

Annotated Checklist Of The Millipeds Of California (Arthropoda: Diplopoda)

Author: Shelley, Rowland M.

Source: Monographs of the Western North American Naturalist, 1(1):

90-115

Published By: Monte L. Bean Life Science Museum, Brigham Young

University

URL: https://doi.org/10.3398/1545-0228-1.1.90

BioOne Complete (complete.BioOne.org) is a full-text database of 200 subscribed and open-access titles in the biological, ecological, and environmental sciences published by nonprofit societies, associations, museums, institutions, and presses.

Your use of this PDF, the BioOne Complete website, and all posted and associated content indicates your acceptance of BioOne's Terms of Use, available at www.bioone.org/terms-of-use.

Usage of BioOne Complete content is strictly limited to personal, educational, and non - commercial use. Commercial inquiries or rights and permissions requests should be directed to the individual publisher as copyright holder.

BioOne sees sustainable scholarly publishing as an inherently collaborative enterprise connecting authors, nonprofit publishers, academic institutions, research libraries, and research funders in the common goal of maximizing access to critical research.

ANNOTATED CHECKLIST OF THE MILLIPEDS OF CALIFORNIA (ARTHROPODA: DIPLOPODA)

Rowland M. Shellev¹

ABSTRACT.—The milliped fauna of California consists of 11 orders, 24 families, 83 genera, and 226 species and subspecies. A complete listing of these taxa and intergrades is provided, with published and new records from the state and type localities. *Cylindroiulus caeruleocinctus* (Wood), *C. truncorum* (Silvestri), *Ophyiulus pilosus* (Newport) (all Julida: Julidae), and *Opiona fisheri* Gardner and Shelley (Chordeumatida: Caseyidae) are newly recorded from California. The new combination *Atopetholus wheeleri* (Chamberlin) is proposed.

Key words: milliped, California.

Nearly 40 years have elapsed since Buckett (1964) published a listing of California Diplopoda. This work preceded 2 periods of activity on the state's fauna, the first from 1964 through 1975 by Buckett and M.R. Gardner, and the second from 1989 through 1997 by myself. Knowledge of California diplopods is thus significantly advanced over the condition in 1964, to the point that a new checklist is in order. Buckett (1964) documented a fauna of 9 orders, 23 families, 80 genera, and 178 species and subspecies, 126 of which (70.1% of the total) were known only from the type locality; the present contribution documents a fauna of 11 orders, 24 families, 83 genera, and 226 species and subspecies, 78 of which (34.5% of the total) are known only from the type locality. While considerable work has been done on the California fauna, much remains, and this contribution is intended to stimulate future research.

With the publication of this checklist, California becomes the 4th state with a modern milliped listing, the others being Michigan (Snider 1991, an update of an old list by Johnson [1954]), North Carolina (Shelley 2000a), and Florida (Shelley 2001). An earlier publication on Ohio (Williams and Hefner 1928) is now obsolete. In addition, the faunas of eastern and western Canada have been documented (Shelley 1988, 1990), and there are now 2 continental checklists, by Chamberlin and Hoffman (1958) and Hoffman (1999), from which faunal information can be gleaned for California or

any other state in the continental United States. Four diplopods—Cylindroiulus caeruleocinctus (Wood), C. truncorum (Silvestri), Ophyiulus pilosus (Newport), and Opiona fisheri Gardner and Shelley—are newly recorded from California. These species plus Brachyiulus lusitanus Verhoeff are European julids that have been imported into urban environments; likewise, the Asian species Oxidus gracilis (C.L. Koch) and the Australian/New Zealand diplopod Akamptogonus novarae (Humbert and DeSaussure) have been introduced into California cities and towns. Generic and/or specific names cannot be provided for certain representatives of the Siphonophoridae (Siphonophorida), Atopetholus (Spirobolida: Atopetholidae), Caseya (Chordeumatida: Caseyidae), Rhiscosomides (Chordeumatida: Rhiscosomididae), and Striaria (Chordeumatida: Striariidae). For Paeromopus angusticeps (Wood) (Julida: Paeromopodidae), and Motyxia sequoia (Chamberlin), Xystocheir dissecta (Wood), and X. stolonifera Shellev (all Polydesmida: Xystodesmidae), I present accounts of intergrades, which are prominent in sections of the state. I also propose the new combination Atopetholus wheeleri (Chamberlin). The format for the accounts provides a citation of the type locality (given as a state or country when not in California), occurrence in California including published and new records, pertinent references, and miscellaneous remarks where appropriate. For new records, locality details are provided when there are 6 or fewer new county

¹Research Laboratory, North Carolina State Museum of Natural Sciences, 4301 Reedy Creek Rd., Raleigh, NC 27607. E-mail: rowland.shelley@ncmail.net

records; counties alone are presented when there are more than 6 new counties. Details about junior synonyms should be sought in either Hoffman (1999) or the reference given for the relevant taxa. Acronyms of sources of preserved material are as follows:

AMNH – American Museum of Natural History, New York, NY

BMNH – The Natural History Museum, London, England

BYU – Monte L. Bean Life Science Museum, Provo, UT

CAS – California Academy of Sciences, San Francisco

CDFA – California Department of Food and Agriculture, Sacramento

FMNH – Field Museum of Natural History, Chicago, IL

FSCA – Florida State Collection of Arthropods, Gainesville

LACMNH – Los Angeles County Museum of Natural History Los Angeles CA

Natural History, Los Angeles, CA MCZ – Museum of Comparative Zoology,

Harvard University, Cambridge, MA NCSM – North Carolina State Museum of Natural Sciences, Raleigh

NMNH – National Museum of Natural History, Smithsonian Institution, Washington, DC

TMM – Texas Memorial Museum, Austin

UAZ – Department of Entomology, University of Arizona, Tucson

UCB – Entomology Department, University of California, Berkeley

UCD – Entomology Department, University of California, Davis

UCR – Entomology Department, University of California, Riverside

UID – Entomology Department, University of Idaho, Moscow

WAS – Private collection of W.A. Shear, Hampden-Sydney, VA

WSU – Entomology Department, Washington State University, Pullman

WTAMU – Department of Life, Earth, and Environmental Sciences, West Texas A&M University, Canyon, TX

> Subclass Penicillata Order Polyxenida Family Polyxenidae Genus *Polyxenus* Latreille

Polyxenus anacapensis Pierce, 1940

TYPE LOCALITY.—Middle Anacapa Island, Santa Barbara County.

Occurrence in California.—Published record: Santa Barbara County. New records:

Alameda, Contra Costa, Humboldt, Los Angeles, Marin, Mendocino, Napa, Nevada, Orange, Plumas, Riverside, San Diego, San Joaquin, San Luis Obispo, San Mateo, Santa Clara, Shasta, Solano, Sonoma, Tehama, Trinity, and Ventura cos. (CDFA, FSCA, LACMNH, NMNH, UCB, UCD, UCR, WAS).

Reference.—Pierce 1940.

REMARKS.—For convenience I list all samples of California *Polyxenus* that I have seen under *P. anacapensis*. Some may refer to other species.

Subclass Chilognatha Infraclass Pentazonia Order Glomerida Family Glomeridae Genus *Glomeroides* Chamberlin, 1922

Glomeroides primus (Silvestri, 1929)

Type locality.—Mill Valley, Marin County.
Occurrence in California.—Published records: Marin and Monterey counties. New records: Contra Costa Co., Redwood Park (FSCA, NMNH) and Morega Redwoods (CAS). Santa Cruz Co., Ben Lomond (FSCA) and Santa Cruz City Cave (FSCA).

REFERENCE.—Shear 1986.

Infraclass Helminthomorpha
Subterclass Colobognatha
Order Polyzoniida
Family Polyzoniidae
Subfamily Buzoniinae
Tribe Buzoniini
Genus Buzonium Cook and
Loomis, 1928

Buzonium crassipes Cook and Loomis, 1928

Type Locality.—Sunnyside Mine near Seneca, Plumas County.

OCCURRENCE IN CALIFORNIA.—Published records: Calaveras, Del Norte, El Dorado, Humboldt, Mendocino, Nevada, Placer, Siskiyou, Sonoma, and Trinity counties. New records: None.

REFERENCE.—Shelley 1997a.

Tribe Bdellozoniini Genus *Bdellozonium* Cook and Loomis, 1928

Bdellozonium cerviculatum Cook and Loomis, 1928

TYPE LOCALITY.—Belden, Plumas County.

OCCURRENCE IN CALIFORNIA.—Published records: Del Norte, El Dorado, Fresno, Humboldt, Mariposa, Monterey, Placer, Shasta, Tuolumne, and Tulare counties. New records: None.

REFERENCE.—Shelley 1997a.

Bdellozonium quicki (Chamberlin, 1954)

TYPE LOCALITY.—Chowchilla Mountain, 0.75 mi (1.2 km) N Signal Peak, Mariposa County.

OCCURRENCE IN CALIFORNIA.—Published record: Mariposa County (known only from the type locality).

REFERENCE.—Shelley 1997a.

Genus Stenozonium Shelley, 1997

Stenozonium exile Shelley, 1997

Type Locality.—Arcata Community Forest near Arcata, Humboldt County.

Occurrence in California.—Published record: Humboldt County. New records: None. Reference.—Shelley 1997a.

Family Hirudisomatidae Genus Octoglena Wood, 1864

Octoglena bivirgata Wood, 1864

Type locality.—2 mi (3.2 km) N Ft. Ross, Sonoma County (neotype locality).

OCCURRENCE IN CALIFORNIA.—Published records: Colusa, Del Norte, Humboldt, Lake, Marin, Mendocino, Napa, San Mateo, Santa Clara, Santa Cruz, and Sonoma counties. New records: None.

Reference.—Shelley 1995a.

Octoglena sierra Shelley, 1995

Type locality.—4 mi (6.4 km) W Newcastle, Placer County.

OCCURRENCE IN CALIFORNIA.—Published records: Placer County. New records: None. REFERENCE.—Shelley 1995a.

Superorder Typhlogena Order Platydesmida Family Andrognathidae Genus *Brachycybe* Wood, 1864

Brachycybe californica (Karsch, 1880)

Type locality.—California without further specification.

OCCURRENCE IN CALIFORNIA.—Unknown. REMARKS.—Hoffman (1999) thought this

species should be regarded as valid until the type specimen, in the Zoologisches Museum der Humboldt-Universität, Berlin, Germany, could be examined. He suggested that it might be a senior name to *B. producta* Loomis.

Brachycybe picta Gardner, 1975

Type locality.—1 mi (1.6 km) N Mendocino, Mendocino County.

OCCURRENCE IN CALIFORNIA.—Published records: Marin and Mendocino counties. New records. Marin Co., Sam P. Taylor State Park (UCD), Mill Valley (BMNH), and Lagunetas Canyon (FSCA). Mendocino Co., 5 mi (8 km) E Anchor Bay (AMNH).

REFERENCE.—Gardner 1975.

Brachycybe producta Loomis, 1936

Type locality.—Baja California Norte.

OCCURRENCE IN CALIFORNIA.—Published records: Amador, Calaveras, El Dorado, Lake, Marin, Mariposa, Napa, Nevada, Placer, Sacramento, Shasta, Solano, Sonoma, and Tuolumne counties. New records: Butte Co., Forest Ranch (NCSM) and 2.5 mi (4.0 km) SW Cherokee (WSU).

REFERENCES.—Gardner 1975, Chamberlin and Hoffman 1958.

Brachycybe rosea Murray, 1877

Type locality.—3 mi (4.8 km) SW Placerville, El Dorado County (neotype locality).

OCCURRENCE IN CALIFORNIA.—Published records: El Dorado, Nevada, Plumas, and Shasta counties. New records: Butte Co., 4 mi (6.4 km) SW Stirling City (LACMNH), Big Bear Mountain near Pulga (NMNH), and Forest Ranch (NCSM). Lassen Co., Monton (FSCA). Mendocino Co., 4.1 mi (6.6 km) SW Leggett (AMNH). Placer Co., 5 mi (8 km) N Placerville (NCSM). Sierra Co., Sierra City (AMNH). Tehama Co., Deer Creek (NMNH), S of Lassen Peak (NMNH), and Dales, 10 mi (16 km) E Red Bluff (NCSM). Yuba Co., 5 mi (8 km) N Smartville (UCB) and 1 mi (1.6 km) W Strawberry Valley Ranger Station (UCB).

REFERENCE.—Gardner 1975.

Genus Gosodesmus Chamberlin, 1922

Gosodesmus claremontus Chamberlin, 1922

TYPE LOCALITY.—Claremont, Los Angeles County.

