl Prk, and Stoney Cr, Hwy 198, and Wolverton Cr, Wolverton Ski Area, Sequoia Natl Prk, 3-VII-2003, Meyer (PERC), and Monache Cr, 25-VI-2002 (EPA); TUOLUMNE: Deadman Cr, 11-VII-1989 (BLAB), and North Fork Tuolumne R, 21-VIII-2001 (EPA), and Rough and Ready Cr, Algerine Rd, 11-V-2002, Meyer (PERC); VENTURA: Agua Blanca Cr, 7-VI-2001, and Coyote Cr, 12-VI-2001, and Matilija Cr, 14-VI-2000, and North Fork Matilija Cr, 4-VI-2003, and Scholder Cr, 5-VI-2001, and Sespe Cr, 27-VI-2001 (EPA), Howard Cr, 1.6 mi N Route 6n31, and Piru Cr, 1.7 mi S Cedar Cr, and Revolon Slough, S Wood Rd, 2001, and Bear Cyn Cr, N Sespe Cr, and Piedra Blanca Cr, 0.9 mi N Sespe Cr, and Santa Paula Cyn Cr, 0.5mi N East Fork, 2003 (FGCH), and Wheeler Springs, North Fork Ventura R, 10-VII-1973, Arnaud, A (CAS); YUBA: South Fork Yuba R, 23-IV-1977, Hall (SSU), and Willow Cr, Pendola Rd, 17-V-2002, Meyer (PERC).

***Fallceon eatoni*** (Kimmins)

*New data.*—RIVERSIDE: San Bernardino Mountains, Cottonwood Canyon, 30-VII-1969, Frommer & LePre, A (PERC).

***Fallceon quilleri*** (Dodds)

*Previous data.*—Day (1954a) as *Baetis leechi* Day: NAPA (Conn Cr); Collins (1970) as *B. leechi*: LOS ANGELES (Bear Cr, Big Rock Cr, Big Tujunga Cyn, Cattle Cyn, Chantry Falls, Coldwater Cyn, Crystal L, E Fork San Gabriel R, Little Rock Cr, Monrovia Cyn, North Fork San Gabriel R, Rio Hondo R, Switzer's Camp, West Fork San Gabriel R); Leland and Fend (1998): MERCED (San Joaquin R), STANISLAUS (San Joaquin R).

*New data.*—AMADOR: Stoney Cr, Alder Springs Rd, 3-XI-2000, and Stoney Cr, Rancheria, 2-XI-2000 (FGSA); BUTTE: Big Chico Cr, Chico, 5-VIII-1996, and Butte Cr, Honey Run Rd, Paradise, 6-VIII-1997 (USGS), and Live Oak Slough, 3-IX-2002 (EPA); CONTRA COSTA: Mt Diablo Cr, Port Chicago Hwy, and Mt Diablo Cr, Diablo Cr Golf Course, 2003 (FGCH); DEL NORTE: Smith R, 14-VI-2001 (EPA); EL DORADO: Weber Cr, 24-X-1981, Hill & Wragg (SSU), and Wench Cr, 3-X-2002 (BLAB); FRESNO: Converse Cr, 8-VII-2003, and Mill Flat Cr, 7-VII-2004 (BLAB); GLENN: Cold Cr, 25-VI-2002, and Cottonwood Cr, 26-VI-2002, and North Fork Stony Cr, 10-X-2001 (EPA), and Grindstone Cr, Rd 305 (N 162W), 13-V-2002, Meyer (PERC); HUMBOLDT: Eel R, 19-VI-2001 (EPA); IMPERIAL: Alamo R, Ramer L, and New R, Gaging Station, 2003 (FGCH); INYO: 8 Dish Warm Spring, 7 mi N Big Pine, 6-I-1985, and Novaro's Spring, 3 mi N Death Valley Natl Prk, 8-I-1985, Shepard (SSU), and Cow Cr, Death Valley



Natl Prk, 25-IV-1955, and Resting Springs, 29/30-V-1955, Belkin et al (LACM), and Furnace Cr, Death Valley Natl Prk, 7-IV-1970, Frommer & Frommer (UCR), and Suprise Cyn, Panamint Mtns, 21-IV-1957, Hurd, A (UCB); LAKE: Cache Cr, 4.5 mi N Rayhouse, 31-VIII-1972, Hjelle, A (CAS); LASSEN: 4 mi N Doyle, 22-VIII-1953, Lattin (UCB), and Horse Cr, Little Valley, 2003 (FGCH), and Long Valley Cr, 10-VII-2003 (BLAB); LOS ANGELES: San Francisquito Cr, 5mi N Copper Hill Dr, and Santa Clara R, Hwy 5, Castaic Cr, Lake Hughes Dr, 2001, and Arroyo Sequit, Leo Carillo Beach Camp, and Arroyo Sequit, Mulholland Drive, 2003, and Corral Cyn Cr, Hwy 1, and Elizabeth Cyn Cr, 0.6 mi S Prospect Cyn, and Fish Cyn, Las Flores Cyn Cr, Hwy 1, and Los Alisos Cyn Cr, Decker Cyn Rd, and Marie Cyn Cr, and Pena Cyn Cr, Hwy 1, and Rustic Cyn Cr, Evans Rd, and San Nicolas Cyn Cr, 33905 Hwy 1, and Solstice Cyn Cr, S Coral Canyon Rd, and Topanga Cyn Cr, Topanga Canyon Rd, and Trancas Cyn Cr, Paseo Cyn Rd, and Tuna Cyn Cr, La Tuna Cyn Rd, 2003 (FGCH), and Elizabeth L Cyn, 28-III-1953, A (LACM), and Big Tujunga Cyn, 19-VI-2001, and Piru Cr, 20-VI-2000, and West Fork San Gabriel R, 20-VI-2001 (EPA), and Monrovia, 28-VI-1967, and Santa Anita Cyn, Chantory Flats, 25-III-1967, Collins (CAS); MADERA: Cold Spring, 30-VI-2004 (BLAB); MARIPOSA: Mariposa Cr, 27-VIII-2002 (EPA), and Merced R, Briceburg, 16-IX-1994 (USGS); MENDOCINO: Hopland Field Station, Stream Site 4, 28-IV-1972, Coville & Slater (UCB), and Johnson Cr, N Duncan Cr, and Morrison Cr, and York Cr, 2002 (FGCH), and Navarro R, 18-VIII-2003 (EPA); MERCED: Edendale Cr, Hwy 59, 11-V-2002, Meyer (PERC), and Merced R, River Rd, Newman, 8-IX-1993, and Merced R, McConnell SP, 21-IX-1994, and Salt Slough, Hwy 165, Stevinson, 19-IX-2001 (USGS), and Merced R, Rte 99, 2003 (FGCH); MODOC: Ash Cr, Adin Bridge, 2003, and Pit R, Hwy 299, 4 mi SW Canby, 2002 (FGCH), and Canyon Cr, 17-VI-2003 (BLAB); MONO: Convict Cr, 28-II-1962, Kennedy, A (CAS), and East Walker R, Three Islands, and Hot Cr, and Mammoth Cr, 2001 (FGCH); MONTEREY: Arroyo Seco R, Thorne Rd, 24-IV-2000, and Nacimiento R, Hwy 101, 19-IV-2000, and Salinas R, Bradley Bridge, 19-IV-2000, and Salinas R, Cattlemen Rd, San Ardo, 19-IV-2000, and Salinas R, Elm Rd, Greenfield, 24-IV-2000, and Salinas R, 13th Street, Paso Robles, 16-V-2000, and San Antonio Cr, Hwy 101, 15-V-2000 (FGSA), Carmel R, Hwy 1, and San Antonio Cr, Rancho Del Las Flores, 2001, and Big Cr, Hwy 1, 2002, and San Antonio R, 1.4 mi N Sam Jones Rd, and San Antonio R, Del Venturi Rd, and San Antonio R, Oro Fino Cyn, 2003 (FGCH). NAPA: Capell Cr, 19 mi W Monticello Dam, 13-IX-1967, Haddock (UCB), and Sage Cr, 2.5 mi E Rutherford, 1-III-1987, Shepard (SSU); NEVADA: Deer Cr, 2001, and Squirrel Cr, Western Gateway, 2002 (FGCH), and Yuba R, 28-IX-2000 (FGSA); ORANGE: Aliso Cr, Country Club Rd, Hwy 1, 12-XI-2000, and Arroyo Trabuco Cr, Country Club Rd, Hwy 1, 13-XI-2000, and San Juan Cr, Hwy 74, 26-V-2000 (FGSA); PLACER: Colfax, 31-X-1982, Ranlett (SSU), and North Fork American R, Ponderosa Bridge, 10-X-2007 (BLAB); PLUMAS: Deer Cr, Clairveaux Monastery, 24-X-2000 (FGSA), and Jameson Cr, 30-VIII-2000 (EPA), and Nelson Cr, 16-VII-2004 (BLAB); RIVERSIDE: Riverside, 11-IX-1961, A, and 1000 Palms, 2-X-1978, Mohsen, and Deep Cyn, jct Cactus Spring Trail/Horsethief Cr, 11-VII-1969, Frommer, and Horsethief Cr, Cactus Spring Trail, 26-III-1970, Frommer & LePre, and PL Boyd Desert Research Center, 3.5 mi S Palm Desert, 25-VIII-1969, Frommer & Frommer (UCR), and Andreas Cr, 8-V-2001, and Santa Ana R, 18-VI-2002 (EPA), and Murrietta

Cr, 10-XI-2000, and Stone Cr, 2 mi N Pine Grove, 19-VII-2000, and Temecula Cr, I-15, 23-V-2000 (FGSA), and Sandia Cr, DeLuz Rd, XI-2000, and Santa Ana R, 1 mi SW River Rd, 2002, and Whitewater R, Lincon Ave, 2003 (FGCH), and Sunnyslope channel, Rubidoux, 14-IX-2000 (USGS), and Tahqwitz Cyn, Palm Springs, 7-I-1953, Arnaud, A (CAS); SACRAMENTO: American R, Sacramento, 7-X-1997, and Arcade Cr, Del Paso Heights, 9-X-1998 (USGS), and Dry Cr, 22-VIII-2001 (EPA); SAN BERNARDINO: Chino Cr, Central Ave, Los Serranos, 5-IX-2000, and Cucamonga Cr, Upland, 6-IX-2000, and Santa Ana R, Running Springs, 19-VII-1999, and Warm Cr, 24-VIII-1999 (USGS); City Cr, 11-VI-2002, and Deer Cr, 16-V-2002, and East Twin Cr, 13-VI-2002 (EPA), and Mohave R, 13-X-1967, Cheary, and Stoddard Cyn Cr, 0.25 mi N San Antonio Dam, 27-VII-1969, Malin & Malin (UCR), and Plunge Cr, S Little Mill Cr, 2001 (FGCH); SAN DIEGO: Agua Hedionda Cr, El Camino Real, 9-XI-2000, and Buena Vista Cr, N S Vista Way, 25-V-2000, and Campo Cr, Hwy 94, 12-XI-2000, and Carroll Cyn Cr, I-805, 10-XI-2000, and Chicarita Cr, Evening Cr Rd, 9-XI-2000, and Cottonwood Cr, Old Hwy 80, 11-XI-2000, and Green Valley Cr, S W Bernardo Rd, 9-XI-2000, and Jamul Cr, Otay Lakes Rd, 12-XI-2000, and Kit Carson Cr, Sunset Dr, 9-XI-2000, and La Posta Cr, 12-XI-2000, and Los Penasquitos Cr, Black Mountain Rd, 9-XI-2000, and Pine Cr, Old Hwy 80, 11-XI-2000, and Rattlesnake Cr, Hillary Pk, 1-VI-2000, and San Diego R, Mission Trails Regional Prk, 10-XI-2000, and San Luis Rey R, Hwy 76, 22-V-2000, and San Luis Rey R, Old Hwy 395, 22-V-2000, and San Luis Rey R, Mission Rd, 9-XI-2000, and San Marcos Cr, McMahr Rd, 31-V-2000, and San Marcos Cr, Rancho Santa Fe Rd, 24-V-2000, and Sandia Cr, Sandia Cr Dr, 11-XI-2000, and Santa Margarita R, Camp Pendleton, 21-V-2000, and Santa Margarita R, Willow Glen Rd, 24-V-2000, and Santa Margarita R, Sandia Rd, 11-XI-2000, and Santa Ysabel Cr, Hwy 79, 1-VI-2000, and Sweetwater R, Hwy 94, 10-XI-2000, and Tecolote Cr, Tecolote Cyn Natural Pk, 10-XI-2000, and Troy Cyn Cr, Kitchen Cr Rd, 31-V-2000 (FGSA), and Boulder Cr, Boulder Cr Rd, and De Luz Cr, DeLuz-Murrieta Rd, and Rainbow Cr, Willow Glen Rd, and Stone Cr, Santa Margarita R, 2003 (FGCH); Escondido Cr, 23-V-2002 (EPA), and Palm Cyn, Borrego Valley, and Sentenac Cyn, 26-IV-1953, A (LACM); SAN JOAQUIN: Lone Tree Cr, Lone Tree Rd, 2002 (FGCH), and San Joaquin R, Vernalis, 21-IX-1993, and Stanislaus R, Caswell St Prk, 2-IX-1994, and Stanislaus R, Riverbank, 31-VIII-1994 (USGS); SAN LUIS OBISPO: Alamo Cr, Hwy 166, and Chumash Cr, and Dairy Cr, and San Simeon Cr, Hwy 1, and Walters Cr, V-2001, and Arroyo Grande Cr, and Chorro Cr, South Bay Blvd, and Chorro Cr, Upper Chorro Flats, and Pismo Cr, Hwy 101, 2002, and Old Cr, and Toro Cr, 2003 (FGCH), and Atascadero Cr, Hwy 41, 15-V-2000 (FGSA), and San Luis Obispo Cr, San Luis Bay Dr, 6-V-2002, Meyer (PERC); SAN MATEO: La Honda Cr, N Alpine Cr, 2002 (FGCH); SANTA BARBARA: Alamo Cr, Hwy 166, 27-III-2000, and Sisquoc R, Santa Maria Mesa Rd, 24-III-2000 (FGSA), and Arroyo Burro Cr, Las Positas Rd, and Carpinteria Cr, Carpinteria State Beach, and El Capitan Cr, El Capitan State Beach, and Refugio Cr, Refugio State Beach, and Santa Maria R, Bull Canyon Bridge, and Santa Ynez R, Flordale, 2001, and Gaviota Cr, Hwy 1, and Rincon Cr, Bates Rd, Hwy 1, and Santa Ynez R, Lompoc Hwy, and Tecolote Cr, Baccara Resort, and Torro Cr, Hwy 192, 2002 (FGCH), and Cachuma Cr, 7-V-2003, and El Jaro Cr, 11-VII-2000, and Nojoqui Cr, 23-V-2001 (EPA), and Cold Spring Cr, San Marcos Pass, 24-I-1985, Baumann & Nelson, A (BYU), and Mission Cr, VI/VII-1997, Silldorff

(PERC); SANTA CLARA Arroyo Calero, Harry St, IX-1998, Fend (GSMP), and Bodfish Cr, 0.45 mi S Whitehurst Rd, and Uvas Cr, 0.4 mi S Thomas Rd, 2003 (FGCH), and Guadalupe Cr, VI-1978, A, Klee, and Robertsville, 9-V-1953, Day, A, and Stevens Cr, 12-X-1977, Klee (CAS); SANTA CRUZ: Aptos Cr, Winfield St, 2002 (FGCH); SHASTA: Battle Cr, Gover Rd, 2-XI-2000, and Cow Cr, Millville Plains Rd, 26-X-2000 (FGSA), and Bear Cr, Parkville Rd, 8.5 mi S Millville, 2002, and Oak Run Cr, Old 44 Dr, Winding Way, 2003 (FGCH), and McCloud R, Ladybug Cr, McCloud, 20-VIII-1996 (USGS); SISKIYOU: 1 mi SE Bartle, 9-VI-1974, Green, A (UCB), and trib Irving Cr, 27-VII-2005 (BLAB); SOLANO: Suison Cr, 3-IV-2007 (BLAB); SONOMA: Hale Cr, North Sulfur Cr, and Little Sulphur Cr, VII-2002, and Lynch Cr, Adobe Rd, 2003 (FGCH), and Mark West Cr, 8-VIII-2002 (EPA); STANISLAUS: Stanislaus PG&E Power Plant Site, 5 mi N Turlock L, 17-IX-1976, Collins, A, and Adobe Cr, 8-III-1950, Burdick, A, and North Fork Del Puerto, 13-IV-1980, A (UCB), and Adobe Cr, Patterson, 14-IV-1949, Day, A, and Tuolumne R, 3 mi E Shiloh, 8-V-1955, Day (PERC), and Del Puerto Cr, Elm Ave, 2002, and Del Puerto Cr, Vineyard Rd, 2003 (FGCH), and Orestimba Cr, Orestimba Rd, 19-V-2000 (FGSA), and Stanislaus R, Ripon, 16-VIII-1995, and Tuolumne R, Waterford, 26-VIII-1994 (USGS). SUTTER Feather R, Nicolas, 15-X-1999 (USGS); TEHAMA: Deer Cr, Vina, 7-VIII-1997, and Dye Cr, Foothill Rd, 2002 (FGCH), and Little Dye Cr, 20-VIII-2001 (EPA); TULARE: Horse Cr, 3 mi SW Three Rivers, 2-V-1979, Buegler, A (UCB), and Salmon Cr, Horsemeadow Campground, SNF, 31-VII-1965, Vann (CAS), and Tule R, 20-VI-2002 (EPA); TUOLUMNE: First Cr, Blanchard Rd, 11-V-2002, Meyer (PERC); VENTURA: Agua Blanca Cr, 7-VI-2001, and Matilija Cr, 14-VI-2000, and Piru Cr, 13-VI-2000, and Santa Paula Cr, 8-V-2002, and Sespe Cr, 27-VI-2001 (EPA), and Arroyo Conejo Cr, Hillcrest Dr, and Arroyo Simi Cr, Los Angeles Ave, and Beardsley Wash, Central Ave, and Calleguas Cr, Revolon Slough, and Conejo Cr, Camarillo Treatment Plant, and Howard Cr, 1.6 mi N Route 6n31, and North Fork Arroyo Conejo Cr, Lynn Rd, and Simi Las Posas Cr, Tierra Rejada Rd, and Tapo Cyn trib, Los Angeles Ave, 2001 (FGCH), and Piedra Blanca Cr, 0.9 mi N Sespe Cr, and Rock Cr, N Sespe Cr, and Santa Paula Cyn Cr, 0.4 mi S La Broche Cyn Cr, 2003 (FGCH), and Santa Clara R, S Mountain Rd, and Ventura R, Casita Vista Rd, 6-V-2002, Meyer (PERC), and Sespe Cr, Hwy 33, 1-IV-1981, Baumann/Stanger (BYU); YOLO: Cache Cr, Guinda, 24-VII-1996 (USGS), and Putah Cr, 5-XII-1981, Hill (SSU); YUBA: Yuba River, Marysville, 25-VII-1996 (USGS).

*Remarks.*—Identifications of larvae as *F. quilleri* from northern California as recorded above must be rechecked in the future, because as pointed out by McCafferty et al. (2008), it is quite possible that many will prove to be the larvae of *F. thermophilos* (McDunnough), which became known (McCafferty et al. 2008) after the above identifications were made. WPM rechecked what limited material of this was available at PERC, and found that out of five vials of northern California larvae, one was indeed *F. thermophilos* (from Humboldt County, see below). In a similar respect, larvae from southern California identified as *F. quilleri* need to be rechecked to see if any are actually *F. sonora*, recently discovered in southern California (McCafferty et al. 2008); see also remarks under *F. sonora*, below.

***Fallceon sonora*** (Allen and Murvosh)

*Previous data.*—McCafferty et al. (2008): SAN BERNARDINO (Mojave R).

*Remarks.*—As pointed out by McCafferty et al. (2008), this species, presently known only from larvae, may prove to be a junior synonym of *F. eatoni* (an older name associated only with adults at this time). The latter species is herein shown for the first time to occur in California.

***Fallceon thermophilos*** (McDunnough)

*Previous data.*—Traver (1935a): Unknown County (Eel R); Day (1954a) as *Baetis sulfurosus* Day: SONOMA (Sulphur Cr); McCafferty et al. (2008): HUMBOLT (Grizzly Cr), LAKE (Eel R), MEDOCINO (South Fork Eel R), NAPA (Capell Cr), SISKIYOU (Scott R), SONOMA (Russian R).

*New data.*—HUMBOLDT: Hartsook, 6-VIII-1953, Arnaud, A (CAS); South Fork Eel R, Humboldt Redwoods St Prk, 30,31-VII-1970, Frommer & LePre (PERC); SISKIYOU: Scott R, 3 mi W Kelsey Cr, VIII-1949, Day, A (CAS); SONOMA: Cloverdale, 4-X-1917, A (CUAC), and Russian R, 2 mi N Cloverdale, 8-VII-1975, Rude, A (PERC), and Russian R, Geyserville, 3-VIII-1967, Allen (CAS).

***Paracloeodes minutus*** (Daggy)

*Previous data.*—Day (1955) as *P. abditus* Day: STANISLAUS (Tuolumne R).

*New data.*—HUMBOLDT: South Fork Eel R, Humboldt Redwoods St Prk, 30,31-VII-1970, Frommer & LePre (UCR); MENDOCINO: South Fork Eel R, Piercy, 24-VIII-2001, Ogden (BYU); MONTEREY: Salinas R, Cattlemen Rd, San Ardo, 19-IV-2000, and Salinas R, N Quail Cr conf, 15-V-2000 (FGSA); PLACER: North Fork American R, Ponderosa Bridge, 10-X-2007 (BLAB); SACRAMENTO: Dry Cr, 3-X-2003, Fields (PERC); SAN DIEGO: Santa Margarita R, Camp Pendleton, 21-V-2000 (FGSA).

***Procloeon pennulatum*** (Eaton)

*New data.*—ALPINE: East Fork Carson R, jct Hwy 4/Hwy 89, 26-VIII-2003, Randolph (UCD); HUMBOLDT: South Fork Eel R, Humboldt Redwoods St Prk, 30,31-VII-1970, Frommer & LePre (UCR); SAN BERNARDINO: Snow Crest, San Antonio Falls, 20-VI-1968, Honey (LACM); SHASTA: McCloud R, 4-XI-1961, Lavenberg (LACM).

***Procloeon rivulare*** (Traver)

*New data.*—AMADOR: Cole Cr, 20-X-2004, Fields (PERC); MADERA: North Fork Willow Cr, 7-X-2001, and Tuolumne S Fork Tuolumne R, Yosemite Natl Prk, 22-VIII-2001, Silldorff (PERC).

***Procloeon venosum*** (Traver)

*Previous data.*—Traver (1935a): LOS ANGELES (San Gabriel Cyn).

*New data.*—BUTTE: Chico, 7-V-1953, Abraham & Dart, A (CAS); SISKIYOU: Scott R, Roxbury, VIII-1949, Day, A (CAS).

***Pseudocloeon propinquum*** (Walsh)

*Previous data.*—McCafferty and Meyer (2007a): RIVERSIDE (Deep Cyn), SHASTA (Hat Cr).

## Baetiscidae

***Baetisca lacustris*** McDunnough

*Previous data.*—Eaton (1885) as *B. obesa* (Say): No other data.

*Remarks.*—This species was recently documented from nearby Nevada (Baumann and Kondratieff 2000). The only other species known from the western U. S. is *B. columbiana* Edmunds; see discussion of Webb and McCafferty (2004)

## Caenidae

***Caenis amica*** Hagen

*Previous data.*—Provonsha (1990): LASSEN (Eagle L), SIERRA (Webber L), SISKIYOU (Castle L).

*New data.*—LASSEN: Honey Cr, 20-VII-1970, and Honey L, 10 mi NE Janesville, Hwy 395, 26-VII-1970, Frommer & LePre, A (UCR); MENDOCINO: Cleone L, MacKerricher St Prk, 31-VII-1970, Frommer & LePre, A (UCR); MODOC: Cargo, W West Canby, 24-VI-1960, Schlinger, A (UCR), and Pit R, Canby, 5-VII-1983, Hill, A (SSU); NAPA: L Curry, 9-VII-1949, Day, A (PERC); PLACER: Newcastle, 15-V-1974, Fields, A (SSU); PLUMAS: Squaw Cr, 14-VII-2006 (BLAB); RIVERSIDE: Riverside, 7-VI-1971, Lone, A (UCR); SAN DIEGO: San Luis Ray R, 11-V-1968, Schlinger, A (UCR); SHASTA: Hat Cr, 29-VII-1953, Day, A (CAS); TRINITY: Union Hill L, 1 mi NE Douglas, 28-VII-1970, Frommer & LePre, A (UCR); VENTURA: Wheeler's Hot Springs, 21-I-1965, Jump, A (LACM).

***Caenis bajaensis*** Allen and Murvosh

*Previous data.*—Provonsha (1990): FRESNO (Kings R), NAPA (Sage Cr), STANISLAUS (Adobe Cr).

*New data.*—COLUSA: Colusa, 10-VIII-1955, Schuster, A (UCB); GLENN: North Fork Stony Cr, 0.5 mi N Ida Cr, 2001 (FGCH); LOS ANGELES: Arroyo Seco Cr, 25-VII-2000, and Big Tujunga Cyn, 19-VI-2001, and Elizabeth Cyn Cr, 1-V-2002 (EPA), and Pasadena, 21-III-1957, Horton (LACM), and San Yanez Cyn, Topanga St Prk, 12-III-1989, Lockhart (SSU), and West Fork San Gabriel R, Little Mermaid Cyn, 23-VI-1965, Vann (CAS); MONTEREY: North Fork San Antonio R, Carrizo Cr, and San Antonio R, Del Venturi Rd, and San Antonio R, Oro Fino Cyn, 2003 (FGCH); RIVERSIDE: Andreas Cr, 8-V-2001 (EPA), and Horsethief Cr, Cactus Ranch Trail, 26-III-1970, Frommer & LaPre, and PL Boyd Desert Research Center, 3.5 mi S Palm Desert, 23-VII-1969, Frommer et al, A (CAS); SAN BERNARDINO: City Cr, 11-VI-2002, and E Twin Cr, 13-VI-2002 (EPA), and Montecito, Ashley Dr, 18-V-1976, Tiemann, A (LACM); SAN DIEGO: Cottonwood Cr, Old Hwy 80, 2003 (FGCH), and Palm Cyn Cr, Anza Borrego SP, 3-IV-1985, Shepard (SSU); SAN LUIS OBISPO: Arroyo Grande Cr, and Chorro Cr, 3.5 mi N San Luisito Cr, 2003 (FGCH); SANTA BARBARA: Cachuma Cr, 7-V-2003, and Coche Cr, 11-VII-2001, and El Jaro Cr, 11-VII-2000, and Kelly

Cr, 12-VI-2002, and Nojoqui Cr, 23-V-2001, and Santa Cruz Cr, 10-VII-2001, and Sisquoc R, 30-V-2002 (EPA), W Fork Santa Cruz Cr, 3 mi N Coche Cr, 2001, and Rincon Cr, Hwy 1, and Santa Ynez R, Paradise Rd, 2002 (FGCH), and Santa Cruz Is, Canada de Isley, Coches Prietos, 4-V-2000, Barr (UCB); SANTA CLARA: Bodfish Cr, Whitehurst Rd, 2003 (FGCH); STANISLAUS: PG&E Powerplant Site, 5 mi N Turlock L, 25-V-1976, Collins, A (UCB); TEHAMA: Salt Cr, 2 mi E Red Bluff, 2-V-1969, Evans, A (PERC); TULARE: Tule R, 20-VI-2002 (EPA); VENTURA: Agua Blanca Cr, 7-VI-2001, and Matilija Cr, 14-VI-2000, and North Fork Matilija Cr, 4-VI-2003, and Santa Paula Cr, 8-V-2002, and Scholder Cr, 5-VI-2001, and Sespe Cr, 27-VI-2001 (EPA), and Sespe Cr, 0.2 miles South Trout Cr, 13-VII-2000 (FGSA), and Howard Cr, 1.6 mi N Route 6n31, 2001 (FGCH), and Los Padres Natl For, Arroyo Seco Picnic Area, 25-VI-1967, Evans, A (PERC).

***Caenis latipennis* Banks**

*Previous data.*—Provonsa (1990): BUTTE (Horseshoe Pond), KERN (Shafter), LAKE (Cash Cr, Lucerne, Nice), MADERA (Clark Pond), NAPA (L Curry), YOLO (Davis).

*New data.*—CALAVERAS: 3 mi E West Point, 30-VI-1962, Drew, A, and Moaning Caverns, 24-VI-2003, Meyer, A (PERC); IMPERIAL: Colorado R, Picacho St Prk, 1-IX-1989, Glassford, A (BYU); LAKE: Blue L, 2-XI-1947, Chandler (CAS), and Clear L, 5-VIII-1946 (UCB), and Clear L, Pepperwood Grove, 18-VIII-1986, Shepard (SSU), and Clear L, Rocky Point, Chandler (PERC); MONTEREY: San Antonio R, Del Venturi Rd, 2003 (FGCH); NAPA: 1 mi N Angwin, 9-V-1964, and Pope Cr, Walter Springs Rd, 23-VIII-1964, Leech, A (CAS); PLACER: Clover Valley Cr, 26-X-2001, Fields (PERC), and Penryn, 14-V-1983, Baumann & Mower, A (BYU); SACRAMENTO: Dry Cr, 0.5 mi S Bombay Rd, 2001 (FGCH), and Stone L, 8-V-2003, Fields (PERC); STANISLAUS: Orestimba Cr, Orestimba Rd, and Tuolumne R, Geer Rd, 2003 (FGCH), and PG&E Powerplant Site, 5 mi N Turlock L, 25-V-1976, Collins, A (UCB); TEHAMA: Woodson Bridge SP, 3 mi W Vina, 30-V-1986, Shepard, A (SSU); TRINITY: Trinity R, 12 mi SE Weaverville, Hwy 299, 29-VII-1970, Frommer & LePre, A (UCR).

***Caenis punctata* McDunnough**

*Previous data.*—McCafferty and Meyer (2007a): RIVERSIDE (Santa Margarita R).

***Caenis youngi* Roemhild**

*New data.*—KERN: Shafter, 1-IV-1948, Vander Bosch, A (PERC); MONO: Glacier Lodge, Inyo Natl For, 10-V-1957, Hogue (LACM).

Ephemerellidae

***Attenella delantala* (Mayo)**

*Previous data.*—Mayo (1952a): PLACER (Martis Cr). Allen and Edmunds (1961b): MONO (Green Cr), NEVADA (Truckee R), TEHAMA (nr Childs Meadow); Gard (1961): NEVADA (Sagehen Cr).

*New data.*—ALPINE: East Fork Carson R, Hwy 4/Hwy 89, 26-VIII-2003, Randolph (PERC), and West Fork Carson R, 26-VI-2002 (EPA), and Four Mile



Canyon Cr, 1-VIII-2007 (BLAB); DEL NORTE: South Fork Winchuck R, 6-VIII-2002 (EPA); EL DORADO: Big Meadow Cr, 25-VII-2006, and Saxon Cr, 26-VIII-2001 (BLAB), and Upper Truckee R, 2-VII-1954, Day (LACM); INYO: Thief Cr, 27-VI-2001 (BLAB); MADERA: Rock Cr, 26-VI-2003 (BLAB); MONO: Long Valley Cr, 3-VII-2001 (EPA), and Virginia Cr, Virginia Lakes, 13-VIII-1962, Leech (CAS); NEVADA: Prosser Cr, 27-VII-2004, and Sagehen Cr, 26-VII-2004 (BLAB); PLACER: Blackwood Cr, 3-VIII-2005 (BLAB, and Squaw Cr, 5-VII-1954, Day (CAS); PLUMAS: Butt Cr, 20-IX-2004, and Middle Fork Feather R, 24-VII-2003, and Poplar Cr, 9-VII-2004 (BLAB); SHASTA: North Fork Battle Cr, 14-VII-1953, Day, A/L, and 4 mi W Viola, 27-VI-1947, Chandler, and Hat Cr, Big Springs Camp, 21-VII-1953, Day (CAS), and Cow Cr, Old Fern Rd, 2003 (FGCH); SIERRA: Rock Cr, 24-VI-2004, and North Fork Yuba R, 26-VII-2004 (BLAB), and Sagehen Cr, VII-1953 (LACM); SISKIYOU: Butte Cr, 4.4 mi N Alder Cr, 2001 (FGCH), and Cliff Valley Cr, 1-V-2006 (BLAB), and Grouse Cr, 26-IX-2001 (EPA); TEHAMA: Deer Cr, U Falls, 16-IX-2002, and L Gurnsey Cr, 17-IX-2002 (BLAB), and Gurnsey Cr, Hwy 32, 14-V-2002, Meyer (PERC); TULARE: Salt Lick Cr, 3-VIII-2004, and Parker Meadow Cr, 7-VIII-2003, and North East Fork Cr, 13-VIII-2003 (BLAB); TUOLUMNE: Clark Fork Stanislaus Cr, 22-VIII-2001 (BLAB).

***Attenella margarita*** (Needham)

*New data.*—ALPINE: East Fork Carson R, Hwy 4 at Hwy 89, 26-VIII-2003, Randolph (PERC), and West Fork Carson R, Paynesville, 22-VII-1994 (USGS), and Coyote Valley Cr, 20-VIII-1987 (BLAB); EL DORADO: Upper Truckee R, Hwy 50, 17-VIII-1970, Noble (CAS); NEVADA: Sagehen Cr, 6-VIII-1959, Allen (PERC).

***Attenella soquele*** (Day)

*Previous data.*—Day (1954b): MADERA (Willow Cr); Allen and Edmunds (1961b): MADERA (Soquel Public Camp), PLUMAS (North Fork Deer Cr); Gard (1961): NEVADA (Sagehen Cr).

*New data.*—COLUSA: Mill Cr, 6 mi SW Stonyford, Doody (SSU); DEL NORTE: Smith R, 14-VI-2001 (EPA); FRESNO: Bear Cr, 2001 (FGCH); HUMBOLDT: Van Duzen R, 10-VII-2001 (EPA); MARIPOSA: Merced R, Happy Isles Bridge nr Yosemite Natl Prk, 17-IX-1996, and Merced R, Pohono Bridge, 7-IX-1995, and Merced R, Awahnee bridge, 18-IX-1996 (USGS); NEVADA: Bear R, IV-1977, Hall (SSU); PLUMAS: South Branch Middle Fork Feather R, 5-VIII-2001 (BLAB); SIERRA: Sagehen Cr, 10 mi N Truckee, 28-VIII-1982, Shepard (SSU); SISKIYOU: Clear Cr, 20-VII-2004 (BLAB); TULARE: Little Boulder Cr, 6-VIII-2003 (BLAB); YUBA: Feather R, North Yuba River, 2002 (FGCH).

***Caudatella edmundsi*** (Allen)

*Previous data.*—Hogue and Hawkins (2008): ALPINE (Caples Cr), EL DORADO (Alder Cr, South Fork American R), FRESNO (Kaiser Cr), SISKIYOU (Cecil Cr, Irving Cr, Plummer Cr, Upper Sacramento R), TEHAMA (Deer Creek Meadows Cr), TULARE (Freeman Cr, Peppermint Cr), TUOLUMNE (Deadman Cr).

*New data.*—TRINITY: Stoney Cr, 18-VII-2004 (BLAB).



*Caudatella heterocaudata* (McDunnough)

*Previous data.*—Allen and Edmunds (1961a): EL DORADO (South Fork Rubicon), LOS ANGELES (East Fork San Gabriel R), MADERA (Chilacoot Cr, nr Soquele, North Fork Cr), MARIPOSA (Goose Cr), NEVADA (Yuba R), SISKIYOU (Swillup Cr); Kennedy (1967): MONO (Convict Cr); Leland et al. (1989): MONO (Convict Cr).

