

# MOSQUITO RECORDS FROM THE GREAT BASIN AND THE DRAINAGE OF THE LOWER COLORADO RIVER

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The Great Basin and the drainage of the Lower Colorado River represent a vast, naturally defined area in the western United States characterized, except at the higher elevations, by desert vegetation and a precipitation of less than ten inches per year. The Great Basin includes most of Nevada and western Utah and extends

from southeastern Oregon and southern Idaho southward into southern California. It is bounded on the east by the Wasatch Mountains and high plateaus of central and southern Utah and on the west by the Sierra Nevada Mountain range of California and Nevada. The drainage basin of the Lower Colorado River includes southern Utah, southeastern Nevada, and most of Arizona. This article, a report on the mosquito fauna of these drainage areas,

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includes all published records from Arizona and Nevada and the counties of western and southern Utah which are within the above boundaries. One new state record from the Great Basin drainage of east central California is also included. Records of the mosquito fauna of the Great Basin regions of southeastern Oregon, southern Idaho, and southern California have been omitted. These records may be obtained from the publications of Freeborn and Bohart (1951) and Stage *et al.* (1952). The mosquitoes included in this paper are primarily those inhabiting the desert plains and valleys, but species from mountains and high plateaus have been included if they occur within the two drainage basins covered in the scope of this paper.

The records presented herein are based upon collections made by personnel of the Water Projects Section and the Logan Field Station, CDC, U. S. Public Health Service, and from specimens in the collection of the University of California at Berkeley, University of California at Los Angeles, University of Utah, University of Nevada, and the E. G. Davis collection deposited with the U. S. Department of Agriculture at Tempe, Arizona. Previous publications containing records include Aitken (1945), Bohart (1948), Dyar (1917, 1922, 1928), Fellton (1944), Murphy (1953), Rees (1934, 1942, 1943, 1944), and Rees and Nielsen (1951, 1955). The authors are grateful to John N. Belkin and W. A. McDonald of the Department of Entomology, University of California at Los Angeles, and William C. Reeves of the University of California School of Public Health for permission to use previously unpublished records from Arizona. Forty-nine mosquito species representing eight genera are included in this paper. Despite this surprisingly large number of species for one of the most arid regions in the United States the list should be considered preliminary since many parts of Arizona, Nevada, and western Utah have not been surveyed intensively for mosquitoes.

The collections presented below are ar-

ranged alphabetically by state and county, with the county names in boldface. When more than a single collection for a species was available from the same locality, the first known collection is reported. When individual species were especially abundant and widespread within a county the individual locality records have been omitted. Records based on larval collections only are indicated by (*l.*) inserted after the date. Unspecified records pertain to adult specimens.

Unless otherwise indicated, the collections were made by the authors or by Mr. Barry Valentine who made many of the Nevada collections in the program conducted by the Water Projects Section, USPHS. Other collectors or authors are referred to by abbreviation.

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#### LIST OF SPECIES

##### Genus *Aedes*

*A. aegypti* (Linnaeus): ARIZONA: **Pima:** Tucson (M, 1953). **Yuma:** Yuma, VIII-3-51 (R).

*A. atropalpus* (Coquillett): ARIZONA: **Pima:** Sabino Can., VIII-7-53. **Santa Cruz:** Madera Can., VIII-22-54 (WM). UTAH: **Washington:** Zion Nat. Pk., VI-14-39.

*A. campestris* Dyar & Knab: NEVADA: **Churchill:** Fallon, VII-3-53; Big Soda Lake, IV-24-51 (LR). **Mineral:** Schurz, IV-11-53 (l). **Nye:** 1948 (LR). **White Pine:** Baker, V-9-37. UTAH: **Cache:** Logan, IV-21-31 (K). **Juab:** Fish Springs, VI-9-40; Trout Creek, V-4-37. **Millard:** Clear Lake, V-17-38; Garrison, V-9-37. **Washington:** St. George, IV-12-34. Widespread in the following counties: **Box Elder, Davis, Salt Lake, Tooele, Weber.**