OCCURRENCE IN CALIFORNIA.—Published records: Amador, Kern, Los Angeles, Marin, Mariposa, Mendocino, Monterey, Placer, San Mateo, Santa Barbara, Santa Clara, Santa Cruz, and Tulare counties. New records: Alameda, Del Norte, El Dorado, Fresno, Madera, Orange, San Bernardino, San Diego, San Joaquin, Shasta, and Stanislaus cos. (AMNH, CAS, FSCA, LACMNH, NCSM, UAZ, UCB, UCD, UCR).

REFERENCE.—Gardner 1975.

Genus *Ischnocybe* Cook and Loomis, 1928

Ischnocybe plicata Cook and Loomis 1928

Type locality.—14 mi (22.4 km) up North Fork of Feather River from Belden, Plumas County.

OCCURRENCE IN CALIFORNIA.—Published records: Plumas County. New records: Humboldt Co., Highway of Giants, 2 mi (3.2 km) N Mendocino County line (AMNH). Sonoma Co., locality not specified (BMNH).

REFERENCE.—Gardner 1975.

Genus *Mitocybe* Cook and Loomis, 1928

Mitocybe auriportae Cook and Loomis, 1928

Type locality.—Mount Tamalpais, Marin County.

OCCURRENCE IN CALIFORNIA.—Published record: Marin County (known only from the type locality).

REFERENCE.—Gardner 1975.

Order Siphonophorida Family Siphonorhinidae Genus *Illacme* Cook and Loomis, 1928

Illacme plenipes Cook and Loomis, 1928

Type locality.—Near the divide between Salinas and San Juan Bautista, San Benito County.

OCCURRENCE IN CALIFORNIA.—Published record: San Benito County (known only from the type locality).

REFERENCE.—Shelley 1996a.

REMARKS.—Illacme plenipes is the milliped and the animal with the most legs; a female paratype has 750. I have searched in the vicinity of the type locality several times without

finding more specimens. Re-collection of *I. plenipes* is much to be desired.

Family Siphonophoridae

Undetermined genus and species

Occurrence in California.—Published records: Los Angeles and Orange counties. New records: None.

REFERENCE.—Shelley 1996a.

Subterclass Eugnatha Superorder Juliformia Order Julida Family Julidae Genus *Brachyiulus* Berlese, 1884

Brachyiulus lusitanus Verhoeff, 1898

Type locality.—Portugal.

OCCURRENCE IN CALIFORNIA.—Published record: Contra Costa County. New records: Kern Co., 15 mi (24 km) S Shirley Meadows (LACMNH). Los Angeles Co., Los Angeles (LACMNH), Pasadena (CAS), Claremont and Pomona (NMNH). Riverside Co., Riverside (UCR). Santa Barbara Co., Santa Barbara (NMNH). Santa Clara Co., Palo Alto (NMNH). Tulare Co., E of Visalia (WTAMU). Yolo Co., Davis (UCD). Yuba Co., 5 mi (8 km) N Smartville (UCB).

Reference.—Reeves 2000.

Genus *Cylindroiulus* Verhoeff, 1893

Cylindroiulus caeruleocinctus (Wood, 1864)

Type locality.—Pennsylvania.

OCCURRENCE IN CALIFORNIA.—Published records: None. New records: Los Angeles Co., Long Beach, San Pedro, and Torrance (LAC-MNH). Orange Co., La Habra (LACMNH).

References.—None.

REMARKS.—Cylindroiulus caeruleocinctus is a new species for California.

Cylindroiulus latestriatus (Curtis, 1845)

TYPE LOCALITY.—England.

OCCURRENCE IN CALIFORNIA.—Published records: Los Angeles and Santa Barbara counties. New records: Los Angeles Co., Artesia, Long Beach, Pasadena, and Torrance (CAS, FMNH, LACMNH). Orange Co., Anaheim, Newport Beach, and Santa Ana (LACMNH). Sacramento Co., Sacramento (NMNH). San

Bernardino Co., Victorville (LACMNH). San Francisco Co., San Francisco (CAS). San Joaquin Co., Manteca (CAS). Santa Barbara Co., Los Alamos (LACMNH).

REFERENCE.—Chamberlin 1914.

REMARKS.—Buckett (1964) said that this species occurs from Los Angeles as far north as San Francisco Bay.

Cylindroiulus truncorum (Silvestri, 1896)

Type locality.—Tunisia.

OCCURRENCE IN CALIFORNIA.—Published records: None. New records: Alameda Co., Berkeley (UCB). Butte Co., Chico (NCSM). Los Angeles Co., Pasadena (CAS). Sacramento Co., North Highlands, Dry Creek (UCD). San Bernardino Co., Mt. Baldy Village (BYU). San Mateo Co., Juniperro Serra County Park (CAS). Yolo Co., Davis (UCD).

REFERENCES.—None.

REMARKS.—Cylindroiulus truncorum is a new record for California.

Genus Ophyiulus Berlese, 1884

Ophyiulus pilosus (Newport, 1843)

Type locality.—England.

OCCURRENCE IN CALIFORNIA.—Published records: None. New records: Los Angeles Co., Claremont (FSCA). Sacramento Co., Carmichael (UCD).

REFERENCES.—None.

REMARKS.—Ophyiulus pilosus is a new record for California.

Family Nemasomatidae Genus *Orinisobates* Lohmander, 1932

Orinisobates expressus (Chamberlin, 1941)

Type locality.—Washington.

OCCURRENCE IN CALIFORNIA.—Published record: Glenn County. New records: Shasta Co., along California highway 89 near Bartle (UCD). Trinity Co., 4 mi (6.4 km) S Hayfork (UCB).

REFERENCE.—Enghoff 1985.

Family Paeromopodidae Genus *Californiulus* Verhoeff, 1938

Californiulus blechrostriatus Shelley and Bauer, 1997

TYPE LOCALITY.—Saline Valley, Death Valley National Park, Inyo County.

OCCURRENCE IN CALIFORNIA.—Published record: Inyo County. New record: Inyo Co., Nelson Range, Grapevine Canyon, (FSCA).

REFERENCE.—Shelley and Bauer 1997a.

Californiulus chamberlini (Brolemann, 1922)

TYPE LOCALITY.—Mt. Shasta, Siskiyou County.

OCCURRENCE IN CALIFORNIA.—Published records: Shasta and Siskiyou counties. New records: None.

REFERENCE.—Shelley 1994a.

Californiulus dorsovittatus Verhoeff, 1938

TYPE LOCALITY.—Mt. Harkness, Lassen Volcanic National Park, Plumas County.

OCCURRENCE IN CALIFORNIA.—Published records: Lassen, Plumas, Shasta, Siskiyou, and Tehama counties. New records: None.

REFERENCES.—Shelley 1994a, Shelley and Bauer 1997a.

Californiulus yosemitensis Chamberlin, 1941

TYPE LOCALITY.—Aspen Valley, Yosemite National Park, Tuolumne County.

OCCURRENCE IN CALIFORNIA.—Published records: Butte, Fresno, Kern, Lassen, Madera, Mariposa, Modoc, Mono, Nevada, Placer, Plumas, Shasta, Sierra, Tulare, and Tuolumne counties. New record: County unknown (either Placer or El Dorado), Lake Tahoe (BMNH).

REFERENCES.—Shelley 1994a, Shelley and Bauer 1997a.

Genus Paeromopus Karsch, 1881

Paeromopus angusticeps angusticeps (Wood, 1864)

Type locality.—Oakland, Alameda County (neotype locality).

OCCURRENCE IN CALIFORNIA.—Published records: Alameda, Marin, Monterey, Santa Clara, and Santa Cruz counties. New records: None.

REFERENCES.—Shelley 1994a, Shelley and Bauer 1997a.

Paeromopus angusticeps buttensis Chamberlin, 1954

TYPE LOCALITY.—Big Bar Mountain E Pulga, Butte County.

OCCURRENCE IN CALIFORNIA.—Published records: Amador, Butte, Calaveras, El Dorado, Humboldt, Lake, Mendocino, Nevada, Placer,

Plumas, Shasta, Sierra, Solano, Sonoma, Trinity, Tuolumne, Yolo, and Yuba counties. *New records:* None.

REFERENCES.—Shelley 1994a, Shelley and Bauer 1997a.

Paeromopus angusticeps intergrades

OCCURRENCE IN CALIFORNIA.—Published records: Solano and Sonoma counties. New records: None.

REFERENCE.—Shelley and Bauer 1997.

Paeromopus cavicolens Chamberlin, 1949

Type locality.—Windeler Cavern, ca 8 mi (12.8 km) N Columbia, Tuolumne County.

OCCURRENCE IN CALIFORNIA.—Published record: Tuolumne County (known definitely only from the type locality).

REFERENCE.—Shelley 1994a.

Paeromopus eldoradus Chamberlin, 1941

Type locality.—Coloma, El Dorado County. Occurrence in California.—*Published record:* El Dorado County (known only from the type locality).

REFERENCE.—Shelley 1994a.

Paeromopus paniculus Shelley and Bauer, 1997

Type locality.—1.5 mi (2.4 km) W El Portal, Mariposa County.

Occurrence in California.—Published record: Mariposa County. New records: None. Reference.—Shelley and Bauer 1997a.

Family Parajulidae Genus *Bollmaniulus* Verhoeff, 1926

Bollmaniulus catalinae (Chamberlin, 1940)

Type Locality.—Santa Catalina Island, Los Angeles County.

OCCURRENCE IN CALIFORNIA.—Published record: Santa Catalina Island, Los Angeles County (known only from the type locality).

Reference.—Chamberlin 1940.

Bollmaniulus concolor (Chamberlin, 1940)

Type locality.—Redlands, San Bernardino County.

OCCURRENCE IN CALIFORNIA.—Published record: San Bernardino County (known only from the type locality).

REFERENCE.—Chamberlin 1940.

Bollmaniulus pachysomus (Chamberlin, 1940)

TYPE LOCALITY.—Yosemite National Park, Mariposa/Tuolumne counties.

OCCURRENCE IN CALIFORNIA.—Published record: Mariposa/Tuolumne counties (known only from the type locality).

REFERENCE.—Chamberlin 1940.

Bollmaniulus pearcei (Chamberlin, 1943)

Type locality.—South Fork of Bishop Creek, Inyo County.

OCCURRENCE IN CALIFORNIA.—Published record: Inyo County (known only from the type locality).

REFERENCE.—Chamberlin 1943a.

Bollmaniulus rhodogeus (Chamberlin, 1940)

Type locality.—Redlands, San Bernardino County.

OCCURRENCE IN CALIFORNIA.—Published record: San Bernardino County (known only from the type locality).

Reference.—Chamberlin 1940.

Genus Codiulus Chamberlin, 1940

Codiulus etirus Chamberlin, 1941

TYPE LOCALITY.—Cardiff-by-the-Sea, San Diego County.

OCCURRENCE IN CALIFORNIA.—Published record: San Diego County (known only from the type locality).

Reference.—Chamberlin 1941a.

Codiulus oulogon Chamberlin, 1940

TYPE LOCALITY.—Box Springs/Riverside, Riverside County.

OCCURRENCE IN CALIFORNIA.—Published record: Riverside County (known only from the type locality).

Reference.—Chamberlin 1940.

Genus Mulaikiulus Chamberlin, 1941

Mulaikiulus stanleius Chamberlin, 1941

Type locality.—12 mi (19.2 km) NE Hammond, Tulare County.

OCCURRENCE IN CALIFORNIA.—Published record: Tulare County (known only from the type locality).

REFERENCE.—Chamberlin 1941b.

Genus *Parajulus* Humbert and DeSaussure, 1869

Parajulus varius Bollman, 1887

Type locality.—San Diego, San Diego County.

OCCURRENCE IN CALIFORNIA.—Published records: Mendocino and San Diego counties, and "Rosario Mission," county unknown. New records: None.

REFERENCES.—Bollman 1887a, 1887b.

REMARKS.—This species, listed under "Parajulidae of Uncertain Systematic Position" by Chamberlin and Hoffman (1958) and "Parajulidae of Uncertain Generic Position or Validity" by Hoffman (1999), was described as new twice by Bollman (1887a, 1887b). I cite it here under Parajulus, but undoubtedly it belongs to a different genus, a decision that must await comprehensive studies on western components of the family. In the original descriptions, Bollman reported it from San Diego; Ukiah, Mendocino County; and "Rosario Mission," which was reported to be in Southern California and "Lower California," i.e., Baja California. Chamberlin and Hoffman (1958) suggested San Diego as a restricted type locality but did not designate a lectotype.

Genus Simiulus Chamberlin, 1940

Simiulus arius (Chamberlin, 1918)

Type locality.—Stanford, Santa Clara County.

OCCURRENCE IN CALIFORNIA.—Published record: Santa Clara County (known only from the type locality).