*New data.*—ALPINE: East Carson R, 3-VII-1950, and Markleville, 4-VII-1949, Day (CAS), and West Fork Carson R, 1-VIII-2002 (EPA); AMADOR: Silver Fork American R, Silver L, 23-VII-1981, and Silver L, VIII-1982, Ludwig (SSU); BUTTE: 4 mi SW Sterling City, 20-V-1979, Stanger (BYU), and Little Chico Cr, Schott Rd, and West Fork Feather R, Skyway Rd, 14-V-2002, Meyer (PERC); CALAVERAS: Blue Cr, 5-VII-1989 (BLAB); CONTRA COSTA: Bollinger Cr, 7 mi S Walnut Creek, 28-IV-1968, Bell (UCB); DEL NORTE: Shelly Cr, 20-VI-2002 (BLAB); EL DORADO: Alder Cr, 30-VI-2004, and Anderson Cr, 29-VII-2003, and Bald Mtn Cyn Cr, 2-VIII-2004, and Camp Cr, 15-VII-2003, and Middle Fork Consumnes R, 12-VIII-2003, and North Fork Consumnes R, 13-VIII-2003 (BLAB), and Middle Fork Consumnes R, Somerset, 31-V-1954, Schlinger & Downey, and Taylor Cr, Hwy 50, VI-1970, Noble (CAS), and Tells Cr, Ice House Rd, 22-VI-2003, Meyer (PERC); FRESNO: Dinkey Cr, 14-VIII-1995, and Kaiser Cr, 23-VI-1989 (BLAB), and Zumwalt Mdws, Kings Canyon Natl Prk, 4-VIII-1969, Craig, A (CAS); GLENN: Cold Cr, 25-VI-2002 (EPA); HUMBOLDT: Boise Cr, 25-VI-2002, and North Fork Bear Cr, 6-VI-2002, and Red Cap Cr, 3-VII-2002, and South Fork Bear Cr, 6-VI-2002, and Gitchell Cr, 11-VI-2002 (BLAB), and Mill Cr, 17-VII-2002 (EPA); INYO: Big Pine Cr, 6-V-1986, Baumann & Giuliani, and Independence Cr, 23-V-1986, and South Fork Oak Cr, 16-VI-1986, Giuliani (BYU), and Independence Cr, Onion Valley Rd, L Grays Mdw Campground, and Lone Pine Cr, Whitney Portal Rd, 28-VI-2003, Meyer & Pfister (PERC); LAKE: Eel R at High Rock, 19-VI-2001, and Trout Cr, 14-VI-2001 (BLAB); LOS ANGELES: Topanga Cyn, 31-V-1952 (LACM); MADERA: Big Cr, 24-VI-1989, and Jackass Cr, 21-VI-1988 (BLAB); MARIPOSA: 6 mi E Miami RS, 4-VII-1946, Chandler, and South Fork Merced R, Wawona Camp, Yosemite Natl Prk, 26-VII-1967, Allen (CAS), and Alder Cr, Hwy 41, Yosemite Natl Prk, and Grouse Cr, Hwy 41, Yosemite Natl Prk, 26-VI-2003, and Merced R, Hwy 140, Yosemite Natl Prk, 25-VI-2003, Meyer & Pfister (PERC), and Illouette Cr, 1.7 mi S Clark Fork, 3-X-2000 (FGSA), and Merced R, Happy Isles Bridge, nr Yosemite Natl Prk, 7-IX-1995 (USGS); MENDOCINO: Eel R, 14-VIII-2001 (EPA); MONO: 1 mi SW Tom's Pl, 14-VIII-1963, MacNeill & Lundgren, A, and Green Cr, 6-VIII-1952, Day, and Sonoma Bridge Camp, 28-VII-1962, Rentz & MacNeill (CAS), and Hilton Cr, 2-VII-2001 (EPA); NEVADA: Little Greenhorn Cr, 10-V-2004, and Prosser Cr, 27-VII-2004 (BLAB), and Truckee R, Farad, 30-VI-1994 (USGS); PLACER: Bunch Cr, Yankee Jims Rd, and Jordan Cr, Bowman Rd, 18-V-2002, Meyer et al (PERC), and North Fork American R, 14-VII-1988 (BLAB); PLUMAS: Chester, 18-VIII-1949, Day (CAS), and Chips Cr, 27-VI-2004, and Little North Fork Middle Fork Feather R, 29-VI-2004, and Nelson Cr, 30-VI-2004, and Pauley Cr, 25-VII-2004, and Yellow Cr, 27-VI-2004 (BLAB); RIVERSIDE: Fuller Mill Cr, 9-V-2001 (EPA); SAN BERNARDINO: Barton Cr, 6-VI-2002, and Bear Cr, 28-VI-2001, and Deer Cr, 16-V-2002, and Middle Fork Lytle Cr, 19-VI-2002 (EPA), and Cucamonga Cr, 22-VI-2004 (BLAB), and South Fork Santa Ana R, Angeles Oaks, 23-VII-2001 (USGS);

SANTA CLARA: Stevens Cr, 10/20-VI-1978, Klee (CAS); SHASTA: Brandy Cr, South Shore Dr, and Clear Cr, Placer Rd, 2002, and Wagon Cr, 1.6 mi N Slate Cr, 2001 (FGCH), and McCloud R, Ladybug Cr, McCloud, 21-VIII-1996 (USGS); SIERRA: Goodyear Cr, and South Fork Yuba R, 23-IV-1977, Hall (SSU), and Lavazolla Cr, 27-VII-2004 (BLAB); SISKIYOU: Butte Cr, 21-VIII-2001, and Duck L Cr, 13-IX-2000 (EPA), and Canyon Cr, 15-VIII-2004 (BLAB), and Fowlers Camp, 5 mi E McCloud, 30-VI-1963, MacNeill & Whitehead, A (CAS), and South Fork Sacramento R, 15-VII-1985, Courtney, A (PERC); TEHAMA: Big Smoky Cr, 11-VIII-2004 (BLAB), and South Fork Calf Cr, Hwy 32, 14-V-2002, Meyer (PERC); TRINITY: Corral Cr, 11-VII-2001, and East Fork Coffee Cr, 9-VII-2002, and South Fork Trinity R, 18-V-2002, and Stuart Fork, 9-VIII-2000 (EPA), and North Fork Swift Cr, 23-VII-2001, and Stoney Cr, 18-VII-2004 (BLAB); TULARE: Cabin Cr, Hwy 198, Sequoia Natl Prk, and Silliman Cr, Hwy 198, Sequoia Natl Prk, 2-VII-2003, and Marble Fork Kaweah R, Hwy 198, Lodgepole, Sequoia Natl Prk, and Stoney Cr, Hwy 198, 3-VII-2003, Meyer (PERC), and Dorst Cr, 19-VII-2004 (BLAB); TUOLUMNE: Boulard Cr, and Jawbone Cr, 7-VII-1988 (BLAB).

***Caudatella hystrix*** (Traver)

*Previous data.*— Mayo (1951) as *Ephemerella spinosa* Mayo: INYO (South Fork Bishop Cr, Big Pine Cr); Allen and Edmunds (1961a) some as *E. cascadia* Allen and Edmunds: EL DORADO (West Fork Carson R), MONO (Cottonwood Cr), NEVADA (Eure Valley), SHASTA (Burney Cr, Hat Cr, King Cr); Kennedy (1967): MONO (Convict Cr); Maciolek and Tunzi (1968): MONO (Laurel Cr); Leland et al. (1986): MONO (Convict Cr); Kratz et al. (1994): TULARE (Marble Fork Kaweah R).

*New data.*— ALPINE: Charity Valley Cr, 27-VI-2002 (EPA), and Clark Fork Cr, 12-IX-2001 (BLAB), and West Fork Carson R, 2 mi NE Woodfords, 21-IX-1957, Edmunds (PERC); BUTTE: Big Chico Cr, Hwy 32, 2002 (FGCH); EL DORADO: General Cr, Sugar Pine St Prk, 9-VIII-1969, Noble, and Upper Truckee R, 27-IX-1953, Day (CAS), and Saxon Cr, 17-IX-2001, and Sherman Cyn Cr, 27-XI-2003 (BLAB); FRESNO: Bear Cr, 7-VIII-2001 (EPA), and Laurel Cr, 1-VI-1987, and Huntington L, Kaiser Cr, 29-V-1987, MacDonald (PERC), and Summit Cr, 17-X-2001 (BLAB); HUMBOLDT: Butte Cr, 7-VIII-2001 (EPA), and Redwood Cr, 2001 (FGCH); INYO: Division Cr, 9-III-1986, and Independence Cr, 24-IV-1986, and Lone Pine Cr, 23-IV-1986, Giuliani, and Goodale Cr, 11-II-1986, and North Fork Oak Cr, 12-II-1986, and South Fork Oak Cr, 7-V-1986, and Taboose Cr, Taboose Cr Cmpgd, 13-II-1986, Baumann & Giuliani (BYU), and Independence Cr, Onion Valley Rd, L Grays Mdw Campground, 28-VI-2003, Meyer & Pfister (PERC), and Rawson Cr, 2002 (FGCH), and Shepard Cr, 20-VII-2004 (BLAB), and Tuttle Cr, 2 mi SW Lone Pine, 14-V-1969, Chandler (UCB); LASSEN: Pine Cr, 2-X-2001, and Shanghai Cr, 28-X-2002 (BLAB); MARIPOSA: East Fork Lee Vining Cr, 4 mi W Hwy 395, 26-VII-1967, Allen, and Mariposa Grove, 27-VII-1946, Chandler (CAS), and Illilouette Cr, 3-X-2000 (EPA); MONO: Cottonwood Cr, 30-VIII-2004, and Mammoth Cr, 8-X-2001 (BLAB), and Deadman Cr, Hwy 395, 27-VI-2003, Meyer (PERC), and Green Cr, 6-VIII-1952, Day, and Leavitt Mdw, 12-VIII-1963, Leech, A (CAS), and Hilton Cr, 2-VII-2001 (EPA); NEVADA: Deer Cr, Nevada City, IV-1954, Zimmerman, A (CAS), and Grizzly Cr, 6-I-2003 (BLAB), and Sagehen Cr, 1,5-VII-1984, French, A (UCD); PLACER:

Blackwood Cr, 31-VIII-2006, and North Fork American R, 14-IX-2003 (BLAB), and South Yuba R, Cisco Grove, Hwy 80, 25-III-1966, Miner (PERC); PLUMAS: Boulder Cr, 25-IX-2001, and Florentine Cr, 21-X-2001 (BLAB), and Slate Cr, 22-IX-2004 (BLAB), and Jameson Cr, 30-VIII-2000 (EPA), and North Fork Feather R, 26-IV-1953, Chandler (CAS); SAN BERNARDINO: Barton Cr, 6-VI-2002, and South Fork Santa Ana R, 5-VI-2002 (EPA), and San Antonio Cr, 20-VI-1977, Baumann & Hogue (BYU); SHASTA: Burney Cr, 12-IX-2001 (EPA), and Kings Cr, Lassen Natl Prk, 4-VIII-1985 (PERC); SIERRA: Fiddle Cr, Hwy 49, 17-V-2002, Meyer (PERC), and Sagehen Cr, VII-1953, A (CAS), and Smithneck Cr, 8-IX-2002 (BLAB); SISKIYOU: Butte Cr, 26-IX-2002, and Duck L Cr, 13-IX-2000 (EPA), and Fowlers Camp, 5 mi E McCloud, 30-VI-1963, MacNeill & Whitehead, A (CAS), and Grouse Cr, 0.4 mi N conf Monte Cr, and Wagon Cr, Davis Pl Rd, 2001 (FGCH), and Sacramento R, Shasta, 29-V-1967, Jewett (OSU), and Wooley Cr, 5-XI-2001 (BLAB); TEHAMA: Deer Cr, Hwy 32, and Mill Cr, Hwy 36, and South Fork Calf Cr, Hwy 32, 14-V-2002, Meyer (PERC); TRINITY: Big Cr, 28-VIII-2001, and Coffee Cr, 28-VIII-2003 (EPA), and Browns Cr, 1.1 mi conf Chanchelulla Cr, and Stuart Fork, Hwy 36, 2001 (FGCH); TULARE: Ash Mtn, Kaweah Power Station #3, 28-III-1983, A (BYU), and Clicks Cr, 20-IX-2001, and Salt Lick Cr, 3-VIII-2004 (BLAB), and Silliman Cr, Hwy 198, Sequoia Natl Prk, 2-VII-2003, Meyer (PERC); TUOLUMNE: Parker Pass Cr, 8-IX-2004, and Clark Fork Stanislaus Cr, 22-VIII-2001 (BLAB).

***Caudatella jacobii*** (McDunnough)

*New data.*—MONO: Glacier Cr, Tioga Pass, 15-VII-1966, Hogue (LACM); NEVADA: Sagehen, Hobart Mills, 9-VII-1954, Goodwin (UCB).

***Drunella coloradensis*** (Dodds)

*Previous data.*—Gard (1961): NEVADA (Sagehen Cr); Allen and Edmunds (1962): SHASTA (Kings Cr); Maciolek and Tunzi (1968): MONO (Laurel Cr).

*New data.*—ALAMEDA: Berkeley, 23-IV-1957, Sanchez, and Tilden Prk, 8-IV-1952 (UCB); ALPINE: Arnot Cr, 6-VIII-2001, and Clark Fork Cr, 6-IX-2001, and Disaster Cr, 4-VIII-2004, and Pacific Cr, 10-VIII-2004 (BLAB), and West Fork Carson R, 26-VI-2002 (EPA); AMADOR: Silver L, VIII-1982, Ludwig, and Rancho Rio Cr, 14-II-1971 (SSU), and River Pines, 20-V-1972, Meyer (UCD), and Sutter, 1-IV-1950, Day (CAS); BUTTE: 4 mi SW Sterling City, 20-V-1979, Stanger (BYU), and Big Chico Cr, Hwy 32, and Little Chico Cr, Schott Rd, and Little West Fork, Skyway, and West Fork Feather R, Skyway Rd, 14-V-2002, Meyer (PERC), and Butte Cr, Jonesville, 9-IX-1998 (USGS), and West Branch North Fork Feather R, Lassen Natl For, 9-IX-1976, Hogue (LACM); CALAVERAS: Angels Cr, Hwy 4, Angels Camp, and Calaveritas Cr, Calaveritas Rd, and North Fork Calaveras R, Hwy 49, 11-V-2002, Meyer (PERC), and San Antonio Cr, 3-VII-1974, Fields (SSU); COLUSA: Little Stoney Cr, Stoneyford Rd, 13-V-2002, Meyer (PERC); CONTRA COSTA: San Leandro Cr, 1.5 mi SW Moraga, 3-V-1974, Sorensen, and Wildcat Cr, Tilden Pk, 26-III-1951 (UCB); DEL NORTE: Blue Cr, 20-VII-2004, and Cedar Cr, 14-VII-2004, and Clark's Cr, 23-VI-2002, and North Fork Smith R, 12-VII-2004 (BLAB); EL DORADO: Alder Cr, 30-VI-2004, and Anderson Cr, 3-VIII-2003, and Bald Mtn, Canyon Cr, 2-VIII-2004, and Camp Cr, and Cat Cr, 11-VIII-2003, and Dogtown Cr trib, 28-VII-2003, and Middle Fork Consumes R, Foster Mdw, 4-VIII-2003, and North

Fork Consumnes R, 6-VIII-2003, and North Steely Cr, 27-VII-2003, and Snow Cr, 13-VII-2003, and Sopiago Cr, 29-VII-2003 (BLAB), and Rock Cr, 18-VI-1977, Hall, and Butte Cr, VI-1981, and Hwy 89, Carson Pass, 29-VI-1977 (SSU), and General Cr, Sugar Pine SP, 19-VIII-1969, and Taylor Cr, Hwy 89, VI-1970, and Uppper Truckee R, Hwy 50, 24-VI-1969, Noble (CAS), and Pilot Hill, 20-IV-1973, Meyer (UCD), and Tells Cr, Ice House Rd, 22-VI-2003, Meyer (PERC); FRESNO: Huntington L, Rancheria, 31-VII-1984, and Kaiser Pass, 10-VII-1984, MacDonald (PERC), and South Fork King's R, 17-VIII-2004 (BLAB); GLENN: Elk R, Rd 306, and Grindstone Cr, Rd 305 (N 162W), and Stoney Cr, Elk Cr conf, 13-V-2002, Meyer (PERC); HUMBOLDT: 5 mi N Hoopa, Hwy 101, 20-VII-1967, Evans, and Bull Cr, and Van Duzen R, Hwy 36, and Yager Cr, Hwy 36, W Carlotta, 15-V-2002, and Redwood Cr, Brice Thorne Rd, and Salmon Cr, Salmon Cr Rd, 16-V-2002, Meyer, and Freshwater Cr, 19-V-1988 (PERC), and Baker Cr, 26-V-2003, and Bluff Cr, 14-VII-2002, and Boise Cr, 24-VI-2002, and Bridge Cr, 26-V-2003, and Camp Cr, 1-VII-2002, and Gitchell Cr, 11-VI-2002, and Honeydew Cr, 20-V-2002, and Horse Cr, 11-VI-2002, and Mattole R, 26-V-2003, and North Fork Bear Cr, 6-VI-2002, and Randall Cr, 27-VI-2001, and Red Cap Cr, 3-VII-2002, and South Fork Bear Cr, 6-VI-2002, and Slate Cr, 15-VII-2002, and West Fork Mill Cr, 9-V-2001 (BLAB), and Canoe Cr, 22-VII-2003, and Mill Cr, 17-VII-2002, and Rattlesnake Cr, 5-VIII-2003 (EPA), and Eel R, 29-VI-1968 (UCB); INYO: Big Pine Cr, 1-III-1986, and Division Cr, 7-IV-1986, and Goodale Cr, 27-V-1986, and Taboose Cr, 27-V-1986, Giuliani, and North Fork Oak Cr, and South Fork Oak Cr, 7-V-1986, Baumann & Giuliani (BYU), and Deep Springs, Wyman Cyn, 15-VII-1953, Lattin (UCB), and Independence Cr, Onion Valley Rd, L Grays Mdw Cmpgd, and Lone Pine Cr, Whitney Portal Rd, 28-VI-2003, Meyer & Pfister (PERC), and West Fork Coyote Cr, 2.1 mi NE Coyote L, 16,17-IX-1969, and Wyman Cyn, White Mtns, 20-VII-1967, Frommer & Frommer (UCR); KERN: Cedar Cr, Hwy 155, and Shirley Cr, Hwy 155, 2-IV-1981, Baumann & Stanger (BYU); LAKE: Middle Cr, 5 mi N Upper L, 13-V-1979, Dare, A/L, and Kelsey Cr, Soda Bay Rd, 16-IV-1966, Haddock, and Middletown, 21-V-1950 (UCB), and North Fork Cache Cr, New Long Valley Rd, 16-V-2002, Meyer (PERC); LASSEN: Jones Cr, 13-IX-2004, and Parsnip Cr, 18-VII-2004, and Pine Cr, 28-VII-2004 (BLAB); LOS ANGELES: Buckhorn Campground, 8-VII-1968, Honey, and Little Rock Dam, 18-V-1976, and Tie Cyn, 29-V-1970, Hogue, and Elizabeth L Cyn, 16-V-1951, and Pine Cyn, 13-V-1953, and Valyermo, 30-V-1950 (LACM), and Camp Baldy, 11-VII-1950, Hansen (UCB), and East Fork San Gabriel R, Shady Oaks Camp, 16-VI-1959, Allen (PERC), and Lucas Cr, 27-VII-2004 (BLAB), and San Antonio Cr, 6 mi N Ontario, 26-IV-1962, Andrews (UCR), and San Gabriel Cyn, 23-V-1931, Michener (CUAC), and Sycamore Flats Cmpgd, 24-VI-1968, Evans (OSU), and West Fork San Gabriel R, 16-VI-1980, Clark (BYU); MADERA: Boggy Mdws, 15-VII-1946, Chandler (UCB), and Fresno R, Hwy 41, 10-V-2002, Meyer (PERC), and Nelder Cr, 27-VI-2004, and West Fork Granite Cr, 28-VI-2004 (BLAB), and Willow Cr, 25-VII-1951, Day (LACM); MARIN: 4 mi W Fairfax, 18-IV-1967, Rentz (CAS), and Lagunitas Cr, Sir Francis Drake Blvd, and Nicasio Cr, Nicasio/Lucas Valley Rd, 19-V-2002, Meyer (PERC); MARIPOSA: Alder Cr, Hwy 41, Yosemite Natl Prk, 26-VI-2003, Meyer & Meyer, and East Fork Chowchilla R, Hwy 49, and Mariposa Cr, Joe Howard St., Mariposa, and West Fork Chowchilla R, Darrel Rd, 10-V-2002, and Tenaya Cr, Mirror L, Yosemite Natl Prk, 26-VI-2003, Meyer, and Wildcat Cr,

Hwy 41, Yosemite Natl Prk, 26-VI-2003, and Grouse Cr, Hwy 41, Yosemite Natl Prk, 26-VI-2003, Meyer & Pfister, and Fish Camp, Rt 41, 2-VII-1946, Mulaik (PERC), and Big Cr, Summerdale Camp, 25-VII-1967, and South Fork Merced R, Wawona Camp, Yosemite Natl Prk, and Yosemite Cr, Yosemite Village, Yosemite Natl Prk, 26-VII-1967, Allen (CAS), and Bishop Cr, 7-VII-2004 (BLAB), and Merced R, Yosemite Natl Prk, 15-VII-1933 (INHS); MENDOCINO: Ham Pass, 1 mi N Eel R RS, and 7 mi N Eel River Station, 12-VI-1972, Szerlip, and Hopland Field Station, 28-IV-1972, Coville & Slater, and Pieta Cr, 29-IV-1972, Coville, and Russian R, 0.5 mi E Hopland, 5-V-1968, Haddock (UCB), and Baechtel Cr, 3 mi W Willits, 15-VI-1948, Leech (CAS), and East Fork Russian R, Potter Valley Rd, and Rattlesnake Cr, Hwy 101, 11 m W Laytonville, 16-V-2002, Meyer (PERC), and Mattole R, Pipe Cr, 22-V-2003, and Thompson Cr, 26-V-2003 (BLAB); MERCED: Hidden Cr, 15-VIII-2001 (BLAB); MODOC: East Cr, and South Fork Parker Cr, 20-VII-2004 (BLAB), and Mill Cr, 14-IX-1933 (INHS); MONO: 2 mi S Tom's Pl, Rock Cr Camp, 6-VII-1967, Evans, and 4 mi W Lee Vining, Rt 120, 7-V-1946, Mulaik & Mulaik, and Convict Cr, 11-VI-1936, Needham, and Deadman Cr, Hwy 395, 27-VI-2003, Meyer, and West Walker R, Rt 395, 6-VIII-1985 (PERC), and Glacier Cr, Tioga Pass, 15-VII-1966, Hogue (LACM), and Mammoth Cr, 25-V-1996 (BLAB), and Rock Cr, Tom's Pl, 13-VIII-1957, Linsdale, A (UCB), and Rush Cr, Grant L, 27-VII-1967, Allen (CAS); MONTEREY: Arroyo Seco R, 29-XII-2003, and Mill Cr, 18-VI-2003, and Piney Cr, 22-VII-2003, and Prewitt Cr, 12-V-2003, and Santa Lucia Cr, 30-VI-2003, and Willow Cr, 16-V-2003 (BLAB), and Big Sur R, Hwy 1, Pfeiffer-Big Sur St Prk, and Partington Cr, Hwy 1, 7-V-2002, and Salmon Cr, Hwy 1, 8-VII-2003, Meyer (PERC), and Cachagua Cr, 5 mi SW Jamesburg, 4-IV-1953, Lattin, and Hastings, 22-IV-1966, Haddock (UCB); NEVADA: Clipper Cr, 9-V-2004, and Little Greenhorn Cr, 10-V-2004, and Prosser Cr, 27-VII-2004, and Sagehen Cr, 26-VII-2004 (BLAB), and Eure Valley, 4-VII-1948, Day (CAS), and Hobart Mills, 8-VII-1976, Otondo (UCD), and Rush Cr, Hwy 49, 17-V-2002, Meyer (PERC), and Truckee R, Farad, 30-VI-1994 (USGS), and Yum Spring, 8 mi N Truckee, 9-X-1982, Shepard (SSU); ORANGE: E Fork San Gabriel R, 11-V-2004 (BLAB); PLACER: Bear R, YMCA Camp, and Bunch Cr, Yankee Jims Rd, and Jordan Cr, Bowman Rd, and North Fork American R, Yankee Jims Rd, 18-V-2002, Meyer et al (PERC), and Humbug Cyn Cr, 8-V-2003 (BLAB); PLUMAS: Antelope Cr, 20-VII-2004, and Boulder Cr, 6-VIII-2002, and Chips Cr, 27-VI-2004, and Coldwater Cr, and Florentine Cyn Cr, 30-VI-2004, and Grizzly Cr, 14-VII-2003, and Little North Fork Middle Fork Feather R, 27-VII-2003, and Middle Fork La Porte Cr, 14-VII-2003, and Middle Fork Milsap Cr, 23-VII-2003, and Middle Fork Sloat Cr, 16-VII-2003, and Nelson Cr, 30-VI-2004, and Pauley Cr, 11-IX-2002, and Rush Cr, 20-VII-2003, and Upper Jackson Cr, 25-VII-2004, and West Branch Nelson Cr, 21-VIII-2001, and Willow Cr, 28-VII-2001, and Yellow Cr, 27-VI-2004 (BLAB), and Benner Cr, 6 mi N Chester, 25-VI-1980, Baumann & Stanger (BYU), and Middle Fork Feather R, 21-V-1964, Wooster (SSU); RIVERSIDE: Andreas Cyn, 24-V-1980, Hartman (UCR), and Dark Cyn Cr, 21-VI-1977, and North Fork San Jacinto R, 6 mi S Pine Cove, 22-VI-1977, Baumann & Hogue (BYU), and Idyllwild, 24-V-1950 (LACM), and Strawberry Cr, 21-VI-2004 (BLAB); SAN BERNARDINO: 1 mi E Arrow Bear L, Hwy 18, 29-VI-1967, and Lytle Cr RS, 24-VI-1968, Evans (PERC), and Barton Flats, 20-VII-1953, Belkin, and Camp Baldy, VII-1952, Hogue, and Snow Crest, San Antonio Falls, 20-VI-



1968, Honey, and Deep Cr, 1.5 mi N Running Springs, 3-VI-1978 (LACM), and San Antonio Cyn, 11-VI-1923, A, and Cucamongo Cyn, 7-IV-1923 (CUAC), and Cucamonga Cr, 22-VI-2004, and East Fork Whitewater R, 13-VII-2004, and Middle Fork Lytle Cr, and West Fork City Cr, 21-VI-2004 (BLAB), and Mill Cr, 17-V-1970, Adams, and Mohave R, 10 km SE Hesperia, 11-IV-1987, Yerlinden, and Waterman Cyn, 3-IV-1976, LaSalle (UCR); SAN DIEGO: 5 mi W Fallbrook, 2-VII-1963, Welles (UCB); SAN LUIS OBISPO: Margarita Cr, Hwy 101, 22-IV-1966, Haddock (UCB); SANTA BARBARA: Kelly Cr, 13-VII-2004 (BLAB); SANTA CLARA: Alum Rock Pk, 3-IV-1953, Burdick, and Coyote Cr, 11 mi E Gilroy, 7-III-1964, Finlay, and Smith Cr, 18-V-1953, Burns (UCB), and Guadalupe Cr, VI-1978, and Stevens Cr, 12-X-1977, Klee, and Llagas Cr, 28-III-1974, Ross (CAS), and Los Gatos Cr, Lexington Res, V-1997, Fend (PERC); SANTA CRUZ: Big Cr, Swanton Rd, 9-VII-2003, and Hester Cr, San Jose Rd, 20-V-2002, and Waddell Cr, 10-VII-2003, Meyer, and Santa Cruz, 24-VI-1969, Evans (PERC), and Little Sur R, 17-VIII-2004 (BLAB); SHASTA: Burney Cr, 27-VII-2004 (BLAB); E Fork Hat Cr, 31-VIII-2004, and Lower Kings Cr, 8-VIII-2004, and South Fork Bailey Cr, 6-VIII-2002 (BLAB), and Castle Cr, 3 mi W I-5, 10-VIII-1985 (PERC), and Clear Cr, Placer Rd, and Mad Ox Gulch, Whiskey Cr, 2002 (FGCH), and Dog Cr, 14-V-1948, Wirth (UCB), and Hat Cr, Big Springs, Old Station, Hwy 89, 15-VII-1980, Eng et al, and Lost Cr, Lassen Natl Prk, 18-IX-1946, Chandler (CAS), and Old Cow Cr, 28-VIII-2002, and Squaw Valley Cr, 30-VII-2002 (EPA); SIERRA: Bassets, 20-IX-1946, Chandler (CAS), and Chapman Cr, 3 mi NE Yuba Pass, 12-VII-1981, Wragg, and Lincoln Cr, 14 mi E Sierra City, 1-X-1983, Tappel (SSU), and Fiddle Cr, Hwy 49, and North Yuba R, Hwy 49, and Ramsham Cr, Hwy 49, 17-V-2002, Meyer (PERC), and Independence Cr, 27-VII-2004, and Perazzo Cr, 24-VIII-2003 (BLAB); SISKIYOU: 1 mi SE Bartle, 10,14-VI-1974, and Ash Cr RS, 9 mi E McCloud, 7,9-VI-1974, Szerlip (UCB), and Beaver Cr, 1 mi E Klamath River, 3-VII-1959, Allen (PERC), and Butte Cr, 21-VIII-2001, and Duck Lake Cr, 13-IX-2000 (EPA), and Canyon Cr, 15-VIII-2004, and Elk Cr, 27-VII-2004, and Mill Cr, 18-VII-2004 (BLAB), and Sacramento R, Shasta, 29-V-1967, Jewett (OSU), and Wagon Cr, Davis Pl Rd, 2001 (FGCH); SOLANO: Alamo Cr, Gates Canyon Rd, and Ulatis Cr, Mix Canyon Rd, 12-V-2002, Meyer (PERC); TEHAMA: Big Chico Cr, Hwy 32, and Deer Cr, Hwy 32, and Gurnsey Cr, Hwy 32, and Mill Cr, Hwy 36, and South Fork Calf Cr, Hwy 32, 14-V-2002, Meyer (PERC), and Carter Cr, 22-IX-2003, and Judd Cr, 22-VII-2003 (BLAB); TRINITY: Eagle Cr, 11 mi N Trinity Center, 4-VI-1969, Bell, and Hayfork, 23-V-1973, Szerlig (UCB), and East Fork Coffee Cr, 15-VIII-2004 (BLAB), and Rattlesnake Cr, Hwy 36, and South Fork Trinity R, Hwy 36, 15-V-2002, Meyer (PERC), and Tangle Blue Cr, Shasta NF, 6-IX-1969, LePre (UCR), and South Fork Trinity R, 2002 (FGCH); TULARE: Cabin Cr, Hwy 198, Sequoia Natl Prk, and Silliman Cr, Hwy 198, Sequoia Natl Prk, 2-VII-2003, and Marble Fork Kaweah R, Hwy 198, Sequoia Natl Prk, and Stoney Cr, Hwy 198, 3-VII-2003, and Woodward Cr, Hwy 198, 3-VII-2003, and North Fork Kaweah R, N Fork Dr, 9-V-2002, Meyer (PERC), and Clicks Cr, 25-VII-2004, and Dorst Cr, 19-VII-2004, and Golden Trout Cr, 13-VIII-2003, and Nobe Young Cr, 20-VII-2004, and N E Fork Cr, 13-VIII-2003, and Poison Meadow Cr, 21-VII-2004 (BLAB); TUOLUMNE: Chipmunk Flat, Sonora Pass, 28-VIII-1968, Haddock, and Gaylor L, Yosemite Natl Prk, 8-VII-1946, Chandler, and Strawberry, 4-VII-1957, MacSwain (UCB), and Deadman Cr, 3-VIII-2000, and Middle Fork



Tuolumne R, 23-VIII-2000, and South Fork Tuolumne R, 30-VIII-2000 (FGSO), and Eleanor L, 2-VII-1951 (LACM), and Niagara Cr, Hwy 108, 26-VI-1980, Baumann & Stanger (BYU); VENTURA: Reyes Cr, 3-VIII-2004, and Sespe Cr, 27-V-2003, and Sisar Cr, 13-I-2004 (BLAB), and Santa Paula Cr, Hwy 150, 1-IV-1981, Baumann & Stanger (BYU); YUBA: Brandy Cr, Pendola Rd, and Middle Yuba R, Moonshine Rd, and Willow Cr, Pendola Rd, 17-V-2002, Meyer (PERC).

***Drunella doddsii*** (Needham)

*Previous data.*—Needham (1927): TULARE (South Fork Kaweah R); Gard (1961): NEVADA (Sagehen Cr); Allen and Edmunds (1962): NEVADA (Eure Valley), SAN BERNARDINO (Barton Falls); Maciolek and Tunzi (1968): MONO (Laurel Cr); Hawkins (1986): EL DORADO (Weber Cr); Leland et al. (1986): MONO (Convict Cr); Kratz et al. (1994): TULARE (Marble Fork Kaweah R); Ellsworth (1997): NEVADA (Sagehen Cr).

*New data.*—ALPINE: Arnot Cr, 6-VIII-2001, and Clark Fork Cr, 6-IX-2001, and Disaster Cr, 4-VIII-2004, and Pacific Cr, 10-VIII-2004 (BLAB), and East Fork Caron R, and Silver Cr, East Carson R, 3-VII-1950, Day (CAS), and West Fork Carson R, 21-VII-1994 (USGS); AMADOR: Cole Cr, 7-VIII-2001 (BLAB); BUTTE: Big Chico Cr, Butte Mdws, 16-IX-1997, and Butte Cr, Jonesville, 15-IX-1997 (USGS), and Fall R, Feather Falls, 15-IX-2002 (BLAB), and French Cr, 23-VI-1949, Chandler (CAS), and Little Chico Cr, Schott Rd, 2002 (FGCH), and Little West Fork, Skyway Rd, 14-V-2002, Meyer (PERC); CALAVERAS: Blue Cr, 8-VII-1989 (BLAB); San Antonio Cr, 3-VII-1974, Fields (SSU); DEL NORTE: Blue Cr, 20-VII-2004, and Cedar Cr, 14-VII-2004 (BLAB), and Coldwater Cr, 29-VII-2003, and South Fork Winchuck R, 6-VIII-2002 (EPA); EL DORADO: Alder Cr, 11-XI-2003, and Anderson Cr, 3-VIII-2003, and Big Silver Cr, 11-IX-2003, and Camp Cr, 11-XI-2003, and Canyon Cr, 2-VIII-2004, and Cat Cr, 11-VIII-2003, and Dogtown Cr, 30-X-2003, and Gasparni Cr, 18-VIII-2004, and Jones Fork Silver Cr, 9-X-2003, and Lower Pilot Cr, 27-VIII-2001, and Lower Steely Fork Consumnes R, 27-VIII-2002, and Middle Fork Consumes River, 4-VIII-2003, and North Fork Consumnes R, 6-VIII-2003, and North Steely Cr, 27-VII-2003, and Plum Cr, 24-XI-2003, and Saxon Cr, 17-IX-2001, and Sherman Cyn Cr, 27-XI-2003, and Snow Cr, 13-VII-2003, and Sopiago Cr, 29-VII-2003, and South Fork Silver Cr, 20-X-2003, and Uppper North Fork Consumnes R, 19-XI-2003, and Upper Rubicon R, 3-VIII-2004, and Wench Cr, 8-X-2003 (BLAB), and General Cr, Sugar Pine St Prk, III-1970, Noble (CAS), and Kyburz, 18-VII-1953, Lattin (UCB), and Tells Cr, Ice House Rd, 22-VI-2003, Meyer (PERC), and Upper Truckee R, 2-VII-1954, Day (LACM); FRESNO: Bear Cr, 7-VIII-2001 (EPA), and Laurel Cr, 1-VI-1987, and Huntington L, Rancheria, 31-VII-1984, MacDonald (PERC), and Mono Cr, 9-VIII-2004, and South Fork King's R, 17-VIII-2004, and Summit Cr, 11-VIII-2004 (BLAB), and South Fork San Joaquin R, Blayney Mdws, 10-VIII-1948, Day (CAS); GLENN: Cold Cr, 25-VI-2002 (EPA), and Upper Black Butte R, 20-VI-2003 (BLAB); HUMBOLDT: Backbone Cr, 25-IX-2003, and Bluff Cr, 30-IX-2003, and Butte Cr, 7-VIII-2001, and Fox Cr, 1-X-2003, and Horse Linto Cr, 14-VIII-2003, and Lawrence Cr, 23-VII-2003, and Little Pine Cr, 21-VIII-2002, and Mill Cr, 17-VII-2002, and Sholes Cr, 10-IX-2002, and Squaw Cr, 8-VIII-2002, and Trout Cr, 6-VIII-2003, and West Fork Sproul Cr, 10-VII-2002 (EPA), and Boise Cr, 20-XI-2002, and Elder Cr, 3-VIII-2004, and Rattlesnake Cr, 15-IX-2004, and Red Cap Cr, 19-XI-2002, and Bridge