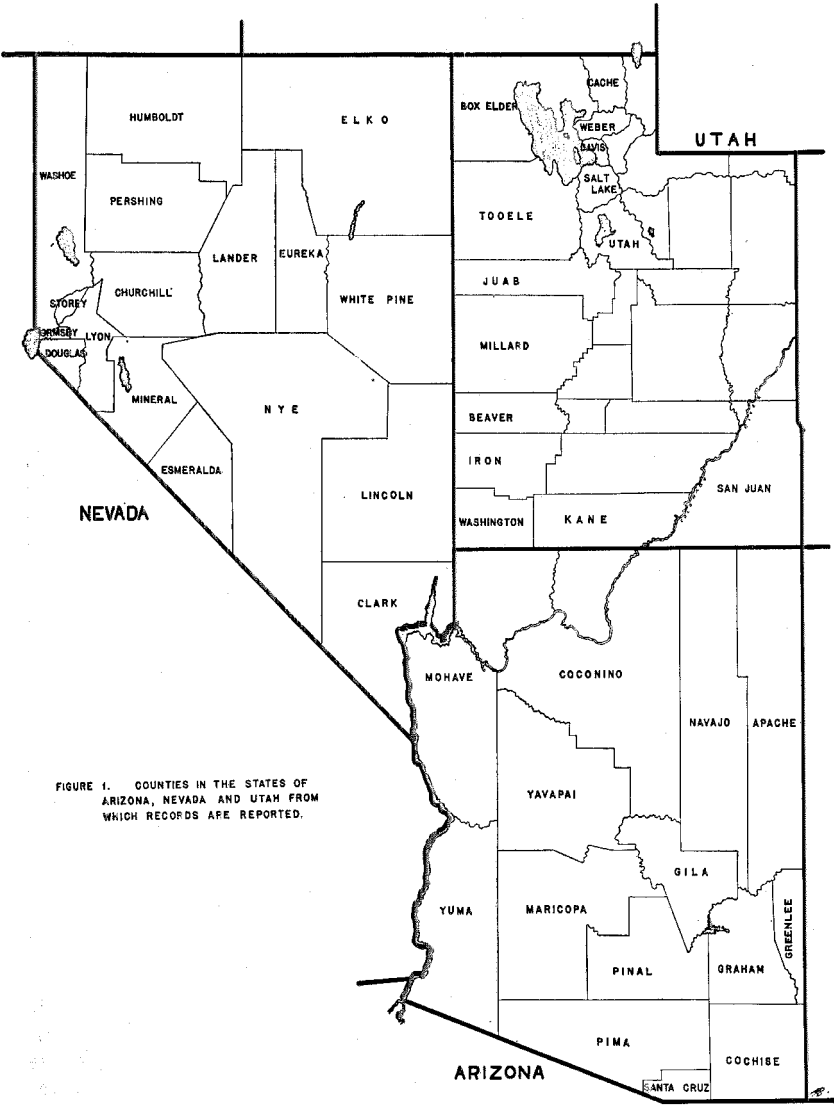


FIGURE 1. COUNTIES IN THE STATES OF ARIZONA, NEVADA AND UTAH FROM WHICH RECORDS ARE REPORTED.

*A. cataphylla* Dyar: ARIZONA: **Cocoino**: Grand Can. Nat. Pk. (N. Entrance), V-31-54. NEVADA: **Douglas**: Glenbrook, VI-5-16 (D, 1917). **Eureka**: Pine Creek (Palisade), IV-19-53 (1). **Ormsby**: Carson City, VII-2-53.

*A. cinereus* (Meigen): NEVADA: **Lander**: Battle Mtn., VIII-4-53. UTAH: **Cache**: Logan, IV-28-34 (K). **Salt Lake**: Holladay, V-17-46 (1). **Utah**: Provo River, VI-24-38.