REFERENCE.—Chamberlin 1940.

Genus Sophiulus Chamberlin, 1940

Sophiulus lomondus Chamberlin, 1941

Type Locality.—Ben Lomond, Santa Cruz County.

OCCURRENCE IN CALIFORNIA.—Published record: Santa Cruz County (known only from the type locality).

REFERENCE.—Chamberlin 1941a.

Sophiulus tivius (Chamberlin, 1912)

Type locality.—Mill Valley, Marin County. Occurrence in California.—Published records: Marin, San Francisco, and Santa Clara counties. New records: None.

REFERENCE.—Chamberlin 1940.

Genus Spathiulus Chamberlin, 1940

Spathiulus elegantulus Causey, 1950

Type Locality.—Happy Isle, Yosemite National Park, Mariposa County.

OCCURRENCE IN CALIFORNIA.—Published record: Mariposa County (known only from the type locality).

Reference.—Causey 1950.

Spathiulus leptus Chamberlin, 1940

Type Locality.—Yosemite National Park, Mariposa/Tuolumne counties.

OCCURRENCE IN CALIFORNIA.—Published record: Mariposa/Tuolumne counties (known only from the type locality).

REFERENCE.—Chamberlin 1940.

Spathiulus tribolus Chamberlin, 1941

Type locality.—Sequoia National Park, 12 mi (19.2 km) N Hammond, Tulare County.

OCCURRENCE IN CALIFORNIA.—Published record: Tulare County (known only from the type locality).

REFERENCE.—Chamberlin 1941b.

Spathiulus tuolumnus (Chamberlin, 1950)

Type Locality.—Pinecrest, Tuolumne County.

OCCURRENCE IN CALIFORNIA.—Published record: Tuolumne County (known only from the type locality).

Reference.—Chamberlin 1950.

REMARKS.—Chamberlin and Hoffman (1958) and Hoffman (1999) show this species as having been originally included in *Spathiulus*, but it was actually described in *Sophiulus*.

Genus Tuniulus Chamberlin, 1941

Tuniulus milpitanus (Chamberlin, 1940)

Type locality.—Milpitas, Santa Clara County.

OCCURRENCE IN CALIFORNIA.—Published record: Santa Clara County (known only from the type locality).

REFERENCE.—Chamberlin 1940.

Order Spirobolida Family Atopetholidae Subfamily Arinolinae

Arinolus latus Loomis, 1953

TYPE LOCALITY.—Antelope Valley between Lancaster and Palmdale, Los Angeles County.

Occurrence in California.—Published record: Los Angeles County. New record: San Bernardino Co., Pisgah Crater (LACMNH).

REFERENCE.—Hoffman and Orcutt 1960.

Genus Piedolus Chamberlin, 1930

Piedolus utus Chamberlin, 1930

TYPE LOCALITY.—Utah.

Occurrence in California.—Published record: Inyo County. New records: None. Reference.—Shelley 2000b.

Subfamily Atopetholinae Genus *Atopetholus* Chamberlin, 1918

Atopetholus angelus Chamberlin, 1920

TYPE LOCALITY.—Silver Lake (Edendale suburb), Los Angeles, Los Angeles County.

OCCURRENCE IN CALIFORNIA.—Published record: Los Angeles County. New records: San Diego Co., U.S. International University, Elliott Campus and Scripps Ranch (NCSM, UCD).

REFERENCE.—Hoffman and Orcutt 1960. REMARKS.—This name may prove to be a junior synonym of *A. californicus*.

Atopetholus barbaranus Chamberlin, 1949

Type Locality.—Orcutt, Santa Barbara County.

OCCURRENCE IN CALIFORNIA.—Published record: Santa Barbara County (known only from the type locality).

REFERENCE.—Hoffman and Orcutt 1960

Atopetholus californicus Chamberlin, 1918

Type locality.—Claremont, Los Angeles/ San Bernardino counties.

OCCURRENCE IN CALIFORNIA.—Published record: Los Angeles/San Bernardino counties. New records: Kern Co., Tehachapi Mountains, along California highway 58 at Clear Creek (NMNH). Orange Co., Newport Beach (UCD). San Diego Co., Torrey Pines State Beach and Reserve (NMNH).

REFERENCES.—Hoffman and Orcutt 1960, Hoffman 1998.

Atopetholus carmelitus Chamberlin, 1940

Type locality.—Hastings Reservation, Monterey County.

OCCURRENCE IN CALIFORNIA.—Published record: Monterey County (known only from the type locality).

REFERENCE.—Hoffman and Orcutt 1960.

Atopetholus fraternus Chamberlin, 1918

Type locality.—Friant, Fresno County.
Occurrence in California.—Published record: Fresno County. New record: Kings Co., Avenal (AMNH).

REFERENCE.—Hoffman and Orcutt 1960.

Atopetholus paroicus Chamberlin, 1941

Type Locality.—Mountain Springs, Imperial County.

OCCURRENCE IN CALIFORNIA.—Published record: Imperial County (known only from the type locality).

REFERENCE.—Hoffman and Orcutt 1960.

Atopetholus pearcei Chamberlin, 1950

Type locality.—Oildale, Kern County.
Occurrence in California.—Published record: Kern County (known only from the type locality)

REFERENCE.—Hoffman and Orcutt 1960.

Atopetholus wheeleri (Chamberlin, 1918), new combination

Type Locality.—Cold Spring Canyon, Santa Ynez Mountains, Santa Barbara County.

OCCURRENCE IN CALIFORNIA.—Published record: Santa Barbara County (known only from the type locality).

REFERENCES.—Hoffman and Orcutt 1960, Hoffman 1998.

REMARKS.—Hoffman (1999) considered *Hesperolus* a questionable synonym of *Atopetholus* but nevertheless listed *H. wheeleri*, making the combination with *Atopetholus* new.

Atopetholus sp.

OCCURRENCE IN CALIFORNIA.—Kern County, Erskine Canyon SE of Kernville (LACMNH). Riverside County, Joshua Tree National Park, Pinyon Wells (LACMNH).

REMARKS.—For completion I list here counties from which unidentified species of *Atopetholus* have been taken.

Genus Orthichelus Chamberlin and Hoffman, 1950

Orthichelus michelbacheri (Verhoeff, 1938)

Type locality.—Walker Pass, 6 mi (9.6 km) NW Freeman, Kern County.

OCCURRENCE IN CALIFORNIA.—Published record: Kern County. New records: Inyo Co., Argus Mountains (FSCA). Riverside Co. (UCD). San Bernardino Co., 5 mi (8 km) S Atolia (FSCA).

REFERENCE.—Hoffman and Orcutt 1960.

Genus Tidolus Chamberlin, 1949

Tidolus parvus Chamberlin, 1918

Type locality.—Claremont, Los Angeles County.

Occurrence in California.—Published record: Los Angeles County. New records: None.

REFERENCE.—Hoffman and Orcutt 1960.

Genus Watichelus Chamberlin, 1949

Watichelus edentatus Loomis, 1949

TYPE LOCALITY.—Between San Diego and El Centro, San Diego/Imperial counties.

OCCURRENCE IN CALIFORNIA.—Published record: San Diego/Imperial counties (known only from the type locality).

REFERENCE.—Hoffman and Orcutt 1960.

Watichelus parallelus Loomis, 1949

TYPE LOCALITY.—Chula Vista, San Diego County.

OCCURRENCE IN CALIFORNIA.—Published record: San Diego County (known only from the type locality).

REFERENCE.—Hoffman and Orcutt 1960.

Watichelus robustus Loomis, 1949

TYPE LOCALITY.—Chula Vista, San Diego County.

OCCURRENCE IN CALIFORNIA.—Published record: San Diego County (known only from the type locality).

REFERENCE.—Hoffman and Orcutt 1960.

Watichelus smithi (Chamberlin, 1947)

Type locality.—Murray Canyon, 3 mi (4.8 km) N Palm Springs, Riverside County.

OCCURRENCE IN CALIFORNIA.—Published record: Riverside County (known only from the type locality).

REFERENCE.—Hoffman and Orcutt 1960.

Subfamily Onychelinae Genus *Onychelus* Cook, 1904

Onychelus obustus Cook, 1904

TYPE LOCALITY.—Colorado Desert, Riverside County.

OCCURRENCE IN CALIFORNIA.—Published records: San Bernardino, San Diego, and Riverside counties. New records: None.

REFERENCE.—Shelley 1998.

Family Spirobolidae Subfamily Tylobolinae Genus *Hiltonius* Chamberlin, 1918

Hiltonius australis (Grinnell, 1908)

TYPE LOCALITY.—Rancho La Brea tar pits, Los Angeles, Los Angeles County.

OCCURRENCE IN CALIFORNIA.—Published record: Los Angeles County (known only from the type locality).

REFERENCE.—Grinnell 1908.

REMARKS.—I follow Hoffman (1999) in placing this species in *Hiltonius*. He stated that it is "almost certainly a senior synonym of either *H. pulchrus* or *Tylobolus claremontus*."

Hiltonius hebes (Bollman, 1887)

Type locality.—San Diego, San Diego County.

Occurrence in California.—Published record: San Diego County. New records: None. Reference.—Keeton 1960.

Hiltonius mimus Chamberlin, 1941

Type Locality.—Mountain Springs, San Diego County.

OCCURRENCE IN CALIFORNIA.—Published record: San Diego County (known only from the type locality).

Reference.—Keeton 1960.

Hiltonius pulchrus Chamberlin, 1918

Type locality.—Claremont, Los Angeles County.

OCCURRENCE IN CALIFORNIA.—Published records: Kern, Los Angeles, and Riverside counties. New records: None.

Reference.—Keeton 1960.

Genus Tylobolus Cook, 1904

Tylobolus castaneus Chamberlin, 1918

Type locality.—Brookdale, Santa Cruz County.

OCCURRENCE IN CALIFORNIA.—Published records: Alameda, Amador, Contra Costa, Fresno, Mariposa, Sacramento, San Joaquin,

Santa Clara, Santa Cruz, and Tulare counties. *New record:* El Dorado Co., 1 mi (1.6 km) E Pacific House (NCSM).

References.—Keeton 1960, 1966.

Tylobolus claremontus Chamberlin, 1918

Type locality.—Claremont, Los Angeles County.

OCCURRENCE IN CALIFORNIA.—Published records: Los Angeles, Riverside, and San Diego counties. New records: None.

REFERENCES.—Keeton 1960, 1966.

Tylobolus deses deses Cook, 1904

Type Locality.—California without further specification; stated to be Stanford University, Santa Clara County, by Buckett and Gardner (1966).

OCCURRENCE IN CALIFORNIA.—Published records: Marin, San Mateo, Santa Cruz, and Sonoma counties. New records: None.

REFERENCES.—Keeton 1960, 1966, Buckett and Gardner 1966.

Tylobolus deses magnificus Buckett and Gardner, 1966

Type locality.—2 mi (3.2 km) W Cordelia, Solano County.

OCCURRENCE IN CALIFORNIA.—Published records: Merced, Napa, and Solano counties. New records: Contra Costa Co., 2 mi (3.2 km) E Clayton Valley (UCD). Sacramento Co., 5 mi (8 km) SW Folsom Dam (UCD). Stanislaus Co., 15 mi (24 km) W Patterson (CAS).

REFERENCES.—Keeton 1960, 1966, Buckett and Gardner 1966.

Tylobolus loomisi Keeton, 1966

Type locality.—South of Ft. Tejon, Kern County.

OCCURRENCE IN CALIFORNIA.—Published records: Kern, Santa Barbara, and Ventura counties. New records: None.

Reference.—Keeton 1966.

Tylobolus monachus (Chamberlin, 1949)

TYPE LOCALITY.—Hastings Reservation, Monterey County.

OCCURRENCE IN CALIFORNIA.—Published records: Fresno and Monterey counties. New records: None.

REFERENCE.—Keeton 1960.

Tylobolus uncigerus (Wood, 1864)

Type locality.—California without further specification; restricted by Keeton (1960) to Solano County.

OCCURRENCE IN CALIFORNIA.—Published records: Contra Costa, Humboldt, Mariposa, Sacramento, San Joaquin, Santa Cruz, and Solano counties. New records: Butte, Colusa, Glenn, Humboldt, Lake, Marin, Mendocino, Napa, Santa Clara, Shasta, Sonoma, Tehama, Trinity, and Yolo cos. (CDFA, FSCA, MCZ, UCB, UCD)

References.—Keeton 1960, 1966.

Tylobolus utahensis Chamberlin, 1925

TYPE LOCALITY.—Utah

OCCURRENCE IN CALIFORNIA.—Published record: Inyo County. New records: None.