Cr, 10-VIII-2004, and South Fork Bear Cr, 26-IX-2001, and Salmon Cr, 20-VIII-2003, and Slate Cr, 15-VII-2002, and U Pilot Cr, 27-VIII-2001, and West Fork Mill Cr, 9-V-2001 (BLAB), and; East Fork Willow Cr, 24-IV-1987, Baumann et al (BYU), and Redwood Cr, Hwy 299, 19-IX-2000 (FGSA), and Van Duzen R, Hwy 36, 15-V-2002, Meyer (PERC); INYO: Independence Cr, 23-V-1986, and Lone Pine Cr, 6-VI-1986, and North Fork Oak Cr, 7-III-1986, Giuliani, and Big Pine Cr, 6-V-1986, Baumann & Giuliani (BYU), and Pine Cr, 19-IX-2004, and Shepard Cr, 20-VII-2004, and Taboose Cr, 20-VII-2004 (BLAB), and West Fork Coyote Cr, 16/17-IX-1969, Frommer & Malin (UCR). LAKE: Benmoore Cr, Eel R, 28-IV-1979, Dare, A (UCB), and Copper Butte Cr, and Thistle Glade Cr, 13-IX-2004 (BLAB), and Rattlesnake Cr, and Trout Cr, Eel R, 2003 (FGCH), and Skeleton Cr, 27-VI-2002 (EPA); LASSEN: Jones Cr, 17-IX-2002, and Parsnip Cr, 13-VII-2004, and Pine Cr, 1-X-2001 (BLAB); MADERA: Middle Fork San Joaquin R, 9-IX-2004, and East Sand Cr, 24-VI-2003, and Stairway Cr, 23-IX-2004 (BLAB); MARIPOSA: 4.5 mi E Tioga Pass, Yosemite Natl Prk, 30-VIII-1968, Haddock, and 6 mi E Miami RS, 4-VII-1946, Chandler (UCB), and Alder Cr, Hwy 41, Yosemite Natl Prk, 26-VI-2003, Meyer & Meyer, and Grouse Cr, Hwy 41, Yosemite Natl Prk, 26-VI-2003, and Merced R, 4 mi N Hwy 140 entrance, Yosemite Natl Prk, 25-VI-2003, Meyer & Pfister (PERC), and Bishop Cr, 7-VII-2004, and South Fork Merced R, 30-VIII-2004, and Tenaya Cr, 31-VIII-2004, and Yosemite Cr, 7-IX-2004 (BLAB), and East Fork Lee Vining Cr, 4 mi W Hwy 395, 26-VII-1967, and Middle Fork Tuolumne R, White Wolf Camp, Yosemite Natl Prk, 29-VII-1967, Allen (CAS), and Illilouette Cr, 3-X-2000 (EPA); MENDOCINO: Beaver Cr, Smokehouse Cr, 27-IX-2004, and Duncan Cr, 17-VIII-2004 (BLAB), and Eel R, 1.75 mi N Wesley Ives Cr, 2001, and Elder Cr, 0.9 mi N S Fork Eel R, and Fox Cr, S Fork Eel R, 2003, and Noyo R, VIII-2002 (FGCH), and Hollow Tree Cr, 23-VIII-2000 (FGSA), and Mudd Cr, 24-VII-2001 (EPA); MERCED: Hidden Cr, 15-VIII-2001 (BLAB); MODOC: East Cr, 20-VII-2004, and South Fork Parker Cr, 20-VII-2004 (BLAB), and Mill Cr, Clear L, 2003 (FGCH); MONO: Convict Cr, 14-IX-2004, and Glass Cr, 13-IX-2004, and Mammoth Cr, 8-X-2001, and O'Harrel Cr, 14-IX-2004 (BLAB), and Deadman Cr, Hwy 395, 27-VI-2003, Meyer (PERC), and Green Cr, 6-VIII-1952, and Virginia Cr, 24-VII-1952, Day (CAS), and Hilton Cr, 2-VII-2001 (EPA), and Long Valley Cr, 2 mi W Hwy 395, 2001 (FGCH); NEVADA: Gray Cr, Truckee R, 2001 (FGCH), and Grizzly Cr, 19-III-2003, and Prosser Cr, 27-VII-2004, and Sagehen Cr, 29-VII-2001 (BLAB), and Truckee R, Farad, 30-VI-1994 (USGS), and Yuba R, 4-XI-2000, Carson (SSU); PLACER: Bear R, YMCA Camp, Hwy 20, 18-V-2002, Meyer et al, and South Yuba R, Cisco Grove, Hwy 80, 25-III-1966, Miner (PERC), and Canyon Cr, Baxter, 30-III-1979, and Truckee R, 30-V-1979, Moore (SSU), and Humbag Canyon Cr, 8-V-2003, and South Fork Long Cyn Cr, 6-X-2003 (BLAB), and Squaw Cr, 2002 (FGCH); PLUMAS: Boulder Cr, 19-IX-2001, and Butt Cr, 20-IX-2004, and Chips Cr, 31-VII-2002, and Coldwater Cr, 13-VII-2004, and Florentine Cr, 21-X-2001, and Grizzly Cr, 14-VII-2003, and Little North Fork Middle Fork Feather R, 29-VI-2004, and Lower Jackson Cr, 25-VII-2004, and Middle Jackson Cr, 25-VII-2004, and Middle Fork Feather R, Nelson Cr, 15-VIII-2004, and Moonlight Cr, 1-IX-2002, and North Fork Middle Fork Feather Cr, 29-VII-2001, and Nelson Cr, 25-VII-2004, and Pauley Cr, 11-IX-2002, and Pinchard Cr, 1-X-2002, and Rush Cr, 20-VII-2003, and South Branch Middle Fork Feather R, 5-VIII-2001, and South Fork Feather R, 17-VIII-2004, and Slate

Cr, 22-IX-2004, and Upper Jackson Cr, 25-VII-2004, and West Branch Nelson Cr, 20-VIII-2001, and Willow Cr, 28-VII-2001 (BLAB), and Jameson Cr, 30-VIII-2000 (EPA); SAN BERNARDINO: East Fork Barton Cr, 18-II-1978, Nilsson (BYU), and South Fork Santa Ana R, Angeles Oaks, 21-VII-1999 (USGS); SAN DIEGO: Sandia Cr, 5-VI-2001 (BLAB); SANTA BARBARA: Kelly Cr, 13-VII-2004 (BLAB); SHASTA: Burney Cr, 27-VII-2004, and Cow Cr, 14-IX-2004, and East Fork Hat Cr, 31-VIII-2004, and South Fork Bailey Cr, 6-VIII-2002 (BLAB), and Clover Cr, Ponderosa Way, and South Fork Bear Cr, Ponderosa Way, 2002, and Wagon Cr, 2001 (FGCH), and Hat Cr, Big Springs, 10-X-1976 (INHS), and McCloud R, Ladybug Cr, McCloud, 22-VIII-1996 (USGS), and North Fork Backbone Cr, 11-IX-2001, and South Fork Slate Cr, 23-VIII-2001, and Squaw Valley Cr, 30-VII-2002, and Old Cow Cr, 28-VIII-2002 (EPA), and Old Station, 17-IX-1946, Chandler (CAS); SIERRA: Bear Valley Cr, 31-VII-2001, and Independence Cr, 27-VII-2004, and North Fork Yuba R, 26-VII-2004, and Perazzo Cr, 24-VIII-2003, and Smithneck Cr, 2002 (BLAB), and Fiddle Cr, 23-IV-1977, Hall, and Lincoln Cr, 14 mi N Sierra City, 1-X-1983, Tappel, and Chapman Cr, 3 mi NE Yuba Pass, 12-VII-1981 (SSU), and Gold Cr, Hwy 89, 16-V-1948, Wirth (UCB), and North Yuba Cr, 10-V-1983, Mower (BYU), and Sagehen Cr, VII-1953 (LACM); SISKIYOU: Bear Cr, 9-VI-2002, and Canyon Cr, 30-X-2001, and Elk Cr, 9-VI-2002, and Grider Cr, 21-X-2001, and Mill Cr, 18-VII-2004, and North Fork Salmon R, 8-VIII-2004, and Seiad Cr, 18-XI-2001, and Wooley Cr, 5-XI-2001 (BLAB), and Buckhorn Cr, 2-X-2001, and Copper Cr, 31-VII-2001, and Eddy Cr, 12-IX-2000, and East Fork Indian Cr, 8-VIII-2000, and Grouse Cr, 26-IX-2001, and South Fork Salmon R, 13-VIII-2002, and Shovel Cr, 15-VIII-2001, and Sugar Cr, 10-VII-2002, and Wagon Cr, 22-VIII-2001 (EPA), and Duck L Cr, 13-IX-2000 (FGSA), and Sacramento R, 8-IX-1953, Chandler, and Scott R, Roxbury, VIII-1949, Day (CAS); TEHAMA: Big Smoky Cr, 11-VIII-2004, and Carter Cr, 22-IX-2003, and Judd Cr, 22-VII-2003, and Lower Gurnsey Cr, 2-IX-2001, and North Fork Calf Cr, 23-IX-2003, and Slate Cr, 2-IX-2001, and South Fork Calf Cr, 3-IX-2003 (BLAB), and Deer Cr, Hwy 32, and Gurnsey Cr, Hwy 32, 14-V-2002, Meyer (PERC), and North Fork Antelope Cr, Ponderosa Way, and South Fork Antelope Cr, 2002 (FGCH); TRINITY: Backbone Cr, and Bluff Cr, and Coffee Cr, and Rattlesnake Cr, 2003, and Mumbo Cr, 2001 (FGCH), and Bear Cr, 11-VII-2002, and Big Cr, 28-VIII-2001, and Browns Cr, 25-VII-2001, and Corral Cr, 11-VII-2001, and Dark Canyon Cr, 18-IX-2003, and East Fork Coffee Cr, 9-VII-2002, and East Fork S Fork Trinity R, 17-IX-2003, and Grassy Flat Cr, 16-VIII-2000, and Potato Cr, 16-IX-2003, and Reading Cr, 12-IX-2002, and Squirrel Gulch, 15-VIII-2000, and Stuart Fork, 9-VIII-2000 (EPA), and Eltapom Cr, 12-VIII-2004 (BLAB), and Hayfork, 23-V-1973, Szerlig (UCB), and South Fork Trinity R, Hwy 36, 15-V-2002, Meyer (PERC); TULARE: Cabin Cr, Hwy 198, Sequoia Natl Prk, and Silliman Cr, Hwy 198, Lodgepole, Sequoia Natl Prk, 2-VII-2003, Meyer, and East Fork Kaweah R, Mineral King Rd, 24-XII-2000, Meyer et al, and Marble Fork Kaweah R, Hwy 198, Lodgepole, Sequoia Natl Prk, Stoney Cr, Hwy 198, 3-VII-2003, Meyer (PERC), and Clicks Cr, 20-IX-2001, and Dorst Cr, 19-VII-2004, and Golden Trout Cr, 13-VIII-2003, and Movie Stringer Cr, 8-IX-2004, and North East Fork Cr, 13-VIII-2003, and Poison Mdw Cr, 21-VII-2004, and South Fork Kaweah R, 16-VIII-2004 (BLAB); TUOLUMNE: Clark Fork, 2-VIII-2000 (FGSO); Clavey R, 22-VIII-2000, and Deadman Cr, 3-VIII-2000, and Hull Cr, 20-IX-2000, and Mill Cr, 31-VII-2000,

and Summit Cr, 10-VIII-2000, and Tuolumne R, Yosemite Natl Prk, 6-IX-2000 (FGSO), and Lily Cr, 3-VIII-2004, and Middle Fork Tuolumne R, 24-VIII-2004, and Parker Pass Cr, 8-IX-2004, and South Fork Tuolumne R, 31-VIII-2004 (BLAB), and North Fork Tuolumne R, 21-VIII-2001 (EPA), and Strawberry, 4-VII-1957, MacSwain (UCB); VENTURA: Sespe Cr, 3-VI-2003 (BLAB); Sisar Cr, 13-I-2004 (BLAB); YUBA: Willow Cr, Pendola Rd, 17-V-2002, Meyer (PERC).

***Drunella flavilinea*** (McDunnough)

*Previous data.*—Mayo (1952a): AMADOR (Jackson); Gard (1961): NEVADA (Sagehen Cr); Allen and Edmunds (1962): AMADOR (Dry Cr, Jackson Cr), DEL NORTE (Bluff Cr), HUMBOLDT (nr Willow Cr, nr Orleans, Hoopa Valley Indian Res), LOS ANGELES (East Fork San Gabriel R), MADERA (Chilacoot Cr), MENDOCINO (Bridges Cr), NAPA (Sage Cr), NEVADA (Sagehen Cr), PLUMAS (nr Spring Garden), RIVERSIDE (North Fork San Joaquin R), SAN BERNARDINO (Barton Flats), SHASTA (Burney Cr, Hat Cr), SISKIYOU (Klamath R, Shasta R, Thompson Cr), TEHAMA (Mill Cr, North Fork Deer Cr), TRINITY (Mad R, Trinity R), TULARE (Kaweah R, Merced R); Kennedy (1967): MONO (Convict Cr); Collins (1970): LOS ANGELES (Bear Cr, Big Rock Cr, Cattle Cyn, Coldwater Cyn, East Fork San Gabriel R, Little Rock Cr, North Fork San Gabriel R, North Fork Tujunga R, San Antonio Cyn, San Gabriel Cyn, West Fork San Gabriel R), RIVERSIDE (Santa Ana R); Leland et al. (1986): MONO (Convict Cr); Serpa (1986): SONOMA (Copeland Cr).

*New data.*—ALPINE: Charity Valley Cr, 27-VI-2002, and West Fork Carson R, 14-VII-2003 (EPA), and Markleville, 4-VII-1949, Day, A (CAS); AMADOR: Sutter Cr, 1-IV-1950, Day (CAS); CALAVERAS: E Cornell, Hwy 4, 7-VII-1967, Evans (PERC); COLUSA: Paradise Cr, 24-VII-1953, Chandler (CAS); DEL NORTE: Cedar Cr, 31-V-2002, Reeves (PERC); EL DORADO: General Cr, Sugar Pine St Prk, 3-VII-1969, and Upper Truckee R, Hwy 50, 21-VI-1970, Noble (CAS), and Rubicon R, 26-VII-1938, and South Fork Rubicon R, 5-VIII-1938 (INHS); FRESNO: Bear Cr, 7-VIII-2001 (EPA), and Laurel Cr, 1-VI-1987, MacDonald (PERC), and Rancharia Cr, 17-VIII-1995 (BLAB); GLENN: Cold Cr, 25-VI-2002, and Stoney Cr, 21-IV-1951, Day, A (CAS); HUMBOLDT: Bluff Cr, Six Rivers NF, 2-VII-1959, Allen (CAS), and Canoe Cr, 22-VII-2003, and Klamath R, 22-V-2002, and Mill Cr, 17-VII-2002, and Squaw Cr, 8-VIII-2002 (EPA); INYO: Big Pine Cr, 9-III-1986, Giuliani (BYU); LAKE: Middle Cr, 28-V-1949, Day (CAS); LASSEN: Pine Cr, and Upper Susan Cr, 3-VII-2003 (BLAB); LOS ANELES: Bear Cr, 31-III-1981, Baumann & Stanger (BYU), and Bouquet Cyn Cr, 30-IV-2002, and West Fork Alder Cr, 21-VI-2001 (EPA), and Elizabeth Cyn Cr, 1-V-2002 (EPA), and Monrovia Cyn Cr, 2-III-1968, Malone, and Prairie Fork, 15-VI-1965, Vann, and Santa Ana R, 28-IV-1962, Brown, and Santa Anita Cr, 27-III-67, Allen (CAS), and Valyermo, 30-V-1950 (PERC), and West Fork San Gabriel R, 2001 (FGCH); MADERA: Willow Cr, 19-VII-1951, Day, A, and Soquel, Hwy 41, 19-VI-1959, Allen (CAS), and East Sand Cr, 24-VI-2003 (BLAB); MARIN: Lagunitas Cr, 22-V-1978, Fields (WCF); MARIPOSA: Merced R, 4 mi N Hwy 140 entrance, Yosemite Natl Prk, 25-VI-2003, Meyer & Pfister (PERC), and Miami RS, 21-VI-1953, and Wawona, 11-VII-1946, Chandler (CAS); MODOC: Canyon Cr, 17-VI-2003, and Lassen Cr, 18-VI-2003 (BLAB); MONO: Hilton Cr, 2-VII-2001, and Long Valley Cr, 3-VII-2001 (EPA), Sonoma Br Camp, 28-

VII-1962, Rentz & MacNeill, A, and Rush Cr, 20-VI-1953, Chandler, (CAS); MONTEREY: Big Sur R, Hwy 1, 2002, and Nacimiento R, and San Antonio R, and Tassajara Cr, Tassajara Hot Springs, 2003 (FGCH); NEVADA: Eure Valley, 4-VII-1948, Day, and Truckee R, E Donner Summit, Hwy 40, 2-VII-1952, Selander & Selander (CAS); PLACER: Middle Fork American R, 27-VII-1938 (INHS); PLUMAS: North Fork Deer Cr, 5 mi N Fire Mtn, 3-VII-1959, Allen (CAS); RIVERSIDE: Fuller Mill Cr, 9-V-2001 (EPA), and North Fork San Jacinto R., Banning Rd, Idyllwild, 13-VI-1959, Edmunds (PERC); SACRAMENTO: Consumnes R, Thornton, 10-V-1952, Day, A (CAS); SAN BERNARDINO: Barton Cr, 6-VI-2002, and Bear Cr, 28-VI-2001, and City Cr, 11-VI-2002, and Cold Cr, 27-VI-2000, and Deer Cr, 16-V-2002, and Middle Fork Lytle Cr, 19-VI-2002, and Mill Cr, 15-V-2002, and Plunge Cr, 20-VI-2001 (EPA), and Santa Ana R, Running Springs, 19-VII-1999, and South Fork Santa Ana R, Angeles Oaks, 21-VII-1999 (USGS); SAN DIEGO: Santa Ysabel Cr, 24-IV-2002, and Sweet Water R, 16-V-2001 (EPA); SAN MATEO: San Gregorio Cr, 17-VI-1950, Day, A (CAS); SANTA BARBARA: Alamo Pintado, 9-V-2002, and Cachuma Cr, 7-V-2003, and Kelly Cr, 12-VI-2002, and Santa Cruz Cr, 10-VII-2001, and Sisquoc R, 29-V-2002 (EPA), and West Fork Santa Cruz Cr, 2001 (FGCH); SANTA CLARA: Guadalupe Cr, 16-V-1953, Day (CAS), and Smith Cr, 19-VI-2002 (EPA); SANTA CRUZ: Little Sur R, VII-2002, and San Vicente Cr, Davenport, and Soquel Cr, Laurel Glen Rd, 2003 (FGCH), and Waddell Cr, 19-V-1951, Day, A, L (CAS); SHASTA: 4 mi W Viola, 27-VI-1946, Chandler (CAS), and Brandy Cr, South Shore Dr, and Clear Cr, Placer Rd, and Mill Cr, El Dorado Stamp Mill, 2002 (FGCH), and McCloud R, Ladybug Cr, McCloud, 20-VIII-1996 (USGS); SIERRA: Yuba R, 15-VII-2003, and Rock Cr, 16-VII-2003 (BLAB); SISKIYOU: Butte Cr, 21-VIII-2001, and Copper Cr, 31-VII-2001, and East Fork Indian Cr, 8-VIII-2000, and South Fork Salmon R, 13-VIII-2002, and Sugar Cr, 10-VII-2002, and Wagon Cr, 22-VIII-2001, and Indian Cr, VIII-1949, A, and Scott R, Roxbury, VIII-1949, Day, and Swillip Cr, 2-VII-1959, Allen (CAS); SONOMA: Sonoma Cr, 1.6 mi N Glen Ellen, 9-IV-1949, Day (CAS); TRINITY: Bear Cr, 11-VII-2002, and Corral Cr, 11-VII-2001, and East Fork Coffee Cr, 9-VII-2002 (EPA), and Stuart Fork, Hwy 36, 9-VIII-2000 (FGSA); TULARE: Badger, 3-V-1947, Chandler, and Salmon Cr, 31-VII-1965, Vann (CAS), and Monache Cr, 25-VI-2002 (EPA), and North Fork Kaweah R, N Fork Dr, 4-VII-2003, Meyer, and Wolverton Cr, Sequoia Natl Prk, 18-VI-1959, Allen (PERC); TUOLUMNE: South Fork Tuolumne R, Rainbow Pool, Hwy 120, 25-VI-2003, Meyer (PERC); VENTURA: Agua Blanca Cr, 7-VI-2001, and Coyote Cr, 12-VI-2001, and North Fork Matilija Cr, 4-VI-2003, and Piru Cr, 14-VI-2001, and Scholder Cr, 5-VI-2001 (EPA), and Howard Cr, 1.6 mi N Route 6n31, 2001 (FGCH).

***Drunella grandis* (Eaton)**

*Previous data.*—Traver (1934) as *Ephemerella yosemite* Traver and *E. proserpina* Traver: MARIPOSA (Merced R), PLUMAS (Feather R), SAN BERNARDINO (Mill Cr Cyn); Day (1952) as *E. glacialis carsona* Day: ALPINE (East Fork Carson R); Allen and Edmunds (1962) as *E. g. grandis* and *E. g. ingens* McDunnough: MONO (Walker R), GLENN (Stoney Cr), MADERA (Chilacoot Cr, nr Soquel), MARIPOSA (Goose Cr), RIVERSIDE (Warm Springs Cr), SHASTA (Burney Cr), SISKIYOU (Dunsmuir); Leland et al. (1986): MONO (Convict Cr); Kratz et al. (1994): TULARE (Marble Fork Kaweah R); Ellsworth



(1997): NEVADA (Sagehen Cr).

*New data.* — ALPINE: Charity Valley Cr, 27-VI-2002 (EPA), and Hot Springs Cr, 4 mi W Markleeville, 3-XI-1983, Tappel, and Shay Cr, 4 mi W Markleeville, 3-XI-1983 (SSU), and Markleeville, 4-VII-1949, Day (CAS), and West Fork Carson R, Hwy 89, 21-III-1985, Baumann & Nelson (BYU); BUTTE: French Cr, 23-VI-1949, Chandler (CAS); CALAVERAS: Oneil Cr, 15-VII-2003 (EPA); COLUSA: Mill Cr, 6 mi W Stonyford, 8-IV-1989, Glenn (SSU); EL DORADO: General Cr, Sugar Pine St Prk, X-1969, Noble, and South Fork American R, 31-VIII-1967, Allen, A (CAS), and Middle Fork American R, 23-VII-1938 (INHS), and North Fork Consumnes R, 12-VIII-2003, and Plum Cr, 24-XI-2003 (BLAB), and Snowline Camp, 16-VII-1948, Frick, A, and Sagehen Cr, 18-IV-1976 (UCB), and Upper Truckee R, VIII-2003, Randolph (PERC); FRESNO: Bear Cr, 2001 (FGCH), and Cedar Grove, 2-VIII-1964, Arnaud, A (CAS), and Laurel Cr, 1-VI-1987, MacDonald (PERC), and Kings R, Trimmer, 15-IX-1993 (USGS), and South Fork Kings River, 17-VIII-2004 (BLAB); HUMBOLDT: Mill Cr, 17-VII-2002 (EPA); INYO: Big Pine Cr, 9-III-1989, Giuliani (BYU), and Lone Pine Cr, Whitney Portal Rd, 28-VI-2003, Meyer & Pfister (PERC), and McGee Cr, and Rawson Cr, 2002 (FGCH), and Tuttle Cr, 2 mi SW Lone Pine, 9-V-1969, Haddock (UCB); LASSEN: Pine Cr, 24-IX-2002, and Willow Cr, 28-X-2002 (BLAB); MADERA: Big Cr, 25-VI-1989 (BLAB), and Willow Cr, 14-VII-1951, Day (CAS); MARIPOSA: Alder Cr, Hwy 41, Yosemite Natl Prk, 26-VI-2003, and Merced R, 4 mi N Hwy 140 entrance, Yosemite Natl Prk, 25-VI-2003, Meyer & Pfister (PERC), and Illouette Cr, 3-X-2000 (FGSA), and South Fork Merced R, Wawona Camp, Yosemite Natl Prk, 26-VII-1967, Allen (CAS), and South Fork Tuolumne R, 4 mi W Yosemite Natl Prk, 6-V-1989, Lockhart (SSU); MODOC: Lassen Cr, 15-VIII-1989 (BLAB); MONO: Cottonwood Cr, 11-VI-1939, Mayo, and Deadman Cr, Hwy 395, 27-VI-2003, Meyer (PERC), and Sonora Br Camp, 28-VII-1962, Rentz & MacNeill, A. and Frying Pan Cr, 15-VII-1952, and Robinson Cr, 16-VII-1952, Day (CAS), and West Fork Walker R, 10 mi S Walker, 6-XI-1983, Titus (SSU); NEVADA: Eure Valley, 4-VII-1948, Day (CAS), and Prosser Cr, 5 mi N Truckee, 2-X-1983, Tappel (SSU), and Truckee R, Hwy 80, 25-III-1967, Miner (PERC); PLACER: Martis Cr, 16-VI-1933 (PERC), and Squaw Cr, 5-VII-1955, Day (CAS), and Truckee R, 30-III-1979, Moore (SSU); PLUMAS: Jameson Cr, 30-VIII-2000 (EPA), and North Fork Feather R, 26-IV-1953, Chandler (CAS), and Warner Cr, 5 mi NW Chester, 25-VI-1980, Baumann & Stanger (BYU), and Willow Cr, 6-VII-2004 (BLAB); RIVERSIDE: Oasis de los Osos Preserve, Snow Cr Village, 13-IV-1996, Johnson (UCR); SAN BERNARDINO: Barton Flats, 20-VII-1953, Belkin, and Deep Cr, 1.5 mi N Running Springs, 3-VI-1978, Hogue (LACM), and Deer Cr, 16-VI-2002 (EPA), and South Fork Santa Ana R, 25-V-1993, Al-Wahaibi (UCR), and Warm Springs Cr, 24-IX-1946 (INHS); SHASTA: Burney Cr, 12-IX-2001, and Old Cow Cr, 28-VIII-2002, and Squaw Valley Cr, 30-VII-2002 (EPA), and Burney Falls, Chandler, 17-IX-1946 (CAS), and Flat Cr, 16-VII-1955, Mueller, A (UCD), and Hat Cr, 3-IV-1977, Giannoni (SSU), and McCloud R, Ladybug Cr, McCloud, 20-VIII-1996 (USGS); SIERRA: Chapman Cr, 12 mi E Sierra City, 1-X-1983, Shober, and North Fork Yuba R, 23-IV-1977, Hall (SSU), and North Yuba R, Hwy 49, 17-V-2002, Meyer (PERC), and Sagehen Cr, VII-1953, Day (LACM); SISKIYOU: Ash Cr RS, 9 mi E McCloud, 7/9-VI-1974, Szerlip (UCB), and North Fork Salmon R, 27-VIII-2003, and Seiad Cr, 26-VIII-2003 (EPA); TEHAMA: Gurnsey Cr, Hwy 32, 14-V-2002, Meyer (PERC);



TRINITY: Browns Cr, 25-VII-2001, and South Fork Trinity R, 17-IX-2003, and Stuart Fork, 14-IX-2000, and Trinity R, 30-VIII-2000 (EPA); TULARE: Three Rivers, 19-VII-1984, Burdick, A, and Cabin Cr, Hwy 198, Sequoia Natl Prk, 2-VII-2003, Meyer, and Ash Mtn flume, Three Rivers, 4-VI-1987 (PERC), and Monache Cr, 25-VI-2002 (EPA), and South Fork Kern R, 15-IX-2004 (BLAB); TUOLUMNE: Jawbone Cr, 30-VII-1988 (BLAB), and North Fork Tuolumne R, 21-VIII-2001 (EPA), and Strawberry, 4-VII-1957, MacSwain (UCB).

***Drunella pelosa* (Mayo)**

*Previous data.*—Mayo (1951): FRESNO (North Fork Cr); Day (1956): ALPINE. Allen and Edmunds (1962): LOS ANGELES (Elizabeth L); Allen (1965): MONO (Sonora Bridge Camp); Kennedy (1967): MONO (Convict Cr); Leland et al. (1986): MONO (Convict Cr).

*New data.*—ALPINE: Markleville, 4-VII-1949, Day (CAS); AMADOR: Silver Fork, American R, Silver L, 23-VII-1981, Ludwig (SSU); CALAVERAS: Blue Cr, 5-VII-1989 (BLAB); DEL NORTE: Shelly Cr, 3-VII-2003 (BLAB); EL DORADO: Camp Cr, 14-VII-2003 (BLAB), and Kyburz, 18-VII-1953, Lattin (UCB), and Middle Fork Consumnes R, Somerset, 31-V-1954, Schlinger & Downey (CAS), and Steele Fork Consumnes R, 4 mi W Grizzly Flat, 14-IV-1973, Meyer (UCD); FRESNO: Deer Cr, 20-VI-1988, and Dinkey Cr, 23-VI-1989 (BLAB), and Laurel Cr, 1-VI-1987, MacDonald (PERC); GLENN: Upper Black Butte R, 21-VI-2003 (BLAB); HUMBOLDT: Boise Cr, 24-VI-2002, and Camp Cr, 1-VII-2002 (BLAB), and East Fork Willow Cr, 24-IV-1987, Baumann et al (BYU); INYO: Big Pine Cr, 8-IV-1986, and North Fork Oak Cr, 24-II-1986, and South Fork Oak Cr, 10-IV-1986, Giuliani (BYU), and Cottonwood Cr, 11-VII-1966, Hogue (LACM), and Independence Cr, Onion Valley Rd, L Grays Valley Campground, 28-VI-2003, Meyer & Pfister (PERC); LAKE: Eel R at High Rock, 19-VI-2001 (BLAB); MADERA: Big Cr, 24-VI-1989, and Jackass Cr, 21-VI-1988 (BLAB); MARIPOSA: Alder Cr, Hwy 41, Yosemite Natl Prk, 26-VI-2003, Meyer & Meyer (PERC); MONO: 1 mi SW Tom's Pl, 14-VIII-1963, MacNeill & Lundgren, A (CAS), and Hilton Cr, 2-VII-2001 (EPA); NEVADA: Canyon Cr, 18-VII-1989 (BLAB); PLACER: Humbag Cyn Cr, 18-IV-2003 (BLAB), and Jordan Cr, Bowman Rd, 18-V-2002, Meyer et al (PERC), and Middle Fork American R, 23-V-1964 (SSU); PLUMAS: Florentine Cyn Cr, 30-VI-2004, and Pauley Cr, 25-VII-2004, and Yellow Cr, 27-VI-2004 (BLAB), and North Fork Feather R, 26-IV-1953, Chandler (CAS); SHASTA: Mill Cr, El Dorado Stamp Mill, 2002 (FGCH); SIERRA: Fiddle Cr, Hwy 49, 17-V-2002, Meyer (PERC), and Lavazolla Cr, 28-VII-1988 (BLAB); SISKIYOU: South Fork Sacramento R, 15-VII-1985, Courtney, A (PERC), and Cliff Cr, and Portugese Cr, 1-V-2006 (BLAB); TRINITY: East Fork Coffee Cr, 9-VII-2002 (EPA), and Little Trinity R, 17-VI-2004, and North Fork Swift Cr, 19-VII-2001 (BLAB); TULARE: Ash Mt, Kaweah Power Station #3, 21-V-1983 (BYU), and Dorst Cr, 19-VII-2004 (BLAB), and Silliman Cr, Hwy 198, Sequoia Natl Prk, 2-VII-2003, and Marble Fork Kaweah R, Hwy 198, Lodgepole, Sequoia Natl Prk, and Stoney Cr, Hwy 198, and Wolverton Cr, Wolverton Ski Area, Sequoia Natl Prk, 3-VII-2003, Meyer (PERC); TUOLUMNE: Deadman Cr, 5-VII-1989 (BLAB), and Strawberry, 6-VII-1957, MacSwain (UCB), and Yosemite Cr, Hwy 120, Yosemite Natl Prk, 27-VI-2003, Meyer (PERC).

*Drunella spinifera* (Needham)

*Previous data.*—Day (1952): ALPINE (Carson R); Mayo (1952a) as *Ephemerella sierra* Mayo: CALAVERAS (Independence Cr), INYO (South Fork Bishop Cr), MONO (McGee Cr)∞, PLACER (American R); Allen and Edmunds (1962): INYO (North Fork Bishop Cr, South Fork Bishop Cr), MADERA (nr Soquel), MONO (McGee Cr), NEVADA (Sagehen Cr); Kratz et al. (1994): TULARE (Marble Fork Kaweah R).

*New data.*—ALPINE: Arnot Cr, 6-VIII-2001 (BLAB); Clark Fork Cr, 6-IX-2001, and Pacific Cr, 10-VIII-2004 (BLAB), and Disaster Cr, 17-IX-1991 (FGSO), and East Fork Carson R, Markleeville, 4-VII-1949, Day, A (CAS), and Markleeville Cr, Markleeville, and West Fork Carson R., 2 mi NE Woodfords, 21-IX-1957, Edmunds & Allen (PERC); AMADOR: Kirkwood Cr, 1-X-2003 (BLAB); BUTTE: Big Chico Cr, Hwy 32, and Galen Cr, Galen Ridge Rd, and Little Chico Cr, Schott Rd, 2002 (FGCH), and Fall R, Feather Falls, 15-IX-2002 (BLAB), and French Cr, 5 mi NE Madrone L, 22-VII-1970, Frommer & LePre (UCR); CALAVERAS: Blue Cr, 12-VII-1989 (BLAB), and Oneil Cr, 15-VII-2003 (EPA); COLUSA: Paradise Cr, 12-V-1953, Chandler (CAS); DEL NORTE: Clarks Cr, 30-VII-2003, and Coldwater Cr, 29-VII-2003 (EPA); EL DORADO: Alder Cr, 11-XI-2003, and Anderson Cr, 3-VIII-2003, and Buckskin Joe Spring, 6-VIII-2003, and Camp Cr, 10-VIII-2003, and Cyn Cr, Bald Mtn, 2-VIII-2004, and Loer Steely Fork Consumnes R, 27-VIII-2002, and Middle Fork Consumnes R, 4-VIII-2003, and North Fork Consumnes R, 6-VIII-2003, and Plum Cr, 24-XI-2003, and Saxon Cr, 26-VIII-2001, and Sherman Cyn Cr, 27-XI-2003, and Sopiago Cr, 29-VII-2003, and Upper North Fork Consumnes R, 19-XI-2003, and Upper Rubicon R, 3-VIII-2004 (BLAB), and General Cr, Sugar Pine St Prk, 3-VIII-1969, and Upper Truckee R, Hwy 50, 20-VIII-1969, Noble (CAS), and South Fork American R, Riverton, 12-X-1971, Darb & /Shay (SSU); FRESNO: Bear Cr, 7-VIII-2001 (EPA), and Huntington L, Rancheria, 31-VII-1984, and Laurel Cr, 1-VI-1987, MacDonald, and South Fork San Joaquin R, Blaney Mdws, 10-VIII-1948, Day (PERC), and Kings R, Trimmer, 15-IX-1993 (USGS), and Mono Cr, 9-VIII-2004, and South Fork King's R, 17-VIII-2004, and Summit Cr, 20-X-2001 (BLAB); HUMBOLDT: Boise Cr, 25-VI-2002, and Bridge Cr, 10-VIII-2004, and Horse Linto Cr, 22-VII-2004, and Red Cap Cr, 24-VI-2002 (BLAB), and Butte Cr, 7-VIII-2001 (EPA), and Redwood Cr trib, 1 mi N Redwood Cr, 2001 (FGCH); INYO: Big Pine Cr, 8-IV-1986, and Division Cr, 1-III-1986, and Independence Cr, and South Fork Oak Cr, 7-III-1986, and Lone Pine Cr, 10-IV-1986, and North Fork Oak Cr, 27-II-1986, Giuliani, and Goodale Cr, 6-V-1986, and Taboose Cr, 13-II-1986, Baumann & Giuliani (BYU), and Rawson Cr, IX-2001 (FGCH), and Shepard Cr, 20-VII-2004 (BLAB); KERN: Kern R, 22-VII-2004 (BLAB); LAKE: Skeleton Cr, 2002 (FGCH); LASSEN: Pine Cr, 10-X-2001 (BLAB); Rock Cr, 15-VIII-2004, and Susan R, 28-VII-2004 (BLAB); MADERA: Boggy Mdws, 15-VII-1946, Chandler, and Willow Cr, 5-VII-1951, Day (CAS), and Lewis Cr, Hwy 41, 18-III-1985, Baumann & Nelson (BYU), and Middle Fork San Joaquin R, Pumice Flats, 7-VIII-1985 (PERC), and Nelder Cr, 27-VI-2004, and Stairway Cr, 23-IX-2004, and West Fork Granite Cr, 28-VI-2004 (BLAB); MARIPOSA: Bishop Cr, 7-VII-2004, and Miami Cr, 15-IX-2004, and Yosemite Cr, 7-IX-2004 (BLAB), and East Fork Lee Vining Cr, 4 mi W Hwy 395, 26-VII-1967, Allen, and Wawona, Yosemite Natl Prk, 17-VII-1946, Chandler (CAS), and Grouse Cr, Hwy 41, Yosemite Natl Prk, 26-VI-2003, Meyer & Pfister (PERC), and Illilouette Cr, 3-X-2000 (EPA),

and Merced R nr Yosemite Natl Prk, 16-IX-1993 (USGS), and S entrance, Yosemite Natl Prk, 18-III-1985, Baumann & Nelson (BYU), and South Fork Merced R, Yosemite Natl Prk, 29-VIII-2000, and Tenaya Cr, 30-VIII-2000 (FGSO); MENDOCINO: Beaver Cr, Smokehouse Cr, 29-IX-2004, and Duncan Cr, 17-VIII-2004 (BLAB), and Eel R, 14-VIII-2001 (EPA); MODOC: Bidwell Cr, 15-VIII-1989, and Lassen Cr, 13-VIII-1989 (BLAB); MONO: Cottonwood Cr, 29-VIII-2004, and Mammoth Cr, 5-X-2001, and O'Harrel Cr, 14-IX-2004, and South Cottonwood Cr, 12-X-2004 (BLAB), and Deadman Cr, Hwy 395, 27-VI-2003, Meyer (PERC), and Dexter Cr, 14-III-1985, Baumann & Nelson (BYU), and Robinson Cr, 18-VII-1952, A, and Frying Pan Cr, 13-VII-1952, and Green Cr, 6-VIII-1952, and Virginia Cr, 24-VII-1952, Day, and Sardine Cr, Hwy 108, E Sonora Pass, 8-VIII-1964, Leech (CAS), and Hilton Cr, 2-VII-2001 (EPA); NEVADA: Eure Valley, 4-VII-1948, Day (CAS), and Sagehen Cr, 10 mi N Truckee, 22-VIII-82, Shepard (SSU); PLACER: Blackwood Cr, 3-VIII-2005, and Middle Fork American R, 15-X-2007 (BLAB), and Squaw Cr, 4-VII-1954, Day (CAS); PLUMAS: Antelope Cr, 16-IX-2002, and Boulder Cr, 18-IX-2001, and Butt Cr, 20-IX-2004, and Florentine Cr, 21-X-2001, and Galeppi Cr, 28-VII-2004, and Little Antelope Cr, 25-VII-2004, and Little North Fork Middle Fork Feather R, 29-VI-2004, and Middle Fork Feather R, 15-VIII-2004, and Middle Jackson Cr, 25-VII-2004, and North Fork Middle Fork Feather Cr, 29-VII-2001, and Nelson Cr, 25-VII-2004, and Pauley Cr, 11-IX-2002, and Pinchard Cr, 1-X-2002, and South Branch Middle Fork Feather R, 5-VIII-2001, and Slate Cr, 22-IX-2004, and Upper Jackson Cr, 25-VII-2004, and West Branch Nelson Cr, 25-VIII-2001 (BLAB), and Jamison Cr, 30-VIII-2000 (FGSA), and Warner Cr, 5 mi NW Chester, 25-VI-1980, Baumann & Stanger (BYU), and Willow Cr, 28-V-1950, Day (PERC); SAN BERNARDINO Alder Cr, 2-X-2002, and Powerline Cr, 1-X-2002 (BLAB), and Bear Cr, 28-VI-2001, and South Fork Santa Ana R, 5-VI-2002 (EPA), and Santa Ana R, Running Springs, 19-VII-1999 (USGS); SHASTA: Burney Cr, 20-VII-1953, and Hat Cr, 29-VII-1953, and North Butte Cr, 14-VII-1953, Day, and Viola, 27-VI-1947, Chandler (CAS), and Clover Cr, Ponderosa Way, 2002, and Wagon Cr, 2001 (FGCH), and Cow Cr, 14-IX-2004, and South Fork Bailey Cr, 10-VIII-2004 (BLAB), and Hour Cr, Hwy 89, 21-IX-1968, Rentz (UCB), and McCloud R, Ladybug Cr, McCloud, 8-IX-1997 (USGS), and North Fork Backbone Cr, 11-IX-2001, and Old Cow Cr, 28-VIII-2002, and South Fork Slate Cr, 23-VIII-2001, and Squaw Valley Cr, 30-VII-2002 (EPA); SIERRA: Bear Valley Cr, 31-VII-2001, and Lincoln Cr, and North Fork Yuba R, 26-VII-2004, and Perazzo Cr, 7-X-2001, and Smithneck Cr, 8-IX-2002 (BLAB), and Rock Cr, 5.7 mi SE Loyalton, 20-VI-1990, Barr & Shepard, and Chapman Cr, 3 mi NE Yuba Pass, 12-VII-1981 (SSU), and Sagehen Cr, VII-1953, Day (LACM); SISKIYOU: Buckhorn Cr, 2-X-2001, and Duck L Cr, 13-IX-2000, and Eddy Cr, 12-IX-2000, and Butte Cr, 21-VIII-2001, and North Fork Salmon R, 27-VIII-2003, and Seiad Cr, 26-VIII-2003, and Shovel Cr, 15-VIII-2001, and Wagon Cr, 22-VIII-2001 (EPA), and Canyon Cr, 15-VIII-2004, and Elk Cr, 27-VII-2004, and Grider Cr, 10-XI-2002, and Indian Cr, 25-X-2001, and Mill Cr, 21-X-2001, and Wooley Cr, 5-XI-2001 (BLAB), and Sacramento R, 9-VII-1953, Chandler, and Scott R, Roxbury, VIII-1949, Day (CAS); TEHAMA: Carter Cr, 22-IX-2003, and Lower Gurnsey Cr, and Slate Cr, 2-IX-2001, and South Fork Calf Cr, 3-IX-2003, and Swamp Cr, 4-VIII-2003 (BLAB), and Deer Cr, Jonesville, 10-IX-1998 (USGS), and North Fork Antelope Cr, and South Fork Antelope Cr, 2002 (FGCH); TRIN-

ITY: Bear Cr, 11-VII-2002 (EPA); Big Cr, 28-VIII-2001, and Browns Cr, 25-VII-200?, and Dark Canyon Cr, 18-IX-2003, and Reading Cr, 12-IX-2002, and Squirrel Gulch, 15-VIII-2000 (EPA), and Mumba Cr, and Weaver Cr, 2001 (FGCH), and Stuart Fork, Hwy 36, 14-IX-2000 (FGSA); TULARE: Clicks Cr, 20-IX-2001, and Golden Trout Cr, 13-VIII-2003, and Movie Stringer Cr, 8-IX-2004, and North East Fork Cr, 13-VIII-2003, and South Fork Kaweah R, 16-VIII-2004, and Poison Mdw Cr, 21-VII-2004, and South Fork Kern R, 10-X-2004, and Spear Cr, 21-VII-2004, and Stokes Stringer Cr, 13-VIII-2003 (BLAB), and Dorst Cr, Sequoia Natl Prk, 25-VII-1967 (CAS), and E Fork Kaweah R, Mineral King Rd, 24-XII-2000, Meyer et al. and Marble Fork Kaweah R, Hwy 198, Lodgepole, Sequoia Natl Prk, and Woodward Cr, Hwy 198, 3-VII-2003, and North Fork Kaweah R, N Fork Dr, 4-VII-2003, and Silliman Cr, Hwy 198, Sequoia Natl Prk, and Suwanee Cr, Hwy 198, Lodgepole, Sequoia Natl Prk, 2-VII-2003, Meyer (PERC), and Monache Cr, 25-VI-2002 (EPA), and and Pearl L trail, 1 mi E Wolverton, Sequoia Natl Prk, 26-VIII-1969, Malin/Malin (UCR); TUOLUMNE Clark Fork, 2-VIII-2000, and Deadman Cr, 3-VIII-2000, and Mill Cr, 30-VII-2000, and Summit Cr, 10-VIII-2000 (FGSO), and Clavey R, 23-VIII-2004, and Hull Cr, 8-VIII-2001, and Middle Fork Tuolumne R, 24-VIII-2004, and Parker Pass Cr, 8-IX-2004, and South Fork Tuolumne R, 31-VIII-2004 (BLAB), and Niagara Cr, Hwy 108, 26-VI-1980, and South Fork Tuolumne R, Hwy 120, 27-VI-1980, Baumann & Stanger (BYU), and Tuolumne R, Dana Fork, 19-VIII-1949, Day (CAS), and Yosemite Cr, Hwy 120, Yosemite Natl Prk, 27-VI-2003, Meyer (PERC).