*A. dorsalis* (Meigen): ARIZONA: **Apache**: Springerville, V-26-53 (1); Lyman Dam, V-26-53; St. Johns, V-26-53. **Navajo**: Joseph City, V-26-53 (1). **Pima**: Tucson, IX-2-53. **Yavapai**: Cornville, VII-15-53 (1). **Yuma**: Parker, X-12-53; Yuma, VIII-3-51 (R). NEVADA: **Churchill**: Hazen, IV-16-53 (1); near Fernly, VII-28-53; Fallon, VII-3-53 (1). **Clark**: Glendale, IV-20-53.

**Douglas**: Mindon, VI-30-53. **Elko**: Elko, VI-26-53 (1). **Eureka**: Dunphy, VIII-22-53. **Lander**: Battle Mtn., VI-21-53. **Lincoln**: Alamo, IV-20-53 (1); Caliente, VII-30-53. **Lyon**: near Fernly, IV-18-53 (1); near Lahontan Res., IV-16-53 (1); Yerington, VII-23-53 (1); Smith, VII-7-53 (1); Dayton, VII-2-53.

**Mineral**: Schurz, VII-23-53. **Ormsby**: Carson City, VII-2-53. **Pershing**: Lovelock, VII-21-53. **Washoe**: Reno, VIII-5-53; Sparks, VIII-7-53. **White Pine**: Baker, V-9-37. UTAH: **Juab**: Fish Springs, VI-9-40; Gandy, V-9-37; Juab, IV-2-33; Yuba Dam, V-9-37. **Kane**: Glendale, IX-9-33. **Millard**: Burbank, V-6-37 (1); Clear Lake, V-17-38(1); Fairbanks, V-6-37; Garrison, V-10-37; Lyndyl, IX-6-36. **San Juan**: Bluff, VI-11-39. **Toole**: Dolomite, IV-9-33 (1); Dugway, VIII-5-52; Grantsville, IV-5-45 (1); Salt Springs, XI-1-30; Wendover, XI-1-30. **Washington**: St. George, VI-17-39. Common and widespread in the following counties: **Box Elder**, **Cache**, **Davis**, **Salt Lake**, **Utah**, **Weber**.

*A. fitchii* (Felt & Young): ARIZONA: **Cocoino**: Grand Can. Nat. Pk. (N. Entrance), V-31-54 (1). NEVADA:

**Douglas**: Spooner Summit, VII-31-53. **Elko**: Carlin, IV-9-53. **Eureka**: Palisade (Pine Creek), VI-19-53. **Humboldt**: Paradise Valley, VIII-11-53. UTAH: **Cache**: Logan, V-27-33 (K); Mendon, IV-19-54 (1). **Davis**: Farmington, V-6-33. **Juab**: Trout Creek, V-6-34 (JR). **Salt Lake**: Salt Lake City, IV-13-32 (1). **Tooele**: Settlement Creek, VI-12-38. **Utah**: Provo River, VIII-4-37. **Weber**: Ogden, V-10-45 (H).

*A. flavescens* (Müller): UTAH: **Cache**: Mendon, IV-21-54 (1). **Salt Lake**: Salt Lake City, VIII-21-31.

*A. idahoensis* (Theobald): NEVADA: **Lander**: Battle Mountain, VII-21-53. UTAH: **Cache**: Logan, V-7-41. **Millard**: Swasey Springs, V-15-38. **Salt Lake**: Salt Lake City, V-24-47 (1).

*A. increpitus* Dyar: NEVADA: **Douglas**: Glenbrook, VIII-25-15 (D, 1922); Mindon, VII-25-53; E. Lake Tahoe, VII-31-53. **Elko**: Carlin, IV-19-53 (1). **Eureka**: Palisade (Pine Creek), IV-19-53 (1). **Lyon**: Dayton, VII-2-53. **Ormsby**: Carson City, VII-2-53. UTAH: **Box Elder**: Blue Creek, V-19-34; Tremonton, VI-22-45 (H). **Cache**: Logan, VI-15-45 (H); Mendon, IV-19-54 (1). **Davis**: Farmington, V-20-45 (H). **San Juan**: Abajo Mtns. (near Blanding), VI-17-46 (1) (H). **Salt Lake**: Salt Lake City, IV-18-31 (1). **Utah**: Provo Canyon, VI-18-45 (H). **Washington**: Pine Valley, IV-20-50 (1); Pintura, IV-20-50 (1); Zion Nat. Pk., VI-14-39. **Weber**: Ogden, IV-30-45.