REFERENCE.—Shelley and Bauer 1997b.

Order Spirostreptida Family Cambalidae Genus *Alakene* Chamberlin, 1941

Alakene simplex Chamberlin, 1941

Type locality.—5 mi (8 km) NE Lemoncove, Tulare County.

OCCURRENCE IN CALIFORNIA.—Published record: Tulare County (known only from the type locality).

REFERENCE.—Chamberlin 1941b.

Genus Buwatia Chamberlin, 1912

Buwatia monterea Chamberlin, 1912

TYPE LOCALITY.—Pacific Grove, Monterey County.

OCCURRENCE IN CALIFORNIA.—Published record: Monterey County (known only from the type locality).

REFERENCES.—Chamberlin 1912, Loomis 1938.

Genus Doilene Chamberlin, 1941

Doilene carmela Chamberlin, 1941

Type locality.—Hastings Reservation, Monterey County.

OCCURRENCE IN CALIFORNIA.—Published record: Monterey County (known only from the type locality).

REFERENCE.—Chamberlin 1941a.

Genus Endere Loomis, 1938

Endere disora Loomis, 1938

TYPE LOCALITY.—Sunnyside Mine near Seneca, Plumas County.

OCCURRENCE IN CALIFORNIA.—Published record: Plumas County (known only from the type locality).

Reference.—Loomis 1938.

Genus Leiodere Loomis, 1938

Leiodere angelorum Chamberlin, 1943

Type locality.—Los Angeles, Los Angeles County.

OCCURRENCE IN CALIFORNIA.—Published record: Los Angeles County (known only from the type locality.

REFERENCE.—Chamberlin 1943a.

Leiodere dasyura Loomis, 1938

TYPE LOCALITY.—Tajiguas, Santa Barbara County.

OCCURRENCE IN CALIFORNIA.—Published record: Santa Barbara County (known only from the type locality).

REFERENCE.—Loomis 1938.

Leiodere nana Loomis, 1938

Type Locality.—Between Vallejo and Cordelia, Solano County.

OCCURRENCE IN CALIFORNIA.—Published record: Solano County (known only from the type locality).

Reference.—Loomis 1938.

Leiodere torreyana Loomis, 1938

TYPE LOCALITY.—Torrey Pines State Beach and Reserve, San Diego County.

OCCURRENCE IN CALIFORNIA.—Published record: San Diego County (known only from the type locality).

Reference.—Loomis 1938.

Genus Nannolene Bollman, 1887

Nannolene burkei (Bollman, 1887)

Type locality.—Ukiah, Mendocino County. Occurrence in California.—Published record: Mendocino County (known only from the type locality).

REFERENCES.—Chamberlin 1922, Loomis 1938.

REMARKS.—Without providing a written account, Chamberlin (1922, pl. 1, figs. 4–10)

published drawings of a male from an unknown locality. As noted by Hoffman (1999), there is no reason to believe that this species is either conspecific or congeneric with the type specimens.

Nannolene catalina Chamberlin, 1941

TYPE LOCALITY.—Hamilton Canyon, Santa Catalina Island, Los Angeles County.

OCCURRENCE IN CALIFORNIA.—Published record: Santa Catalina Island, Los Angeles County. New records: None.

REFERENCE.—Chamberlin 1941a.

Nannolene corticolens Chamberlin, 1951

Type locality.—Base of Mt. Diablo, Contra Costa County.

OCCURRENCE IN CALIFORNIA.—Published record: Contra Costa County (known only from the type locality).

REFERENCE.—Chamberlin 1951.

Nannolene dorothea Chamberlin, 1941

Type Locality.—One of 3 sites in Kern County (Isabella, Kernville, or Squaw Valley) or 1 mi (1.6 km) E Hammond, Tulare County.

Occurrence in California.—Published records: Kern and Tulare counties. New records:

REFERENCE.—Chamberlin 1941b.

Nannolene keiferi Chamberlin, 1943

Type Locality.—Near Sacramento, Sacramento County.

OCCURRENCE IN CALIFORNIA.—Published record: Sacramento County (known only from the type locality).

Reference.—Chamberlin 1943b.

Nannolene minor Loomis, 1938

Type locality.—Near Bakersfield, Kern County.

OCCURRENCE IN CALIFORNIA.—Published record: Kern County (known only from the type locality).

REFERENCE.—Loomis 1938.

Nannolene personifer Chamberlin, 1941

Type locality.—9 mi (14.4 km) N Placerville, El Dorado County.

OCCURRENCE IN CALIFORNIA.—Published record: El Dorado County (known only from the type locality).

REFERENCE.—Chamberlin 1941b.

Nannolene violacea Loomis, 1938

TYPE LOCALITY.—South of Atascadero, San Luis Obispo County.

OCCURRENCE IN CALIFORNIA.—Published records: Kern and San Luis Obispo counties. New records: None.

Reference.—Loomis 1938.

Genus Odachurus Loomis, 1938

Odachurus petasatus Loomis, 1938

TYPE LOCALITY.—Torrey Pines State Beach and Reserve, San Diego County.

OCCURRENCE IN CALIFORNIA.—Published record: San Diego County (known only from the type locality).

REFERENCE.—Loomis 1938.

Genus Paiteya Chamberlin, 1910

Paiteya errans Chamberlin, 1910

Type locality.—Southern California without further specification.

OCCURRENCE IN CALIFORNIA.—No definite localities known.

REFERENCES.—Chamberlin 1910, Loomis 1938.

Genus Pharodere Loomis, 1938

Pharodere radiata Loomis, 1938

TYPE LOCALITY.—Torrey Pines State Beach and Reserve, San Diego County.

OCCURRENCE IN CALIFORNIA.—Published record: San Diego County. New records: None. REFERENCE.—Loomis 1938.

Genus Platydere Loomis, 1938

Platydere caeca Loomis, 1938

Type Locality.—Tajiguas, Santa Barbara County.

OCCURRENCE IN CALIFORNIA.—Published record: Santa Barbara County (known only from the type locality).

Reference.—Loomis 1938.

Genus Tigolene Chamberlin, 1941

Tigolene clementinus Chamberlin, 1941

Type locality.—San Clemente Island, Los Angeles County.

OCCURRENCE IN CALIFORNIA.—Published record: San Clemente Island, Los Angeles County (known only from the type locality).

REFERENCE.—Chamberlin 1941a.

Genus Titsona Chamberlin, 1912

Titsona sima Chamberlin, 1912

Type locality.—Oroville, Butte County.
Occurrence in California.—Published records: Butte and Yolo counties. New records:
None.

REFERENCES.—Chamberlin 1912, Loomis 1938, Chamberlin and Hoffman 1958.

Genus Tridere Loomis, 1938

Tridere chelopa Loomis, 1938

Type locality.—2 mi (3.2 km) "above" Mountain Springs along the road from San Diego to El Centro; inferred by Hoffman (1999) to be in the southwestern corner of Imperial County.

OCCURRENCE IN CALIFORNIA.—Published record: Imperial County (known only from the type locality).

Reference.—Loomis 1938.

Unknown Cambalidae

OCCURRENCE IN CALIFORNIA.—Alameda, Colusa, Del Norte, Glenn, Los Angeles, Monterey, Napa, Orange, Plumas, Riverside, San Bernardino, Shasta, Stanislaus, Tehama, Trinity, Yolo, and Yuba counties (AMNH, CAS, CDFA, FSCA, LACMNH, NCSM, NMNH, UCB).

REMARKS.—As western Cambalidae have not been revised and the distinctions between genera are unclear, I list here unidentified samples I have seen from other counties in California.

Superorder Nematophora Order Chordeumatida Family Apterouridae Genus *Apterourus* Loomis, 1966

Apterourus horizontalis Loomis, 1966

TYPE LOCALITY.—Cajon Pass, San Bernardino County.

OCCURRENCE IN CALIFORNIA.—Published record: San Bernardino County (known only from the type locality).

REFERENCES.—Loomis 1966, Shear 1977.

Family Caseyidae Genus *Caseya* Cook and Collins, 1895

Caseya bucketti Gardner and Shelley, 1989

Type locality.—22 mi (35.2 km) W Red Bluff, Tehama County.

OCCURRENCE IN CALIFORNIA.—Published records: Shasta and Tehama counties. New records: None.

REFERENCE.—Gardner and Shelley 1989.

Caseya coxalis Loomis, 1966

Type locality.—Davenport, Santa Cruz County.

OCCURRENCE IN CALIFORNIA.—Published records: San Mateo and Santa Cruz counties. New records: None.

REFERENCE.—Gardner and Shelley 1989.

Caseya dorada (Chamberlin, 1941)

Type locality.—9 mi (14.4 km) N Placerville, El Dorado County.

OCCURRENCE IN CALIFORNIA.—Published records: Amador, Calaveras, El Dorado, Nevada, Placer, and Sacramento counties. New records: None.

REFERENCE.—Gardner and Shelley 1989.

Caseya guttata Gardner and Shelley, 1989

TYPE LOCALITY.—4 mi (6.4 km) E Sunny Brae, Humboldt County.

OCCURRENCE IN CALIFORNIA.—Published record: Humboldt County. New records: None. REFERENCE.—Gardner and Shelley 1989.

Caseya heteropa disjuncta Gardner and Shelley, 1989

Type locality.—3 mi (4.8 km) W Forestville, Sonoma County.

OCCURRENCE IN CALIFORNIA.—Published records: Napa, Solano, Sonoma, and Yolo counties. New record: Lake Co., Cobb Mountain, Kelsey Creek (NMNH).

REFERENCE.—Gardner and Shelley 1989.

Caseya heteropa heteropa Cook and Collins, 1895

Type locality.—An unspecified locality in Marin County.

OCCURRENCE IN CALIFORNIA.—Published records: Alameda, Marin, Monterey, San Benito, San Mateo, Santa Clara, Santa Cruz, Solano, and Sonoma counties. New records: None.

REFERENCE.—Gardner and Shelley 1989.

Caseya heteropa montana Gardner and Shellev. 1989

Type locality.—6 mi (9.6 km) S El Dorado, El Dorado County.

OCCURRENCE IN CALIFORNIA.—Published records: Amador, Butte, Calaveras, Colusa, El Dorado, Mariposa, and Tuolumne counties. New records: None.

REFERENCE.—Gardner and Shelley 1989.

Caseya heteropa oraria Gardner and Shelley, 1989

TYPE LOCALITY.—5 mi (8 km) NE Mendocino, Mendocino County.

OCCURRENCE IN CALIFORNIA.—Published records: Humboldt and Mendocino counties. New records: None.

REFERENCE.—Gardner and Shelley 1989.

Caseya longiloba Gardner and Shelley, 1989

Type locality.—1.5 mi (2.4 km) SW Douglas City, Trinity County.

OCCURRENCE IN CALIFORNIA.—Published record: Trinity County. New records: None.

REFERENCE.—Gardner and Shelley 1989.

Caseya occidentalis Gardner and Shelley, 1989

Type locality.—Del Puerto Canyon, 12 mi (19.2 km) W Patterson, Stanislaus County.

OCCURRENCE IN CALIFORNIA.—Published record: Stanislaus County (known only from the type locality).

REFERENCE.—Gardner and Shelley 1989.

Caseya paradoxa Gardner and Shelley, 1989

TYPE LOCALITY.—2 mi (3.2 km) E Briceburg, Mariposa County.

OCCURRENCE IN CALIFORNIA.—Published record: Mariposa County. New records: None. REFERENCE.—Gardner and Shellev 1989.

Caseya prionota Gardner and Shelley, 1989

Type locality.—14 mi (22.4 km) E Briceburg, Mariposa County.

OCCURRENCE IN CALIFORNIA.—Published records: Fresno, Madera, and Mariposa counties. New records: None.

REFERENCE.—Gardner and Shellev 1989.

Caseya sequoia Chamberlin, 1941

Type locality.—12 mi (19.2 km) NE Hammond, Tulare County.

OCCURRENCE IN CALIFORNIA.—Published record: Tulare County. New records: None.

REFERENCE.—Gardner and Shelley 1989.

Caseya shastensis Gardner and Shelley, 1989

Type locality.—18 mi (28.8 km) W Redding, Shasta County.

OCCURRENCE IN CALIFORNIA.—Published record: Shasta County. New records: None.

REFERENCE.—Gardner and Shelley 1989.

Caseya similis Causey, 1952

TYPE LOCALITY.—Tehachapi Pass, Kern County.

OCCURRENCE IN CALIFORNIA.—Published records: Kern and Los Angeles counties. New records: None.

REFERENCE.—Gardner and Shelley 1989.

Caseya taliae Gardner and Shelley, 1989

Type locality.—10 mi (16 km) NE Auberry, Fresno County.