*Ephemerella aurivillii* (Bengtsson)

*Previous data.*—Allen and Edmunds (1965): NEVADA (Eure Valley, Sagehen Cr).

*New data.*—BUTTE Big Chico Cr, Chico, 6-VIII-1996 (USGS); EL DORADO: Upper Truckee R, 2-VII-1950, Day (CAS); HUMBOLDT: Klamath R, 22-V-2002 (EPA); LOS ANGELES: San Gabriel R, 18-X-2001 (BLAB); MERCED: Merced R, Snelling, 23-IX-1994 (USGS); MONTEREY: Arroyo Seco at Escondido, 3-VIII-2004, and Tassajara, 5-VIII-2004, and Willow Cr, 4-VIII-2004 (BLAB); NEVADA: Little Truckee R, 5-VIII-2004 (BLAB); ORANGE: San Gabriel R, 26-IX-2001 (BLAB); PLACER: North Fork American R at Ponderosa Bldg, 10-X-2007 (BLAB); PLUMAS: Cottonwood Cr, 18-XI-2003, and Greenhorn Cr, 16-VI-2003 (BLAB); RIVERSIDE: Herkey Cr, 10-V-2001 (EPA); SACRAMENTO: American R, Sacramento, 7-X-1997 (USGS); SAN BERNARDINO: Barton Cr, 6-VI-2002, and Deer Cr, 16-V-2002 (EPA); SAN JOAQUIN: Stanislaus R, Riverbank, 31-VIII-1994 (USGS); SANTA BARBARA: Manzana, 23-VI-2003 (BLAB); SANTA CLARA: Stevens Cr, 10,20-VI-1978, Klee (CAS); SHASTA: McCloud R, Ladybug Cr, McCloud, 22-VIII-1996 (USGS); SISKIYOU: South Fork Salmon R, 8-VII-2002, and Specimen Cr, 22-VII-2004, and Wooley Cr, 2-IX-2006 (BLAB); SONOMA: Sulphur Cr, 27-IV-2000 (PERC); STANISLAUS: Stanislaus R, Ripon, 16-VIII-1995 (USGS); SUTTER: Feather R, Nicolas, 31-VII-1996 (USGS); TEHAMA: Deer Cr, Campbellville, 4-IX-1997 (USGS); TULARE: Dry Cr, Hwy 121, S of Badger, 16-III-1985, Baumann & Nelson (BYU); TUOLUMNE: Clavey Cr, 21-VIII-2006, and Trout Cr, 17-VIII-2006 (BLAB); VENTURA: Lions Cr, 24-VI-2004, and North Fork Matalija, 22-VI-2004, and East Fork Santa Paula, 29-VI-2004 (BLAB); YOLO: Cache Cr, Guinda, 24-VII-1996 (USGS); YUBA: Yuba R, Marysville, 3-X-1997 (USGS).

*Ephemerella dorothea* McDunnough

*Previous data.*—Traver (1935a) as *E. infrequens* McDunnough: EL DORADO (Lake Tahoe); Traver (1935a) as *E. mollitia* Seemann: TULARE (Sequoia Natl Prk), TUOLUMNE (Tuolumne R); Allen and Edmunds (1965) as *E. infrequens*: ALPINE (West Fork Carson R), NEVADA (Eure Valley), SHASTA (Hat Cr); Allen and Edmunds (1965) as *E. mollitia*: LOS ANGELES (San Antonio Cyn, San Dimas), SAN BERNARDINO (Cucamonga Cyn); Allen (1968) as *E. mollitia*: AMADOR (Sutter Cr), LAKE (St. Helena Cr), NAPA (Sage Cr), PLUMAS (Feather R), SAN MATEO (Pescadero Cr), SANTA CLARA (Smith Cr), SONOMA (Sonoma Cr); Kennedy (1967) as *E. infrequens*: MONO (Convict Cr); Collins (1970) as *E. mollitia*: LOS ANGELES (Little Rock Cr); Leland et al. (1986) as *E. infrequens*: MONO (Convict Cr); Jacobus and McCafferty (2003): INYO (North Fork Oak Cr).

*New data.*—ALPINE: E Fork Carson R, 3-VII-1950, and Markleville, 4-VII-1949, Day, A (CAS), and West Fork Carson R, 26-VI-2002 (EPA); AMADOR: Mokelumne R, Hwy 49, 24-VI-2003, Meyer & Pfister (PERC); Volcano, 15-VII-1957 (SSU); BUTTE: Big Chico Cr, Hwy 32, and Little Chico Cr, Schott Rd, and Little West Fork, Skyway Rd, and West Fork Feather R, Skyway Rd, 14-V-2002, Meyer (PERC); CALAVERAS: Mokelumne R, Electra Rd, Hwy 49, 24-VI-2003, Meyer & Pfister (PERC); COLUSA: Little Stony Cr, 6 mi S Stonyford, 29-III-1956, Leech (CAS), and Middle Fork Stony Cr, 6 mi W Stonyford, 4-IV-1987, Shepard, and Mill Cr, 6 mi SW Stonyford, Doody (SSU); EL DORADO: General Cr, Sugar Pine St Prk, 3-VII-1969, Noble (CAS), and Saxon Cr, 26-VIII-2001 (BLAB), and Trout Cr, W Tahoe Keys, 28-XII-2000, and Upper Truckee R, VIII-2003, Randolph (PERC), and Weber Cr, 30-I-1977, Corpus (SSU); FRESNO: Laurel Cr, 1-VI-1987, MacDonald (PERC); GLENN: Grindstone Cr, Rd 305 (N 162W), 13-V-2002, Meyer (PERC); HUMBOLDT: Boise Cr, 24-VI-2002, and West Fork Mill Cr, 9-V-2001 (BLAB); INYO: Big Pine Cr, and Goodale Cr, 6-V-1986, and Taboose Cr, 13-II-1986, Baumann/Giuliani, and Lone Pine Cr, 23-IV-1986, and South Fork Oak Cr, 7-III-1986, Giuliani (BYU), and Bishop Cr, Bishop, 24-VI-1934, Smith, A (CUAC), and Horton Cr, 8 mi NW Bishop, Hwy 395, 18-IX-1969, Frommer et al (UCR), and Independence Cr, Onion Valley Rd, L Grays Mdw Campground, 28-VI-2003, Meyer & Pfister, and South Fork Bishop Cr, 25-VI-1934 (PERC), and Tuttle Cr, 2 mi SW Lone Pine, 14-V-1969, Haddock (UCB). KERN: Brush Cr, 26-II-1953 (LACM), and Shirley Cr, Hwy 155, 2-IV-1981, Baumann & Stanger (BYU); KINGS: Ishim Cr, 1-V-1976, Klee (CAS); LASSEN: Pine Cr, 28-VII-2004 (BLAB); LOS ANGELES: Claremont, 30-III-1923 (CUAC); MADERA: Fresno R, Hwy 41, 10-V-2002, Meyer (PERC); MARIPOSA: Merced R, 4 mi N Hwy 140 entrance, Yosemite Natl Prk, 25-VI-2003, Meyer & Pfister, and Merced R., Yosemite Natl Prk, 1 mi E jct Hwy 140/120, 25-III-1967, Allen (PERC); MENDOCINO: Fern Cr, Van Damme SP, 18-II-1985, Baumann & Nelson (BYU), and Pieta Cr, 5 mi S Hopland, 23-V-1976, Nowierski (UCB); MODOC: Buck Cr RS, 11,13-VI-1970, Dietz, A (UCB); MONO: 1 mi SW Tom's Pl, 14-VIII-1963, MacNeill & Lundgren, A, and Sonora Bridge Camp, 28-VII-1962, Rentz & MacNeill, A (CAS), and Deadman Cr, Hwy 395, 27-VI-2003, Meyer (PERC), and Dexter Cr, Adobe Res, 14-III-1985, Baumann & Nelson (BYU), and Mammoth Cr, 5-X-2001 (BLAB); MONTEREY: Big Sur R, 2-XI-1948, Wirth, and Piney Cr, Arroyo Seco, 24-IV-1976, Ulrich, and Santa Lucia Cr, Girl Scout Camp, 3-V-1964, Finlay (UCB), and Salmon Cr, Hwy 1, 7-V-2002, Meyer (PERC);



NEVADA: Sagehen Cr, 11-IV-1952, Needham (UCB), and Truckee R, Farad, 7-X-1996 (USGS), and Wolf Cr, 11 mi N Auburn, 25-II-1989, Lockhart (SSU); PLACER: Bear R, YMCA Camp, Hwy 20, and Jordan Cr, Bowman Rd, 18-V-2002, Meyer et al, and South Yuba R, Cisco Grove, Hwy 80, 25-III-1966, Miner (PERC), and Truckee R, 30-III-1979, Moore, and Weber Cr, Fornis Rd Br, 26-II-1977, Hall (SSU); PLUMAS: Quincy, 16-V-1948, Wirth (UCB), and Warner Cr, 5 mi NW Chester, 25-VI-1980, Baumann & Stanger (BYU), and Willow Cr, 2-VII-2002 (BLAB); RIVERSIDE: San Jacinto R, 11-V-1952 (LACM); SAN BERNARDINO: South Fork Santa Ana R, Burro Flats, 25-V-1993, Al-Wahaibi (UCR); SAN LUIS OBISPO: Margarita Cr, Hwy 101, 22-IV-1966, Haddock (UCB); SANTA CLARA: Barrett Cr, IX-1998, Fend (GSMP), and Steven's Cr, 28-IV-1951, Day, A, and Guadalupe Cr, 12-V-1978, Klee (CAS); SHASTA: Castle Crags St Prk, 28-VI-1962, Toschi, A (UCB), and Clear Cr, Placer Rd, and Whiskey Cr, 2002 (FGCH), and Fall R, 19-III-1949, Day, A, and Sacramento R, Flume Cr, 26-III-1956, Morrison (LACM), and Hat Cr, Big Springs, 10-X-1976, Furnish (INHS); SIERRA: Fiddle Cr, Hwy 49, and North Yuba R, Hwy 49, and Ramsham Cr, Hwy 49, 17-V-2002, Meyer (PERC), and Goodyear Cr, 23-IV-1977, Hall (SSU); SISKIYOU: Mt Shasta City, 20-VI-1958, Powell, A, and Ash Cr RS, 9 mi E McCloud, 7,9-VI-1974, Szerlip (UCB); TEHAMA: Big Chico Cr, Hwy 32, and Deer Cr, Hwy 32, and Gurnsey Cr, Hwy 32, 14-V-2002, Meyer (PERC); TEHAMA: Mill Cr, 5 mi N Childs, 3-VII-1959, Allen (PERC); TULARE: Ash Mt, Kaweah Power Station #3, 15-V-1983 (BYU), and Marble Fork Kaweah R, Hwy 198, Lodgepole, Sequoia Natl Prk, 3-VII-2003, and Silliman Cr, Hwy 198, Sequoia Natl Prk, 2-VII-2003, Meyer, and North Fork Kaweah R, N Fork Dr, 23-XII-2000, Meyer & McWherter (PERC); TUOLUMNE: Niagara Cr, Hwy 108, 26-VI-1980, Baumann & Stanger (BYU); YUBA: Brandy Cr, Pendola Rd, and Middle Yuba R, Moonshine Rd, and Willow Cr, Pendola Rd, 17-V-2002, Meyer (PERC).

***Ephemerella excrucians* Walsh**

*Previous data.*—Traver (1935a) as *E. inermis* Eaton: MONO (Tioga R); Allen and Edmunds (1965) as *E. inermis*: ALPINE (Markleeville, West Fork Carson R), INYO (South Fork Bishop Cr), MADERA (Chilacoot Cr, nr Soquel), MARIPOSA (Merced R), SAN MATEO (Pescadero Cr), SHASTA (Hat Cr), TEHAMA (Mill Cr), TULARE (Marble Fork Kaweah R); Allen (1968) as *E. inermis*: LOS ANGELES (Santa Anita Cr); Collins (1970) as *E. inermis*: LOS ANGELES (East Fork San Gabriel Cyn, Little Rock Cr, Santa Anita Cyn).

*New data.*—ALPINE: Silver King Cr, 29-VI-2001 (BLAB); AMADOR: Sutter Cr, 2-IV-1977, Hall (SSU); DEL NORTE: Elk Cr, 19-VI-2001, and Shelly Cr, 3-VII-2002 (BLAB); EL DORADO: Alder Cr, 11-XI-2003, and Big Hill Cyn Cr, 24-XI-2003, and Camp Cr, 11-XI-2003, and Dogtown Cr, 30-X-2003, and Jones Fork Silver Cr, 18-XI-2003, and Sherman Cyn Cr, 27-XI-2003, and Upper North Fork Consumnes R, 19-XI-2003 (BLAB), and General Cr, Sugar Pine St Prk, 3-VII-1969, and Taylor Cr, Hwy 89, VI-1970, and Upper Truckee R, Hwy 50, 13-V-1970, and Tahoe Keys Marina, 28-V-1969, Noble (CAS); GLENN: Stoney Cr, 21-IV-1951, Day (CAS); HUMBOLDT: Red Cap Cr, 19-XI-2002, and South Fork Bear Cr, 13-X-2004 (BLAB); INYO: Big Pine Cr, and South Fork Oak Cr, 16-VI-1986, and Goodale Cr, 16-II-1986, and Independence Cr, 27-II-1986, and North Fork Oak Cr, 7-III-1986, Giuliani, and Lone Pine Cr, 7-III-



1986, Baumann & Giuliani (BYU); KERN: South Fork Kern R, Onyx, 15-III-1985, Baumann & Nelson (BYU); LOS ANGELES: Santa Ana R, 28-IV-1962, Brown (CAS); MARIPOSA: East Fork Lee Vining Cr, 4 mi W Hwy 395, and South Fork Merced R, Wawona Camp, Yosemite Natl Prk, 26-VII-1967, Allen (CAS); MONO: Frying Pan Cr, 4-VIII-1952, Day, A.L., and Robinson Cr ditch, 16-VII-1952, Day (CAS), and Mammoth Cr, 25-VI-1996 (BLAB); MONTEREY: Big Cr, Hwy 1, 2002 (FGCH); NEVADA: Grizzly Cr, 6-I-2003, and Prosser Cr, 27-VII-2004, and Spring Cr, 17-XII-2002 (BLAB), and Sagehen Cr, 3-VII-1947, Chandler (CAS), and Truckee R, Farad, 30-VI-1994 (USGS); PLACER: Humbug Canyon Cr, 16-IV-1999, and 17-IV-2003, and South Fork Long Canyon Cr, 25-X-2000 (BLAB); PLUMAS: Florentine Cyn Cr, and Nelson Cr, 30-VI-2004, and Middle Fork Sloat Cr, 16-VII-2003 (BLAB), and North Fork Feather R, 26-IV-1953, Chandler (CAS); SAN BERNARDINO: South Fork Santa Ana R, Angeles Oaks, 21-VII-1999 (USGS); TEHAMA: North Fork Antelope Cr, Ponderosa Way, 2002 (FGCH); TULARE: Ash Mountain flume, Three Rivers, 4-VI-1987, MacDonald (PERC), and South Fork Kern R, 8-IX-2004 (BLAB); TUOLUMNE: Clark Fork, 2-VIII-2000 (FGSO).

***Ephemerella maculata* Traver**

*Previous data.*—Traver (1934) as *E. euterpe* Traver: LOS ANGELES (San Gabriel Mtns), SANTA CRUZ (Waddell Cr); Allen and Edmunds (1965): LOS ANGELES (San Gabriel Cyn), MENDOCINO (Baechtel Cr, Broadus Cr, Eel R), SAN MATEO (San Gregario Cr), SANTA CRUZ (Waddell Cr); Allen (1968): ALAMEDA (Niles Cyn), AMADOR (Ione), COLUSA (jct Hwy 16/20), CONTRA COSTA (San Ramon Cr), GLENN (Stoney Cr), LAKE (Middle Cr), NAPA (Capell Cr); Collins (1970): LOS ANGELES (East Fork San Gabriel R, Little Rock Cr, North Fork San Gabriel R, San Gabriel Cyn, San Gabriel R, West Fork San Gabriel R).

*New data.*—AMADOR: Niles Cyn, 8-V-1949, Day (CAS); BUTTE: Big Chico Cr, 26-V-1967, Malin (UCR); CALAVERAS: Calaveritas Cr, Calaveritas Rd, and North Fork Calaveras R, Hwy 49, 11-V-2002, Meyer (PERC); COLUSA: Little Indian Cr, Lodoga Rd, and Little Stoney Cr, Stoneyford Rd, 13-V-2002, Meyer (PERC); CONTRA COSTA: 7 mi South Walnut Cr, 24-III-1968, Bell (UCB); GLENN: Elk R, Rd 306, and Grindstone Cr, Rd 305 (N 162W), and Stoney Cr, Elk Cr conf, 13-V-2002, Meyer (PERC); HUMBOLDT: Bull Cr, and Salmon Cr, Salmon Cr Rd, 16-V-2002, and Van Duzen R, Hwy 36, and Yager Cr, Hwy 36, W Carlotta, 15-V-2002, Meyer, and Freshwater Cr, 19-V-1988 (PERC), and Eel R, Richardson Grove SP, 31-V-1968, Haddock (UCB), and Klamath R, 22-V-2002 (EPA); LAKE: Kelsey Cr, Soda Bay Rd, 16-IV-1966, Haddock (UCB); LOS ANGELES: West Fork San Gabriel R, 20-VI-2001 (EPA); MADERA: Coarsegold Cr, Hwy 41, and Fresno R, Hwy 41, 10-V-2002, Meyer (PERC); MARIN: Lagunitas Cr, Sir Francis Drake Blvd, 19-V-2002, Meyer (PERC); MARIPOSA: Mariposa Cr, Joe Howard St, Mariposa, and West Fork Chowchilla R, Darrel Rd, 10-V-2002, Meyer (PERC); MENDOCINO: East Fork Russian R, Potter Valley Rd, and Rattlesnake Cr, Hwy 101, 11 mi W Laytonville, 16-V-2002, Meyer, and York Cr, 30-IV-2000 (PERC), and Hopland FS, 28-IV-1972, Coville, and Pieta Cr, Russian R, 5 mi S Hopland, 23-V-1976, Nowierski (UCB); MONTEREY: Big Sur R, Hwy 1, Pfeiffer-Big Sur St Prk, and Salmon Cr, Hwy 1, 7-V-2002, Meyer, and Nacimiento R, and Rattlesnake Cr, 2003 (FGCH), and San

Antonio R, Pleyto Rd, 9-IV-1963, Rentz (CAS); NAPA: Capell Cr, 2 mi NW Capell, 25-IV-1982, Shepard (SSU), and Cyrus Cr, 1-V-2000, and Garnet Cr, and Hopper Cr, 2-V-2000 (PERC); NEVADA: Rush Cr, Hwy 49, 17-V-2002, Meyer (PERC); PLACER: North Fork American R, Yankee Jims Rd, 18-V-2002, Meyer et al. (PERC); SAN BERNARDINO: Bear Cr, 28-VI-2001, and Middle Fork Lytle Cr, 19-VI-2002 (EPA), and San Antonio Cyn, 28-V-1923 (CUAC); SAN LUIS OBISPO: Old Cr, and San Luis Obispo Cr, 2002 (FGCH), and San Simeon Cr, San Simeon Cr Rd, 7-V-2002, Meyer (PERC), and Tassajara Cr, 7 mi N San Luis Obispo, 6-VI-1971, Pinto, A (UCR); SANTA BARBARA: Alamo Pintado, 9-V-2002, and Sisquoc R, 30-V-2002 (EPA); SANTA CLARA: Bodfish Cr, Whitehurst Rd, 2003 (FGCH), and Isabel Cr, 1-V-1956, Burdick, A, and Smith Cr, 18-V-1953, Burns (UCB), and Stevens Cr, 12-X-1977, Klee (CAS); SANTA CRUZ: Big Cr, Swanton Rd, and Scott Cr, Swanton Rd, 9-VII-2003, and Waddell Cr, 10-VII-2003, Meyer (PERC), and Little Sur R, VII-2002, and San Vicente Cr, Davenport, and Soquel Cr, Laurel Glen Rd, 2003 (FGCH); SHASTA: Churn Cr, Redding, 14-V-1948, Wirth (UCB); SISKIYOU: Wagon Cr, 22-VIII-2001 (EPA); SONOMA: 2 mi E Healdsburg, 17-V-1964, Arnaud, A (CAS), and Big Sulfer Cr, The Geysers, 12-V-1977 (UCB); TRINITY: South Fork Trinity, 18-V-2002 (EPA); VENTURA: Agua Blanca Cr, 7-VI-2001, and Piru Cr, 14-VI-2001, and Scholder Cr, 5-VI-2001 (EPA), and Howard Cr, 1.6 mi N Route 6n31, 2001 (FGCH).

***Ephemerella tibialis* McDunnough**

*Previous data.*—Traver (1935a): LOS ANGELES (San Gabriel Mtns); Gard (1961): NEVADA (Sagehen Cr); Allen and Edmunds (1963): HUMBOLDT (nr Willow Cr), NEVADA (South Fork San Joaquin R), PLUMAS (North Fork Deer Cr), SIERRA (Lincoln Cr), TULARE (Dorst Camp, Sequoia Natl Prk); Allen and Collins (1968) as *Serratella sequoia* (Allen & Collins): TULARE (Salmon Cr); Leland et al. (1986): MONO (Convict Cr).

*New data.*—ALPINE: East Fork Carson R, jct Hwys 4/89, and Silver Cr, Hwy 4, and Upper Cascade Cr, Hwy 4, 26-VIII-2003, Randolph, and Markleeville Cr, Markleeville, 21-IX-1957, Edmunds & Allen (PERC), and Hot Springs Cr, Grover Hot Springs, 5-XI-1983, Titus (SSU), and West Fork Carson R, Paynesville, 22-VII-1994 (USGS); BUTTE: Big Chico Cr, Butte Mdws, 16-IX-1997 (USGS), and French Cr, 5 mi NE Madrone L, 22-VII-1970, Frommer & LePre (UCR), and West Branch North Fork Feather R, 9-IX-1976, Hogue (LACM); CALAVERAS: Blue Cr, 6-VII-1989 (BLAB); DEL NORTE: Elk Cr, 21-VI-2001 (BLAB), and South Fork Winchuck R, 6-VIII-2002 (EPA), and Winchuck R, 2002 (FGCH); EL DORADO: 4 mi W Kyberz, 29-VIII-1953, Selander & Selander (PERC), and Camp Cr, 16-VII-2003, and Middle Fork Consumnes R, 12-VIII-2003, and North Fork Consumnes R, 12-VIII-2003 (BLAB), and General Cr, Sugar Pine St Prk, 19-VIII-1969, and Upper Truckee R, Hwy 50, 10-X-1950, Noble, and Rubicon R, Georgetown-Ralston Rd, 27-VII-1963, Leech (CAS), and One-eye Cr, 18-VI-1977, Hall, and South Fork American R, Riverton, 24-VIII-1971, Darb & Hall (SSU); FRESNO: Bear Cr, 7-VIII-2001 (EPA), and Kings R, Trimmer, 15-IX-1993 (USGS), and South Fork San Joaquin R, Blayne Mdws, VIII-1948, Day (PERC), and Summit Cr, 11-VIII-2004 (BLAB); GLENN: Cold Cr, 25-VI-2002 (EPA), and Upper Black Butte R, 4-VII-2002 (BLAB); HUMBOLDT: Bluff Cr, 14-VII-2002, and North Fork Bear Cr, 6-VI-2002, and Red Cap Cr, 3-VII-2002, and South Fork Bear Cr, 17-VI-2002, and Slate Cr, 23-VI-2002, and West Fork

Mill Cr, 7-VI-2004 (BLAB), and Canoe Cr, 22-VII-2003, and Fern Cyn, 12-VIII-2003, and Lawrence Cr, 23-VII-2003, and Little Freshwater Cr, 8-VIII-2001, and Maple Cr, 20-VIII-2002, and West Fork Sproul Cr, 10-VII-2002 (EPA), and Mad R, Blue L, 2-VII-1959, Allen, and Redwood Cr, Brice Thorne Rd, and Salmon Cr, Salmon Cr Rd, 16-V-2002, Meyer, and Freshwater Cr, 19-V-1988 (PERC); INYO: Lone Pine Cr, Whitney Portal Rd, 28-VI-2003, Meyer & Pfister (PERC), and North Fork Bishop Cr, 12-VIII-2004 (BLAB); KERN: Kern R, 22-VII-2004 (BLAB); LASSEN: Bogard Cr, 12-VII-2004, and Butte Cr, 7-VII-2004, and Pine Cr, 13-VII-2004 (BLAB), and South Fork Pitt R, 7 mi E Likely, 3-IX-1983, Hosea (SSU); LOS ANGELES: San Gabriel R, 14-VI-1996, Hogue (PERC); MADERA: Middle Fork San Joaquin R, Pumice Flats, 7-VIII-1985 (PERC); MARIPOSA: Merced R, Yosemite Natl Prk, 16-VIII-1933 (INHS), and South Fork Merced R, Wawona Camp, Yosemite Natl Prk, 26-VII-1967, Allen (CAS), and Tenaya Cr, Mirror Lake, Yosemite Natl Prk, 13-IX-1994 (USGS), and Wildcat Cr, Hwy 41, Yosemite Natl Prk, 26-VI-2003, Meyer & Pfister (PERC); MENDOCINO: Cottoncove Cr, Hwy 1, 15 mi SW Leggett, 21-VI-1985, Baumann et al (BYU), and Duncan Cr, 17-VIII-2004 (BLAB), and Eel R, 2001 (FGCH); MODOC: Cedar Cr, 11.5 mi W Cedarville, 15-VIII-1991, Shepard, and Cedar Pass, 6-VII-1974, Fields (SSU), and East Cr, 20-VII-2004, and South Fork Parker Cr, 20-VII-2004 (BLAB); MONO: Cottonwood Basin, 3-VIII-1975, Rude (UCB), and Hilton Cr, Hwy 395, 2001 (FGCH), and Long Valley Cr, 3-VII-2001 (EPA), and West Walker R, Rt 395, 6-VIII-1985 (PERC); MONTEREY: Piney Cr, 22-VII-2003, and Prewitt Cr, 14-V-2003 (BLAB); NEVADA: Prosser Cr, 27-VII-2004 (BLAB), and Sagehen Cr, 10 mi N Truckee, 27-VIII-1982, Shepard (SSU), and Yuba R, 2 mi W Cisco Grove, 6-VIII-1959, Allen (PERC); PLACER: Blackwood Cr, 20-VII-2004, and Middle Fork American R, 15-X-2007 (BLAB), and Five Lakes Cr, Alpine Mdws Ski Area, 14-VIII-1968, Baumann (PERC); PLUMAS: Boulder Cr, 6-VIII-2002, and Coldwater Cr, 30-VI-2004, and Grizzly Cr, 14-VII-2003, and Little North Fork Middle Fork Feather R, 29-VI-2004, and L Jackson Cr, and Middle Jackson Cr, 25-VII-2004, and Nelson Cr, 13-VIII-2003, and Pauley Cr, 22-VIII-2004, and Rush Cr, 20-VII-2003, and Upper Jackson Cr, 25-VII-2004 (BLAB), and Chester, 18-VIII-1949, Day, and Middle Fork Feather R, 15-IX-1970, Noble (CAS); RIVERSIDE: Strawberry Cr, Idyllwild, 13-VI-1959, Edmunds (PERC); SAN DIEGO: Sweet Water R, 16-V-2001 (EPA); SANTA BARBARA: Kelly Cr, 13-VII-2004 (BLAB), and Sisquoc R, 29-V-2002 (EPA); SANTA CLARA: Guadalupe Cr, and Stevens Cr, 10,20-VI-1978, Klee (CAS); SANTA CRUZ: Big Cr, Swanton Rd, and Scott Cr, Swanton Rd, 9-VII-2003, and Waddell Cr, 10-VII-2003, Meyer (PERC); SHASTA: Burney Cr, 12-IX-2001, and South Fork Slate Cr, 23-VIII-2001 (EPA), and Castle Cr, 3 mi W I-5, 10-VIII-1985 (PERC), and Wagon Cr, 2001, and French Gulch Cr, French Gulch, and Mad Ox Gulch, Whiskey Cr, and Mill Cr, Stamp Mill, and New York Gulch, Hwy 299, and Whiskey Cr, 2002 (FGCH), and Hat Cr, Fall R Mills, 6-VI-1969, Apperson (UCR), and Honn Cr Camp, Hwy 89, 21-IX-1968, Rentz (UCB), and McCloud R, Ladybug Cr, McCloud, 20-VIII-1996 (USGS), and South Fork Bailey Cr, 10-VIII-2004 (BLAB); SIERRA: 3 mi SE Sierraville, Rt 89, 7-VII-1946, Muliak & Muliak (PERC), and 4 mi E Bassets, Rt 49, 20-IX-1946 (INHS), and Lincoln Cr, 14 mi E Sierra City, 2-X-1983, Devorak, and North Fork Yuba R, X-1981 (SSU), and Perazzo Cr, 24-VIII-2003 (BLAB); SISKIYOU: Butte Cr, 21-VIII-2001, and East Fork Indian Cr, 8-VIII-2000, and South Fork Salmon R, 13-VIII-2002, and Sugar

Cr, 10-VII-2002 (EPA), and Canyon Cr, 15-VIII-2004, and Mill Cr, 18-VII-2004, and North Fork Salmon R, 8-VIII-2004 (BLAB), and Duck L Cr, 13-VIII-2000 (FGSA), and Grouse Cr, and Wagon Cr, Davis Pl Rd, 2001 (FGCH), and Scott R, Roxbury, VIII-1949, Day (CAS); TEHAMA: Deer Cr, Jonesville, 10-IX-1998 (USGS), and Mill Cr, 5 mi W Childs Mdw, 3-VII-1959, Allen (PERC), and Slate Cr, 23-IX-2003 (BLAB), and South Fork Antelope Cr, 2002 (FGCH); TRINITY: Bear Cr, 11-VII-2002, and East Fork Coffee Cr, 9-VII-2002, and East Fork S Fork Trinity R, 17-IX-2003, and Mumbo Cr, 24-VII-2001, and Squirrel Gulch, 15-VIII-2000, and Stuart Fork, 9-VIII-2000 (EPA), and Corral Cr, and Weaver Cr, 2001, and South Fork Trinity R, Wild Mad Rd, 2003 (FGCH); TULARE: Cabin Cr, Hwy 198, Sequoia Natl Prk, 2-VII-2003, and Marble Fork Kaweah R, Hwy 198, Sequoia Natl Prk, and Stoney Cr, Hwy 198, 3-VII-2003, Meyer, and Three Rivers, 4-VIII-1984, MacDonald (PERC), and South Fork Kaweah R, 16-VIII-2004 (BLAB); TUOLUMNE: Clark Fork, 2-VIII-2000, and Summit Cr, 10-VIII-2000 (FGSO), and E Sonora Pass, 6-VIII-1985 (PERC), and Tuolumne R, Dana Fork, 19-VIII-1949, Day, A (CAS); VENTURA: 0.5 mi W Buckingham, US 299, 16-IX-1946 (INHS), and Howard Cr, 1.6 mi N Route 6n31, 2001 (FGCH), and Scholder Cr, 5-VI-2001 (EPA).

***Ephemerella velmae*** Allen and Edmunds

*Previous data.*—Allen and Edmunds (1963): INYO (North Fork Bishop Cr).

*New data.*—FRESNO: Laurel Cr, 1-VI-1987, and Huntington L, Sample Mdw, and Kaiser Pass, 10-VII-1984, MacDonald (PERC), and Division Cr, 9-III-1986, and Goodale Cr, and Lone Pine Cr, 16-VI-1986, and North Fork Oak Cr, 23-IV-1986, Giuliani (BYU); PLUMAS: Jackson Cr, 9-VIII-2005 (BLAB); SISKIYOU: Irving Cr, 21-VI-2004 (BLB); TULARE: Suwanee Cr, Hwy 198, Sequoia Natl Prk, 2-VII-2003, Meyer (PERC).

***Eurylophella lodi*** (Mayo)

*Previous data.*—Mayo (1952b): AMADOR (Dry Cr).

*New data.*—BUTTE: Glen Cr, 2002 (FGCH); NEVADA: Truckee R, Farad, 7-X-1996 (USGS).