*A. melanimon* Dyar: NEVADA: **Churchill**: Fallon, VI-3-53. **Douglas**: Mindon, VI-27-53. **Elko**: Elko, VI-26-53; Ruby Valley, VII-29-53. **Eureka**: Dunphy, VIII-22-53. **Humboldt**: Paradise Valley, VIII-11-53; Golconda, VIII-10-53. **Lander**: Battle Mtn., VII-22-53. **Lyon**: Dayton, VII-2-53; Smith, VII-7-53; Yerington, VII-8-53. **Mineral**: Schurz, VII-23-53. **Ormsby**: Brunswick Can., VII-26-53; Carson City, VII-2-53. **Pershing**: Lovelock, VIII-10-53.

*A. melanimon* Dyar: NEVADA: **Churchill**: Fallon, VI-3-53. **Douglas**: Mindon, VI-27-53. **Elko**: Elko, VI-26-53; Ruby Valley, VII-29-53. **Eureka**: Dunphy, VIII-22-53. **Humboldt**: Paradise Valley, VIII-11-53; Golconda, VIII-10-53. **Lander**: Battle Mtn., VII-22-53. **Lyon**: Dayton, VII-2-53; Smith, VII-7-53; Yerington, VII-8-53. **Mineral**: Schurz, VII-23-53. **Ormsby**: Brunswick Can., VII-26-53; Carson City, VII-2-53. **Pershing**: Lovelock, VIII-10-53.

*A. melanimon* Dyar: NEVADA: **Churchill**: Fallon, VI-3-53. **Douglas**: Mindon, VI-27-53. **Elko**: Elko, VI-26-53; Ruby Valley, VII-29-53. **Eureka**: Dunphy, VIII-22-53. **Humboldt**: Paradise Valley, VIII-11-53; Golconda, VIII-10-53. **Lander**: Battle Mtn., VII-22-53. **Lyon**: Dayton, VII-2-53; Smith, VII-7-53; Yerington, VII-8-53. **Mineral**: Schurz, VII-23-53. **Ormsby**: Brunswick Can., VII-26-53; Carson City, VII-2-53. **Pershing**: Lovelock, VIII-10-53.

*A. melanimon* Dyar: NEVADA: **Churchill**: Fallon, VI-3-53. **Douglas**: Mindon, VI-27-53. **Elko**: Elko, VI-26-53; Ruby Valley, VII-29-53. **Eureka**: Dunphy, VIII-22-53. **Humboldt**: Paradise Valley, VIII-11-53; Golconda, VIII-10-53. **Lander**: Battle Mtn., VII-22-53. **Lyon**: Dayton, VII-2-53; Smith, VII-7-53; Yerington, VII-8-53. **Mineral**: Schurz, VII-23-53. **Ormsby**: Brunswick Can., VII-26-53; Carson City, VII-2-53. **Pershing**: Lovelock, VIII-10-53.

*A. melanimon* Dyar: NEVADA: **Churchill**: Fallon, VI-3-53. **Douglas**: Mindon, VI-27-53. **Elko**: Elko, VI-26-53; Ruby Valley, VII-29-53. **Eureka**: Dunphy, VIII-22-53. **Humboldt**: Paradise Valley, VIII-11-53; Golconda, VIII-10-53. **Lander**: Battle Mtn., VII-22-53. **Lyon**: Dayton, VII-2-53; Smith, VII-7-53; Yerington, VII-8-53. **Mineral**: Schurz, VII-23-53. **Ormsby**: Brunswick Can., VII-26-53; Carson City, VII-2-53. **Pershing**: Lovelock, VIII-10-53.