Occurrence in California.—Published records: Fresno and Madera counties. New records: None.

REFERENCE.—Gardner and Shelley 1989.

Caseya sp.

OCCURRENCE IN CALIFORNIA.—New records: Riverside Co., Rubidoux (LACMNH). Santa Barbara Co., San Marcos Pass (NMNH). Ventura Co., Wheeler Springs (LACMNH).

REMARKS.—For completion I cite here additional counties from which unidentifiable specimens of *Caseya* have been collected.

Genus *Ochrogramma* Gardner and Shelley, 1989

Ochrogramma haigi Gardner and Shelley, 1989

Type locality.—5 mi (8 km) SW Gasquet, Del Norte County.

OCCURRENCE IN CALIFORNIA.—Published record: Del Norte County. New records: None. REFERENCE.—Gardner and Shelley 1989.

Genus Opiona Chamberlin, 1951

Opiona berryessae Gardner and Shelley, 1989

Type locality.—12 mi (19.2 km) W Winters, Napa County.

OCCURRENCE IN CALIFORNIA.—Published record: Napa County (known only from the type locality).

REFERENCE.—Gardner and Shelley 1989.

Opiona bifurcata Gardner and Shelley, 1989

Type locality.—Russian Gulch State Park, Mendocino County.

OCCURRENCE IN CALIFORNIA.—Published record: Mendocino County. New records: None. REFERENCE.—Gardner and Shelley 1989.

Opiona communis angusta Gardner and Shelley, 1989

Type locality.—6 mi (9.6 km) SSE Santa Rosa, Sonoma County.

OCCURRENCE IN CALIFORNIA.—Published records: Marin and Sonoma counties. New records: None.

REFERENCE.—Gardner and Shelley 1989.

Opiona communis communis Gardner and Shelley, 1989

Type locality.—3 mi (4.8 km) N Kenwood, Sonoma County.

OCCURRENCE IN CALIFORNIA.—Published records: Santa Cruz, Solano, and Sonoma counties. New records: None.

REFERENCE.—Gardner and Shelley 1989.

Opiona communis prolixa Gardner and Shelley, 1989

TYPE LOCALITY.—7 mi (11.2 km) W Oakville, Napa County.

OCCURRENCE IN CALIFORNIA.—Published records: Napa and Sonoma counties. New records: None.

REFERENCE.—Gardner and Shelley 1989.

Opiona distincta Gardner and Shelley, 1989

TYPE LOCALITY.—2.5 mi (4.0 km) SE Guerneville, Sonoma County.

OCCURRENCE IN CALIFORNIA.—Published record: Sonoma County (known only from the type locality).

REFERENCE.—Gardner and Shelley 1989.

Opiona exigua Gardner and Shelley, 1989

Type locality.—Russian Gulch State Park, Mendocino County.

Occurrence in California.—Published records: Mendocino and Sonoma counties. New records: None.

REFERENCE.—Gardner and Shelley 1989.

Opiona fisheri Gardner and Shelley, 1989

Type locality.—Oregon.

OCCURRENCE IN CALIFORNIA.—Published records: None. New record: Siskiyou Co., 8 mi (12.8 km) S Dunsmuir (UCB).

REFERENCE.—Gardner and Shelley 1989.

REMARKS.—Opiona fisheri is a new record for California.

Opiona siliquae Causey, 1963

Type locality.—Fault Rock Cave near Spy Rock, Mendocino County.

OCCURRENCE IN CALIFORNIA.—Published record: Mendocino County (known only from the type locality).

REFERENCE.—Gardner and Shelley 1989.

Genus Speoseya Causey, 1963

Speoseya grahami Causey, 1963

TYPE LOCALITY.—Shaw's Cave, Calaveras County.

OCCURRENCE IN CALIFORNIA.—Published record: Calaveras County (known only from the type locality).

Reference.—Causey 1963.

Family Conotylidae Subfamily Conotylinae Genus *Plumatula* Shear, 1971

Plumatyla humerosa (Loomis, 1943)

Type locality.—Sunnyside Mine, 3 mi (4.8 km) SW Seneca, Plumas County.

OCCURRENCE IN CALIFORNIA.—Published records: Plumas and Siskiyou counties. New records: None.

REFERENCE.—Shear 1971.

Genus Taiyutyla Chamberlin, 1952

Taiyutyla extorris (Shear, 1971)

Type locality.—1 mi (1.6 km) S Grass Valley, Nevada County.

OCCURRENCE IN CALIFORNIA.—Published record: Nevada County (known only from the type locality).

REFERENCES.—Shear 1971, 1976.

Taiyutyla francisca Shear, 1971

Type locality.—1 mi (1.6 km) SE Inverness, Marin County.

OCCURRENCE IN CALIFORNIA.—Published record: Marin County (known only from the type locality).

REFERENCES.—Shear 1971, 1976.

Taiyutyla napa Shear, 1971

Type locality.—Mount St. Helena, Napa County.

OCCURRENCE IN CALIFORNIA.—Published record: Napa County (known only from the type locality).

REFERENCES.—Shear 1971, 1976.

Family Rhiscosomididae Genus *Rhiscosomides* Silvestri, 1909

Rhiscosomides acovescor Shear, 1972

TYPE LOCALITY.—Samuel P. Taylor State Park, Marin County.

OCCURRENCE IN CALIFORNIA.—Published record: Marin County (known only from the type locality).

REFERENCE.—Shear 1973.

Rhiscosomides montereum Chamberlin, 1910

Type locality.—Pacific Grove, Monterey County.

OCCURRENCE IN CALIFORNIA.—Published record: Monterey County (known only from the type locality).

REFERENCE.—Shear 1973.

Rhiscosomides trinitarium Shear, 1973

Type locality.—Butter Creek, 12 mi (19.2 km) SE Hyampom, Trinity County.

OCCURRENCE IN CALIFORNIA.—Published record: Trinity County (known only from the type locality).

Reference.—Shear 1973.

Rhiscosomides sp.

OCCURRENCE IN CALIFORNIA.—Del Norte County, Jeddediah Smith State Park (UID). San Mateo County, summit of La Honda grade (FSCA) and 6 mi (9.6 km) SE Half Moon Bay (NMNH). Santa Clara County, 5.2 mi (8.3 km) SW Stevens Creek Dam (UCD). Santa Cruz County, Empire Cave (FSCA) and mountains between Santa Cruz and Holy City (NMNH).

Reference.—None.

REMARKS.—I have not attempted to identify these tiny millipeds, and so I combine under this category all samples of *Rhiscosomides* that I have seen from California.

Family Striariidae Genus *Striaria* Bollman, 1888

Striaria californica Cook, 1899

Type locality.—California without further specification; said to be near Sausolito, Marin County, by Hoffman (1999).

OCCURRENCE IN CALIFORNIA.—Published records: Marin, Santa Cruz, and Solano counties. New records: None.

References.—Cook 1899, Loomis 1936.

Striaria carmela Chamberlin, 1947

Type locality.—Hastings Reservation, Monterey County.

OCCURRENCE IN CALIFORNIA.—Published record: Monterey County (known only from the type locality).

REFERENCE.—Chamberlin 1947.

Striaria eldora Chamberlin, 1953

TYPE LOCALITY.—Crystal Cosumnes Cave, El Dorado County.

OCCURRENCE IN CALIFORNIA.—Published record: El Dorado County (known only from the type locality).

Reference.—Chamberlin 1953.

Striaria eutypa (Chamberlin, 1941)

Type locality.—9 mi (14.4 km) N Placerville, El Dorado County.

OCCURRENCE IN CALIFORNIA.—Published record: El Dorado County (known only from the type locality).

REFERENCE.—Chamberlin 1941b.

Striaria nana Loomis, 1936

Type locality.—Altamont Pass above Niles, Alameda County.

OCCURRENCE IN CALIFORNIA.—Published record: Alameda and Santa Cruz counties. New records: None.

REFERENCE.—Loomis 1936.

Striaria sp.

OCCURRENCE IN CALIFORNIA.—Published record: Contra Costa County. New records: Alameda, El Dorado, Humboldt, Los Angeles, Marin, Mendocino, Sacramento, San Francisco, San Mateo, Santa Cruz, Shasta, Solano, Sonoma, Stanislaus, and Trinity cos. (AMNH, CAS, CDFA, FSCA, LACMNH, NCSM, NMNH, UCB, UCD).

Reference.—Causey 1958.

Remarks.—As *Striaria* has not been revised, it is impossible to identify forms at the species level. I therefore combine under this category all samples of *Striaria* that I have seen from California.

Genus Speostriaria Causey, 1960

Speostriaria shastae (Causey, 1958)

TYPE LOCALITY.—Samwel Cave, Shasta County.

OCCURRENCE IN CALIFORNIA.—Published record: Shasta County (known only from the type locality).

References.—Causey 1958, 1960.

Genus Vaferaria Causey, 1958

Vaferaria imberbis (Loomis, 1936)

Type Locality.—South of Atascadero, San Luis Obispo County.

OCCURRENCE IN CALIFORNIA.—Published record: San Luis Obispo County (known only from the type locality).

REFERENCES.—Loomis 1936, Causey 1958.

Order Callipodida Family Schizopetalidae Subfamily Tynommatinae Tribe Colactidini Genus *Colactis* Loomis, 1937

Colactis protenta Loomis, 1937

Type locality.—Baja California Norte, Mexico.

Occurrence in California.—*Published* record: San Diego County. New records: None. Reference.—Shelley 1996b.

Colactis tiburona (Chamberlin, 1923)

Type locality.—Sonora, Mexico. Occurrence in California.—Published record: Imperial County. New records: None. Reference.—Shelley 1996b.

Genus Heptium Loomis, 1937

Heptium carinellum Loomis, 1937

TYPE LOCALITY.—2 mi (3.2 km) E "Indian Head," presumably along California highway 86, Imperial County.

OCCURRENCE IN CALIFORNIA.—Published records: Imperial and Riverside counties. New records: None.

REFERENCE.—Shelley 1996b.

Heptium scamillatum Loomis, 1937

Type locality.—Between Perris and Elsinore, Riverside County.

OCCURRENCE IN CALIFORNIA.—Published records: Riverside and San Bernardino counties. New records: None.

Reference.—Shelley 1996b.

Tribe Diactidini Genus *Caliactis* Shelley, 1996

Caliactis bistolata Shelley, 1996

Type locality.—Mission Viejo, Orange County.

OCCURRENCE IN CALIFORNIA.—Published record: Orange County (known only from the type locality).

REFERENCE.—Shelley 1996b.

Genus Diactis Loomis, 1937

Diactis anniscela Shelley, 1996

Type locality.—Banning, Riverside County. Occurrence in California.—Published record: Riverside County (known only from the type locality).

REFERENCE.—Shelley 1996b.

Diactis cupola Shelley, 1996

Type locality.—3 mi (4.8 km) from Santa Monica, Los Angeles County.

Occurrence in California.—Published record: Los Angeles County. New records: None.

REFERENCE.—Shelley 1996b.

Diactis frondifera Loomis, 1937

TYPE LOCALITY.—Torrey Pines State Beach and Reserve, San Diego County.

OCCURRENCE IN CALIFORNIA.—Published records: Los Angeles and San Diego counties. New records: None.

REFERENCE.—Shelley 1996b.

Diactis jacinto Shelley, 1996

Type locality.—San Jacinto Mountains south of Banning, Riverside County.

OCCURRENCE IN CALIFORNIA.—Published record: Riverside County (known only from the type locality).

REFERENCE.—Shelley 1996b.

Diactis procera Shelley, 1996

TYPE LOCALITY.—Silverado Canyon ca 11 mi (17.6 km) N Mission Viejo, Orange County.

OCCURRENCE IN CALIFORNIA.—Published record: Orange County (known only from the type locality).

Reference.—Shelley 1996b.

Diactis soleata Loomis, 1937

Type Locality.—Along Temescal Canyon Road ca 10.2 mi (16.3 km) S Corona, Riverside County.

OCCURRENCE IN CALIFORNIA.—Published records: Los Angeles and Riverside counties. New records: None.

REFERENCE.—Shelley 1996b.

Diactis strumella Shelley, 1996

Type Locality.—Laguna Beach, Orange County.

OCCURRENCE IN CALIFORNIA.—Published record: Orange County (known only from the type locality).

Reference.—Shelley 1996b.

Diactis triangula Loomis, 1937

Type locality.—Ca 46 mi (73.6 km) E San Diego, San Diego County.

OCCURRENCE IN CALIFORNIA.—Published records: Los Angeles, San Bernardino, and San Diego counties. New records: None.

REFERENCE.—Shelley 1996b.