***Matriella teresa*** (Traver)

*Previous data.*—Traver (1934) as *Ephemerella cognata* Traver: LOS ANGELES (San Antonio Cyn), SANTA CRUZ (Waddell Cr); Day (1952) as *E. cognata*: NAPA (Sage Cr), SAN MATEO (San Gregorio Cr), SANTA CRUZ (Waddell Cr), SONOMA (Sonoma Cr); Gard (1961) as *E. cognata*: NEVADA (Sagehen Cr); Allen and Edmunds (1963): CALAVERAS (Cottage Grove), EL DORADO (nr Kyburz), HUMBOLDT (Mad R, nr Willow Cr, Hoopa Valley Indian Res, Willow Cr), LOS ANGELES (East Fork San Gabriel R), MADERA (Chilacoot Cr), NEVADA (Sagehen Cr), SANTA CRUZ (Waddell Cr), SISKIYOU (Scott R, Swillup Cr), TEHAMA (Mill Cr); Kennedy (1967): MONO (Convict Cr); Collins (1970): LOS ANGELES (Little Rock Cr, West Fork San Gabriel R); Serpa (1986): SONOMA (Copeland Cr).

*New data.*—ALAMEDA: Strawberry Cyn, Berkeley, IV-1938, Maehler (CAS); ALPINE: Clark Fork Cr, 6-IX-2001 (BLAB), and Markleville, 4-VII-1949, Day, A (CAS), and West Fork Carson R, 26-VI-2002 (EPA); CALAVERAS: Blue Cr, 5-VII-1989 (BLAB), and Calaveritas Cr, Calaveritas Rd, 11-V-2002,

Meyer (PERC), and Oneil Cr, 15-VII-2003 (EPA); DEL NORTE: Clarks Cr, 30-VII-2003, and Coldwater Cr, 29-VII-2003, and Smith R, 14-VI-2001 (EPA); EL DORADO: Oyster Cr, Hwy 88, 19-X-1999 (PERC), and Saxon Cr, 4-IX-2001 (BLAB); FRESNO Bear Cr, 7-VIII-2001 (EPA), and Huntington L, Sample Mdw, 10-VII-1984, MacDonald (PERC), and Kings R, Trimmer, 15-IX-1993 (USGS); GLENN: Upper Black Butte R, 20-VI-2003 (BLAB); HUMBOLDT: Bluff Cr, 14-VII-2002, and Boise Cr, 25-VI-2002, and Camp Cr, 23-VI-2002 (BLAB), and Boer's Ranch, 6-IX-2003, Barbercall, and Bull Cr, and Redwood Cr, Brice Thorne Rd, 16-V-2002, and Van Duzen R, Hwy 36, 15-V-2002, Meyer (PERC), and Canoe Cr, 22-VII-2003, and Honeydew Cr, 22-VII-2003, and Mill Cr, 17-VII-2002 (EPA); INYO: North Fork Oak Cr, 24-V-1986, and South Fork Oak Cr, 16-VI-1986, Giuliani (BYU), and Wyman Cyn, Deep Springs, 15-VII-1953, Lattin (CAS); LASSEN: Parsnip Cr, 13-VII-2004 (BLAB); LOS ANGELES: West Fork Alder Cr, 21-VI-2001 (EPA), and West Fork San Gabriel R, 2001 (FGCH); MADERA Coarsegold Cr, Hwy 41, 10-V-2002, Meyer (PERC), and Salter Cr, 15-VI-1934 (INHS), and Willow Cr, 12-VI-1951, Day (CAS); MARIN: Lagunitas Cr, 22-V-1978, Fields (WCF); MARIPOSA: East Fork Chowchilla R, Hwy 49, 10-V-2002, Meyer (PERC), and South Fork Merced R, Wawona Camp, Yosemite Natl Prk, 26-VII-1967, Allen (CAS); MENDOCINO: 7 mi NE Eel R Station, 12-VI-1972, Szerlip (UCB), and Anchor Bay, 15-VIII-1946, Chandler (CAS), and Baechtel Cr, 3 mi W Willits, 15-VI-1948, Leech (PERC); MERCED: Merced R, Snelling, 23-IX-1994 (USGS); MODOC: Bidwell Cr, 11-VIII-1989, and Lasssen Cr, 13-VIII-1989 (BLAB), and Rush Cr, 16-VII-1950, Leech (CAS); MONO: Convict Cr, Mammoth Lakes, 15-VIII-1992, Cooper (PERC), and Hilton Cr, 2-VII-2001 (EPA); MONTEREY: Garrapata Cr, and North Fork San Antonio R, and Tassajara Cr, Tassajara Hot Springs, 2003 (FGCH), and Partington Cr, Hwy 1, 7-V-2002, Meyer (PERC); NAPA: Hopper Cr, 3-V-2000, and Chiles Cr, 30-IV-2000, and Cyrus Cr, and Garnet Cr, 1-V-2000, and Huichica Cr, 1-V-2000 (PERC), and Sonoma Cr, 3-VII-1950, Day, A (CAS); NEVADA: Canyon Cr, 18-VII-1989, and Sagehen Cr, 9-VII-2001 (BLAB), and Truckee R, Hwy 40, E Donner Summit, 2-VIII-1952, Selander & Selander (PERC); PLACER: Bunch Cr, Yankee Jims Rd, 18-V-2002, Meyer et al (PERC); PLUMAS: Antelope Cr, 20-VII-2004, and Boulder Cr, 18-IX-2001, and Chips Cr, 31-VII-2002, and South Branch Middle Fork Feather R, 5-VIII-2001, and West Branch Nelson Cr, 21-VIII-2001 (BLAB); RIVERSIDE: Herkey Cr, 10-V-2001 (EPA), and Strawberry Cr, Hwy 74, 6 mi W Mountain Center, 21-VI-1977, Baumann & Hogue (BYU); SAN BERNARDINO: Barton Cr, 6-VI-2002, and Bear Cr, 26-VI-2001, and Deer Cr, 16-V-2002, and Middle Fork Lytle Cr, 19-VI-2002 (EPA), and Mill Cr, 5 mi W Forest Falls, 4-VI-1978, Clark (UCR), and San Antonio Cyn, 11-VI-1923, Needham (CUAC), and South Fork Santa Ana R, Angeles Oaks, 24-VII-2001 (USGS); SAN DIEGO: Santa Ysabel, 24-IV-2002, and West Fork San Luis Rey R, 17-V-2001 (EPA); SANTA BARBARA: Coche Cr, and West Fork Santa Cruz Cr, 2001 (FGCH), and Kelly Cr, 12-VI-2002, and Santa Cruz Cr, 10-VII-2001, and Sisquoc R, 30-V-2002 (EPA); SANTA CLARA: Guadalupe Cr, 16-V-1953, Day, and Stevens Cr, 12-X-1977, Klee (CAS); SANTA CRUZ: Scott Cr, 2003 (FGCH); SHASTA: Brandy Cr, South Shore Dr, and Clear Cr, Hwy 273, and Mill Cr, El Dorado Stamp Mill, 2002 (FGCH), and Hat Cr, Heuers, 15-VII-1953, Day (CAS), and Pit R, Fender Crossing, 27-IV-1984 (PERC); SIERRA: Lavazolla Cr, 2-VIII-1988 (BLAB); SISKIYOU: Clear Cr, 20-VII-2004 (BLAB), and Copper Cr, 31-VII-



2001 (EPA), and Cottage Grove, 2-VII-1959, Allen (PERC); SOLANO: Ulatris Cr, Mix Canyon Rd, 12-V-2002, Meyer (PERC); STANISLAUS: Tuolumne R, Waterford Rd, 2003 (FGCH); TEHAMA: Carter Cr, 8-VII-2004 (BLAB); Slate Cr, 2-IX-2001 (BLAB); TRINITY: Bear Cr, 11-VII-2002, and Corral Cr, 11-VII-2001, and Mumbo Cr, 24-VII-2001, and South Fork Trinity R, 18-V-2002 (EPA), and Trinity R, 2002 (FGCH); TULARE: Monache Cr, 25-VI-2002 (EPA), and North Fork Kaweah R, N Fork Dr, 9-V-2002, Meyer (PERC), and Salmon Cr, Horsemeadow Campground, Sequoia Natl Prk, 1-VII-1965, Vann (CAS); TUOLUMNE: Rough and Ready Cr, Algerine Rd, 11-V-2002, Meyer (PERC), and Two Mile Cr, 16-VIII-2006 (BLAB); VENTURA: Coyote Cr, 12-VI-2001, and Scholder Cr, 5-VI-2001 (EPA), and Howard Cr, 1.6 mi N Route 6n31, and Piru Cr, 2001 (FGCH).

***Serratella levis* (Day)**

*Previous data.*—Day (1954b): NAPA (Capell Cr); Gard (1961): NEVADA (Sagehen Cr); Allen and Edmunds (1963): NEVADA (Sagehen); Kennedy (1967): MONO (Convict Cr).

*New data.*—DEL NORTE: Middle Fork Smith R, 15-IX-2000 (EPA); EL DORADO: Oyster Cr, Hwy 88, 19-X-1999 (PERC), and Taylor Cr, Hwy 89, 26-IX-1968, Noble (CAS); HUMBOLDT: Eel R, 29-VI-1968 (UCB); INYO: Big Pine Cr, 1-III-1986, and Goodale Cr, 16-II-1986, Guiliani, and Independence Cr, and South Fork Oak Cr, 12-II-1986, and Lone Pine Cr, 7-III-1986, Baumann & Giuliani (BYU); MENDOCINO: Pieta Cr, Russian R, 5 mi S Hopland, 23-V-1976, Nowierski, and 7 mi W Eel R RS, 10-VI-1972, Szerlip (UCB); NAPA: Cyrus Cr, 1-V-2000 (PERC); SACRAMENTO: American R, Sacramento, 29-VII-1996 (USGS); SAN DIEGO: West Fork San Luis Rey R, 2001 (FGCH); SISKIYOU: Kelsey Cr, 10-IX-1989 (BLAB); SONOMA: Russian R, 2 mi N Cloverdale, 8-VII-1975, Rude (UCB), and Sulphur Cr, 15-VII-1950, Day (CAS); TUOLUMNE: Deadman Cr, 5-VII-1989 (BLAB).

***Serratella micheneri* (Traver)**

*Previous data.*—Traver (1934): LOS ANGELES (San Gabriel Cyn); Gard (1961): NEVADA (Sagehen Cr); Allen and Edmunds (1963): LOS ANGELES (East Fork San Gabriel R), MENDOCINO (Broadus Cr, Eel R), NEVADA (nr Donner, Prosser Cr), SAN BERNARDINO (Warm Springs Cr), SISKIYOU (Klamath R, Scott R), STANISLAUS (Riverbank), TULARE (Kaweah R); Collins (1970): LOS ANGELES (Bear Cr, Big Tujunga Cyn, East Fork San Gabriel R, North Fork San Gabriel R, San Gabriel R, West Fork San Gabriel R); Green (1976): SACRAMENTO (American R).

*New data.*—ALPINE: West Fork Carson R, Wood, 21-VII-1994 (USGS); BUTTE: Butte Cr, Rich Bar Rd, 2002 (FGCH); CALAVERAS: North Fork Calaveras R, Hwy 49, 11-V-2002, Meyer (PERC), and Oneil Cr, 15-VII-2003 (EPA), and San Antonio Cr, 3-VII-1974, Fields (SSU); DEL NORTE: Smith R, 24-V-2002 (EPA); EL DORADO: Consumnes R, 24-VIII-1971, Darby & Hall, and Silver Cr, 10-VI-1977, Hall (SSU); FRESNO: Alder Cr, 16-VII-1988 (BLAB); HUMBOLDT: Eel R, 19-VI-2001, and Klamath R, 22-VI-2001, and Van Duzen R, 10-VII-2001 (EPA); KERN: Kern R, 20-VII-2004, Bottorff (PERC); LAKE: St Helena Cr, 11-VII-1979, Hall & Reichle (SSU); LASSEN: Sagehen Cr, 17-VIII-1951 (UCB); LOS ANGELES: Big Tujunga Cyn, 19-VI-2001, and Piru Cr,



20-VI-2000 (EPA), and East Fork Rincon, 15-IX-1965, Vann, and Monrovia Cyn Cr, 22-VII-1968, Malone (CAS), and Elizabeth L Cyn, 13-V-1953 (LACM), and West Fork Alder Cr, 2001 (FGCH); MADERA: 7 mi ENE Fish Camp, 17-VII-1946, Chandler (CAS), and Big Cr, 23-VI-1989 (BLAB); MARIPOSA: Mahoney Gulch, Hwy 132, Coulterville, and Mariposa Cr, Joe Howard St, Mariposa, 10-V-2002, Meyer (PERC), and Merced R, Briceburg, 16-IX-1994 (USGS), and Wawona, 17-VII-1946, Chandler (CAS); MENDOCINO: 7 mi W Eel R RS, 12-III-1972, Szerlip, and Pieta Cr, Russian R, 5 mi S Hopland, 23-V-1976, Nowierski (UCB); MERCED: Edendale Cr, Hwy 59, and Merced R, Merced Falls Rd, 11-V-2002, Meyer (PERC); MODOC: South Fork Pit R, 29-VIII-2000 (EPA), and Lassen Cr, 12-VIII-1989 (BLAB); MONO: Mill Cr, 7-IX-2004 (BLAB), and Rush Cr, 3-VIII-1953, Chandler (CAS); MONTEREY: Arroyo Seco Cr, and Nacimiento R, and San Antonio R, Sam Jones Rd, and Tassajara Cr, Tassajara Hot Springs, 2003 (FGCH); NAPA: Capell Cr, 21-VI-1952, Day (CAS), and Cyrus Cr, 1-V-2000, and Milliken Cr, 26-IV-2000, and Napa R, Calistoga (PERC), and St Helena Cr, 11-VII-1979, Hall & Reichle (SSU); NEVADA: Sagehen Cr, 6 mi N Truckee, 2-X-1983, Shober (SSU); PLUMAS: North Fork Feather R, 2002, Fields (PERC); RIVERSIDE: Fuller Mill Cr, 2001 (FGCH); SACRAMENTO: American R, Goethe Prk, 10-VII-1980, Dubbs (SSU), and Consumnes R, Thornton, 10-V-1952, Day (CAS); SAN BERNARDINO: Bear Cr, 28-VI-2001, and City Cr, 11-VI-2002, and Mill Cr, 15-V-2002 (EPA), and Santa Ana R, Running Springs, 19-VII-1999 (USGS); SAN DIEGO: Cold Stream, 15-V-2001 (EPA), and Sweetwater R, 2001 (FGCH); SAN JOAQUIN: Stanislaus R, Caswell St Prk, 2-IX-1994 (USGS); SAN LUIS OBISPO: San Luis Obispo Cr, and Toro Cr, 2003 (FGCH), and San Simeon Cr, San Simeon Cr Rd, 7-V-2002, Meyer (PERC); SANTA BARBARA: Cachuma Cr, 7-V-2003, and Coche Cr, 11-VII-2001, and Sisquoc R, 30-V-2002 (EPA), and Santa Ynez R, 13-VII-1971, Frommer, A (UCR), and West Fork Santa Cruz Cr, 2001 (FGCH); SANTA CLARA: Alamitos Cr, Mazzone Dr, V-1997, Fend (PERC), and Coyote Cr, IX-1998, Fend (GSMP); SANTA CRUZ: Soquel Cr, Laurel Glen Rd, 2003 (FGCH), and Waddell Cr, Rancho de Oso, Shepherd, A (CUAC); SHASTA: Burney Falls, 7-IX-1946, Chandler (CAS), and Clear Cr, Hwy 273, 2002 (FGCH); SIERRA: Sagehen Cr, 10 mi N Truckee, 28-VIII-1982, Shepard, and North Fork Yuba R, X-1981 (SSU); SISKIYOU: Boulder Cr, 28-VI-2005 (BLAB), and Klamath R, 7-IX-2000 (EPA), and South Fork Sacramento R, 9-IX-1953, Chandler (CAS); SONOMA: Russian R, Hwy 128, Geyserville, 21-VIII-2003, Randolph (PERC); STANISLAUS: Stanislaus R, Knights Ferry, 19-IX-1994 (USGS), and Tuolumne R, Triangle Ranch, 26-VI-1954, Day, A.L (CAS); SUTTER: Feather R, Nicolas, 31-VII-1996 (USGS); TEHAMA: Deer Cr, Vina, 12-VIII-1998 (USGS), and Dye Cr, 2001 (FGCH), and Little Dye Cr, 20-VIII-2001 (EPA); TRINITY: Browns Cr, 25-VII-2001, and Trinity R, 30-VIII-2000, and West Fork Van Duzen R, 11-VII-2002 (EPA), and Grass Valley Cr, Weaverville, 16-IX-1946, Chandler (CAS), and Van Duzen R, Zenia Rd, 2002, and Weaver Cr, 2001 (FGCH); TULARE: North Fork Kaweah R, North Fork Dr, 4-VII-2003, Meyer, and Three Rivers, 4-VIII-1984, MacDonald (PERC), and Nobe Young Cr, 11-VI-1989 (BLAB); TUOLUMNE: First Cr, Blanchard Rd, and Hatch Cr, Blanchard Rd, 11-V-2002, and South Fork Tuolumne R, Rainbow Pool, Hwy 120, 25-VI-2003, Meyer (PERC); VENTURA: Agua Blanca Cr, 7-VI-2001, and Matilija Cr, 14-VI-2000, and North Fork Matilija Cr, 4-VI-2003, and Piru Cr, 6-VI-2001, and Santa Paula Cr, 8-V-2002, and Scholder

Cr, 5-VI-2001, and Sespe Cr, 13-VII-2000 (EPA), and Coyote Cr, and Howard Cr, 1.6 mi N Route 6n31, 2001 (FGCH); YOLO: Cache Cr, Guinda (Rd 57), 12-V-2002, Meyer (PERC); YUBA: Middle Yuba R, Moonshine Rd, 17-V-2002, Meyer (PERC).

***Timpanoga hecuba* (Eaton)**

*Previous data.*—Allen and Edmunds (1959) as *Ephemerella h. pacifica* Allen & Edmunds: MENDOCINO (Baechtel Cr), SIERRA (nr Sierra City), SISKIYOU (Scott R); Gard (1961): NEVADA (Sagehen Cr).

*New data.*—ALPINE: Carson R, VIII-1949, Day, A (CAS), and East Fork Carson R, jct Hwy 4/Hwy 89, 26-VIII-2003, Randolph, and West Fork Carson R, 2 mi NE Woodsford, 21-IX-1957 (PERC); CALAVERAS: Blue Cr, 9-VII-1989 (BLAB), and Middle Fork Mokelumne R, Hwy 26, 8-VII-1967, Evans (PERC), and San Antonio Cr, 3-VII-1974 (SSU); DEL NORTE: Blue Cr, 20-VII-2004, and North Fork Smith R, 12-VII-2004 (BLAB), and Coldwater Cr, 29-VII-2003 (EPA); EL DORADO: Camp Cr, 16-VII-2003, and L Pilot Cr, 27-VIII-2001, and Sopiago Cr, 29-VII-2003 (BLAB), and Upper Truckee R, Hwy 50, 20-VIII-1970, Noble (CAS); FRESNO: Alder Cr, 14-VII-1988 (BLAB); GLENN: Upper Black Butte R, 25-VI-2002 (BLAB); HUMBOLDT Bluff Cr, 21-VII-2004, and Boise Cr, 24-VI-2002, and Bridge Cr, 26-V-2003, and Camp Cr, 23-VI-2002, and Horse Cr, 11-VI-2002, and Mattole R, 26-V-2003, and North Fork Bear Cr, 6-VI-2002, and South Fork Bear Cr, 6-VI-2002, and Yew Cr, 22-V-2003 (BLAB), and Canoe Cr, 22-VII-2003, and Honeydew Cr, 22-VII-2003, and Lawrence Cr, 23-VII-2003, and Trout Cr, 6-VIII-2003 (EPA), and Redwood Cr, 15-IX-1946, Chandler (CAS); LAKE: Rattlesnake Cr, 21-VI-2001, and Trout Cr, 14-VI-2001 (BLAB), and Trout Cr, 2003 (FGCH); LASSSEN: Susan Cr, 3-VII-2003 (BLAB); MENDOCINO: Broadus Cr, Hwy 20, 1.3 mi W Willits, 2-VII-1959, Allen (PERC), and Mattole R, 22-V-2003, and Thompson Cr, 26-V-2003 (BLAB), and Noyo R, VII-2002 (FGCH); NEVADA: Deer Cr, Broad St, 2001 (FGCH), and Prosser Cr, 27-VII-2004, and Sagehen Cr, 9-VII-2001 (BLAB); PLUMAS: Frenchman Cr, 28-VII-2004, and Rush Cr, 12-VII-2004, and South Branch Middle Fork Feather R, 5-VIII-2001, and Willow Cr, 6-VII-2004 (BLAB); SANTA CRUZ: San Vicente Cr, Davenport, 2003 (FGCH), and Scott Cr, Swanton Rd, 9-VII-2003, Meyer (PERC); SHASTA: McCloud R, Ladybug Cr, McCloud, 20-VIII-1996 (USGS), and Shasta R, 3 mi N Weed, 3-VII-1959, Allen (PERC); SIERRA: Independence Cr, 27-VII-2004 (BLAB), and Indian Cr, Hwy 49, 26-VIII-1961, Leech (CAS); SISKIYOU: Beaver Cr, 1 mi E Klamath River, 3-VII-1959, Allen (PERC), and Canyon Cr, 15-VIII-2004 (BLAB), and Klamath R, VIII-1949, Day, A (CAS), and North Fork Salmon R, 27-VIII-2003, and Sugar Cr, 10-VII-2002 (EPA); TEHAMA: Big Smoky Cr, 11-VIII-2004 (BLAB), and Deer Cr, 1-IX-1961, Leech (CAS), and South Fork Trinity, 18-V-2002 (EPA); TRINITY: Hayfork Cr, 13-VII-1988, and Little Trinity Cr, 6-VII-2004, and Upper Rattlesnake Cr, 12-VIII-1988 (BLAB); TULARE: Inidan Cr, 24-VIII-1989 (BLAB); TUOLUMNE: Reed Cr, 15-VIII-2006, and Reynolds Cr, 14-VIII-2006 (BLAB), and South Fork Tuolumne R, Rainbow Pool, Hwy 120, 25-VI-2003, Meyer (PERC).

## Ephemeridae

**Hexagenia limbata** (Serville)

*Previous data.*— Upholt (1937) as *H. californica* Upholt: FRESNO (Kingsburg).

*New data.*— BUTTE: Oroville, 5-VI-1953, Denning, A (CAS); CONTRA COSTA: Oakley, 10-VII-1986, Brown, A (FGCH); EL DORADO: Deer Cr, 10-I-1972, Blasell (SSU); FRESNO: San Joaquin Valley, 16,31-VII-1955, Schnick, A (LACM), and Selma, 6-VII-1950, Schlenger, A (UCD); GLENN: Willows, 7-IX-1969, Marks, A (LACM); KERN: 4 mi N Bakersfield, 26-VII-1952, Selander, A (PERC), and Greenfield, 19-VII-1958, Stange, A, and Bakersfield 24-VII-1944, A (LACM), and Kern Prk, 15-VII-1946, Ehrenford, A (UCB); KINGS: Hanford, 17-VII-1950, Schlenger, A, and Helm, 17-VI-1953, Michalk, A (UCD); LAKE: Cache Cr, Lower L, 25-V-1947, Chandler (CAS); LASSEN: Blue L, 15,19-VIII-1962, Rees/Reid, A (LACM), and Standish, 9-VIII-1959, Chemsak, A (UCB); MADERA: 3 mi W Chowchilla, 30-VI-1960, Snelling, A (LACM); MERCED: 10 mi E Gustine, 14-V-1953, Ross, A, and Merced, 9-VIII-1972, Denning, A (CAS), and Dos Palos, 22-VI-1948, Adams, A (UCB), and Winton, 2-VIII-1951, Lammelan, A (UCD); MODOC: 1 mi E Likely, 9-X-1976 (INHS), and Alturus, 24-VI-1954, Denning, A (CAS), and Pit R, Canby, 5-VII-1983, Hill, A (SSU), and Rush Cr, 12-VI-1987, Kleinties, A (CSU); PLACER: Lincoln, 22-VII-1976, Melnicoe, A, and Newcastle, 15-VII-1972, Fields, A (SSU); SACRAMENTO: L Natoma, 9-IX-1982, Sizelove, A, and Notoma, 15-VII-1973, Wigglesworth, A, and Prairie City, 20-XI-1977, Boucher, A, Rosemont, 24-VII-1978, Hall, A, and Sacramento, 20-IX-1989, Glenn, A, and and Rancho Seco, 22-VII-1974, A, and American R, XI-1981 (SSU), and Carmichael, 25-VI-1960, Gantanbein, A, and Fair Oaks, 19-VII-1969, Meyer, A (UCD); SAN BERNARDINO: Mitchell Caverns, 8-IV-1977, A (SSU); SHASTA: Fall R Mills, 24-VI-1972, Schneeflock, A (UCB); SISKIYOU: Boulder Cr, 6-IX-2005 (BLAB); STANISLAUS: Modesto, 5-VIII-1980, Weissman, A (CAS), and Newman, 30-VI-1954, Moore, A (UCD), and Stanislaus PG&E Power Plant Site, 5 mi N of Turlock L, 21-IX-1976, Collins, A, and Westley, 13-VII-1949, Leigh, A (UCB); SUTTER: irrigation canal, 26-IV-1977, Roberts (SSU); TRINITY: 3 mi SW Callahan, 29-V-1977, Shapiro, A (UCD); TULARE: Dinuba, 28-VII-1976, Roush, A (UCD), and Tipton, 1-VII-1958, Allen, A, and Visalia, 21-VII-1952, Murrey, A (UCB); TUOLUMNE: Tuolumne Mdw, Yosemite Natl Prk, 16-VII-1950, Alexander, A (PERC); YOLO: Cache Cr, 1-IX-1951, Day (PERC), and Davis, 18-V-1997, Ledford (UCD), and Woodland, 30-VII-1973, Stroud, A (SSU); YUBA: Merle Collins Res, Hashagen (PERC).

## Heptageniidae

**Cinygma dimicki** McDunnough

*New data.*— KERN: Cedar Cr, Hwy 155, 5 mi N Alta Sierra, 15-VIII-1975, Rude, A (UCB); MARIPOSA: Merced R, Yosemite Natl Prk, 8-VI-1994, Fend, A (PERC); MENDOCINO: Gibson Cr, 1 mi W Ukiah, 6-IX-1976, Hogue, A (LACM); PLUMAS: Domingo Spring, 6 mi NW Chester, 25-VI-1980, Baumann & Stanger, A (BYU).

***Cinygma integrum* Eaton**

*Previous data.*—Serpa (1986): SONOMA (Copeland Cr).

*New data.*—EL DORADO: 2 mi N Kelsey, 23-VI-1967, A (UCB), and General Cr, Sugar Pine St Prk, X-1969, Noble, and Whaler Cr, 2 mi SE Quintette, 27-VII-1963, Leech (CAS), and Weber Cr, 31-X-1973, Caywood (SSU); FRESNO: Oak Flat Campground, 22-VII-1984, MacDonald (PERC); HUMBOLDT: Redwood Cr, Brice Thorne Rd, 16-V-2002, Meyer, and Redwood Grove Cr, 3 mi E jct Hwys 101/199, 16-IV-1967, Evans (PERC); MADERA: Willow Cr, VII-1951, Day (PERC); MARIPOSA: 7 mi NE Fish Camp, 11-VII-1946, Chandler (UCB), and Fish Camp, 2-VII-1946, Mulaik (PERC); MENDOCINO: Hendy Woods St Prk, 14/21-VI-1968, Bell & Bell (CAS); NEVADA: Rush Cr, Hwy 49, 17-V-2002, Meyer (PERC); PLACER: Bunch Cr, Yankee Jims Rd, and Jordan Cr, Bowman Rd, 18-V-2002, Meyer et al (PERC); PLUMAS: Domino Springs, 28-V-1950, Day (PERC), and Rock Cr, 7-VIII-1974, Fields (SSU); SONOMA: Russian R, Cloverdale, 8-VIII-1967, Allen, A (CAS); TEHAMA: Mill Cr, Hwy 36, 14-V-2002, Meyer (PERC); TULARE: Kings Cyn Rd, 1-VII-1946, Mulaik (PERC); YUBA: Brandy Cr, Pendola Rd, and Willow Cr, Pendola Rd, 17-V-2002, Meyer (PERC).

*Remarks.*—The Serpa (1986) record was not previously published.

***Cinygma lyriforme* (McDunnough)**

*New data.*—MADERA Willow Cr, 25-VII-1951, Day, A.L (LACM).

***Cinygmula gartrelli* McDunnough**

*New data.*—NEVADA: Sagehen Cr, 27-VI-1972, Belmont, A (UCD); SANTA CRUZ: Waddell Cr, Swanton, 4-IV-1933, A (CUAC).

***Cinygmula mimus* (Eaton)**

*Previous data.*—Traver (1935a): PLACER: (L Tahoe). Serpa (1986): SONOMA (Copeland Cr).

*New data.*—GLENN: Stoney Cr, 21-IV-1951, Day, A.L (CAS); LAKE: St Helena Cr, 12-IV-1952, Day, A.L (PERC); MENDOCINO: Big Dann Cr, 30-V-1955, Schlinger & Downey, A (CAS); MONO: Huntoon Forest Camp, 2-VII-1967, Arnaud, A, and Leavitt Mdw, 12-VIII-1963, Leech, A (CAS); NEVADA: Sagehen Cr, 21-VII-1976 (UCD); PLUMAS Thompson's Cr, 25-VII-1953, Williams, A (CAS); SANTA CLARA: Stevens Cr, 28-IV-1951, Day, A (PERC); TULARE: 0.75 mi W Tokopah Falls, Lodgepole, Sequoia Natl Prk, 30-VIII-1969, Malin, and Pear L Trail, 2 mi E Wolverton, Sequoia Natl Prk, 29-VIII-1969, Malin & Malin (UCR).

***Cinygmula par* (Eaton)**

*Previous data.*—Mayo (1952b): MADERA (Shadow Cr).

*New data.*—BUTTE: West Branch North Fork Feather R, 9-IX-1976, Hogue (LACM); CONTRA COSTA: San Leandro Cr, 3-V-1974, Buegler (UCB); INYO: Big Pine Cr, 25-IV-1986, and Division Cr, 9-III-1986, and Independence Cr, 27-II-1986, and Lone Pine Cr, 7-III-1986, and South Fork Oak Cr, 28-II-1986, Giuliani, and Goodale Cr, 11-II-1986, and North Fork Oak Cr, 12-II-1986, Baumann & Giuliani, and Horton Cr, 15-III-1985, Baumann & Nelson (BYU); LOS ANGELES: Santa Anita Cr, Chantory Flat, 28-III-1967 (CAS); MARIN: 4

mi W Fairfax, 18-IV-1967, Rentz (CAS), and Lagunitas Cyn, 20-IV-1947, Chandler (UCB); MENDOCINO: Baechtel Cr, 3 mi W Willits, 15-VI-1948, Leech (PERC); MODOC: 9 mi NE Adin, 12-VI-1974, Szerlip (UCB); MONO: North Fork Perry Aiken Cr, 23-VIII-1986, Giuliani, A, and Dexter Cr, 14-III-1985, Baumann & Nelson (BYU); SAN BERNARDINO: East Fork Barton Cr, Barton Flats, 18-II-1978, Nilsson (BYU); SANTA CLARA: Penitencia Cr, Alum Rock Pk, 20-III-1964, Finlay (UCB); SHASTA: Burney Fall, 17-IX-1946, Chandler (CAS), and Castle Cr, Castle Crags SP, 16-II-1985, Baumann & Nelson (BYU); SISKIYOU: Ash Cr RS, 9 mi E McCloud, 7,9-VI-1974, Szerlip (UCB); TUOLUMNE: Niagara Cr, Hwy 108, 26-VI-1980, Baumann & Stanger (BYU).

***Cinygmula ramaleyi* (Dodds)**

*New data.*—FRESNO: Kaiser Pass, 10-VII-1984, MacDonald (PERC); HUMBOLDT: Redwood Cr, Brice Thorne Rd, 16-V-2002, Meyer (PERC); SHASTA: Kings Cr, Lassen Natl Prk, 18-IX-1946 (UCB); TULARE: Wolverton Cr, Wolverton Ski Area, Sequoia Natl Prk, 3-VII-2003, Meyer (PERC); TUOLUMNE: E Sonora Pass, 6-VIII-1985 (PERC).

***Cinygmula reticulata* McDunnough**

*New data.*—ALPINE: East Fork Carson R, Hwy 89, S Markleville, 21-III-1985, Baumann & Nelson (BYU); INYO: North Fork Oak Cr, 27-II-1986, Giuliani, A (BYU); LAKE: Saint Helena Cr, 12-IV-1952, Day, A,L (LACM); MARIN: Muir Woods, 25-IV-1964, Denning, A (PERC); MODOC: Stough Res Campground, Hwy 299, E Cedar Pass, 29-VII-1998, Atkinson, A (BYU); MONO: Virginia Cr, VII-1952, Day, A (CAS); NEVADA: Sagehen Cr, 25-VI-1980, Harper, A (UCD); PLUMAS: Benner Cr, 6 mi N Chester, 25-VI-1980, Baumann & Stanger (BYU); SAN BERNARDINO: Barton Flats, 20-VII-1953, Belkin (LACM); SANTA CRUZ: Scott Cr, Swanton Rd, 9-VII-2003, Meyer (PERC); SIERRA: Big Springs, Hwy 49, N Sierra City, 24-VI-1980, Baumann & Stanger (BYU); TEHAMA: King's Cr Mdws, Lassen Natl Prk, 23-VII-1950, Alexander, A (PERC); TULARE: Ash Mountain, Sequoia Natl Prk, 28-IV-1979, Powell, A (UCB); TUOLUMNE: Tuolumne Mdws, Yosemite Natl Prk, Alexander, A (CAS); VENTURA: Cherry Cr, 1-IV-1981, Baumann & Stanger (BYU).

***Cinygmula tioga* Mayo**

*Previous data.*—Mayo (1952b): MONO (Lee Vining Cr).

*New data.*—EL DORADO: Sagehen Cr, 11-VI-1953, Lattin, A (UCB); MONO: Virginia Cr, 1 mi W Conway Summit, 26-VII-1952, Day, A (CAS); NEVADA: Sagehen Cr, 30-VI-1953, RLU, A (UCB); SIERRA: Sagehen Cr, VII-1953, A (LACM).

***Cinygmula uniformis* McDunnough**

*New data.*—BUTTE: Big Chico Cr, Hwy 32, and Little West Fork, Skyway Rd, and S Toadtown, Skyway Rd, and West Fork Feather R, Skyway Rd, 14-V-2002, Meyer (PERC); COLUSA: Little Stony Cr, 5 mi S Stonyford, 4-IV-1987, Shepard (SSU); EL DORADO: General Cr, Sugar Pine St Prk, X-1969, Noble, and Upper Truckee R, Hwy 50, 20-VIII-1969, Noble (CAS), and Pyramid Cr, Hwy 50, Twin Bridges, 21-III-1985, Baumann & Nelson (BYU); FRESNO: Kaiser Cr, Huntington L, 29-V-1987, MacDonald (PERC); HUMBOLDT: Van Duzen

R, Hwy 36, and Yager Cr, Hwy 36, W of Carlotta, 15-V-2002, Meyer (PERC); MARIN: Lagunitas Cr, Sir Francis Drake Blvd, 19-V-2002, Meyer (PERC), and Redwood Cr, Mt Tamalpais St Prk, 27-IV-1987, Baumann et al, A (BYU); MARIPOSA: Grouse Cr, Hwy 41, Yosemite Natl Prk, 26-VI-2003, Meyer & Pfister (PERC), and Yosemite Cr, Hwy 120, Yosemite Natl Prk, 27-VI-1980, Baumann & Stanger (BYU); MENDOCINO: Rattlesnake Cr, Hwy 101, 11 mi W Laytonville, 16-V-2002, Meyer (PERC); MONO: 4 mi W Lee Vining, 7-V-1946, Mulaik & Mulaik (PERC); MONTEREY: Big Sur R, Hwy 1, Pfeiffer-Big Sur St Prk, and Salmon Cr, Hwy 1, 7-V-2002, Meyer (PERC), and Piney Cr, Arroyo Seco, 24-IV-1976, Ulrich (UCB); NAPA: Sage Cr, 29-III-1952, Day, A,L (CAS); NEVADA: Fordyce Cr, 20-IV-1977, Hall (SSU), and Sagehen Cr, 11-IV-1952, Needham (UCB); PLACER: Bear R, YMCA Camp, Hwy 20, 18-V-2002, Meyer et al, and South Yuba R, Cisco Grove, Hwy 80, 25-III-1966, Miner (PERC); PLUMAS: Benner Cr, 6 mi N Chester, 25-VI-1980, Baumann & Stanger (BYU), and North Fork Feather R, 26-IV-1953, Chandler (CAS); SAN BERNARDINO: San Bernardino Natl For, 29-VI-1967, Evans (PERC); SAN MATEO: Pescadero Cr, Portola St Prk, 7-V-1950, Leech, A (CAS); SANTA CLARA: Guadalupe Cr, 4-IV-1954, Day, A, and Alum Rock Prk, San Jose, 15-II-1974, Ross (CAS), and Smith Cr, Mt Hamilton, 14-IV-1951, Day, A (PERC); SANTA CRUZ: Hester Cr, San Jose Rd, 20-V-2002, Meyer (PERC), and Waddell Cr, 19-V-1951, Day, A,L (CAS); SISKIYOU: Ash Cr RS, 9 mi E McCloud, 7,9-VI-1974, Szerlip (UCB); TEHAMA: Big Chico Cr, Hwy 32, and Gurnsey Cr, Hwy 36, and Mill Cr, Hwy 36, and South Fork Calf Cr, Hwy 32, 14-V-2002, Meyer (PERC); TRINITY: South Fork Trinity R, Hwy 36, 15-V-2002, Meyer (PERC); TULARE: Marble Fork Kaweah R, Hwy 198, Lodgepole, Sequoia Natl Prk, 3-VII-2003, and Silliman Cr, Hwy 198, Sequoia Natl Prk, 2-VII-2003, Meyer (PERC); TUOLUMNE: Niagara Cr, Hwy 108, 26-VI-1980, Baumann & Stanger (BYU); YUBA: Brandy Cr, Pendola Rd, 17-V-2002, Meyer (PERC).