*A. melanimon* Dyar: NEVADA: **Churchill**: Fallon, VI-3-53. **Douglas**: Mindon, VI-27-53. **Elko**: Elko, VI-26-53; Ruby Valley, VII-29-53. **Eureka**: Dunphy, VIII-22-53. **Humboldt**: Paradise Valley, VIII-11-53; Golconda, VIII-10-53. **Lander**: Battle Mtn., VII-22-53. **Lyon**: Dayton, VII-2-53; Smith, VII-7-53; Yerington, VII-8-53. **Mineral**: Schurz, VII-23-53. **Ormsby**: Brunswick Can., VII-26-53; Carson City, VII-2-53. **Pershing**: Lovelock, VIII-10-53.

**Washoe:** Sparks, VIII-7-53; Reno, VIII-6-53. **UTAH:** **Cache:** Mendon, VIII-2-54. **Juab:** Topaz, VI-15-44 (JF). **Salt Lake:** Salt Lake City, VI-29-48. **San Juan:** Bluff, VI-10-39.

*A. muelleri* Dyar: ARIZONA:

**Cochise:** Chiricahua Mtns., VIII-17-17 (D, 1922, 1928). **Santa Cruz:** Madera Can., VIII-25-54 (WM).

*A. nigromaculis* (Ludlow): ARIZONA:

**Navajo:** Joseph City, V-26-53; Show Low, VII-19-53 (1). **Yavapai:** Ashfork, VIII-13-53; Yarnell, VII-22-53. **NEVADA:** Common and widespread in the following counties: **Churchill, Douglas, Lander, Lyon, Mineral, Ormsby, Pershing, Washoe.** **UTAH:** **Box Elder:** Blue Creek, X-11-34. **Cache:** Amalga, V-17-34 (K); Logan, V-15-54; Logan Meadows, VIII-15-34 (K). **Salt Lake:** Salt Lake City, IV-21-31 (1). **San Juan:** Blanding, VI-10-39 (R); Bluff, VI-10-39. **Weber:** Ogden, VIII-1-35.

*A. niphadopsis* Dyar & Knab: **NEVADA:** **Esmeralda:** Coaldale, V-8-39 (A). **Eureka:** Palisade (Pine Creek), IV-19-53 (1). **UTAH:** **Juab:** Trout Creek, V-4-37. **Millard:** Swasey Springs, V-14-38. Widespread in the following counties: **Box Elder, Davis, Salt Lake, Tooele, Utah, Weber.**

*A. pullatus* (Coquillett): **UTAH:** **San Juan:** Abajo Mtns. (near Blanding), VI-17-46 (1) (H).

*A. purpureipes* Aitken: ARIZONA: **Pima:** Tucson, VII-27-32 (M, 1953); Gardner Can., VIII-24-54 (WM). **Santa Cruz:** Madera Can., VIII-22-54 (WM); Sonoita Creek, VIII-24-54 (WM); Patagonia (A).

*A. sollicitans* (Walker): ARIZONA: **Yuma:** Wallton (F, 1944).

*A. schizopinax* Dyar. CALIFORNIA: **Nevada:** Boca, IV-12-53 (1). **UTAH:** **Cache:** Logan, VI-25-54; Mendon, IV-19-54 (1).

*A. sticticus* (Meigen): **UTAH:** **Cache:** Logan, VI-12-54.

*A. trivittatus* (Coquillett): ARIZONA: **Apache:** Springerville, V-26-53 (1).

**Cochise:** Sonoita, VIII-8-53; Fry, VIII-8-53; St. David, VIII-8-53. **Greenlee:** Duncan, IX-17-53. **Santa Cruz:** Lochiel, VIII-8-53; Patagonia, VIII-8-53. **Gila:** Payson, VII-14-53 (1).