Genus Florea Shelley, 1996

Florea sinuata Shelley, 1996

Type Locality.—Trabuco Ranger District, Cleveland National Forest, Orange County.

OCCURRENCE IN CALIFORNIA.—Published record: Orange County (known definitely only from the paratype locality).

REFERENCE.—Shelley 1996b.

Tribe Tynommatini Genus *Tynomma* Loomis, 1937

Tynomma magnum Buckett and Gardner, 1969

Type locality.—7 mi (11.8 km) E Monterey, Monterey County.

Occurrence in California.—Published record: Monterey County. New records: None. Reference.—Shelley 1996b.

Tynomna mutans (Chamberlin, 1910)

Type locality.—Stanford, Santa Clara County.

OCCURRENCE IN CALIFORNIA.—Published records: Alameda, Contra Costa, Marin, San

Mateo, Santa Clara, Santa Cruz, Solano, and Sonoma counties. *New records:* Monterey/San Benito cos., between Salinas and San Juan Bautista (UCD). Napa Co., 7 mi (11.2 km) W Oakville (UCD).

REFERENCE.—Shelley 1996b.

Tynomma schlingeri Gardner, 1973

TYPE LOCALITY.—Frank Raines Park, Del Puerto Canyon, Stanislaus County.

OCCURRENCE IN CALIFORNIA.—Published record: Santa Clara and Stanislaus counties. New records: None.

REFERENCES.—Gardner 1973, Shelley 1996b. REMARKS.—As explained by Hoffman (1999), Shelley (1996b) redescribed this species based on the type specimens of *T. schlingeri* and renamed it *T. gardneri*, a rare example of an objective synonym.

Superorder Merocheta Order Polydesmida Family Fuhrmannodesmidae Genus *Phreatodesmus* Loomis, 1960

Phreatodesmus cooki Loomis, 1960

TYPE LOCALITY.—Tehachapi Pass, Kern County.

OCCURRENCE IN CALIFORNIA.—Published record: Kern County (known only from the type locality).

Reference.—Loomis 1960.

Phreatodesmus dentatus Loomis, 1960

Type locality.—Cajon Pass, San Bernardino County.

OCCURRENCE IN CALIFORNIA.—Published record: San Bernardino County (known only from the type locality).

Reference.—Loomis 1960.

Phreatodesmus hastingsus (Chamberlin 1941)

TYPE LOCALITY.—Hastings Reservation, Monterey County.

OCCURRENCE IN CALIFORNIA.—Published record: Monterey County (known only from the type locality).

REFERENCES.—Loomis 1960, Shelley 1997b. REMARKS.—Shelley (1997b) outlined the confusion that surrounds this species, and, as noted by Hoffman (1999), placement in *Phreatodesmus* is entirely speculative.

Phreatodesmus torreyanus Loomis, 1960

TYPE LOCALITY.—Torrey Pines State Beach and Reserve, San Diego County.

OCCURRENCE IN CALIFORNIA.—Published records: Riverside and San Diego counties. New records: None.

Reference.—Loomis 1960.

Genus Tidesmus Chamberlin, 1943

Tidesmus episcopus Chamberlin, 1943

TYPE LOCALITY.—Bishop's Road, Reservoir Hill, Los Angeles County.

OCCURRENCE IN CALIFORNIA.—Published record: Los Angeles County (known only from the type locality).

REFERENCE.—Chamberlin 1943c.

Family Nearctodesmidae Genus *Harpogonopus* Loomis, 1960

Harpogonopus confluentus Loomis, 1960

Type locality.—45 mi (72 km) E San Diego, San Diego County.

OCCURRENCE IN CALIFORNIA.—Published records: Los Angeles, Orange, San Diego, Santa Barbara, and Ventura counties. New records: None.

REFERENCES.—Loomis 1960, Shelley 1993a, 1994b.

REMARKS.—Buckett (1964) spelled the genus correctly, but Hoffman (1980, 1999) and Shelley (1993a) misspelled it as "Harpagonopus." Shelley (1993a) followed Hoffman (1980) in considering the genus of uncertain family position in the Trichopolydesmoidea, but the following year he (Shelley 1994b) assigned it to the Nearctodesmidae.

Genus Nearctodesmus Silvestri, 1910

Nearctodesmus cerasinus (Wood, 1864)

Type locality.—Oregon.

OCCURRENCE IN CALIFORNIA.—Published records: Del Norte, Humboldt, Mendocino, and Siskiyou counties. New records: None.

REFERENCE.—Shelley 1994b.

Nearctodesmus salix Chamberlin, 1949

Type Locality.—12 mi (19.2 km) W Willow Creek (town), Humboldt County.

OCCURRENCE IN CALIFORNIA.—Published records: Humboldt, Marin, Mendocino, Sonoma, and Trinity counties. New records: None.

REFERENCE.—Shelley 1994b.

Family Paradoxosomatidae Tribe Australiosomatini Genus Akamptogonus Attems, 1914

Akamptogonus novarae (Humbert and DeSaussure, 1869)

Type locality.—New Zealand.

OCCURRENCE IN CALIFORNIA.—Published records: Mendocino, Napa, San Diego, San Francisco, Santa Barbara, and Sonoma counties. New records: Mendocino Co., Mendocino Woodlands (CAS). Napa/Sonoma cos., locality not specified (CAS). San Diego Co., Torrey Pines State Beach and Reserve (NMNH). Santa Barbara Co., Accli Garden (NMNH).

REFERENCES.—Hoffman 1979, Shelley et al. 1998.

REMARKS.—Shelley et al. (1998) recorded California counties for this species, to which I now add locality details.

Tribe Sulciferini Genus *Oxidus* Cook, 1911

Oxidus gracilis (C. L. Koch, 1847)

Type Locality.—Austria (from a greenhouse).

OCCURRENCE IN CALIFORNIA.—Published records: None. New records: Alameda, Contra Costa, Fresno, Los Angeles, Nevada, Orange, Riverside, Sacramento, San Diego, San Francisco, San Joaquin, San Luis Obispo, San Mateo, Santa Barbara, Santa Clara, Shasta, and Yolo cos. (AMNH, BMNH, CAS, CDFA, LACMNH, MCZ, NMNH, TMM, UCB, UCD, UCR).

Reference.—Buckett 1964.

REMARKS.—Buckett (1964) stated that this introduced, synanthropic diploped occurs throughout the western United States. It is one of the few millipeds with a common name, the hothouse or greenhouse milliped, and unquestionably occurs in urban environments in all counties of California.

Family Polydesmidae Genus *Bidentogon* Buckett and Gardner, 1968

Bidentogon californicus (Chamberlin, 1918)

Type locality.—Sacramento, Sacramento County.

OCCURRENCE IN CALIFORNIA.—Published record: Sacramento County (known only from the type locality).

Reference.—Shear 1972.

Bidentogon helferorum Buckett and Gardner, 1968

Type locality.—1 mi (1.6 km) N Mendocino, Mendocino County.

OCCURRENCE IN CALIFORNIA.—Published records: Alameda and Mendocino counties. New records: Marin Co., Stinson Beach (NCSM), 1 mi (1.6 km) W Olema (UCB), and Point Reyes Station and 2 mi (3.2 km) E Point Reyes Station (FSCA, NCSM). Santa Clara Co., Milpitas (NMNH), Stanford University (NMNH), and Mt. Madonna (FSCA). Santa Cruz Co., Ben Lomond (UCB). San Mateo Co., near junction of Portola and San Gregorio roads (FSCA).

REFERENCES.—Buckett and Gardner 1968a, Shear 1972.

Genus Calianotus Shelley, 1997

Calianotus bituberculatus (Loomis, 1960)

TYPE LOCALITY.—Niles Canyon, Alameda County.

OCCURRENCE IN CALIFORNIA.—Published records: Alameda and Contra Costa counties. New records: None.

Reference.—Shelley 1997b.

Calianotus sastianus (Chamberlin, 1910)

TYPE LOCALITY.—8 mi (12.8 km) S Dunsmuir, Shasta County (neotype locality).

OCCURRENCE IN CALIFORNIA.—Published records: Shasta and Siskiyou counties. New records: None.

Reference.—Shelley 1997b.

Calianotus yosemitensis (Causey, 1954)

TYPE LOCALITY.—Vernal Falls, Yosemite National Park, Mariposa County.

OCCURRENCE IN CALIFORNIA.—Published records: Calaveras, Madera, Mariposa, Tulare, and Tuolumne counties. New records: None.

REFERENCE.—Shelley 1997b.

Genus Scytonotus C. L. Koch, 1847

Scytonotus simplex Chamberlin, 1941

Type locality.—Oregon.

OCCURRENCE IN CALIFORNIA.—Published records: Del Norte, Humboldt, Marin, Mendocino, San Joaquin, Sonoma, and Trinity counties. New records: None.

REFERENCE.—Shelley 1993b.

Family Xystodesmidae Subfamily Xystodesminae Tribe Chonaphini Genus Selenocheir Shelley, 1994

Selenocheir arcuata Shelley, 1994

Type locality.—18.8 mi (30.1 km) NE Red Bluff, Tehama County.

OCCURRENCE IN CALIFORNIA.—Published records: Humboldt, Lake, Mendocino, and Tehama counties. New records: None.

Reference.—Shelley 1994c.

Selenocheir directa Shelley, 1994

Type locality.—7 mi (11.2 km) NE Gasquet, Del Norte County.

Occurrence in California.—Published record: Del Norte County. New records: None. Reference.—Shelley 1994c.

Selenocheir sinuata Shelley, 1994

Type locality.—2 mi (3.2 km) SW Dales, Tehama County.

OCCURRENCE IN CALIFORNIA.—Published records: Butte, El Dorado, Humboldt, Placer, Shasta, and Tehama counties. New records: None

Reference.—Shelley 1994c.

Tribe Sigmocheirini Genus *Ochthocelata* Shelley, 1995

Ochthocelata adynata Shelley, 1995

Type locality.—4 mi (6.4 km) E Glenville, Kern County.

OCCURRENCE IN CALIFORNIA.—Published record: Kern County. New records: Kern Co., Live Oak Picnic Grounds (FSCA), and Kern R. Canyon, County Picnic Grounds, along Stork Creek (FSCA, NCSM).

Reference.—Shelley 1995b.

Genus Sigmocheir Chamberlin, 1951

Sigmocheir calaveras Chamberlin, 1951

TYPE LOCALITY.—Crystal-Stanislaus Cave, ca 3 mi (4.8 km) W Columbia, Calaveras County.

OCCURRENCE IN CALIFORNIA.—Published records: Calaveras, Mariposa, and Tuolumne counties. New records: None.

REFERENCE.—Shelley 1995b.

Sigmocheir furcata Shelley, 1995

Type locality.—Williams Cave, ca 1 mi (1.6 km) N Murphys, Calaveras County.

Occurrence in California.—Published records: Amador, Calaveras, El Dorado, Placer, and Sacramento counties. New records: None. Reference.—Shelley 1995b.

Sigmocheir maculifer (Chamberlin, 1941)

TYPE LOCALITY.—9 mi (14.4 km) N Woodlake, Tulare County.

OCCURRENCE IN CALIFORNIA.—Published records: Fresno and Tulare counties. New records: None.

Reference.—Shelley 1995b.

Tribe Xystocheirini Genus *Anombrocheir* Buckett and Gardner, 1969

Anombrocheir bifurcata Gardner and Buckett. 1969

Type locality.—8.5 mi (13.6 km) NW Rumsey, Colusa County.

OCCURRENCE IN CALIFORNIA.—Published records: Colusa and Yolo counties. New records: None.

REFERENCE.—Gardner and Buckett 1969.

Anombrocheir spinosa Buckett and Gardner, 1969

TYPE LOCALITY.—3.5 mi (5.6 km) N Leesville, Colusa County.

OCCURRENCE IN CALIFORNIA.—Published records: Colusa and Glenn counties. New records: None.

REFERENCES.—Buckett and Gardner 1969, Gardner and Buckett 1969.

Genus Motyxia Chamberlin, 1941

Motyxia kerna Chamberlin, 1941

Type locality.—7 mi (11.2 km) N Glenville, Kern County.

OCCURRENCE IN CALIFORNIA.—Published records: Kern and Tulare counties. New records: None

Reference.—Shelley 1997c.

Motyxia monica Chamberlin, 1944

TYPE LOCALITY.—Madelia Canyon, Sherman Oaks, Los Angeles County.

Occurrence in California.—Published records: Kern and Los Angeles counties. New records: None.

REFERENCE.—Shelley 1997c.

Motyxia pior Chamberlin, 1941

Type locality.—12 mi (19.2 km) NE Hammond, Tulare County.

OCCURRENCE IN CALIFORNIA.—Published records: Tulare County. New records: None. REFERENCE.—Shelley 1997c.