*Remarks.*—Although Day (1954b, 1956) treated this species as occurring in California, he gave no supporting data, and thus the first bona fide California records are given here, as per McCafferty (2000).

***Ecdyonurus criddlei* (McDunnough)**

*Previous data.*—Traver (1935a) as *Heptagenia rosea* Traver: LOS ANGELES (San Gabriel Cyn); Collins (1970) as *H. rosea*: LOS ANGELES (Cattle Cyn, West Fork San Gabriel R); Serpa (1986) as *Nixe rosea* (Traver): SONOMA (Copeland Cr); Smith (2000): SANTA CRUZ (Waddell Cr).

*New data.*—ALPINE: East Fork Carson R, jct Hwys 4/89, 26-VIII-2003, Randolph (UCD), and Markleville, 4-VII-1949, Day, A (CAS), and West Fork Carson R, 2 mi NE Woodford, 21-IX-1957 (PERC); AMADOR: Mokelumne R, IX-2003, Fields (PERC), and Silver L, IX-1978, and Volcano, 19-VII-1956 (SSU); BUTTE: Big Chico Cr, Chico, 7-V-1968, Malin (UCR); CALAVERAS: Angels Cr, Hwy 4, Angels Camp, and North Fork Calaveras R, Hwy 49, 11-V-2002, Meyer (PERC), and Jesus Maria Cr, and Oneil Cr, 4-VII-1974, and San Antonio Cr, 3-VII-1974, Fields (SSU); COLUSA: Little Stoney Cr, Stoneyford Rd, 13-V-2002, Meyer (PERC); CONTRA COSTA: Bollinger Cr, 7 mi S Walnut Creek, 15-VI-1969, Bell (UCB), and Marsh Cr, 3 mi E Clayton, 2-VI-1980, Cadematori (BYU), and San Ramon Cr, 27-IV-1951, Day, A,L (LACM); EL DORADO: American R, Hwy 50/Icehouse Rd, 26-VIII-2003, Randolph (UCD), and



Placerville, 7-VII-1976 (SSU), and Upper Truckee, Hwy 50, 17-VIII-1970, Noble (CAS); GLENN: Elk R, Rd 306, and Grindstone Cr, Rd 305 (N 162W), and Stoney Cr, Elk Cr conf, 13-V-2002, Meyer (PERC); HUMBOLDT: Arcata, 21-VII-1969, Show (UCB), and NF Yager Cr, Bridgeville-Kneeland Rd, 8-VIII-1966, Leech, A (CAS), and Redwood Cr, Brice Thorne Rd, 16-V-2002, Meyer (PERC); LAKE: Middle Cr, 10 mi N Clear L, 20-VI-1985, Baumann et al (BYU), and Helena Cr, Hwy 29, 11-VII-1979, Reichle & Hall (SSU), and North Fork Cache Cr, New Long Valley Rd, 16-V-2002, Meyer (PERC); LOS ANGELES: Monrovia Canyon Cr, 24-VI-1968, Malone (CAS), and Tanbark Flat, 13-VII-1950, Hansen (UCB); MADERA: Coarsegold Cr, Hwy 41, 10-V-2002, Meyer (PERC); MARIN: Lagunitas Cr, Sir Francis Drake Blvd, and Nicasio Cr, Nicasio/Lucas Valley Rd, 19-V-2002, Meyer (PERC), and Mill Valley, 21-IX-1954, Leech, A (CAS), and Olema Cr, 0.1 mi NW Olema, 16-X-1965, Haddock (UCB); MARIPOSA: Mariposa Cr, Joe Howard St, Mariposa, 10-V-2002, Meyer (PERC), and Yosemite Village, Yosemite Natl Prk, 16-IX-1971, Kimset (UCD); MENDOCINO: 1 mi West Eel R RS, 10-VI-1972, Szerlip, and 5 mi E Hopland, 4-V-1968, Haddock (UCB), and 10 mi W Willits, 26-VII-1967, Ross & Wieties, A (CAS), and Broadus Cr, Hwy 20, W Willits, 2-VII-1959, Allen (PERC); MERCED: Edendale Cr, Hwy 59, and Merced R, Merced Falls Rd, 11-V-2002, Meyer (PERC); MODOC: 8 mi NW Fandango Pass, 11-VII-1967, Evans, A (PERC); MONO: Frying Pan Cr, 4-VIII-1952, Day, A, and Hot Springs, 2.5 mi SE Bridgeport, 15-VIII-1963, Leech, A (CAS); MONTEREY: Salmon Cr, Hwy 1, 8-VII-2003, Meyer (PERC); NAPA: Cappell Cr, Hwy 128, L Berryessa, 20-VI-1985, Baumann et al (BYU), and Helena Cr, Hwy 29, 11-VII-1979, Reichle & Hall (SSU), and Sage Cr, 5-IV-1953, Day, A (CAS); NEVADA: Prosser Cr, 5 mi N Truckee, 20-X-1983, Shober (SSU), and Rush Cr, Hwy 49, 17-V-2002, Meyer (PERC); PLACER: Foresthill, V-1976, Klee (CAS), and Middle Fork American R, Cache Rock, 15-X-2007, and North Fork Middle Fork R, 3-X-2007, and Rubicon R, Ellicott Bridge, 26-IX-2007 (BLAB); RIVERSIDE: Strawberry Cr, Hwy 74, 6 mi W Mtn Center, 21-VI-1977, Baumann & Hogue (BYU); SACRAMENTO: Folsom, 2-VII-1956 (SSU); SAN BERNARDINO: Montecito Ashley Dr, 18-V-1976, Tiemann, A (LACM); SAN LUIS OBISPO: San Simeon Cr, San Simeon Cr Rd, 7-V-2002, Meyer (PERC); SAN MATEO: San Francisquito Cr, V-1997, Fend (PERC), and San Gregorio Cr, 6-X-1951, Day, A (CAS); SANTA CLARA: Guadalupe Cr, VI-1978, A, and Stevens Cr, 12-X-1977, Klee (CAS), and Los Gatos Cr, Lexington Res, V-1997, Fend (PERC); SANTA CRUZ: Big Cr, Swanton Rd, and Scott Cr, Swanton Rd, 9-VII-2003, and Waddell Cr, 10-VII-2003, Meyer (PERC), and Zayante Cr, 21-X-1950, Day, A (CAS); SHASTA: French Gulch, Hwy 299, 20-VII-1967, Evans (PERC); SISKIYOU: Scott R, Roxbury, VIII-1949, Day, A (CAS); SOLANO: Alamo Cr, Gates Cyn Rd, and Ulati Cr, Mix Canyon Rd, 12-V-2002, Meyer (PERC); SONOMA: Russian R, Hwy 128, Geyserville, 21-VIII-2003, Randolph (UCD), and Sonoma Cr, 1.6 mi N Glen Ellen, 4-VI-1949, Day, A (CAS); TRINITY: Tangle Blue Cr, 6-IX-1969, LePre (UCR); TUOLUMNE: Rough and Ready Cr, Algerine Rd, and Sullivan Cr, Algerine Rd, 11-V-2002, Meyer (PERC); VENTURA: Los Padres Natl For, Arroyo Seco Picnic Area, 25-VI-1967, Evans, A (PERC); YOLO: Cache Cr, Guinda (Rd 57), 12-V-2002, Meyer (PERC).

*Epeorus albertae* (McDunnough)

*New data.*—ALPINE: East Fork Carson R, jct Hwys 4/89, 26-VIII-2003, Randolph (UCD); AMADOR: Volcano, 19-VII-1956 (SSU); BUTTE: Big Chico Cr, Bidwell Prk, 20-VI-1979, Stanger (BYU), and Butte Cr, Doe Mill Rd, Stirling City, 5-VIII-1997 (USGS); CALAVERAS: 4.8 km S West Point, 30-VII-1980, Williams, A (CAS); FRESNO: Big Cr, Pine Flat Res, 22-VII-1984, MacDonald (PERC); HUMBOLDT: Eel R, 29-VI-1968 (UCB); LAKE: Kelsey Cr, Soda Bay Rd, 16-IV-1966, Haddock (UCB); MENDOCINO: Pieta Cr, Russian R, 5 mi S Hopland, 23-V-1976, Nowierski (UCB); MONTEREY: Rat Cr, Dorena Dam, 14-VI-1958, Johnson (PERC); NEVADA: Hobart Mills, 8-VII-1976, Otondo (UCD), and Prosser Cr, 3 mi N Truckee, 6-VIII-1959, Allen (PERC); PLACER: Shirttail Cr, 2-IX-1973, Stroud (SSU); PLUMAS: Thompson Cr, SW Quincy, 16-VII-1985, Courtney, A, and North Fork Feather R, and Upper North Fork Feather R, IX-2001, Fields (PERC); SAN MATEO: San Gregorio Cr, 24-VI-1950, Day, A.L (CAS); SANTA CLARA: Barret Cr, V-1997, Fend, and Smith Cr, 14-VI-1958, Johnson (PERC); SANTA CRUZ: Scott Cr, Swanton Rd, 9-VII-2003, and Waddell Cr, 10-VII-2003, Meyer (PERC); SHASTA: Deep Cr, 13-IX-1953, Chandler, A (CAS), and French Gulch, Hwy 299, 20-VII-1967, Evans (PERC), and Hat Cr, Fall R Mills, 22-IX-1969, Apperson (UCR); SISKIYOU: Castle Crags St Prk, Grass L, 8-VII-1972, A (CAS), and Klamath R, SR 96, and Scott R, 2 mi NW Scott Bar, 5-VII-1967, Allen (CAS); SONOMA: Big Sulfer Cr, The Geysers, 6-IX-1976, Ulrich (UCB), and Russian R, Hwy 128, Geyserville, 21-VIII-2003, Randolph (UCD), and Sonoma Cr, 29-IV-1950, Day, A.L (CAS); SUTTER: Sacramento Slough, Nicolas, 1-VIII-1996 (USGS); TEHAMA: Deer Cr, Vina, 7-VIII-1996 (USGS).

*Remarks.*—Although Day (1954b, 1956) and Edmunds and Allen (1964) treated this species as occurring in California, they gave no supporting data, and thus the first bona fide California records are given here, as per McCafferty (2000).

*Epeorus deceptivus* (McDunnough)

*Previous data.*—Edmunds and Allen (1964): SAN BERNARDINO (Barton Flats).

*New data.*—BUTTE: Butte Cr, Jonesville, 15-IX-1997 (USGS), and West Branch North Fork Feather R, 9-IX-1976, Hogue (LACM); CALAVERAS: Calaveras Cr, 3 mi S San Andreas, Hwy 49, 8-VII-1967, Evans (PERC); EL DORADO: 4 mi W Kyburz, 29-VIII-1953, Selander/Selander (PERC), and Rubicon R, 26-VII-1938, Needham (INHS); FRESNO: Huntington L, Sample Mdw, 10-VII-1984, MacDonald (PERC); LAKE: Kelsey Cr, Kelseyville, 29-V-1949, Leech (CAS); LOS ANGELES: Big Rock Cr, Valyermo, 5-VI-1951, and Little Rock Dam, 15-V-1976, Hogue (LACM), and East Fork San Gabriel R, 16-VI-1959, Allen (CAS); MARIPOSA: 4.5 mi E Tioga Pass, Yosemite Natl Prk, 30-VIII-1968, Haddock (UCB), and 6 mi E Miami RS, 4-VII-1946, Chandler (CAS); MENDOCINO: Hopland Field Station, 3-IV-1968, Daly (UCB); MONO: Convict Cr, 11-VIII-1936, Needham (INHS), and Glacier Cr, Tioga Pass, 15-VII-1955, Hogue (LACM); NEVADA: Sagehen Cr, 3-VII-1947, Chandler (CAS), and Squirrel Cr, 25-VIII-1938, Needham (INHS); PLUMAS: North Fork Feather R, 26-IV-1953, Chandler (CAS); RIVERSIDE: Idyllwild, 24-V-1950 (LACM); SAN BERNARDINO: Lytle Cr RS, 24-VI-1968, Evans (PERC); SHASTA: Pits Dam, 12-X-1952, Chandler (CAS); SISKIYOU: Ash Cr RS, 9 mi E McCloud,

7,9-VI-1974, Szerlip (UCB); TRINITY: Upper Canyon Cr, 27-VII-1938, Needham (INHS).

***Epeorus dulciana*** (McDunnough)

*Previous data.*—Leland et al. (1986): MONO (Convict Cr).

*New data.*—ALPINE: Carson R, 21-VII-1985, Courtney, A (PERC), and Markleville, 3-VII-1950, Day, A (CAS); AMADOR: Silver L, IX-1978 (SSU); BUTTE: 4 mi SW Sterling City, 20-V-1979, Stanger (BYU), and Big Chico Cr, Hwy 32, and Little West Fork, Skyway Rd, and South Toadtown, Skyway Rd, 14-V-2002, Meyer (PERC); CALAVERAS: Angels Cr, Hwy 4, Angels Camp, and North Fork Calaveras R, Hwy 49, 11-V-2002, Meyer (PERC), and Jesus Maria Cr, 4-VII-1974, Fields (SSU); COLUSA: Little Stoney Cr, Stoneyford Rd, 13-V-2002, Meyer (PERC); EL DORADO: Consumnes R, 24-VIII-1971, Danby & Hall, and One-eye Cr, 18-VI-1977, Hall, and Butte Cr, VI-1981 (SSU), and Tells Cr, Ice House Rd, 22-VI-2003, Meyer (PERC); FRESNO: Oak Flat Campground, 22-VII-1984, MacDonald (PERC); GLENN: Grindstone Cr, Rd 305 (N 162W), 13-V-2002, Meyer (PERC); HUMBOLDT: 5 mi W Willow Cr, and Bluff Cr, 2-VII-1959, Allen, and Bull Cr, and Salmon Cr, Salmon Cr Rd, 16-V-2002, and Van Duzen R, Hwy 36, 15-V-2002, and Yager Cr, Hwy 36, W Carlotta, 15-V-2002, Meyer (PERC), and Mad R, Blue L, 2-VII-1959, Allen (CAS); INYO: Lone Pine Cr, Whitney Portal Rd, 28-VI-2003, Meyer & Pfister (PERC), and South Fork Oak Cr, 16-VI-1986, Giuliani (BYU); LOS ANGELES: Bear Cr, 31-III-1981, and Placerita Cr, Placerita St Prk, 2-IV-1981, Baumann & Stanger (BYU), and Camp Baldy, 11-VII-1950, Hansen (UCB), and East Fork San Gabriel R, 16-VI-1959, Allen (PERC), and West Fork San Gabriel R, 6-X-1965, Kevner (CAS); MADERA: Chilecoot Cr, Bass L, 19-VI-1959, Allen, and Middle Fork San Joaquin R, Pumice Flats, 7-VIII-1985 (PERC), and Windy Gap, 13-VII-1946, Chandler (CAS); MARIPOSA: Alder Cr, Hwy 41, Yosemite Natl Prk, 26-VI-2003, Meyer & Meyer, and Grouse Cr, Hwy 41, Yosemite Natl Prk, and Wildcat Cr, Hwy 41, Yosemite Natl Prk, 26-VI-2003, and Merced R, 4 mi N Hwy 140 entrance, Yosemite Natl Prk, Meyer & Pfister, 25-VI-2003 (PERC), and Big Cr, Summerdale Camp, 25-VII-1967, Allen, and Fish Camp, Rt 41, 2-VII-1946, Muliak (CAS); MENDOCINO: 4 mi W Eel R RS, 10-VI-1972, Doyan, A (UCB), and Booneville, 15-VIII-1945, Chandler (CAS), and Bridges Cr, 2-VII-1959, Allen, and Rattlesnake Cr, Hwy 101, 11 mi W Laytonville, 16-V-2002, Meyer (PERC); MONO: Frying Pan Cr, 30-VII-1952, Jewett, A (CAS), and Robinson Cr, 21-VII-1952, Day, A, L (LACM); MONTEREY: Arroyo Seco, 3-V-1959, Brown (FGCH); Partington Cr, Hwy 1, 7-V-2002, and Salmon Cr, Hwy 1, 8-VII-2003, Meyer, and Rat Cr, Dorena Dam, 14-VI-1958, Johnson (PERC), and Piney Cr, Arroyo Seco, 24-IV-1976, Ulrich, and Santa Lucia Cr, 3-V-1964, Finlay (UCB); NEVADA: Deer Cr trib, 1.5 mi N Nevada City, 20-VI-1948, Day, and Rush Cr, Hwy 49, 17-V-2002, Meyer (PERC), and Hobart Mills, 8-VII-1976, Otondo, and Sagehen Cr, 21-VII-1976, Smith (UCD), and Yuba R, 2 mi W Cisco Grove, 6-VIII-1959, Allen (CAS); PLACER: Bear R, YMCA Camp, Hwy 20, and North Fork American R, Yankee Jims Rd, 18-V-2002, Meyer et al (PERC), and South Fork American R, Kyburz, Hwy 80, 25-VIII-1978, Denning, A (BYU); RIVERSIDE: Andreas Cyn, 24-V-1980, Hartman (UCR), and Strawberry Cr, 21-VI-1977 (LACM); SACRAMENTO: Dry Cr, Frenchtown Br, 22-VIII-1938 (INHS); SAN BERNARDINO: Santa Ana R, Seven Oaks, 22-VI-1997, Baumann & Hogue, A (BYU); SAN DI-

EGO: 5 mi W Fallbrook, 2-VII-1963, Welles (UCB); SANTA CLARA: Stevens Cr, 10/20-VI-1978, Klee (CAS); SANTA CRUZ: Big Cr, Swanton Rd, 9-VII-2003, Meyer (PERC); SHASTA: Hat Cr, Heuers, 19-VII-1953, Day, A, and Sulfer Cr, Castle Craggs St Prk, 25-VII-1965, Denning, A (PERC); SIERRA: Fiddle Cr, Hwy 49, and Ramsham Cr, Ramsham Rd/Hwy 49, 17-V-2002, Meyer (PERC); SISKIYOU: South Fork Sacramento R, 15-VII-1985, Courtney, A, and Cottage Grove, 2-VI-1959, Allen (PERC); TEHAMA: Big Chico Cr, Hwy 32, and Gurnsey Cr, Hwy 36, 14-V-2002, Meyer (PERC); TRINITY: Rattlesnake Cr, Hwy 36, 15-V-2002, Meyer (PERC); TULARE: Cabin Cr, Hwy 198, Sequoia Natl Prk, and Silliman Cr, Hwy 198, Sequoia Natl Prk, 2-VII-2003, and Marble Fork Kaweah R, Hwy 198, Sequoia Natl Prk, and Stoney Cr, Hwy 198, and Wolverton Cr, Wolverton Ski Area, Sequoia Natl Prk, 3-VII-2003, and North Fork Kaweah R, N Fork Dr, 4-VII-2003, Meyer (PERC), and Lodgepole, Sequoia Natl Prk, 27/28-VIII-1969, Malin & Malin, A (UCR); TUOLUMNE: South Fork Tuolumne R, Rainbow Pool, Hwy 120, 25-VI-2003, Meyer (PERC); VENTURA: Santa Paula Cr, Hwy 150, Sulphur Springs, 1-IV-1981, Baumann & Stanger (BYU); YUBA: Brandy Cr, Pendola Rd, and Middle Yuba R, Moonshine Rd, and Willow Cr, Pendola Rd, 17-V-2002, Meyer (PERC).

*Remarks.*—Day (1954b, 1956) treated this species, but provided no supporting collection documentation for California.

***Epeorus grandis* (McDunnough)**

*Previous data.*—Kratz et al. (1994): TULARE (Marble Fork Kaweah R).

*New data.*—COLUSA: Paradise Cr, 18-IV-1952, Chandler (CAS); EL DORADO: American R, Hwy 50, and Silver Fork, American R, 12-XII-1981, Hill (SSU); HUMBOLDT: Cedar Cr, Hwy 299, 25-IV-1987, A, and Fish L, 24-IV-1987, Baumann et al, A (BYU); INYO: Big Pine Cr, and Lone Pine Cr, and South Fork Oak Cr, 23-IV-1986, and Division Cr, 9-III-1986, and Goodale Cr, 27-V-1986, Giuliani, and Horton Cr, 15-III-1985, and Independence Cr, and North Fork Oak Cr, 12-II-1986, and Taboose Cr, 13-II-1986, Baumann & Giuliani (BYU); MARIPOSA: East Fork Lee Vining Cr, 4 mi W Hwy 395, and Yosemite Cr, Yosemite Village, Yosemite Natl Prk, 26-VII-1967, Allen (CAS); MODOC: Cedar Pass, 29-VI-1955, MacSwain, A (UCB); MONO: Deadman Cr, Hwy 395, 27-VI-2003, Meyer, and Rock Cr Cmpgrd, 2 mi S Tom's Pl, 6-VII-1967, Evans, and Virginia Cr, 27-VII-1952, A,L, and Eure Valley, 4-VII-1948, Day (PERC), and Glacier Cr, Tioga Pass, 15-VII-1966, Hogue (LACM), and Nevada Deer Cr, 6-III-1977, Corpus, and Yuba R, 4-XI-2000, Carson (SSU); PLACER: Wark Cr, 2 mi S Tahoe City, 25-VII-1974, Westerland, A (LACM); PLUMAS: Upper Butte Valley Cr, 27-X-2001, Fields (PERC); SAN BERNARDINO: Barton Flats, 27-IV-1950, and South Fork Santa Ana R (LACM); SHASTA: Hat Cr, 16-VII-1953, Day (CAS); SIERRA: Big Springs, Hwy 49, N Sierra City, 24-VI-1980, Baumann & Stanger, A (BYU), and North Fork Yuba R, 1 mi E Bassetts, 28-VI-2003, Opler, A (CSU); TEHAMA: Deer Cr, Hwy 32, 10-V-1968, Evans, A (PERC); TUOLUMNE: Rt 108, E Sonora Pass, 6-VIII-1985 (PERC), and Sonora Pass, 10-VII-1957, MacSwain, A (UCB), and Stanislaus R, 19 mi S Strawberry, 6-XI-1983, Titus (SSU).

*Remarks.*—Day (1954b, 1956) treated this species, but provided no supporting collection documentation for California.

***Epeorus hesperus* (Banks)**

*Previous data.*—Banks (1924): LOS ANGELES (Pacoima); Traver (1935a) as *Iron sancta-gabriel* Traver: LOS ANGELES (San Gabriel Mtns), SANTA CRUZ (Waddell Cr).

*New data.*—LOS ANGELES: Big Tujunga Canyon, 26-VII-1967, and Santa Anita Cr, 28-III-1967, and Switzer's Camp, 26-VI-1967, Collins, and East Fork San Gabriel R, 15-VII-1965, A, and Cattle Cyn, 14-VI-1965, and Coldwater Cyn, 27-VI-1965, and San Gabriel R, 19-VII-1965, and North Fork San Gabriel R, 8-IX-1965, and Lower Cattle Cyn, 15-IX-1965, Vann (CAS), and Little Rock Cr, 11-VI-1968, and Santa Anita Cyn, 17-IV-1968, Allen, A, and Monrovia Cyn Cr, 28-II-1968, Malone, and Rio Hondo R, 20-X-1965, Cipriano, and San Gabriel Cyn, 3-IV-1967, Lowrie, West Fork San Gabriel R, 14-V-1965, Cresswell (CAS); TULARE: Salmon Cr, 2-VIII-1965, Vann, A (CAS).

*Remarks.*—Meyer and McCafferty (2007a) showed that the Banks (1924) record from Pacoima was associated with California, not Washington as it had historically been misinterpreted. The numerous records from Los Angeles County support this conclusion.

***Epeorus lagunitas* (Traver)**

*Previous data.*—Traver (1935a): MARIN (L Lagunitas); Smith (2000): SANTA CRUZ (Waddell Cr).

*Remarks.*—This species is not known outside of California.

***Epeorus longimanus* (Eaton)**

*Previous data.*—Kennedy (1967): MONO (Convict Cr); Maciolek and Tunzi (1968): MONO (Laurel Cr); Serpa (1986): SONOMA (Copeland Cr); Leland et al. (1989): MONO (Convict Cr).

*New data.*—ALPINE: Silver Cr, Hwy 4, 1.5 mi West East Fork Carson R, 26-VIII-2003, Randolph (UCD), and West Fork Carson R, Wood, 21-VII-1994 (USGS); AMADOR: Sutter Cr, 2/29-IV-1977, Hall (SSU); BUTTE: Big Chico Cr, Chico, 22-III-1968, Malin, and French Cr, 5 mi NE Madrone L, 22-VII-1970 (UCR), and Little Butte Cr, 5-III-1975, Fields (SSU), and Little Chico Cr, Schott Rd, and Little West Fork, Skyway Rd, and West Fork Feather R, Skyway Rd, 14-V-2002, Meyer (PERC); CALAVERAS: Middle Fork Mokelumne R, Hwy 26, 8-VII-1967, Evans (PERC); COLUSA: Little Stony Cr, 5 mi S Stonyford, 4-IV-1967, Shepard (SSU), and Paradise Cr, 18-IV-1952, Chandler (CAS); DEL NORTE: Cedar Cr, 31-V-2002, Reeves (PERC); EL DORADO: South Fork American R, Riverton, 24-VIII-1971, Darby & Hall, and Butte Cr, VI-1981 (SSU), and Pyramid Campground, Hwy 50, 13-VII-1978, Denning, A (BYU), and Tells Cr, Ice House Rd, 22-VI-2003, Meyer (PERC), and Upper Truckee R, 2-VII-1954, Day (LACM); FRESNO: Huntington L, Kaiser Cr, 29-V-1987, and Laurel Cr, 1-VI-1987, MacDonald (PERC), and South Fork San Joaquin R, Blaney Mdw, VIII-1948, Day (CAS); GLENN: Grindstone Cr, Rd 305 (N 162W), 13-V-2002, Meyer (PERC); HUMBOLDT: 5 mi W Willow Cr, 2-VII-1959, Allen, and Van Duzen R, Hwy 36, 15-V-2002, Meyer (PERC), and Cedar Cr, Hwy 299, 25-IV-1987, Baumann et al, A (BYU); INYO: Big Pine Cr, 6-V-1986, Baumann & Giuliani, and North Fork Oak Cr, 6-V-1986, Giuliani (BYU), and Independence Cr, Onion Valley Rd, L Grays Mdw Campground, 28-VI-2003, Meyer & Pfister, and Lone Pine Cr, Whitney Portal Rd, 28-VI-2003, Meyer (PERC); KERN: Shirley



Cr, Hwy 155, Wofford Heights, 2-IV-1981, Baumann & Stanger (BYU); LOS ANGELES: Big Rock Cr, and Littlerock Cr, 27-IV-1968, Collins, and East Fork San Gabriel R, 17-VIII-1965, and North Fork San Gabriel R, 7-VII-1965, Vann, A (CAS); MADERA: Boggy Mdws, 15-VII-1946, and Jackass Mdws, 31-VII-1946, Chandler, and Soquele, Hwy 41, 19-VI-1959, and Willow Cr, 29-VII-1967, Allen (CAS), and Reds Mdw Campground, W Devils Postpile, 20-VII-1985, Courtney, A, and Fresno R, Hwy 41, 10-V-2002, Meyer, and Chilecoot Cr, 1 mi N Bass L, 19-VI-1959 (PERC), and East Fork Granite Cr, 26-VI-1934, Needham (INHS); MARIN: 6 mi E Miami RS, 4-VII-1946, and Lagunitas Cyn, 20-IV-1947, Chandler (UCB); MARIPOSA: Alder Cr, Hwy 41, Yosemite Natl Prk, and Tenaya Cr, Mirror L, Yosemite Natl Prk, 26-VI-2003, Meyer & Meyer, and East Fork Chowchilla R, Hwy 49, 10-V-2002, Meyer, and Grouse Cr, Hwy 41, Yosemite Natl Prk, 26-VI-2003, and Merced R, 4 mi N Hwy 140 entrance, Yosemite Natl Prk, 25-VI-2003, Meyer & Pfister (PERC), and South Fork Merced R, Wawona Camp, Yosemite Natl Prk, 26-VII-1967, Allen (CAS); MENDOCINO: Indian Cr, Hwy 128, 18-II-1985, Baumann & Nelson (BYU), and Pieta Cr, Russian R, 5 mi S Hopland, 23-V-1976, Nowierski (UCB), and Rattlesnake Cr, Hwy 101, 11 mi W Laytonville, 16-V-2002, Meyer (PERC); MODOC: Rush Cr, 9 mi NE Adin, 12-VI-1974, Szerlip (UCB); MONO: Convict Cr, 13-VI-1936, Needham (INHS), and Deadman Cr, Hwy 395, 27-VII-2003, Meyer (PERC), and Leavitt Mdw, 12-VIII-1963, Leech, A, and Rush Cr, Grant L, 27-VII-1967, Allen, and Virginia Cr, 31-VII-1952, Day (CAS); MONTEREY: Rat Cr, 14-VI-1958, Johnson, and Salmon Cr, Hwy 1, 7-V-2002, Meyer (PERC); NAPA: Sage Cr, 25-III-1950, Day, A, and Campbell Cr, Oakville, Glen Ellen Rd, 10-IV-1951, Leech (CAS); NEVADA: Eure Valley, 4-VII-1948, Day (CAS), and Humbug Cr, 9-III-1979, Felleto & Cropper, and Prosser Cr, 1-V-1977 (SSU), and Rush Cr, Hwy 49, 17-V-2002, Meyer, and Truckee R, E Donner Summit, 2-VIII-1952, Selander & Selander (PERC), and Sagehen Cr, 21-VII-1976, Giblin (UCD); PLACER: Bear R, YMCA Camp, Hwy 20, and Jordan Cr, Bowman Rd, and North Fork American R, Yankee Jims Rd, 18-V-2002, Meyer et al (PERC), and Middle Fork American R, 23-V-1964 (SSU), and Truckee R, Hwy 89, 1 mi S Truckee, 19-VI-1985, Baumann et al (BYU), and Ward Cr, 2 mi S Tahoe City, 22-VII-1974, Westerland, A (LACM); PLUMAS: Benner Cr, 6 mi N Chester, and North Fork Feather R, 5 mi S Caribou, 25-VI-1980, Baumann & Stanger, A (BYU), and Wolf Cr, 2 mi N Greenville, 16-V-1948, Wirth (UCB); SAN BERNARDINO: Barton Flats, 20-VII-1953, Belkin (LACM), and Hook Cr, 5-VII-1959, Malone, A (CAS), and South Fork Santa Ana R, Angeles Oaks, 10-VII-2000 (USGS); SAN MATEO: Corte Madera Cr, V-1997, Fend (PERC); SANTA CLARA: Alamos Cr, and Saratoga, Alta Vista Ave, IX-1998, Fend (GSMP), and Guadalupe Cr, and Stevens Cr, 10, 20-VI-1978, Klee (CAS), and Smith Cr, Mt Hamilton, 7-IV-1951, Day, A (PERC); SHASTA: Big Springs Campground, 21-VII-1953, Day (CAS), and Hat Cr, 3-VII-1959, Allen (PERC), and Honn Cr Camp, Hwy 89, 21-IX-1968, Rentz (UCB), and McCloud R, Ladybug Cr, McCloud, 20-VIII-1996 (USGS); SIERRA: 2 mi E Bassets, 24-VI-2001, Opler, A (CSU), and Fiddle Cr, Hwy 49, and N Yuba R, Hwy 49, 17-V-2002, and Ramsham Cr, Ramsham Rd/Hwy 49, 17-V-2002, Meyer (PERC), and Goodyear Cr, and Ladies Cyn Cr, 23-IV-1977, Hall (SSU), and Sagehen Cr, VII-1953 (LACM); SISKIYOU: Ash Cr RS, 9 mi E McCloud, 7-9-VI-1974, Szerlip (UCB), and Fowlers Camp, 5 mi E McCloud, 30-VI-1963, MacNeill & Whitehead, A (CAS); SONOMA: Sonoma Cr, 1.6 mi N Glen Ellen,



9-IV-1949, Day (CAS); TEHAMA: Big Chico Cr, Hwy 32, and Deer Cr, Hwy 32, and Mill Cr, Hwy 36, and South Fork Calf Cr, Hwy 32, 14-V-2002, Meyer (PERC); TRINITY: Mad R, 30-VII-1960, Leech, A (CAS), and South Fork Trinity R, Hwy 36, 15-V-2002, Meyer (PERC); TULARE: Ash Mt flume, Three Rivers, 4-VI-1987, MacDonald, and Cabin Cr, Hwy 198, Sequoia Natl Prk, and Silliman Cr, Hwy 198, Sequoia Natl Prk, 2-VII-2003, and Marble Fork Kaweah R, Hwy 198, Sequoia Natl Prk, and Woodward Cr, Hwy 198, and Stoney Cr, Hwy 198, 3-VII-2003, Meyer, and Wolverton Cr, Sequoia Natl Prk, 18-VI-1959, Allen (PERC); TUOLUMNE: South Fork Tuolumne R, Rainbow Pool, Hwy 120, 25-VI-2003, and Yosemite Cr, Hwy 120, Yosemite Natl Prk, 27-VI-2003, Meyer (PERC), and Strawberry, 4-VII-1957, MacSwain (UCB).

***Epeorus margarita*** Edmunds & Allen

*New data.*—ALPINE: Silver Cr, Hwy 4, 1.5 mi W jct E Fork Carson R, 26-VIII-2003, Randolph (UCD).

***Heptagenia elegantula*** (Eaton)

*Previous data.*—Day (1954b): STANISLAUS; Green (1976): SACRAMENTO (American R); Leland and Fend (1998): MERCED (San Joaquin R), STANISLAUS (San Joaquin R).

*New data.*—ALPINE: Markleville, 3-VII-1950, Day, and Markleville, 3-VII-1950, Day, A (CAS); COLUSA: Mill Cr, 6 mi W Stonyford, 8-IV-1989, Glenn (SSU), and Sacramento R, Colusa, 30-VII-1996 (USGS); INYO: Big Pine, VII-1970, Derham & Giuliani, A (CAS); MERCED: Merced, 16-VII-1947, Waltz, A (CAS); MONO: Sardine Cr, Hwy 108, 26-VI-1980, Baumann & Stanger (BYU); PLUMAS: Upper North Fork Feather R, IX-2001, Fields (PERC); SACRAMENTO: American R, Sacramento, 21-X-1982, Titus (SSU); SAN JOAQUIN: Stanislaus R, Riverbank, 10-VI-1950, Day, A (CAS); SHASTA: Hat Cr, Fall R Mills, VI-1968, Apperson (UCR); SUTTER: Feather R, Nicolas, 31-VII-1996 (USGS).

***Heptagenia solitaria*** McDunnough

*New data.*—ALPINE: East Fork Carson R, Markleville, 21-IX-1957, Edmunds & Allen (PERC).

***Ironodes californicus*** (Banks)

*Previous data.*—Banks (1910): LOS ANGELES (nr Claremont); Traver (1935a): SAN BERNARDINO (Icehouse Cyn); Serpa (1986): SONOMA (Copeland Cr).