*A. varipalpus* (Coquillett): ARIZONA:

**Cochise:** Chiricahua Mtns., VI-17-37 (M, 1953). **Coconino:** Williams, July 29 (D, 1922). **Graham:** Mt. Graham, VII-4-40 (M, 1953). **Pima:** Sabino Basin, Santa Catalina Mtns., VIII-23-18 (D, 1922); Santa Rita Mtns., X-20-40 (M, 1953). **NEVADA:** **Douglas:** Glenbrook, VIII-25-15 (D, 1922). **Ormsby:** Carson City, VII-2-53.

*A. vexans* (Meigen): ARIZONA:

Common and widespread in the following counties. **Apache, Cochise, Graham, Greenlee, Maricopa, Pima, Pinal, Yavapai, Yuma.** **NEVADA:** Common and widespread in the following counties: **Churchill, Douglas, Elko, Eureka, Humboldt, Lander, Lyon, Mineral, Pershing.** **Utah:** **Millard:** Swasey Springs, V-16-38; **San Juan:** Blanding, VI-10-39; Bluff, VI-10-39. Common and widespread in the following counties: **Box Elder, Cache, Davis, Salt Lake, Utah, Weber.**

#### Genus *Anopheles*

*A. barberi* Coquillett: ARIZONA: **Santa Cruz:** VIII-24-54 (1) (WM).

*A. franciscanus* McCracken: ARIZONA: Common and widespread in the following counties: **Cochise, Coconino, Gila, Graham, Greenlee, Maricopa, Mohave, Navajo, Pima, Pinal, Santa Cruz, Yavapai, Yuma.** **NEVADA:** **Lyon:** Dayton, X-9-53 (1). **Nye:** Beatty, VII-23-53 (1). **Clark:** Indian Springs, V-26-40 and Tule Springs, V-24-40 (A, 1945). **UTAH:** **Juab:** Fish Springs, X-28-53. **San Juan:** Monticello, IX-7-53. **Washington:** Hurricane, VI-16-39 (H); Leeds, IV-20-50 (1). St. George, VI-6-30; Washington, VI-16-39.

*A. freeborni* Aitken: ARIZONA: **Apache:** Concho, V-26-53 (1); Lyman Dam, V-26-53 (1); Springerville, V-26-53

(1). **Cochise:** Douglas (A, 1945); St. David, VII-13-53. **Mohave:** Wickieup, XI-9-53 (1); Big Sandy Wash, XI-15-53 (1). **Navajo:** Show Low, VII-19-53 (1). **Pima:** Arivaca, XII-5-32 (A, 1945). **Yavapai:** Santa Maria River, XI-9-53 (1). NEVADA: Common and widespread in the state. Collected from the following counties: **Churchill, Douglas, Elko, Humboldt, Lander, Lincoln, Lyon, Nye, Ormsby, Pershing, Washoe.** UTAH: **Box Elder:** Tecoma Mtns., VI-2-37. **Juab:** Fish Springs, X-28-53 (1). **Kane:** Kanab, VI-14-39. **Tooele:** Ibapah, XI-2-30; Grantsville, III-23-47. **Washington:** Hurricane, VI-15-39; Leeds, V-2-39; St. George, IV-14-34; Washington, IV-14-34 (1). Zion Nat. Pk., IX-16-30. Common and widespread in the following counties: **Cache, Davis, Salt Lake, Utah, Weber.**

#### Genus *Culex*

*C. apicalis* Adams: ARIZONA: **Apache:** McNary, VII-19-53 (1); Alpine, VII-9-53 (1). **Coconino:** Sedona, VI-16-53 (1). **Maricopa:** Tortilla Flat, III-20-53 (1); Tempe, IX-27-33 (ED). **Navajo:** Winslow (B, 1948). **Pima:** Sabino Can., III-28-33 (ED); Tucson, IV-11-33 (M, 1953). **Yavapai:** Prescott (B, 1948).

*C. arizonensis* Bohart: ARIZONA: **Pima:** Santa Catalina Mtns., XI-8-34 (M, 1953). **Santa Cruz:** Madera Can., VIII-25-54 (WM). **Yavapai:** Prescott, VIII-25-47 (B, 1948).