Motyxia porrecta Causey and Tiemann, 1969

Type locality.—Stork Creek picnic site, Kern River Canyon, Kern County.

OCCURRENCE IN CALIFORNIA.—Published records: Kern County. New records: None. REFERENCE.—Shelley 1997c.

Motyxia sequoia alia Causey and Tiemann, 1969

Type Locality.—Along California highway 198 at Horseshoe Creek, Tulare County.

OCCURRENCE IN CALIFORNIA.—Published records: Tulare County. New records: None. REFERENCE.—Shelley 1997c.

Motyxia sequoia sequoia (Chamberlin, 1941)

Type locality.—10 mi (16 km) E Hammond, Tulare County.

OCCURRENCE IN CALIFORNIA.—Published records: Tulare County. New records: None. REFERENCE.—Shelley 1997c.

Motyxia sequoia intergrades

OCCURRENCE IN CALIFORNIA.—Published records: Tulare County. New records: None. REFERENCE.—Shelley 1997c.

Motyxia sequoiae (Loomis and Davenport, 1951)

Type locality.—Above Camp Nelson, Tulare County.

OCCURRENCE IN CALIFORNIA.—Published records: Tulare County. New records: None. REFERENCE.—Shelley 1997c.

Motyxia tiemanni Causey, 1960

Type locality.—Shirley Meadows, Kern County.

OCCURRENCE IN CALIFORNIA.—Published records: Kern County. New records: None. REFERENCE.—Shelley 1997c.

Motyxia tularea ollae Causey and Tiemann, 1969

Type locality.—5.4 mi (8.6 km) W of Tule River Indian Reservation, Tulare County.

OCCURRENCE IN CALIFORNIA.—Published records: Tulare County. New records: None. REFERENCE.—Shelley 1997c.

Motyxia tularea tularea (Chamberlin, 1949)

TYPE LOCALITY.—Sugarloaf Mountain, Tulare County.

OCCURRENCE IN CALIFORNIA.—Published records: Tulare County. New records: None. REFERENCE.—Shelley 1997c.

Genus Parcipromus Shelley, 1995

Parcipromus cooki (Causey, 1955)

TYPE LOCALITY.—Kings River Canyon, Fresno County (neotype locality).

OCCURRENCE IN CALIFORNIA.—Published records: Fresno and Tulare counties. New records: None.

REFERENCE.—Shelley 1995c.

Parcipromus gigantoarboricolus Shelley, 1995

Type locality.—Giant Forest, Sequoia National Park, Tulare County.

OCCURRENCE IN CALIFORNIA.—Published records: Tulare County. New records: None. REFERENCE.—Shelley 1995c.

Parcipromus tiemanni Shelley, 1995

Type locality.—11.2 mi (17.9 km) S Camp Nelson, Tulare County.

OCCURRENCE IN CALIFORNIA.—Published records: Tulare County. New records: None. REFERENCE.—Shelley 1995c.

Genus Wamokia Chamberlin, 1941

Wamokia dentata Buckett and Gardner, 1968

Type locality.—3 mi (4.8 km) NW Somerset, El Dorado County.

OCCURRENCE IN CALIFORNIA.—Published record: El Dorado County (known only from the type locality).

REFERENCE.—Buckett and Gardner 1968b.

Wamokia discordis Buckett and Gardner, 1968

Type locality.—1 mi (1.6 km) E Auburn, Placer County.

Occurrence in California.—Published records: El Dorado and Placer counties. New records: None.

REFERENCE.—Buckett and Gardner 1968b.

Wamokia falcata Buckett and Gardner, 1968

Type locality.—Camino, El Dorado County. Occurrence in California.—*Published record:* El Dorado County (known only from the type locality).

REFERENCE.—Buckett and Gardner 1968b.

Wamokia hoffmani Buckett and Gardner, 1968

TYPE LOCALITY.—1 mi (1.6 km) N Shingle Springs, El Dorado County.

Occurrence in California.—Published records: Amador and El Dorado counties. New records: None.

REFERENCE.—Buckett and Gardner 1968b.

Wamokia placera Chamberlin, 1941

Type locality.—9 mi (14.4 km) N Placerville, El Dorado County.

Occurrence in California.—Published records: El Dorado County. New records:

REFERENCE.—Buckett and Gardner 1968b.

Wamokia remota Buckett and Gardner, 1968

Type locality.—8 mi (12.8 km) NE Auburn, Placer County.

OCCURRENCE IN CALIFORNIA.—Published records: Placer County. New records: None.

REFERENCE.—Buckett and Gardner 1968b.

Wamokia sierrae Buckett and Gardner, 1968

TYPE LOCALITY.—1 mi (1.6 km) SW Grass Valley, Nevada County.

OCCURRENCE IN CALIFORNIA.—Published record: Nevada County (known only from the type locality).

REFERENCE.—Buckett and Gardner 1968b.

Genus Xystocheir Cook, 1904

Xystocheir bistipita Shelley, 1996

Type locality.—1 mi (1.6 km) N San Luis Obispo, San Luis Obispo County.

OCCURRENCE IN CALIFORNIA.—Published record: San Luis Obispo County (known only from the type locality).

REFERENCE.—Shelley 1996c.

Xystocheir brachymacris Shelley, 1996

Type locality.—1 mi (1.6 km) NE Pacific House, El Dorado County.

OCCURRENCE IN CALIFORNIA.—Published records: El Dorado County. New records: None.

Reference.—Shelley 1996c.

Xystocheir dissecta dissecta (Wood, 1867)

Type Locality.—Probably near San Francisco or San Jose, San Francisco or Santa Clara counties.

OCCURRENCE IN CALIFORNIA.—Published records: Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Sonoma counties. New records: None.

REFERENCE.—Shelley 1996c.

Xystocheir dissecta microrama Shelley, 1996

Type locality.—2 mi (3.2 km) W Cordelia, Solano County.

OCCURRENCE IN CALIFORNIA.—Published records: Alameda, Contra Costa, Sacramento, and Solano counties. New records: None.

Reference.—Shelley 1996c.

Xystocheir dissecta taibona Chamberlin, 1912

Type Locality.—Pacific Grove, Monterey County.

OCCURRENCE IN CALIFORNIA.—Published records: Monterey, San Benito, Santa Clara, and Santa Cruz counties. New records: None.

REFERENCE.—Shelley 1996c.

Xystocheir dissecta intergrades

OCCURRENCE IN CALIFORNIA.—Published records: Alameda, Contra Costa, Lake, Mendocino, Napa, Solano, Sonoma, Stanislaus, and Yolo counties. New records: None.

REFERENCE.—Shelley 1996c.

Xystocheir modestior haerens Shelley, 1996

Type Locality.—Along California highway 180, ca 28 mi (44.8 km) E Fresno, Fresno County.

OCCURRENCE IN CALIFORNIA.—Published record: Fresno County. New records: None.

Reference.—Shelley 1996c.

Xystocheir modestior modestior (Chamberlin, 1941)

Type Locality.—4–7 mi (6.4–11.2 km) N Badger, Fresno/Tulare counties.

OCCURRENCE IN CALIFORNIA.—Published records: Fresno, Madera, and Tulare counties. New records: None.

REFERENCE.—Shelley 1996c.

Xystocheir prolixorama Shelley, 1996

Type locality.—5 mi (8 km) N Cloverdale, Mendocino County.

OCCURRENCE IN CALIFORNIA.—Published record: Mendocino County. New records: None. REFERENCE.—Shelley 1996c.

Xystocheir reducta (Causey, 1955)

Type locality.—2.1 mi (3.4 km) E Briceburg, Mariposa County.

OCCURRENCE IN CALIFORNIA.—Published records: Amador, Calaveras, Mariposa, and Tuolumne counties. New records: None.

Reference.—Shelley 1996c.

Xystocheir solenofurcata Shelley, 1996

Type locality.—2 mi (3.2 km) N Plymouth, Amador County.

OCCURRENCE IN CALIFORNIA.—Published record: Amador County. New records: None. REFERENCE.—Shelley 1996c.

Xystocheir stenomacris Shelley, 1996

Type locality.—15 mi (24 km) N Ahwahnee, Mariposa County.

OCCURRENCE IN CALIFORNIA.—Published record: Mariposa County. New records: None. REFERENCE.—Shelley 1996c.

Xystocheir stolonifera stolonifera Shelley, 1996

Type locality. —2 mi (3.2 km) S Tollhouse, Fresno County.

OCCURRENCE IN CALIFORNIA.—Published record: Fresno County. New records: None. REFERENCE.—Shelley 1996c.

Xystocheir stolonifera uncinata Shelley, 1996

Type locality.—3 mi (4.8 km) S Coarsegold, Madera County.

OCCURRENCE IN CALIFORNIA.—Published records: Fresno and Madera counties. New records: None.

REFERENCE.—Shelley 1996c.

Xystocheir stolonifera intergrades

OCCURRENCE IN CALIFORNIA.—Published record: Madera County. New records: None. REFERENCE.—Shellev 1996c.

Tribe Xystodesmini Genus *Harpaphe* Cook, 1904

Harpaphe haydeniana cummingsiensis (Verhoeff, 1944)

Type Locality.—Cummings, Mendocino County.

OCCURRENCE IN CALIFORNIA.—Published records: Humboldt, Mendocino, and Sonoma counties. New records: None.

REFERENCE.—Buckett and Gardner 1968c.

Harpaphe haydeniana haydeniana (Wood, 1864)

Type locality.—Oregon (neotype locality).
Occurrence in California.—Published records: Marin County. New records: None.
Reference.—Buckett and Gardner 1968c.

Harpaphe haydeniana inlignea Chamberlin, 1949

Type locality.—Inwood, Shasta County.
Occurrence in California.—Published records: Shasta County. New records: None.
Reference.—Buckett and Gardner 1968c.

Harpaphe haydeniana lanceolata Buckett and Gardner, 1968

TYPE LOCALITY.—Mount St. Helena, Napa County.

Occurrence in California.—Published records: Lake and Napa counties. New records: None.

REFERENCE.—Buckett and Gardner 1968c.

Harpaphe haydeniana maurogona Buckett and Gardner, 1968

TYPE LOCALITY.—2 mi (3.2 km) E Baxter, Nevada County.

OCCURRENCE IN CALIFORNIA.—Published record: Nevada County (known only from the type locality).

REFERENCE.—Buckett and Gardner 1968c.

Harpaphe haydeniana scotia (Chamberlin, 1941)

Type locality.—12 mi (19.2 km) S Los Gatos, Santa Clara County.

OCCURRENCE IN CALIFORNIA.—Published records: Monterey, Santa Clara, and Santa Cruz counties. New records: Alameda Co., Berkeley (UCB). San Mateo Co., County Memorial Park (CAS).

REFERENCE.—Buckett and Gardner 1968c.

Harpaphe pottera Chamberlin, 1949

Type Locality.—Potter Creek, Mendocino County.

OCCURRENCE IN CALIFORNIA.—Published records: Humboldt and Mendocino counties. New records: None.

REFERENCE.—Buckett and Gardner 1968c.

Harpaphe telodonta Chamberlin, 1943

Type locality.—Arcata, Humboldt County. Occurrence in California.—*Published records:* Del Norte and Humboldt counties. *New records:* None.

REFERENCES.—Buckett and Gardner 1968c, 1968d.

ACKNOWLEDGMENTS

I thank my colleague W.A. Shear for loan of material in his private collection, and the following curators and collection managers for loans from or access to the indicated collections: N.I. Platnick (AMNH), P. Hillyard (BMNH), C.E. Griswold (CAS), A.R. Hardy (CDFA), P. Sierwald (FMNH), G.B. Edwards (FSCA), the late C.L. Hogue (LACMNH), L. Leibensperger (MCZ), J.A. Coddington (NMNH), J.R. Reddell (TMM), C.A. Olsen (UAZ), C.B. Barr (UCB), L.S. Kimsey (UCD), S.I. Frommer (UCR), F.W. Merickel (UID), R.S. Zack (WSU), and W.D. Sissom (WTAMU).

LITERATURE CITED

- BOLLMAN, C.H. 1887a. Notes on North American Julidae. Annals of the New York Academy of Science 4:25–44.
- _____. 1887b. Description of new genera and species of North American Myriopoda (Julidae). Entomologica Americana 1:225–228.
- BUCKETT, J.S. 1964. Annotated list of the Diplopoda of California. Simmons Publishing Co., Davis, CA. 34 pp.
- Buckett, J.S., and M.R. Gardner. 1966. Rediscovery and redescription of *Tylobolus deses* Cook, with the description of a new subspecies (Diplopoda: Spirobolidae). Proceedings of the Biological Society of Washington 79:41–48.
- ______. 1968a. A new genus and species of milliped from northern California (Polydesmida: Vanhoeffeniidae). Pan-Pacific Entomologist 44:198–202.