*New data.*—ALAMEDA Berkeley, 22-IV-1957, Sanchez, and Strawberry Cr, 7-II-1987, Stockwell, and Tilden Prk, 11-IV-1985, Steggall (UCB), and New Redwood Cyn, 21-III-1936, Rayner (INHS); ALPINE: Heenan Cr, Heenan L, 8-VI-1983, Titus, and Hot Springs Cr, Grover Hot Springs, Boutler, and Shay Cr, 4 mi W Markleville, 5-X-1983, Devorak (SSU); AMADOR: Grass Valley Cr, Hwy 88, 24-VI-2003, Meyer & Pfister, and Mokelumne R, IX-2003, Fields (PERC), Sutter Cr, IV-1977, Hall, and Rancho Rio Cr, 14-II-1971 (SSU); BUTTE: 4 mi SW Sterling City, 20-V-1979, Stanger, and Butte Cr, 15-II-1985, Baumann & Nelson (BYU), and Big Chico Cr, Hwy 32, and Little Chico Cr, Schott Rd, and Little West Fork, Skyway Rd, and West Fork Feather R, Skyway Rd, 14-V-2002,

Meyer (PERC), and French Cr, 5 mi NE Madrone L, 22-VI-1970, Frommer & LePre (UCR), and Little Butte Cr, 5-III-1975, Fields (SSU); COLUSA: Little Stoney Cr, Stoneyford Rd, 13-V-2002, Meyer (PERC), and Paradise Cr, 24-VII-1953, Chandler (CAS); CONTRA COSTA: Jewel L, Berkeley, 13-XII-1956, Powell, and Oxidation Ponds, 17-III-1953, Coatsworth, and San Leandro Cr, 3-V-1974, Buegler (UCB); EL DORADO: 1 mi W Riverton, and Bridal Veil Falls, 5 mi E Pollock Pines, 5-III-1989, Lockhart, and American R, Scion Prk, 12-XII-1981, Hill, and McKinney Cr, 30-III-1979, Moore (SSU), and Mutton Cr, 1-VII-1987, Kleintjes, and Tells Cr, Ice House Rd, 22-VI-2003, Meyer (PERC); HUMBOLDT: 0.5 mi W Ruby Cr, 10-V-1988, Fiala (INHS), and Bluff Cr, 2-VII-1959, Allen, and Bull Cr, and Redwood Cr, Brice Thorne Rd, and Salmon Cr, Salmon Cr Rd, 16-V-2002, Meyer (PERC); INYO: Big Pine Cr, 1-III-1986, and Division Cr, 9-III-1986, and Independence Cr, 10-IV-1986, and Lone Pine Cr, 23-IV-1986, and North Fork Oak Cr, 27-II-1986, and South Fork Oak Cr, 28-II-1986, Giuliani, and Goodale Cr, 11-II-1986, and Taboose Cr, 13-II-1986, Baumann & Giuliani (BYU), and Tuttle Cr, 2 mi SW Lone Pine, 14-V-1969, Haddock (UCB); KERN: Cedar Cr, Hwy 155, and Shirley Cr, Hwy 155, and Spout Spring, Hwy 155, W Alta Sierra, 2-IV-1981, Baumann & Stanger (BYU), and Pine Mt, 1-IV-1989, Lockhart (SSU); LAKE: Middle Cr, 5 mi N Upper L, 25-III-1979, Dare, A (UCB); LOS ANGELES: Alpine Cyn Cr, Hwy 39, 20-VI-1977, Baumann & Hogue, and Arroyo Seco Cr, 25-I-1985, Baumann & Nelson, and Lucas Cr, 21-I-1985, Baumann et al, and Placerita Cr, Placerita St Prk, 2-IV-1981, Baumann & Stanger (BYU), and Camp Baldy, 11-VII-1950, Hansen (UCB), and Icehouse Cyn, 15-IV-1933, Chandler, A, and North Fork San Gabriel R, Hwy 39, 11-VIII-1965, Vann (CAS), and Mt Baldy, 21-X-1965, Gillogly (UCR), and San Gabriel Mts, 15-IV-1933, Michener, A (CUAC); MADERA: 4 mi W Bass L, 1-VII-1946, and Chilacoot Cr, 1 mi N Bass L, 19-VI-1959, and Willow Cr, Kelty Mdws, 6 mi N Soquel, 29-VII-1967, Allen (CAS), and Lewis Cr, Hwy 41, 18-III-1985, Baumann/Nelson (BYU); MARIN: 4 mi W Fairfax, 18-IV-1967, Rentz (CAS), and Alpine L, 10-IV-1968, Munroe, and Bill Williams Cr, Crown Rd, Kentfield, 24-V-1976, Ulrich, and Woodacre, 28-III-1955, Hudson (UCB), and Garden Club Cr, Audubon Cyn Ranch, 19-II-1985, Baumann & Nelson (BYU); MARIPOSA: Alder Cr, Hwy 41, Yosemite Natl Prk, and Grouse Cr, Hwy 41, Yosemite Natl Prk, and Wildcat Cr, Hwy 41, Yosemite Natl Prk, 26-VI-2003, Meyer & Pfister (PERC), and South Fork Merced R, Wawona Camp, Yosemite Natl Prk, 26-VII-1967, Allen (CAS); MENDOCINO: 7 mi N Eel R Station, 12-VI-1972, Szerlip (UCB), and Chadman Cr, Hwy 1, Bruhel Point, 18-II-1985, Baumann & Nelson (BYU), and Gibson Cr, 1 mi W Ukiah, 6-IX-1976, Hogue (LACM), and Hendy Woods St Prk, 14, 21-VI-1968, Bell & Bell (CAS); MODOC: 9 mi NE Adin, 12-VI-1974, Szerlip, and Willow Cr, Fandango Pass, 15-V-1948, Wirth (UCB); MONO: Rush Cr, Grant L, 27-VII-1967, Allen (CAS), and Slakard Cr, 2 mi N Topas, 5-XI-1983, Titus (SSU); MONTEREY: Partington Cr, Hwy 1, 7-V-2002, and Salmon Cr, Hwy 1, 8-VII-2003, Meyer (PERC); NAPA: Schwartz Cr, Pope Valley, 24-IV-1964 (SSU); NEVADA: Deer Cr trib, Nevada City, 20-VI-1948, Day (CAS), and Humbug Cr, 9-III-1979, Cropper & Felletto, and Oregon Cr, 23-IV-1977, Hall, and Wolf Cr, 1 mi N Auburn, 25-II-1989, Lockhart (SSU); PLACER: Bear R, YMCA Camp, Hwy 20, and Jordan Cr, Bowman Rd, 18-V-2002, Meyer et al (PERC), and Shirttail Cr, 9-VI-1974, Fields, A, and Canyon Cr, Baxter, 30-III-1979, Moore (SSU); PLUMAS: Benner Cr, 6 mi N Chester, 3-VI-

1980, and Butte Valley Res, 25-VI-1980, Baumann & Stanger (BYU), and Upper North Fork Feather R, IX-2001, Fields (PERC); RIVERSIDE: Andreas Canyon, 24-V-1980, Hartman, and L Fulmore, IV/VIII-1969, Hagstrum (UCR), and Dark Canyon Cr, and North Fork San Jacinto R, and Stone Cr, and Strawberry Cr, Hwy 74, 6 mi W Mtn Center, 21-VI-1977, Baumann & Hogue (BYU); SAN BERNARDINO: East Fork Barton Cr, 18-II-1978, Nilsson, and Falls Cr, Fallsville, 22-VI-1977, and San Antonio Cr, San Antonio Falls, 20-VI-1977, and Mill Cr, Fallsvale, 19-I-1985, Baumann & Nelson (BYU), and Forest Home, 27-III-1965, Forester, and South Fork Mdws, 30-VIII-1969, Frommer & Frommer, and South Fork Santa Ana R, 25-V-1993, Al-Wahaibi (UCR), and Lytle Cr, 9-I-1988, Kondratieff & Baumann (PERC); SAN MATEO: LaHonda Cr, LaHonda, 15-V-1937 (INHS), and Purissima Cr, 24-V-1975, Nichols (UCD), and Squealer Gulch Cr, 3 mi W Woodside, 22-III-1987, Shepard (SSU); SANTA BARBARA: Cuyama, 19-IV-1954, Anderson (UCR), and San Jose Cr, 21-I-1985, Baumann & Nelson (BYU); SANTA CLARA: Guadalupe Cr, 12-II-1976, and Stevens Cr, 26-IX-1976, Klee, and Stevens Cr Res, 18-II-1974, Ross, and Svedal, 16-III-1970, Real (CAS), and Saratoga Cr, Sanborn Rd, Hwy 9, 25-I-1992, Kondratieff (PERC); SANTA CRUZ: Hester Cr, San Jose Rd, 20-V-2002, and Waddell Cr, 10-VII-2003, Meyer, and Santa Cruz, 24-VI-1969, Evans (PERC); SHASTA: 4 mi W Viola, 27-VI-1947, Chandler, A (CAS), and Hat Cr, Fall R Mills, 5-V-1969, Apperson (UCR), and Pit R, Fender Crossing, 27-IV-1984, and South Fork Sacramento R trib, 26-IV-1984 (PERC); SIERRA: Big Spring, 3 mi E Sierra City, and Oregon Cr, 3 mi N N San Juan, 25-II-1989, Lockhart, and Goodyear Cr, and Ladies Cyn Cr, 23-IV-1977, Hall (SSU), and Cottonwood Cr, 24-VI-1980, Baumann & Stanger (BYU), and Fiddle Cr, Hwy 49, and Ramsham Cr, Ramsham Rd, 17-V-2002, Meyer (PERC); SISKIYOU: 1 mi E Bartle, Sorensen, and Ash Cr RS, 9 mi E McCloud, 7/9-VI-1974, Szerlip (UCB), and Big Springs, Mt Shasta, Pamann et al, A (BYU), and Sacramento R, Mt Shasta, 29-V-1967, Jewett (OSU); SOLANO: Gates Cyn, 9-V-1956, Schlinger, A (PERC); Green Valley, 10-V-1953, Downey (CAS). SONOMA 1 mi N Ft Ross, 21-VII-1981, Balfour (SSU), and St Helena Cr, Hwy 29, 12-VII-1959, Allen (CAS); TEHAMA: Big Chico Cr, Hwy 32, and Deer Cr, Hwy 32, and Mill Cr, Hwy 36, and South Fork Calf Cr, Hwy 32, 14-V-2002, Meyer (PERC); TRINITY: 7 air mi SW Hayfork, 24-V-1973, Szerlip (UCB), and Hennessy Cr, Hwy 299, 22-VI-1985, Baumann et al, A (BYU); TULARE: Cabin Cr, Hwy 198, Sequoia Natl Prk, and Silliman Cr, Hwy 198, Sequoia Natl Prk, and Suwanee Cr, Hwy 198, Sequoia Natl Prk, 2-VII-2003, and Marble Fork Kaweah R, Hwy 198, Sequoia Natl Prk, and Stoney Cr, Hwy 198, and Wolverton Cr, Wolverton Ski Area, Sequoia Natl Prk, 3-VII-2003, Meyer (PERC), and Nelson Cr, Camp Nelson, 16-III-1985, Baumann & Nelson (BYU); TUOLUMNE: Niagara Cr, Hwy 108, 26-VI-1980, and South Fork Tuolumne R, Rainbow Pool, 27-VI-1980, Baumann & Stanger (BYU), and Rt 108, E Sonora Pass, 6-VIII-1985 (PERC); YUBA: Brandy Cr, Pendola Rd, and Willow Cr, Pendola Rd, 17-V-2002, Meyer (PERC), and Oregon Cr, 23-IV-1977, Hall (SSU).

***Ironodes lepidus* Traver**

*Previous data.*—Traver (1935b): INYO (Silver Cyn); Day (1952): PLUMAS (Feather R); Leland et al. (1989): MONO (Convict Cr).

*New data.*—ALPINE: Carson R trib, Soda Springs, 29-VI-1995, Randolph (PERC); CALAVERAS: E Cornell, Hwy 4, 7-VII-1967, Evans (PERC); FRESNO:

Laurel Cr, 1-VI-1987, MacDonald (PERC); Oak Flat Campground, 22-VII-1984, MacDonald (PERC); HUMBOLDT: 5 mi W Hoopa, Hwy 101, 20-VII-1967, Evans (PERC), and 7 mi S Orleans, 2-VII-1959, Allen (CAS); MARIPOSA: Fish Camp, Rt 41, 2-VII-1946, Mulaik (CAS); MONO: 2 mi S Tom's Pl, Rock Cr Camp, 6-VII-1967, Evans (PERC); SAN BERNARDINO: Barton Flats, 20-VII-1953, Belkin (LACM); SISKIYOU: Cottage Grove, 2-VII-1959 (PERC); TULARE: Wolverton Cr, Sequoia Natl Prk, 18-VI-1959, Allen (CAS).

***Ironodes nitidus* (Eaton)**

*Previous data.*—Ellsworth (1997): NEVADA (Sagehen Cr).

*New data.*—COLUSA: Paradise Cr, 24-VII-1953, Chandler, A (CAS); EL DORADO: Whaler Cr trib, 2 mi SE Quintette, 27-VII-1963, Leech (CAS); INYO: Independence Cr, Onion Valley Rd, L Grays Mdw Campground, 28-VI-2003, Meyer & Pfister (PERC); LOS ANGELES: South Fork Big Rock Cr, and Bear Cr, Hwy 39, 23,26-VIII-1965, and East Fork San Gabriel R, 16-IX-1965, and North Fork San Gabriel R, 11-VIII-1965, Vann, and Big Tujunga Canyon, and Monrovia Cyn Cr, 26-VI-1967, and Fish Cyn, Monrovia, 28-VI-1967, and Millard Cyn, Alta Dena, 10-VII-1967, and Santa Ana Cyn, Chantory Flats, 25-III-1967, Collins, and West Fork San Gabriel R, 6-X-1964, Armstrong (CAS); MADERA: Chilacoot Cr, 1 mi N Bass L, 19-VI-1959, Allen (PERC), and Willow Cr, 6 mi N Chester, 28-V-1950, Day (CAS); MARIN: Cascade Cr, 20-IV-1952, Leech, A (CAS); MARIPOSA: 2 mi ESE Mariposa Grove, and Wawona, 17-VII-1946, and 6 mi E Miami RS, 4-VII-1946, Chandler (CAS); MONO: Murphey Cr, 28-VII-1952 A,L, and Sage Cr, 24-III-1951, Day, A,L (CAS); PLACER: 2.5 mi W Whitmore Main Sta, Hwy 80, 25-III-1967, Miner (PERC); PLUMAS: North Feather R, Hamilton Br, 29-V-1950, Day (PERC); RIVERSIDE: Strawberry Cr, 21-VI-1977, Hogue, and Idyllwild, 24-V-1950 (LACM), and North Fork San Jacinto Rio, Banning Rd, Idyllwild, 13-VI-1959, Edmunds (CAS); SAN BERNARDINO: 1 mi E Arrow Bear L, Hwy 18, 29-VI-1967, and Lytle Cr RS, 24-VI-1968, Evans (PERC), Deep Cr, 1.5 mi N Running Springs, 3-VI-1978, Hogue, and Snow Crest, San Antonio Falls, 20-VI-1968, Honey, and Barton Flats, 27-IV-1950, and South Fork Santa Ana R (LACM); SHASTA: Battle Cr, 18-VII-1953, Day, A/L, and Burney Falls, 29-VI-1947 (CAS), and Sacramento R, 26-III-1956, Morrison (LACM); SIERRA: Big Springs, Hwy 49, N Sierra City, 24-VI-1980, Baumann & Stanger, A (BYU); SISKIYOU: Castle Cr, 2-VII-1953, A, and Castle L, 20-VII-1953, Chandler, A, and Sacramento R, Mt Shasta, 5-VI-1965, A, and Shasta Springs, 24-VI-1960, Jewett, A (PERC); SONOMA: Green Valley, 20-III-1936, A (UCD); TUOLUMNE: Tuolumne Meadow, Yosemite Natl Prk, 15-VII-1955, Matsuda, A (PERC); TULARE: Badger, 3-V-1947 (CAS), and Marble Fork Kaweah R, Sequoia Natl Prk, 18-VI-1959, Allen (PERC).

*Remarks.* æ Eaton (1885) first mentioned this species from California, but provided no documentation; and the Ellsworth (1997) report was not published.

***Maccaffertium terminatum* (Walsh)**

*New data.*—COLUSA: Little Stony Cr, 5 mi W Stonyford, 4-IV-1987, Shepard (SSU).

***Nixe kennedyi*** (McDunnough)

*Previous data.*—McDunnough (1924): NAPA (Calistoga); Mayo (1952b): AMADOR (Amador Cr, Dry Cr); Day (1956): ALAMEDA.

*New data.*—AMADOR: Niles Cyn, 8-V-1949, Day, A (CAS); BUTTE: Anderson Fork, N Chico, Rock Cr Rd, 11-V-1968, Evans, A (PERC), and Chico Cr, 13-V-1953, Abraham & Dart, A (CAS); FRESNO: Dry Cr, 14-V-1954, Ell, A (CAS); NAPA: Capell Cr, 7-VI-1952, Day, A (PERC); SISKIYOU: South Fork Sacramento R, 15-VII-1985, Courtney, A (PERC); SONOMA: Russian R, 2 mi N Cloverdale, 8-VII-1975, Rude, A (UCB); STANISLAUS: Stanislaus PG&E Power Plant Site, 5 mi N Turlock L, 15-IX-1976, Collins, A (UCB); TEHAMA: Salt Cr, 15-V-1954, Chandler, A (CAS).

***Rhithrogena decora*** Day

*Previous data.*—Day (1954b): SHASTA (Hat Cr).

*New data.*—PLACER: North Fork American R, Yankee Jims Rd, 18-V-2002, Meyer et al (PERC); TULARE: Marble Fork Kaweah R, Hwy 198, Sequoia Natl Prk, 3-VII-2003, Meyer (PERC).

***Rhithrogena flavianula*** (McDunnough)

*Previous data.*—Traver (1935a): MARIPOSA (Yosemite Valley); Mayo (1939): EL DORADO (Middle Fork Consumnes R); Day (1954b): ALPINE (West Fork Carson R).

*New data.*—ALPINE: East Fork Carson R, Glen Alpine, 4-VII-1954, Day (CAS); SAN BERNARDINO: Barton Flats, 27-IV-1950 (CAS); SIERRA: North Fork Yuba R, 1 mi E Bassetts, 25-VI-2003, Opler, A (CSU).

***Rhithrogena hageni*** Eaton

*Previous data.*—Eaton (1885): NEVADA (Truckee); Day (1957) as *R. brunnea* Hagen: EL DORADO (Upper Truckee).

*New data.*—ALPINE: Carson R trib, Soda Springs, 29-VI-1995, Randolph (PERC); AMADOR: Rancho Rio Cr, 14-II-1971 (SSU); BUTTE: Big Chico Cr, Hwy 32, and S Toadtown, Skyway Rd, 14-V-2002, Meyer (PERC), and French Cr, 5 mi NE Madrone L, 22-VII-1970, Frommer & LePre (UCR); COLUSA: Little Stony Cr, 5 mi S Stonyford, 4-IV-1987, Shepard (SSU); CONTRA COSTA: San Leandro Cr, 1.5 mi SW Moraga, 3-V-1974, Sorensen (UCB); EL DORADO: American R, Hwy 50, 12-XII-1981, Hill (SSU), and General Cr, Sugar Pine SP, XII-1969, Noble (CAS), and Kyburz, 18-VII-1953, Lattin (UCB); FRESNO: Blayney Mdws, VIII-1948, Day, A,L (CAS), and Kings R, Trimmer, 7-III-1947, Hansen (UCB); INYO: Independence Cr, Onion Valley Rd, L Grays Mdw Campground, 28-VI-2003, Meyer & Pfister (PERC), and Lone Pine Cr, 23-IV-1986, Giuliani (BYU); LOS ANGELES: Bear Cr, 31-III-1981, Baumann & Stanger, and Lucas Cr, 21-I-1985, Baumann et al (BYU); MENDOCINO: Indian Cr, Hwy 128, and Pieta Cr, Hwy 101, and South Fork Eel R, 18-II-1985, Baumann & Nelson (BYU); MONO: Convict Cr, 12-VI-1936, Needham (INHS); Deadman Cr, Hwy 395, 27-VI-2003, Meyer (PERC), and Green Cr, 6-VIII-1952, and Virginia Cr, 31-VII-1952, and Frying Pan Cr, 28-VII-1952, Day, A, and Rush Cr, Grant L, 27-VII-1967, Allen (CAS); MONTEREY: Big Sur R, 1-V-1948, Chandler (CAS); NEVADA: Humbug Cr, 9-III-1979, Feletto & Cropper (SSU); PLACER: North Fork American R, Yankee Jims Rd, 18-V-2002, Meyer et al

(PERC), and South Fork American R, Placerville, 27-X-1974, Klee (CAS); PLUMAS: Big Grizzly Cr, Hwy 70, and Middle Fork Feather R, Hwy 70, E Portola, and Spanish Cr, Hwy 70, Keddie, 14-II-1985, Baumann & Nelson (BYU), and Sulfur Cr, Hwy 89, 16-IV-1964, Wooster (SSU); SAN BERNARDINO: Caribou Cr, Big Bear City, 17-I-1985, Baumann & Nelson (BYU), and South Fork Santa Ana R (LACM); SAN MATEO: Islam Shrine Prk, Portola SP, 15-IV-1949, Stark (PERC), and La Honde Cr, La Honde, 15-V-1937 (INHS); SANTA CLARA: Guadalupe Cr, VI-1978, and Stevens Cr, 22-II-1976, Klee, and Alum Rock Prk, 5-II-1976 (CAS); SANTA CRUZ: Big Cr, Swanton Rd, 9-VII-2003, and Soquel Cr, Old San Jose Rd, Laurel Glen, 21-XII-2000, Meyer (PERC); SHASTA: Hat Cr, Big Springs, 22-VII-1953, Day, A (CAS); SIERRA: Fiddle Cr, Hwy 49, 17-V-2002, Meyer (PERC), and Little Truckee R, Hwy 89, and North Fork Yuba R, 1-V-1977 (SSU), and Sagehen Cr, VII-1953, A (LACM); SISKIYOU: Ash Cr RS, 9 mi E McCloud, 7,9-VI-1974, Szerlip (UCB), and South Fork Sacramento R, 8-VII-1953, Chandler, A (CAS); TEHAMA: Big Chico Cr, Hwy 32, and Deer Cr, Hwy 32, 14-V-2002, and Manzanita L, 27-VII-1959, Alexander, A, and Salt Cr, 3-VIII-1957 (PREC); TRINITY: South Fork Trinity R, Hwy 36, 15-V-2002, Meyer (PERC); TULARE: East Fork Kaweah R, Mineral King Rd, and Kaweah R, Dinely Bridge, Hwy 198, 24-XII-2000, and South Fork Kaweah R, S Fork Dr, 25-XII-2000, Meyer et al, and North Fork Kaweah R, North Fork Dr, 23-XII-2000, Meyer & McWherter, and Silliman Cr, Hwy 198, Sequoia Natl Prk, 2-VII-2003, Meyer (PERC), and Pear Lake Trail, 1 mi E Wolverton, Sequoia Natl Prk, 29-VIII-1969, Malin & Malin (UCR); TUOLUMNE: Stanislaus R, 19 mi N Strawberry, 4-XI-1983, Tappel (SSU), and Strawberry, 4-VII-1957, MacSwain (UCB).

***Rhithrogena morrisoni* (Banks)**

*Previous data.*—Seemann (1927) as *Iron petulans* Seemann: LOS ANGELES (San Dimas), SAN BERNARDINO (Cucumanga); Traver (1935a) as *R. petulans*: SAN BERNARDINO (Icehouse Cyn), SANTA CRUZ (Santa Cruz Mtns); Collins (1970): LOS ANGELES (Chantry Flat, East Fork San Gabriel R, North Fork San Gabriel R); Siegfried and Knight (1977): NEVADA (Squirrel Cr).

*New data.*—ALPINE: Markleville, 4-VII-1949, Day, A (CAS), and West Fork Carson R, 3-VII-1950, Day, A (PERC); AMADOR: Grizzly Flat, 13-V-1978, Meyer (UCD), and Ione Rd, 9 mi W Jackson, 1-IV-1950, Day, A (CAS); EL DORADO: 5 mi S Meyers, 1-VI-1972, Slater (UCB), and Upper Truckee R, Hwy 50, 21-VI-1970, Noble (CAS); HUMBOLDT: 5 mi W Willow Cr, 2-VII-1959, Allen (PERC), and Willow Cr, Hwy 299, 22-VI-1985, Baumann et al, A (BYU); LAKE: Middleton Cr, 22-IX-1939, VanDuzee, A (CAS); LOS ANGELES: Monrovia Canyon Cr, 18-II-1968, Malone, and San Gabriel Mtns, 15-IV-1933, Michener, A (CAS); MADERA: Chilacoot Cr, 1 mi N Bass L, 19-VI-1959 (PERC); MARIN: Cascade Cr, 26-III/10-IV-1952, A, and Mill Valley, 26-IV-1950, Leech, A (CAS), and Lagunitas Cr, 23-VIII-2004, Fields (WCF); MARIPOSA: East Fork Lee Vining Cr, 4 mi W Hwy 395, 26-VII-1967, Allen (CAS); MONO: Rock Cr, 1 mi SW Tom's Pl, 13-VIII-1957, MacNeill, A, and Ruch Cr, Grant L, 27-VII-1967, Allen (CAS); MONTEREY: Big Sur R, Hwy 1, Pfeiffer-Big Sur St Prk, 7-V-2002, Meyer (PERC), and Santa Lucia Cr, 3-V-1964, Finlay (UCB); NAPA: Sage Cr, 26-III-1955, Day, A (CAS); NEVADA: South Fork Yuba R, Washington, 21-II-1987, Shepard (SSU); PLUMAS: North Fork Feather R, 26-IV-1953, Chan-



dler (CAS), and Seneca, Feather R, 19-V-1982, Ulrich, A (UCB), and Upper North Fork Feather River, X-2001, Fields (PERC); SAN BERNARDINO: Forest Falls, 4-X-1980, Hawks, A (UCR); SAN MATEO: Portola SP, 8-V-1950, Ross, A (CAS); SANTA CLARA: Guadalupe Cr, 4-IV-1954, Day, A, L (CAS); SHASTA: Hat Cr, 2 mi N Old Station, 3-VII-1959, Allen (PERC); SIERRA: North Fork Yuba R, 1 mi E Bassetts, 25-VI-2003, Opler, A (CSU); SISKIYOU: Fowlers Camp, 5 mi E McCloud, 1-VII-1963, MacNeill & Whitehead, A (CAS), and Klamath R, 21-VI-1958, Benjamin, A (INHS); SONOMA: Glen Ellen, 16-IV-1949, Day, A (CAS); TRINITY: Butter Cr Mdw, 8 mi W Hayfork, 20-V-1973, Bentzian, A (UCB); TULARE: Camp Wihon, 12 mi NE Springville, 1-VI-1979, Buegler, A (UCB), and Lodgepole, Sequoia Natl Prk, 27/28-VIII-1969, Malin & Malin, A (UCR), and Marble Fork Kaweah R, Lodgepole Camp, Sequoia Natl Prk, 25-VII-1967, Allen (CAS); TUOLUMNE: Strawberry, 20-VI-1957, MacSwain, A (UCB); YOLO: Cache Cr, 6 mi N Rumsey, 19-IV-1953, Day, A (CAS); YUBA: Marysville, 1-V-1993, Jessen, A (UCD).

***Rhithrogena plana*** Allen & Chao

*New data.*—EL DORADO: Upper Truckee R, Hwy 50, 23-XII-1969, Noble (CAS).

***Rhithrogena robusta*** Dodds

*New data.*—ALPINE: Carson R trib, Soda Springs, 29-VI-1995, Randolph (PERC), and Hot Spring Cr, Grover Hot Springs, Boutler (SSU); BUTTE: West Branch North Fork Feather R, 9-IX-1976, Hogue (LACM); COLUSA: Little Stony Cr, 6 mi S Stonyford, 7-IV-1989 (SSU); EL DORADO: American R, Scion Prk, 12-XII-1981, Hill (SSU), and Upper Truckee R, Hwy 50, 13-V-1970, Noble (CAS); INYO: Big Pine Cr, 1-III-1986, and Division Cr, 9-III-1986, and Goodale Cr, 8-IV-1986, and Independence Cr, 7-III-1986, and Lone Pine Cr, 10-IV-1986, and North Fork Oak Cr, 27-II-1986, Giuliani, and North Fork Oak Cr, 12-II-1986, Baumann & Giuliani (BYU), and West Fork Coyote Cr, 16-IX-1969, Frommer et al (UCR); MONO: Rock Cr, 27-V-1963, Andrews (UCR); NEVADA: Eure Valley, 4-VII-1948, Day (PERC), and Sagehen Cr, 15-VI-1978, Heydon, A (UCD); SAN BERNARDINO: Barton Flats, 27-IV-1950 (LACM); SHASTA: Deep Cr, 12-X-1952, Chandler (CAS); SIERRA: Lincoln Cr, 14 mi E Sierra City, 1-X-1983, Tappel (SSU); TRINITY: Tangle Blue Rd, Scott Mtns, 8-IX-1969 (UCR); TUOLUMNE: Deadman Cr, 1 mi W Sonora Pass, 6-XI-1983, Hosea (SSU).

***Rhithrogena undulata*** (Banks)

*New data.*—EL DORADO: Pyramid Cr, 22-VIII-1952, Jewett, A, and General Cr, Sugar Pine St Prk, 23-XI-1968, Noble (CAS); FRESNO: Blayney Mdws, VIII-1948, Day (PERC); HUMBOLDT: 3.3 mi N Orick, Hwy 101, 7-IV-1966, Leech, A (CAS), and Bull Cr, 16-V-2002, and Yager Cr, Hwy 36, W Carlotta, 15-V-2002, Meyer (PERC); LOS ANGELES: Upper Bear Cr, 13-X-1965, Armstrong, A (CAS); MADERA: North Fork Arlins Cr, 16-VIII-1971, Leech, A (CAS); MONTEREY: Piney Cr, Arroyo Seco, 24-IV-1976, Ulrich (UCB); PLACER: Shirttail Cr, 9-VI-1974, Fields, A (SSU); SAN BERNARDINO: Barton Flats, 20-VII-1953, Belkin (LACM).

## Isonychiidae

*Isonychia velma* Needham

*Previous data.*—Needham (1932): SONOMA (Cloverdale), YOLO (Putah Cr); Traver (1935a): SONOMA (Sobre Vista); Siegfried and Knight (1977): NEVADA (Squirrel Cr); Kondratieff and Voshell (1984): HUMBOLDT (Eel R), MENDOCINO (Alder Cr, Boonville, Eel R), PLUMAS, SISKIYOU (Klamath R), SONOMA (Russian R), TRINITY (Trinity R, Weaverville), YOLO (Monticello, Putah Cr).

*New data.*—AMADOR: Volcano, 15-VII-1957 (SSU); BUTTE: Big Chico Cr, Bidwell Pk, 20-VI-1979, Stanger (BYU), and North Fork Feather R, 2002 (FGCH); EL DORADO: Consumnes R, 24-VIII-1971, Darby & Hall (SSU); HUMBOLDT: Bull Cr, 4-X-1969, Apperson & Davison, A (UCR), and Dyerville, 14-VIII-1946, Chandler (UCB), and Eel R, 19-VI-2001 (EPA), and Van Duzen R, 8.8 mi W Bridgeville, Hwy 36, 7-VIII-1966, Leech (CAS); MARIPOSA: Merced R, 22-VIII-1933 (INHS); MENDOCINO: Hendy Woods St Prk, 17-VIII-1969, Bell (CAS), and Russian R, 25-VII-1948, Wirth (CAS), and Middle Fork Eel R, 9-VII-2002, and Navarro R, 18-VIII-2003 (EPA), and Rancheria Cr, 4 mi W Booneville, 18-VIII-1986, Shepard (SSU); PLACER: North Fork/South Fork American R conf, 29-X-1983 (SSU); PLUMAS: Howells, 29-VIII-1946, Chandler (CAS); SHASTA: Pit River, Hagen Flat Rd, 10-IX-1996, Brett, A, and Bear Cr, Hwy 44, 3mi E Millville, 2002 (FGCH), and Cow Cr, Hwy 299, 8-X-1976, Furnish (INHS), and French Gulch, Hwy 299, 20-VII-1967, Evans (PERC); SIERRA: North Fork Yuba R, 23-IV-1977, Hall (SSU); SISKIYOU: Scott R, 2 mi NW Scott Bar, 5-VIII-1967, Allen (CAS); SONOMA: Austin Cr, 17-VII-1975, Hawkins/Darby (SSU), and Gualala R, Stewart's Point-Healdsburg Rd, and Wheatfield Fork, Gualala R, 7-IX-1964, Leech (CAS); TEHAMA: Dye Cr, 2001 (FGCH), and Little Dye Cr, 20-VIII-2001, and North Fork Elder Cr, 29-VIII-2001 (EPA); YUBA: Oregon Cr Cmpgd, 2 mi S Camptonville, 26-IX-1987, Wyatt (SSU).

## Leptohephidae

*Asiopanax edmundsi* (Allen)

*New data.*—KERN: Kern R, 10 mi E Bakersfield, 24-III-2003, Fields (WCF); PLUMAS: North Fork Feather R, Poe reach, 25-IX-2002, Fields (PERC); SISKIYOU: Klamath R, Hwy 96, 2-IX-2000, Adams (PERC); SONOMA: VII-1979, Fields, and Russian R, Hwy 128, Geyserville, 21-VIII-2003, Randolph (PERC).

*Homoleptohyphes dimorphus* (Allen)

*Previous data.*—Collins (1970): LOS ANGELES (Cattle Cyn, East Fork San Gabriel R, North Fork San Gabriel R, West Fork San Gabriel R); Kilgore and Allen (1973): LOS ANGELES (W Fork San Gabriel R).

*New data.*—AMADOR Mokelumne R, 29-VIII-2003, Fields (PERC); BUTTE: Middle Fork Feather R, Milsap Bar, 22-IX-2004, Fields (WCF); CALAVERAS: Mokelumne R, 29-VIII-2003, Fields (PERC); EL DORADO: North Fork Middle Fork American R, 6-XI-1980, Fields (PERC); MONTEREY: Arroyo Seco North, 5-VIII-2004 (BLAB); PLACER: North Fork American R,

Yankee Jims Rd, 18-V-2002, Meyer et al (PERC); PLUMAS: Rogers Flat, 30-VI-2003 (WCF); YUBA: Middle Yuba R, Moonshine Rd, 17-V-2002, Meyer (PERC).

***Tricorythodes explicatus* (Eaton)**

*Previous data.*—Traver (1935a) as *T. fallax* Traver: SANTA CRUZ (Waddell Cr); Frantz and Cordone (1966) as *T. minutus* Traver: EL DORADO (Lake Tahoe); Collins (1970) as *T. minutus*: LOS ANGELES (Bear Cr, Big Tujunga R, Cattle Cyn, East Fork San Gabriel R, Little Dalton Cyn, Little Rock Cr, Monrovia Cyn, North Fork San Gabriel R, San Gabriel R, West Fork San Gabriel R); Green (1976) as *T. minutus*: SACRAMENTO (American R); Siegfried and Knight (1977) as *T. minutus*: NEVADA (Squirrel Cr); Leland et al. (1986) as *T. minutus*: MONO (Convict Cr); Serpa (1986) as *T. minutus*: SONOMA (Copeland Cr); Allen and Murvosh (1987) as *T. minutus*: MONO (East Fork Walker R), SISKIYOU (Scott R), SONOMA (Sonoma Cr); Leland and Fend (1998) as *T. minutus*: MERCED (San Joaquin R), STANISLAUS (San Joaquin R).

*New data.*—ALAMEDA: Arroyo Mocho, 20 mi S Livermore, 2-III-1958, Linsdale (UCB), and Sunol Valley Regional Prk, 31-V-1968, Arnaud, A (CAS); ALPINE: Silver King Cr, 7-VIII-1992 (BLAB), and West Fork Carson R, 2 mi NW Woodfords, 21-IX-1957 (CAS); BUTTE: Big Chico Cr, Chico, 26-V-1967, Malin (UCR), and North Fork Feather R, 3-IV-1989, Doody (SSU), and Richardson Springs, N Chico, 11-V-1968, Evans, A (PERC); CALAVERAS: Pleasanton, 29-X-1938, Upholt, A (PERC); COLUSA: Mill Cr, 5 mi W Stonyford, 16-VI-1985, Shepard (SSU); EL DORADO: Upper Truckee R, Hwy 50, 17-VIII-1970, Noble (CAS), and Weber Cr, 24-X-1981, Hill & Wragg (SSU); GLENN: Stoney Cr, 13-V-2002, Meyer (PERC); HUMBOLDT: Grizzly Cr, Redwood St Prk, 29-VIII-1968, Turner, A (UCB), and South Fork Eel R, Humboldt Redwoods St Prk, 30,31-VII-1970, Frommer & LePre, A, and Redwood Cr, Orick, 11-X-1969, and Van Duzen R, 2 mi E Bridgeville, 18-X-1969, Apperson & Davison (UCR), and Riverwalk RV Prk, Fortuna, 16-V-2002, Meyer, A (PERC); INYO: Horton Cr, 8 mi NW Bishop, 18-IX-1969, Malin (UCR), and Owens R, 19-IX-1979, Calaway (BYU); LAKE: Middle Cr, 28-V-1949, Day, A, L, and Cash Cr, 8-IX-1946, Chandler (CAS), and North Fork Cache Cr, New Long Valley Rd, 16-V-2002, Meyer (PERC), and St Helena Cr, Hwy 29, 11-VII-1979, Reichle & Hall (SSU); LASSEN: Goodrich Cr, 7-VIII-1974, A, and 12 mi S Ravendale, 7-VIII-1974, Fields (SSU), and Doyle, 19-IX-1946, Chandler (CAS); LOS ANGELES: Elizabeth L Cyn, 13-V-1953 (LACM), and Malibu Cr, 23-VI-1977, Baumann & Hogue, A, and Placerita Cr, Placerita St Prk, 2-IV-1981, Baumann & Stanger, A, and Tapica Prk, 5-VI-1975, Dobry (BYU), and Santa Monica Mtns, and Santa Monica Mtns, 17-IV-1976, Pinto, A, and Narrows, Whittier, 17-V-1960, Bay (UCR), and Topanga Cyn, 25-IX-1941, Sommerman (INHS); MADERA: Willow Cr Ranch, 22-VII-1951, Day, A (CAS); MARIN: Lagunitas Cr, 23-VIII-2004, Fields (WCF), and Point Reyes, 11-V-1971, Denning, A (CAS); MENDOCINO: Alder Cr, 2 mi N Manchester, 12-X-1964, Leech, A, and Rancheria Cr, 24-VII-1954, Leech, A, and Russian R, Cloverdale, 12-IX-1949, Day, A (CAS), and Dimmick St Prk, 7 mi W Navarro, 24-VII-1975, Rude, A, and Rattlesnake Cr, 14-IX-1946, Chandler (UCB), and Navarro R, Hendy Woods St Prk, 20-VI-1985, Baumann et al, A (BYU); MERCED: Merced R, Merced Falls Rd, 11-V-2002, Meyer (PERC); MONO: Owens R, Crowley L, 27-VI-1980, Baumann & Stanger, A (BYU); MONTEREY: Carmel

R, 22-X-1983, Shober, and Sage Cr, 8 mi E Rutherford, 1-III-1987, Shepard, and St Helena Cr, Hwy 29, 11-VII-1979, Reichle & Hall (SSU), and Tassajara Hot Springs, 26-V-1954, Bryant, A (CAS); NAPA: Conn Cr, Rutherford, 24-IX-1949, Day, A (CAS); NEVADA: Middle Fork Yuba R, Hwy 49, 1-V-1977 (SSU), and Rush Cr, Hwy 49, 17-V-2002, Meyer (PERC); PLACER: Middle Fork American R, above Ralston Afterbay, 2-X-2007 (BLAB), and South Fork American R, Placerville, 27-X-1974 (CAS); PLUMAS: Indian Cr, 7-X-2003 (BLAB), and Middle Fork Feather R, Beckworth, 9-XII-1986, Shepard (SSU); RIVERSIDE: Riverside, 16-II-1970, Nakashima, and Santa Ana R, 8-IV-1978, Helmkamp (UCR); SACRAMENTO: American R, 18-III-1977, Hall, and Consumnes R, 1 mi E Sloughhouse, 3-V-1989, Lockhart, and Dry Cr, 1-V-1977 (SSU), and Dry Cr, Rio Linda, 7-X-2004, Bates (PERC); SAN BENITO: Pescadero Cr, Cienega Rd, and San Benito R, Coalinga Rd, 8-V-2002, Meyer (PERC), and Pinnacles Natl Mon, 5-V-1946, Chandler (CAS); SAN BERNARDINO: Bennett Wash, Parker Dam, 23-II-1951, Adams & MacNeill (UCB), and Deep Cr, 15-VIII-1976, A (LACM), and North Fork Deer Cr, Arrowhead L, 23-IX-1946, Nelson (INHS); SAN DIEGO: Arroyo Seco Campground, Cuyamaca Ranch St Prk, and Pine Valley Cr, Old Hwy 80, 2-XII-1981, Baumann & Clark, A (BYU), and Lone Jack Rd, Olivenhain, 12-I-1985, Polhemus (PERC), and Sentenac Cyn, 26-IV-1953 (LACM); SAN JOAQUIN: Mokulumne R, Clements, 1-XI-1981, Hill (SSU); SAN LUIS OBISPO: Arroyo Grande Cr, Mason St, 6-V-2002, and San Simeon Cr, San Simeon Cr Rd, 7-V-2002, Meyer (PERC), and Lopez Cyn Cr, 17-IV-1965, Leech, A (CAS); SAN MATEO: San Francisquito Cr, Bishop Ln, IX-1998, Fend (GSMP), and San Gregorio Cr, 24-VI-1950, Day, A (CAS); SANTA BARBARA: Jalama Cr, 22-V-1970, Swift (LACM), and Santa Cruz Is, Canon del Puerto, 15-IX-1964, Irwin, A (UCR); SANTA CLARA: Alamos Cr, Mt Forest Dr, IX-1998, Fend (GSMP), and Guadalupe Cr, VI-1978, A, Stevens Cr, 10-20-VI-1978, Klee, and Smith Cr RS, 20-VII-1968, Arnaud, A, and Alum Rock Prk, 28-X-1974 (CAS), and Hassler Ranch, 16-IV-1964, Rude, A (PERC); SANTA CRUZ: San Lorenzo R, 3 mi S Felton, 17-X-1987, Shepard (SSU); SHASTA: Clear Cr, 15 mi W Redding, 17-IX-1946, Chandler (CAS), and Hat Cr, Hwy 299, 8-X-1976, Furnish (INHS); SIERRA: North Fork Yuba R, X-1981 (SSU), and Webber L, 20-VIII-1939, A (CAS); SISKIYOU: Klamath R, 5 mi SE Seiad Valley, SR 96, 5-VIII-1967, Allen (CAS); SONOMA: Big Sulphur Cr, The Geysers, 6-IX-1976, Ulrich (UCB), and Gualala R, Wheatfield Br, 6-IX-1964, Leech, A (CAS), and Russian R, Hwy 128, Geyserville, 21-VIII-2003, Randolph (PERC); STANISLAUS: Adobe Cr, 20 mi W Patterson, IV-1948, Day (CAS), and Del Puerto Cr, 18 km SW Patterson, 15-V-1997, Leford (UCD), and Stanislaus PG&E Power Plant Site, 5 mi N Turlock L, 27-V-1976, Collins, A (UCB); TRINITY: Weaverville, 16-IX-1946, Chandler (CAS); TULARE: Kaweah R, 4 mi S Three Rivers, 18-VI-1959, Allen (CAS), and North Fork Kaweah R, North Fork Dr, 4-VII-2003, Meyer (PERC); VENTURA: East Fork Sespe Cr, 16-III-1965, Swanson, and Matilija Cr, 5-VIII-1973, Lauer (CAS), and Santa Clara R, S Mountain Rd, 6-V-2002, Meyer (PERC), and Sespe Cr, 5 mi N Fillmore, 1-IV-1981, Baumann & Stanger, A (BYU); YOLO: Cache Cr Pk, 23-X-1981, A, and Putah Cr, 5-XII-1981, Hill (SSU); YUBA: Middle Fork Yuba R, Hwy 49, 1-V-1977 (SSU).

***Tricorythodes fictus*** Traver

*New data.*—LOS ANGELES Santa Monica Mtns, 17-IV-1976, Clark, A (UCR).

## Leptophlebiidae

***Choroterpes albiannulata*** McDunnough

*New data.*—HUMBOLDT: South Fork Eel R, 5 mi N Myers Flat, 4-VIII-1967, Allen (CAS); SONOMA: Russian R, Hwy 128, Geyserville, 21-VIII-2003, Randolph (UCD).

***Choroterpes inornata*** Eaton

*New data.*—VENTURA Matilija Cr, 5-VIII-1973, Lauer (CAS).

***Choroterpes terratoma*** Seemann

*Previous data.*—Seemann (1927): RIVERSIDE (Andreas Cyn); Traver (1935a): LOS ANGELES (San Gabriel Cyn), SONOMA (Cloverdale); Collins (1970): LOS ANGELES (East Fork San Gabriel R, North Fork San Gabriel R, West Fork San Gabriel R).

*Remarks.*—This species is not known outside of California.

***Leptophlebia cupida*** (Say)

*New data.*—SIERRA: Independence, 1-VII-1976, Nixon, A (UCD).

***Leptophlebia pacifica*** (McDunnough)

*New data.*—HUMBOLDT: South Fork Eel R, Humboldt Redwoods St Prk, 30,31-VII-1970, Frommer & LePre (UCR); SHASTA: Fall R, 19-III-1949, Day (CAS).

***Paraleptophlebia altana*** Kilgore and Allen

*Previous data.*—Kilgore and Allen (1973): LOS ANGELES (Cattle Cyn, Coldwater Cyn, Little Dalton Cyn, Little Rock Cyn, Millard Cyn, San Antonio Cyn, West Fork San Gabriel R).

*New data.*—HUMBOLDT: Redwood Cr, Brice Thorne Rd, 16-V-2002, Meyer (PERC); LOS ANGELES: Santa Anita R, 5-VII-1967, Allen, A, and Bear Cr, Hwy 39, 23,26-VIII-1965, and Door Cyn, Angeles Crest Hwy, 13-VI-1965, and East Fork San Gabriel R, 12-VIII-1965, Vann, and Monrovia Cyn, 19-VII-1967, Collins (CAS).

*Remarks.*—This species is not known outside of California.

***Paraleptophlebia associata*** (McDunnough)

*Previous data.*—McDunnough (1924): SANTA BARBARA (Santa Cruz Island); Traver (1934): SANTA CRUZ (Felton, Waddell Cr); Serpa (1986): SONOMA (Copeland Cr).

*New data.*—LOS ANGELES: Pine Cyn, 15-V-1952, A, and Topanga Cyn, 18-V-1952, Day, A (LACM), and West Fork San Gabriel R, 1965, Vann, A (CAS); MODOC: Mill Cr, S Warner Mtns, 9-X-1976 (INHS); RIVERSIDE: PL Boyd Desert Res Center, 3.5 mi S Palm Desert, 19-V-1973, Pinto, A (UCR); SAN DIEGO: Palm Canyon, Borrego Valley, 26-IV-1953, Anderson, A (LACM); SAN

JOAQUIN: Del Puerto Cyn, 19-IV-1990, Webb (INHS); SANTA BARBARA: 24-IV-1953, Nelson, A (LACM), and Santa Cruz Is, 7-V-1968, Schuster, A (UCD); SANTA CLARA: Robertsville, 9-V-1953, Day, A (LACM), and Uvas Cyn, 30-XI-1971, Denning, A (CAS); SANTA CRUZ: Big Basin Redwood Prk, 5-VI-1971, Denning, A (CAS).

*Remarks.*—This species is not known outside of California.

***Paraleptophlebia bicornuta* (McDunnough)**

*New data.*—EL DORADO: South Fork American R, Riverton, 18-X-1975, Meyer (PERC), and Upper Truckee R, VIII-2003, Randolph (UCD); MARIN: Alpine L, 6-VI-1957, Adelson (UCB), and Lagunitas Cr, 23-VIII-2004, Fields (PERC), and Paper Mill Cr, Sam P Taylor St Prk, 19-X-1976, Unzicker et al (INHS).

***Paraleptophlebia cachea* Day**

*Previous data.*—Day (1954b): YOLO (Cache Cr).

*Remarks.*—This species is not known outside of California.

***Paraleptophlebia californica* Traver**

*Previous data.*—Traver (1934): SANTA CRUZ (Waddell Cr).

*New data.*—BUTTE: Anderson Fork, N Chico, Rock Cr Rd, 11-V-1968, Evans, A (PERC).

*Remarks.*—This species is not known outside of California.

***Paraleptophlebia clara* (McDunnough)**

*Previous data.*—McDunnough (1933): SANTA CLARA (Los Gatos).

*New data.*—SANTA CRUZ Waddell Cr, A (CUAC).

*Remarks.*—This species is not known outside of California.

***Paraleptophlebia debilis* (Walker)**

*Previous data.*—Serpa (1986): SONOMA (Copeland Cr).

*New data.*—ALAMEDA: Strawberry Canyon, Berkeley, 6-XI-1955, Hogue (LACM); DEL NORTE: 3 mi E jct Hwy 101/199, 16-IV-1967, Evans (PERC); EL DORADO: Bridal Veil Campground, 10-X-1976, Gelhaus, and Upper Truckee R, Hwy 50, 23-XII-1969, Noble (CAS), and Kanaka Valley Cr, 5 mi NNW Rescue, 4-X-1983, Hosea (SSU); FRESNO: Indian Cr, Hume Rd, 28-VIII-1969, Malin & Malin (UCR); HUMBOLDT: Redwood Cr, Brice Thorne Rd, 16-V-2002, Meyer (PERC); LAKE: Anderson Springs, 30-IV-1955, Leuschner (INHS); LOS ANGELES: Hidden Springs Rest Area, 27-VI-1967, Evans (PERC), and Pine Cyn, 13-V-1953, and Topanga Cyn, 12-V-1950 (LACM), and Santa Ynez Cyn Cr, 2 mi N Pacific Palisades, 24-III-1989, Lockhart (SSU); MARIN: Muir Woods, 18-VI-1966, Baumann, and Lagunitas Cr, Sir Francis Drake Blvd, 19-V-2002, Meyer (PERC), and Novato, 7-IV-1963, Rentz (CAS); MARIPOSA: East Fork Chowchilla R, Hwy 49, 10-V-2002, Meyer (PERC); MENDOCINO: 5 mi E Hopland, 4-V-1968, Haddock (UCB); MONTEREY: Hastings Nat Hist Res, 22-IV-1966, Haddock, and Santa Lucia Cr, 3-V-1964, Finlay (UCB), and Salmon Cr, Hwy 1, 8-VII-2003, Meyer (PERC); PLACER: Foresthill, IX-1975, Klee, A, and South Fork American R, Placerville, 27-X-1974 (CAS); PLUMAS: Domingo Spring, 6 mi NW Chester, 25-VI-1980, Baumann & Stanger, A (BYU); RIVER-



SIDE: 10 mi E Hemet, and Fuller Mill Cr, 21-IX-1966, Andrews, and Horsethief Cr, 4-IV-1970, LePre, and Strawberry Cr, Hwy 74, 10-X-1964, Irwin (UCR); SAN BENITO: Bear Gulch Cr, Pinnacles NM, 22-IV-1989, Lockhart (SSU), and Pinnacles NM, 29-VIII-1952, Leech, A.L (CAS); SAN BERNARDINO: L Hook Cr, 3-X-1964, Somerby, and Mohave R, 13-X-1967, Cheary (UCR), and North Fork Deer Cr, Arrowhead L, 23-IX-1946, Nelson (INHS); SAN DIEGO: Palm Canyon, Borrego Valley, 26-IV-1953 (LACM); SAN MATEO: Los Trancos Cr, Old Alpine Rd, IX-1998, Fend (GSMP), and San Francisquito Cr, V-1997, Fend (PERC); SANTA BARBARA: Cachuma Saddle, 19-VI-1953, A.L (LACM), and Cold Spring Cr, Montecito, 24-I-1985, Baumann & Nelson, A (BYU), and Santa Cruz Is, Canada deSley, Coche Prietos, 4-V-2000, Barr (UCB); SANTA CLARA: Arroyo Calero, Harry St, IX-1998, Fend (GSMP), and Guadalupe Cr, VI-1978, and Stevens Cr, 12-X-1977, Klee (CAS); SANTA CRUZ: Mtn View Rd, 2 mi NW Old San Jose Rd, 20-XII-2000, Meyer (PERC); SHASTA: McCamber L, 4-XI-1953, Chandler, A (CAS); SIERRA: Fiddle Cr, 11 mi W Downieville, Rt 49, 23-IX-1946, Nelson (INHS), and Sagehen Cr, 10 mi N Truckee, 28-VIII-1982, Shepard (SSU); SOLANO: Ulati Cr, Mix Canyon Rd, 12-V-2002, Meyer (PERC); STANISLAUS: Del Puerto Cyn, North Fork Del Puerto Cr, 8-IV-1972, Szerlip (UCB); TEHAMA: Deer Cr, 18-IX-1946, Chandler, A (CAS), and Mineral, 21-IX-1951, Schlinger & Hall, A (UCD); TUOLUMNE: White Wolf, Yosemite Natl Prk, 8-VII-1946 (CAS); VENTURA: Cherry Cr, 21-I-1992, Baumann & Zenger, A (BYU).

*Remarks.*— Day (1954b) reported this species, without supporting documentation; and the Serpa (1986) report was not published.

***Paraleptophlebia gregalis* (Eaton)**

*New data.*—CALAVERAS: Angels Cr, Hwy 4, Angels Camp, 11-V-2002, Meyer (PERC); COLUSA: Little Stoney Cr, Stoneyford Rd, 13-V-2002, Meyer (PERC); LAKE: Middle Cr, 10 mi N Clear L, 20-VI-1985, Baumann et al (BYU); LOS ANGELES: Sycamore Flats Campground, 24-VI-1968, Evans, A (OSU), and West Fork San Gabriel Cyn, 27-V-1978, Blake (UCR); MARIN: Lagunitas Cr, Sir Francis Drake Blvd, and Nicasio Cr, Nicasio/Lucas Valley Rd, 19-V-2002, Meyer (PERC), and S P Taylor Prk, 9-V-1979, Eng (CAS); MARIPOSA: Mahoney Gulch, Hwy 132, Coulterville, and Mariposa Cr, Joe Howard St, Mariposa, 10-V-2002, Meyer (PERC); MONTEREY: Salmon Cr, Hwy 1, 8-VII-2003, Meyer (PERC); ORANGE: Trabuco Cyn, 23-V-1971, Kent (UCB); PLACER: North Fork/South Fork American R conf, Hwy 49, 3 mi S Auburn, 13-X-1976, Gelhaus (CAS); RIVERSIDE: Deep Cyn, 10 mi S Palm Desert, 11-VII-1969, Frommer, and Horsethief Cr, 26-III-1970, Frommer & LePre, and PL Boyd Desert Res Center, 3.5 mi S Palm Desert, 19-V-1973, McGregor (UCR); SAN BERNARDINO: Hwy 138, 11 mi E Cajon, 13-X-1967, Nakakihara, and South Fork Santa Ana R, Burro Flats, 25-V-1993, Al-Wahaibi (UCR); SANTA CLARA: Alum Rock Prk, 2-II-1976, and Stevens Cr, 12-X-1977, Klee (CAS), and Pacheco Cr, 25-IV-1993, Fend (PERC); SOLANO: 3 mi N Vacaville, 19-IV-1975, Nichols (UCD), and Alamo Cr, Gates Canyon Rd, 12-V-2002, Meyer (PERC).

***Paraleptophlebia helena* Day**

*Previous data.*—Day (1952): SONOMA (Mill Cr).

*New data.*—MENDOCINO: Rattlesnake Cr, Cummings, 14-IX-1946, Chandler (CAS); NEVADA: Prosser Cr, 3-X-1982, Shepard (SSU); PLACER: Rubicon R nr Long Cnyon Cr, 24-IX-2007 (BLAB); SONOMA: Fort Ross, 12-XI-1969, Balding, A (SSU).

*Remarks.*—This species is not known outside of California.

***Paraleptophlebia heteronea* (McDunnough)**

*New data.*—EL DORADO: Whaler Cr trib, 2 mi SE Quintette, 27-VII-1963, Leech (CAS); FRESNO: Oak Flat Campground, 22-VII-1984, MacDonald (PERC); HUMBOLDT: Bull Cr, 16-V-2002, Meyer (PERC); PLACER: Bear R, YMCA Camp, Hwy 20, and Jordan Cr, Bowman Rd, 18-V-2002, Meyer et al (PERC); SANTA CRUZ :Hester Cr, San Jose Rd, 20-V-2002, Meyer (PERC); SIERRA: Fiddle Cr, Hwy 49, and Ramsham Cr, Hwy 49, 17-V-2002, Meyer (PERC); TEHAMA: Deer Cr, Hwy 32, and Mill Cr, Hwy 36, 14-V-2002, Meyer (PERC); TULARE: North Fork Kaweah R, North Fork Dr, 9-V-2002, Meyer (PERC); YUBA: Brandy Cr, Pendola Rd, and Willow Cr, Pendola Rd, 17-V-2002, Meyer (PERC).

***Paraleptophlebia memorialis* (Eaton)**

*Previous data.*—Eaton (1884): NEVADA (Truckee); Traver (1935a): LOS ANGELES (San Dimas Cyn), MARIPOSA (Yosemite Valley); Kennedy (1967): MONO (Convict Cr); Collins (1970): LOS ANGELES (Little Rock Dr, San Gabriel Cyn, Santa Anita Cyn, West Fork San Gabriel R); Leland et al. (1989): MONO (Convict Cr).

*New data.*—EL DORADO: 1 mi W Riverton, 5-III-1989, Lockhart, and Bridal Veil Falls, 5 mi E Pollock Pines, 28-IV-1987, Vanrossum, and McKinney Cr, 30-III-1979, Moore, and South Fork Silver Cr, Ice House Rd, 2-V-1987 (SSU), and Canyon Cr, 1 mi N Arctic Mine, 19-IX-1938, Needham (INHS); FRESNO: Huntington L, Rancheria, 7-VII-1984, MacDonald, S (PERC); INYO: Big Pine Cr, 6-V-1986, and Goodale Cr, 11-II-1986, Baumann & Giuliani, and Division Cr, 7-VI-1986, and Independence Cr, 24-IV-1986, and Lone Pine Cr, 10-IV-1986, and North Fork Oak Cr, 7-III-1986, and South Fork Oak Cr, 28-II-1986, Giuliani (BYU), and Horton Cr, 8 mi NW Bishop, Hwy 395, 18-IX-1969, Frommer et al (UCR), and North L, 18 mi W Bishop, 10-IX-1966, Rentz & Rentz, and Tuttle Cr, 2 mi SW Lone Pine, 6-V-1969, Haddock (UCB), and Shephard Cr, Manzanar, 23-IV-1955, Hogue (LACM); LASSEN: S Milford, US 395, 19-IX-1946, Nelson (INHS); LOS ANGELES: Cattle Cyn, 12-VIII-1965, and Coldwater Cyn, 27-VI-1965, Vann (CAS), and Lucas Cr, 21-I-1985, Baumann et al (BYU); MARIPOSA: Alder Cr, Hwy 41, Yosemite Natl Prk, 26-VI-2003, Meyer & Meyer (PERC), and Fish Camp, 11-VII-1946, Chandler (CAS); MODOC: Cedar Pass, 29-VI-1955, MacSwain, A (UCB); MONO: L Rock Cr, Hwy 395, 19-IX-1969, Malin et al (UCR), and Rock Cr, Tom's Pl, 15-VIII-1957, Powell, A (UCB); MONTEREY: Big Sur R, 11-II-1948, Wirth (UCB); NEVADA: Sagehen Cr, 11-IV-1952, Needham (UCB); RIVERSIDE: Dark Canyon Cr, 21-VI-1977, Baumann & Hogue (BYU); SAN BERNARDINO: Hook Cr, 5-VII-1969, Malone, A (CAS); SANTA BARBARA: Cold Springs Cr, Monticito, 24-I-1985, Baumann & Nelson (BYU); SANTA CLARA: Alamitos Cr, and Saratoga, Via Monte Dr, IX-1998, Fend

(GSMP); SHASTA: Pit R, Fender Crossing, 27-IV-1984 (PERC); SISKIYOU: Castle L, 2-VII-1953, Chandler, A (CAS); TULARE: Cabin Cr, Hwy 198, Sequoia Natl Prk, 2-VII-2003, and Marble Fork Kaweah R, Hwy 198, Lodgepole, Sequoia Natl Prk, and Stoney Cr, Hwy 198, 3-VII-2003, and Woodward Cr, Hwy 198, 3-VII-2003, Meyer, and Wolverton Cr, Sequoia Natl Prk, 18-VI-1959, Allen (PERC); TUOLUMNE: Strawberry, 22-VI-1957, Burns, A (UCB).

***Paraleptophlebia packii* (Needham)**

*New data.*—EL DORADO American R, Hwy 50/Icehouse Rd, 26-VIII-2003, Randolph (UCD).

***Paraleptophlebia placeri* Mayo**

*Previous data.*—Mayo (1939): AMADOR (Amador Cr, Dry Cr, Jackson Cr).

*New data.*—ALAMEDA: L Anza, 18-VII-1989, Balfour (SSU); AMADOR: Grass Valley Cr, Hwy 88, 24-VI-2003, Meyer & Pfister, and Mokelumne R, IX-2003, Fields (PERC); EL DORADO: Coyote Cr, 17-III-1970, Meyer, and Sweetwater Cr, Salmon Falls Rd, 29-IV-1969, A (UCD), and Taylor Cr, Hwy 89, and Upper Truckee R, Hwy 50, 20-VIII-1969, Noble (CAS); MARIN: Lagunitas Cr, 23-VIII-2004, Fields (PERC), and Mill Valley, 20-IV-1947, Chandler (CAS), and Paper Mill Cr, St Prk Taylor SP, 19-X-1976, Unzicker et al (INHS); MARIPOSA: Coulterville, 14-V-1954, Truxal & Martin, A (LACM); SANTA CRUZ: Waddell Cr, 10-VII-2003, Meyer (PERC); SHASTA: Hat Cr, Fall R Mills, 6-VI-1969, Apperson (UCR).

*Remarks.*—This species is not known outside of California.

***Paraleptophlebia quisquilia* Day**

*Previous data.*—Day (1952): LAKE (Middle Cr).

*Remarks.*—This species is not known outside of California.

***Paraleptophlebia rufivenosa* (Eaton)**

*Previous data.*—Eaton (1884): MARIN (San Raphael); Seemann (1927): LOS ANGELES (San Dimas), RIVERSIDE (Andreas Cyn), SAN BERNARDINO (Cucamonga).

*New data.*—FRESNO: Huntington L, Sample Mdw, 10-VII-1984, MacDonald, A (PERC).

***Paraleptophlebia temporalis* (McDunnough)**

*Previous data.*—Serpa (1986): SONOMA (Copeland Cr).

*New data.*—INYO: Ash Cr, 7 mi NW Olancha, 8-VI-1988, A, and Coyote Cr, 8 mi SSW Bishop, 4-VII-1986, A, and Goodale Cr, 18-VI-1986, A, and Haiwee Cr, 10 mi S Olancha, 19-VI-1986, A, and South Fork Oak Cr, 16-VI-1986, Giuliani, A (BYU); MONO: Rock Cr, 3 mi SE Tom's Pl, 27-VI-1986, A, and Taylor Cyn Springs, 14 mi W Benton, 28-VII-1988, Giuliani, A (BYU); NEVADA: Sagehen Cr, 22-VI-1972, Casey, A, and Wolf Cr, 18-IV-1973, Meyer, A (UCD); PLUMAS: Domingo Spring, 6 mi NW Chester, and Warner Cr, 5 mi NW Chester, 25-VI-1980, Baumann & Stanger, A (BYU); SAN BERNARDINO: Santa Ana R, Seven Oaks, 22-VI-1977, Baumann & Hogue, A (BYU); TRINITY: Trinity Center, 7-VI-1964, Pinto, A (UCR); TUOLUMNE: Rainbow Pool Picnic Area, South Fork Tuolumne R, 27-VI-1980, Baumann & Stanger, A (BYU).

*Remarks.*—The Serpa (1986) report of this species was not published.

***Paraleptophlebia vaciva* (Eaton)**

*New data.*—EL DORADO: General Cr, Sugar Pine SP, 19-VIII-1969, and Upper Truckee R, Hwy 50, 10-X-1969, Noble (CAS); MADERA: Jackass Mdws, 31-VII-1946, Chandler, and Willow Cr, 6 mi N Soquel, 29-VII-1967, Allen (CAS); MARIPOSA: Coulterville, 14-V-1954, Truxal & Martin, A (LACM), and East Fork Lee Vining Cr, 4 mi W Hwy 395, 26-VII-1967, Allen, and Miami RS, 21-VI-1953, Chandler (CAS); TULARE: Middle Fork Kaweah R, Lodgepole Camp, Sequoia Natl Prk, and Round Mdw Camp, Sequoia Natl Prk, 25-VII-1967, Allen (CAS).

***Paraleptophlebia zayante* Day**

*Previous data.*—Day (1952): SANTA CRUZ (Zayante Cr). Day (1956): SAN MATEO.

*New data.*—EL DORADO: Upper Truckee R, Hwy 50, 17-VIII-1970, Noble (CAS).

*Remarks.*—This species is not known outside of California.

## Polymitarcyidae

***Ephoron album* (Say)**

*New data.*—ALPINE: Four Mile Canyon Cr, 4-IX-1996 (BLAB).

## Potamanthidae

***Anthopotamus verticis* (Say)**

*Previous data.*—McCafferty and Meyer (2007b): EL DORADO (Upper Truckee R).

## Pseudironidae

***Pseudiron centralis* McDunnough**

*Previous data.*—McCafferty and Meyer (2007a): SACRAMENTO (Sacramento R), YOLO (Sacramento R).

## Siphonuridae

***Edmundsius agilis* Day**

*Previous data.*—Day (1953): MADERA (Willow Cr); Meyer et al. (2003): FRESNO (Bull Cr, Providence Cr), MADERA (Willow Cr, North Willow Cr), MARIPOSA (trib Cascade Cr, trib Illilouette Cr, trib Crane Cr).

*Remarks.*—This species is not known outside of California.

***Siphonurus columbianus* McDunnough**

*Previous data.*—Traver (1935a): MARIPOSA (Yosemite Valley); Matsuda (1956): TUOLUMNE (Tuolumne Meadows).

*New data.*—ALPINE: Hope Valley, 9-VII-1948, Tucker, A (UCB); AMADOR: Silver L, VIII-1982, Ludwig, A (SSU); BUTTE: French Cr, 23-VI-1949, Chandler (CAS); CALAVERAS: Middle Fork Mokelumne R, 8-VII-1967, Evans (PERC); EL DORADO: Pino Grande, SW L Edson, 29-VI-1967, Neumann,

A (UCB); FRESNO: Hulmer Rd/Kings Canyon Rd jct, Kings Canyon Natl Prk, 1-VII-1946 (PERC); HUMBOLDT: 10 mi N Arcata, 21-VII-1969, Show, and Eel R, Richardson Grove St Prk, 31-V-1968, Haddick (UCB); MADERA: Coarsegold, 29-VI-1946, Chandler (UCB), and Willow Cr, Soquel Mdw, 8-VII-1951, Day, A,L (CAS); MARIPOSA: Cascade Cr, 31-VIII-2001, and Illouette Cr trib, 30-VIII-2001, and Yosemite Cr trib, Yosemite Natl Prk, 3-VIII-2001, Silldorff (PERC); MENDOCINO: Russain R, Hopland, 9-V-1970, Lane (UCB); MONO: Leavitt Mdw, 10-VIII-1962, Leech (CAS); MONTEREY: Arroyo Seco, 6 mi W Greenfield, 22-IV-1967, Haddock (UCB); NEVADA: Grass Valley, 5-V-1946, Chandler (CAS), and Sagehen Cr, Hobart Mills, 9-VII-1954, Goodwin (UCB); PLUMAS: Bucks L, 5-VII-1964, Dunning, A (UCD); SACRAMENTO: Consumnes R, 1 mi E Sloughhouse, 3-V-1989, Lockhart (SSU); SAN LUIS OBISPO: Margarita Cr, Hwy 101, 22-IV-1966, Haddock (UCB); SHASTA: Churn Cr, Redding, 14-V-1948, and Hat Cr, 4-V-1973, Daly, and Hat L, Lassen Natl Prk, 11-VII-1947, Usinger, and Kings Cr, Lassen Natl Prk, 19-IX-1946, Chandler (CAS); SISKIYOU: 1 mi SE Bartle, 10,14-VI-1974, and Ash Cr RS, 9 mi E McCloud, 7,9-VI-1974, Szerlip, and Grass L, 27-VIII-1946, Chandler (UCB); STANISLAUS: Del Puerto Cyn, Frank Raines Pk, 12-IV-1980, Moyles (UCB); TUOLUMNE: South Fork Tuolumne R, Yosemite Natl Prk, 3-VIII-2001, Silldorff (PERC).

*Siphonurus occidentalis* (Eaton)

*Previous data.*— Eaton (1885): NEVADA (Truckee); Mayo (1939): AMADOR (Dry Cr); Kennedy (1967): MONO (Convict Cr).

*New data.*— ALAMEDA: Tilden Prk, 13-V-1952, Lattin (UCB); ALPINE: Hope Valley, 9-VII-1948, Hurd, A (UCB), and West Fork Carson R, 3-VII-1950, Day, A (CAS); COLUSA: Bear Cr, 10-V-1975, McCarthy (UCD); EL DORADO: 3 mi S Camino, 23-VI-1948, Hurd (UCB), and Upper Truckee R, 2-VII-1950, Day, A (CAS); FRESNO: Hulmer Rd/Kings Canyon Rd jct, 1-VII-1946, Mulaik, and Kaiser Pass, 10-VII-1984, MacDonald, A (PERC); LAKE: Reiff, 25-V-1947, Chandler (CAS); LASSEN: Susan R Camp, 10-VII-1949, Wade, A (UCB); LOS ANGELES: Little Rock Cr, 11-VI-1968, Collins (CAS); MADERA: 4 mi W Bass L, 1-VII-1946, Chandler (CAS); MARIN: S P Taylor Pk, 9-V-1979, Eng (CAS); MARIPOSA: Tenaya L, Yosemite Natl Prk, 8-VII-1946 (CAS), and Yosemite, 14-VI-1931, A (UCB); MENDOCINO: Baechtel Cr, 3 mi W Willits, 15-XI-1948, Leech (PERC), and Broadus Cr, 1.3 mi W Willits, 2-VII-1959, Allen, and Willits, 15-VI-1948, Leech (CAS), and Hopland Field Sta, 28-IV-1972, Coville & Slater (UCB); MODOC: Fandango Pass, 8-VI-1970, Dietz, A (UCB); MONO: Robinson Cr, 14-VII-1952, Day, A,L (PERC), and Sardine Cr, 28-VI-1951, Silver, A (LACM); NEVADA: Sagehen Cr, 19-VII-1978, Haydon, A (UCD); PLACER: Middle Fork American R, 23-VII-1938, Needham (INHS); PLUMAS: 7.5 mi E Chester, 23,24-VI-1978, A,L (CAS), and Wolf Cr, 2 mi N Greenville, 16-V-1948, Wirth, A (UCB); SACRAMENTO: Consumnes R, Thornton, 10-V-1952, Day, A,L (CAS); SANTA CLARA: Pacheco Cr, 25-IV-1993, Fend (PERC), and Smith Cr, Mt Hamilton, 18-V-1953, Burns (UCB), and Stevens Cr, 12-X-1977, Klee (CAS); SHASTA: Hat Cr, Pronin, A (CAS); SIERRA: Sagehen Cr, VII-1953, A (LACM); SISKIYOU: 1 mi SE Bartle, Sorensen, A, and Ash Cr RS, 9 mi E McCloud, 10,12-VI-1974, A (UCB); SOLANO: Green Valley, 10-V-1953, Downey (CAS); SONOMA: East Austin Cr, 10-VII-1979 (CAS); TUOLUMNE: Tuolumne Mdws, Yosemite Natl Prk, 16-VII-1950, Alexander, A (PERC).

*Siphonurus spectabilis* Traver

*Previous data.*—Traver (1935a): SANTA CRUZ (Waddell Cr); Mayo (1939) as *S. maria* Mayo: AMADOR (Dry Cr), CALAVERAS (Jesus Maria Cr).

*New data.*—ALAMEDA: Niles Cyn, 8-V-1949, Day (CAS); ALPINE: Hope Valley, 19-V-1959, Harmstom (PERC); AMADOR: Consumnes R, Latrobe Rd, 14-IV-1973, Meyer (UCD), and Sutter Cr, 1-IV-1950, Day, A (CAS), and Volcano, 19-VII-1956 (SSU); BUTTE: Singer Cr, 13 mi N Chico, IV-1969, A,L (CAS); CALAVERAS: Angles Cr, Hwy 4, Angels Camp, and Calaveritas Cr, Calaveritas Rd, and North Fork Calaveras R, Hwy 49, 11-V-2002, Meyer (PERC), and Esperanza Cr, 4-VII-1974 (SSU); COLUSA: Little Stoney Cr, Stoneyford Rd, 13-V-2002, Meyer (PERC), and Stony Cr, 5 mi W Stonyford, 16-VI-1985, Shepard, A (SSU); CONTRA COSTA: San Ramon Cr, 11-VI-1949, Day, A (CAS); DEL NORTE: Six Rivers NF, 30-V-1951, Cross (PERC); EL DORADO: Consumnes R, 24-VIII-1971, Darby & Hall, and Placerville, 5-VII-1956 (SSU); FRESNO: Hwy 185, 1-V-1976, Klee (CAS); GLENN: Elk R, Rd 306, and Grindstone Cr, Rd 305 (N 162W), 13-V-2002, Meyer (PERC); HUMBOLDT: Redwood Cr, Brice Thorne Rd, 16-V-2002, and Van Duzen R, Hwy 36, and Yager Cr, Hwy 36, W of Carlotta, 15-V-2002, Meyer (PERC); LAKE: Middle Cr, 28-V-1949, Day (CAS), and North Fork Cache Cr, New Long Valley Rd, 16-V-2002, Meyer (PERC); MADERA: Coarsegold Cr, Hwy 41, 10-V-2002, Meyer (PERC); MARIN: Nicasio Cr, Nicasio/Lucas Valley Rd, 19-V-2002, Meyer (PERC); MARIPOSA: East Fork Chowchilla R, Hwy 49, and Mahoney Gulch, Hwy 132, Coulterville, and West Fork Chowchilla R, Darrel Rd, 10-V-2002, Meyer (PERC); MENDOCINO: Baechtel Cr, 3 mi W Willits, 15-VI-1948, Leech, and East Fork Russian R, Potter Valley Rd, 16-V-2002, Meyer, and Flynn Cr, Hwy 28, 19-VII-1960 (PERC); MONO: Leavitt Mdw, 27-III-1964, Leech (CAS); MONTEREY: San Antonio R, Pleyto Rd, 9-IV-1963, Rentz (CAS); NAPA: Burton Cr, Pope Valley, L Barryessa Rd, 10-V-1964, Leech (CAS), and L Hennessey, 26-IV-1969, Brode (FGCH), and Sage Cr, 30-IV-1950, Day, A,L (LACM); NEVADA: Prosser Cr, 5 mi N Truckee, 2-X-1983, Tappel (SSU), and Rush Cr, Hwy 49, 17-V-2002, Meyer (PERC); PLACER: North Fork American R, Yankee Jims Rd, 18-V-2002, Meyer et al (PERC), and Newcastle, 1-VII-1975, Fields, A (SSU); SAN BERNARDINO: Deep Cr, Running Springs, 19-VI-1976, Hogue (LACM); SAN FRANCISCO: San Francisco, V-1942, A (PERC); SAN MATEO: Palo Alto, 27-IV-1947, Chandler, and San Gregorio Cr, 17-VI-1950, Day, A (CAS); SANTA CLARA: Alum Rock Pk, 13-III-1965, Kavanough (CAS), and Isabel Cr, 19-IV-1956, Ribble (INHS), and Penitencia Cr, V-1997, Fend (PERC); SANTA CRUZ: Waddell Cr, 10-VII-2003, Meyer (PERC); SIERRA: Fiddle Cr, 23-IV-1977, Hall (SSU); SOLANO: Alamo Cr, Gates Cyn Rd, and Ulati Cr, Mix Cyn Rd, 12-V-2002, Meyer, and Gates Cyn, 9-V-1956, Schlenger, A (PERC), and Vacaville, 1-V-1950, McClay, A (UCD); SONOMA: Sonoma Cr, 29-IV-1950, Day, A,L (CAS); TEHAMA: Singer Cr, 13 mi N Chico, 12-IV-1979, A (CAS); TRINITY: Tangle Blue Cr, 6-IX-1969, LePre (UCR); TULARE: North Fork Kaweah R, N Fork Dr, 9-V-2002, Meyer (PERC); TUOLUMNE: Niagra Cr, 9-VIII-1962, Leech (CAS), and Sullivan Cr, Algerine Rd, 11-V-2002, Meyer (PERC); VENTURA: Sespe Cr, 26-V-1937 (PERC); YOLO: Cache Cr, 6 mi N Runsey, 17-V-1952, Day, A (CAS); YUBA: Middle Yuba R, Moonshine Rd, 17-V-2002, Meyer (PERC).



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