- . 1968b. Revision of the milliped genus Wamokia Chamberlin from the Sierra Nevada of central California (Diplopoda: Polydesmida: Xystodesmidae). Proceedings of the Biological Society of Washington 81:511–538.
- . 1968c. Revision of the milliped genus Harpaphe Cook from western North America (Polydesmida: Xystodesmidae). California Department of Agriculture, Occasional Papers of the Bureau of Entomology 11:1–51.
- . 1968d. Rediscovery of the type of the milliped Harpaphe telodonta (Chamberlin) (Diplopoda: Eurydesmidae). Journal of the New York Entomological Society 76:60–63.
- ____. 1969. A new genus of xystodesmid milliped from northern California. Entomological News 80:67–73.
- Causey, N.B. 1950. New genera and species of millipeds Paraiulidae (Juloidea). Proceedings of the Arkansas Academy of Science 3:45–58.
- . 1958. New records and descriptions of a new genus and a new species of millipeds of the family Striariidae (Chordeumida). Proceedings of the Biological Society of Washington 71:179–184.
- . 1960. Speostriaria, new genus (Diplopoda: Chordeumida: Chordeumidea: Striariidae). Proceedings of the Biological Society of Washington 73:25–28.
- . 1963. Two new caseyid millipeds from California caves (Chordeumida: Chordeumidea). Wasmann Journal of Biology 21:193–198.
- CHAMBERLIN, R.V. 1910. Diplopoda from the western states. Annals of the Entomological Society of America 3:233–262.
- _____. 1912. New North American chilopods and diplopods. Annals of the Entomological Society of America 5:141–172.
- _____. 1914. A new *Julus* from California. Canadian Entomologist 46:314–315.
- ____. 1922. Notes on West Indian millipeds. Proceedings of the United States National Museum 61:1–19.
- . 1940. New genera and species of North American Paraiulidae. Bulletin of the University of Utah 30(11) [Biological Series 5(7)]:1–39.
- . 1941a. New American millipeds. Bulletin of the University of Utah 31(11) [Biological Series 6(4)]:1–39.
 - . 1941b. New western millipeds. Bulletin of the University of Utah 31(12) [Biological Series 6(5)]:1–23.
 - . 1943a. On some genera and species of American millipeds. Bulletin of the University of Utah 34(6) [Biological Series 8(2)]:1–20.
- _____. 1943b. A new cambalid diplopod. Entomological News 54:88–89.
- . 1943c. On nine North American polydesmoid millipeds. Proceedings of the Biological Society of Washington 56:35–40.
- . 1947. Seven new American millipeds. Proceedings of the Biological Society of Washington 60:9–16.
 - . 1950. Three new genera and eight new species of western millipeds. Chicago Academy of Science Natural History Miscellanea 68:1–6.
- _____. 1951. Records of American millipeds and centipeds collected by Dr. D. Elden Beck in 1950. Great Basin Naturalist 11:27–35.
- _____. 1953. Two new millipeds taken in California caves.
 Entomological News 64:93–95.
- CHAMBERLIN, R.V., AND R.L. HOFFMAN. 1958. Checklist of the millipeds of North America. United States National Museum Bulletin 212:1–236.

- COOK, O.F. 1899. The diploped family Striariidae. Proceedings of the United States National Museum 21: 667–676.
- ENGHOFF, H. 1985. The millipede family Nemasomatidae, with the description of a new genus, and a revision of *Orinisobates* (Diplopoda: Julida). Entomologica Scandinavica 16:27–67.
- Gardner, M.R. 1973. A new milliped of the genus *Ty-nomma* from California (Lysiopetalidea: Lysiopetalidae). Pan-Pacific Entomologist 49:270–272.
- _____. 1975. Revision of the millipede family Andrognathidae in the Nearctic region. Memoirs of the Pacific Coast Entomological Society 5:1–61.
- GARDNER, M.R., AND J.S. BUCKETT. 1969. A new species of Anombrocheir Buckett and Gardner from the inner Coast Ranges of northern California. Entomological News 80:293–299.
- Gardner, M.R., and R.M. Shelley. 1989. New records, species, and genera of caseyid millipeds from the Pacific Coast of North America (Diplopoda: Chordeumatida: Caseyidae). Pan-Pacific Entomologist 65:177–268.
- GRINNELL, F. 1908. Quaternary myriopods and insects of California. Bulletin of the University of California Department of Geology 5:207–215.
- HOFFMAN, R.L. 1979. An Australian polydesmoid milliped in San Francisco (Paradoxosomatidae). Wasmann Journal of Biology 37:55–58.
- _____. 1980 (1979). Classification of the Diplopoda.

 Museum d'Histoire Naturelle, Geneva, Switzerland.

 237 pp.
- . 1998. Some necessary fine-tuning in the order Spirobolida (Spirobolidae, Messicobolidae, Atopetholidae). Myriapodologica 5:63–76.
- _____. 1999. Checklist of the millipeds of North and Middle America. Virginia Museum of Natural History Special Publication 8:1–584.
- HOFFMAN, R.L., AND B.S. ORCUTT. 1960. A synopsis of the Atopetholidae, a family of spiroboloid millipeds. Proceedings of the United States National Museum 111: 95–166
- JOHNSON, B.M. 1954. The millipeds of Michigan. Papers of the Michigan Academy of Science, Arts, and Letters 39:241–252.
- KEETON, W.T. 1960. A taxonomic study of the milliped family Spirobolidae (Diplopoda: Spirobolida). Memoirs of the American Entomological Society 17:1–146.
- . 1966. The species of the milliped genus *Tylobolus* (Diplopoda: Spirobolida), a re-examination. Transactions of the American Entomological Society 92: 17–28.
- LOOMIS, H.F. 1936. New millipeds of the American family Striariidae. Journal of the Washington Academy of Science 26:404–409.
- _____. 1938. The cambaloid millipeds of the United States, including a family new to the fauna and new genera and species. Proceedings of the United States National Museum 86:27–66.
- _____. 1960. Millipeds of the order Polydesmida from the western states and Baja California. Journal of the Kansas Entomological Society 33:57–68.
- _____. 1966. Two new families and other North American Diplopoda of the suborder Chordeumidea. Proceedings of the Biological Society of Washington 79:221–230.

- PIERCE, W.D. 1940. A rare myriopod from Anacapa Island compared with two Texas species. Bulletin of the Southern California Academy of Science 39:158–171.
- Reeves, W.K. 2000. Additional California records of Brachyiulus lusitanus (Julida: Julidae), an exotic European millipede. Pan-Pacific Entomologist 76:251.
- SHEAR, W.A. 1971. The milliped family Conotylidae in North America, with a description of the new family Adritylidae (Diplopoda: Chordeumida). Bulletin of the Museum of Comparative Zoology 141:55–97.
 - . 1972. The milliped genus Bidentogon (Diplopoda, Polydesmida, Trichopolydesmidae). Proceedings of the Biological Society of Washington 85:489–492.
- . 1973. The milliped family Rhiscosomididae (Diplopoda: Chordeumatida: Striarioidea). Psyche 80: 189–203.
- _____. 1976. The milliped family Conotylidae (Diplopoda, Chordeumida) revision of the genus *Taiyutyla*, with notes on recently proposed taxa. American Museum Novitates 2600:1–22.
- . 1977. The systematic position of the milliped family Apterouridae (Diplopoda, Chordeumida, Striarioidea) and a redescription of Apterourus horizontalis Loomis. Proceedings of the Biological Society of Washington 89:689–694.
- . 1986. Millipeds from caves in Mexico and Central America. V. New species and records of Glomeridae, Trichopetalidae, Cleidogonidae, Fuhrmannodesmidae, Cryptodesmidae, Cambalidae, Typhlobolellidae, Rhachodesmidae, and Sphaeriodesmidae. Texas Memorial Museum Speleological Monograph 1:63–86.
- SHELLEY, R.M. 1988. The millipeds of eastern Canada (Arthropoda: Diplopoda). Canadian Journal of Zoology 66:1638–1663.
 - . 1990. A new milliped of the genus *Metaxycheir* from the Pacific Coast of Canada (Polydesmida: Xystodesmidae), with remarks on the tribe Chonaphini and the western Canadian and Alaskan diplopod fauna. Canadian Journal of Zoology 68:2310–2322.
- . 1993a. Harpagonopus confluentus Loomis, a Pacific Coast milliped of the United States and Mexico (Polydesmida: Trichopolydesmoidea). Myriapodologica 2:73–81
- _____. 1993b. Revision of the milliped genus *Scytonotus*Koch (Polydesmida: Polydesmidae). Brimleyana 19:
 1–60.
- _____. 1994a. Revision of the milliped family Paeromopodidae, and elevation of the Aprosphylosomatinae to family status (Julida: Paeromopodoidea). Entomologica Scandinavica 25:169–214.
- . 1994b. The milliped family Nearctodesmidae in northwestern North America, with accounts of Sakophallus and S. simplex Chamberlin (Polydesmida). Canadian Journal of Zoology 72:470–495.
- . 1994c. The Chonaphini, a biogeographically significant milliped tribe in eastern and western North America (Polydesmida: Xystodesmidae). Brimleyana 20:111–200.
- . 1995a. The milliped family Hirudisomatidae in the New World (Polyzoniida). Brimleyana 23:103–143. . 1995b. The Sigmocheirini, a xystodesmid mil
 - liped tribe in the Sierra Nevada Mountains, California, U.S.A. (Polydesmida: Xystodesmidae). Entomologica Scandinavica 26:339–360.
- . 1995c. Parcipromus, n. gen., a xystodesmid milliped genus from the Sierra Nevada Mountains, California (Polydesmida). Myriapodologica 3:53–70.

- . 1996a. The milliped order Siphonophorida in the United States and northern Mexico. Myriapodologica 4:21–33.
- . 1996b. The milliped order Callipodida in western North America (Schizopetalidae: Tynommatinae), and a summary of the New World fauna. Entomologica Scandinavica 27:25–64.
- _____. 1996c. Revision of the milliped genus *Xystocheir* Cook (Polydesmida: Xystodesmidae). Canadian Journal of Zoology 74:1336–1363.
- . 1997a. The milliped family Polyzoniidae in North America, with a classification of the global fauna (Diplopoda Polyzoniida). Arthropoda Selecta 6(3/4): 3–34.
- ____. 1997b. The identity of *Polydesmus sastianus* Chamberlin, proposal of a new milliped genus, and remarks on the identity of *Phreatodesmus hastingsus* (Chamberlin) (Polydesmida: Polydesmidae). Myriapodologica 4:59–67.
- . 1997c. A re-evaluation of the milliped genus *Motyxia* Chamberlin, with a re-diagnosis of the tribe Xystocheirini and remarks on the bioluminescence (Polydesmida: Xystodesmidae). Insecta Mundi 11: 331–351.
- . 1998. The milliped genus *Onychelus* Cook (Spirobolida: Atopetholidae: Onychelinae). Myriapodologica 5:111–117.
- . 2000a. Annotated checklist of the millipeds of North Carolina (Arthropoda: Diplopoda), with remarks on the genus Sigmoria Chamberlin (Poly-

- desmida: Xystodesmidae). Journal of the Elisha Mitchell Scientific Society 116:177–205.
- . 2000b. The milliped genus *Piedolus* Chamberlin (Spirobolida: Atopetholidae: Arinolinae). Myriapodologica 6:77–81.
- 2001. Annotated checklist of the millipeds of Florida (Arthropoda: Diplopoda). Insecta Mundi 14: 241–251.
- SHELLEY, R.M., AND S.B. BAUER. 1997a. New records and species, and taxonomic alterations, in the milliped family Paeromopodidae (Julida). Entomological News 108:1–14.
- _____. 1997b. Distribution of the milliped *Tylobolus uta-hensis* Chamberlin, with remarks on *T. fredericksoni* (Causey) (Spirobolida: Spirobolidae). Great Basin Naturalist 57:231–237.
- SHELLEY, R.M., S.B. BAUER, AND S.F. SWIFT. 1998. The milliped family Paradoxosomatidae in the Hawaiian Islands (Diplopoda: Polydesmida). Bishop Museum Occasional Papers 56:43–53.
- SNIDER, R.M. 1991. Updated species lists and distribution records for the Diplopoda and Chilopoda of Michigan. Michigan Academician 24:177–194.
- WILLIAMS, S.R., AND R.A. HEFNER. 1928. The millipedes and centipedes of Ohio. Bulletin of the Ohio Biological Survey 4:93–146.

Received 18 September 2000 Accepted 21 February 2001