*C. boharti* Brookman and Reeves: NEVADA: **Washoe:** Verdi, VII-17-53 (1).

*C. coronator* Dyar and Knab: ARIZONA: **Cochise:** St. David, X-22-53 (1). **Pima:** Arivaca, VI-17-34 and Santa Catalina Mtns., III-27-30 (M, 1953).

*C. erythrothorax* Dyar: ARIZONA: **Cochise:** St. David, VII-20-53. NEVADA: **Churchill:** Fallon, VII-13-53. **Lyon:** Smith, VIII-14-53. **Nye:** 1949 (P). UTAH: **Cache:** Logan, IV-24-54; Mendon, IV-27-54. **Juab:** Fish Springs, XI-2-30. **Washington:** St. George,

XII-20-45. Widespread in the following counties: **Box Elder, Davis, Salt Lake, Weber.**

*C. pipiens* (Linnaeus): UTAH: **Washington:** St. George, Oct. 1938. Widespread in the following counties: **Box Elder, Davis, Salt Lake, Utah, Weber.**

*C. quinquefasciatus* Say: ARIZONA: Common and widespread in the state. Collected in the following counties: **Cochise, Graham, Maricopa, Pima, Pinal, Santa Cruz, Yuma.** UTAH: **Salt Lake:** Salt Lake City, IX-24-40. **Washington:** St. George, October 1938.

*C. restuans* Theobald: ARIZONA: **Santa Cruz:** Sonoita Creek, VIII-25-54 (WM).

*C. salinarius* Coquillett: UTAH: **Washington:** St. George, XI-20-44 (H).

*C. stigmatosoma* Dyar: ARIZONA: **Cochise:** Douglas, VIII-18-39 (TR); St. David, VIII-1-53 (1); Tombstone, IX-1-39 (TR); Willcox, IX-17-53 (1). **Pima:** Tucson, XI-4-53. **Pinal:** Coolidge, Oct. 1941 (WR). **Santa Cruz:** Canelo, VIII-8-53 (1); Madera Can., VIII-22-54 (WM); Nogales, VII-15-40 (M, 1953); Sonoita Creek, VIII-24-54 (WM). NEVADA: **Lyon:** Dayton, IX-11-53.

*C. tarsalis* Coquillett: ARIZONA: Common and widespread. Collected in large numbers in every county except **Greenlee** where it doubtless also occurs. NEVADA: Common and widespread. Collected in every county except **Esmeralda, Eureka, and Humboldt.** UTAH: Common and widespread in the following counties: **Box Elder, Cache, Davis, Iron, Juab, Kane, Millard, Salt Lake, San Juan, Tooele, Utah, Washington, Weber.**

*C. territans* Walker: ARIZONA: **Cochise:** St. David, X-3-53. UTAH: **Cache:** Logan, IV-11-54; Mendon, VI-25-54.

*C. thriambus* Dyar: ARIZONA: **Apache:** Concho IX-8-53 (1). **Cochise:** St. David, VIII-4-53 (1). **Coconino:** Sedona, VI-16-53 (1). **Gila:** Miami, V-25-53 (1). **Greenlee:** Duncan, IX-17-

53 (1). **Maricopa**: near Mesa, XI-1-53 (1). **Mohave**: Big Sandy Wash, XI-15-53 (1). **Navajo**: Show Low, VII-19-53 (1). **Pima**: near San Xavier Mission, V-8-53 (1); Tucson, X-13-53; **Pinal**: Superior, IX-18-53 (1). **Santa Cruz**: Madera Can., VIII-22-54 (WM); Patagonia, V-9-53 (1). **Yavapai**: Cornville, VII-15-53 (1); Santa Maria River, IX-9-53 (1). Skull Valley, VII-18-53 (1). NEVADA: **Clark**: Cactus Springs, VII-22-53 (1).

#### Genus *Culiseta*

*C. impatiens* (Walker): NEVADA: **Elko**: Harrison Pass, VII-29-53 (1). UTAH: **Box Elder**: Raft River Mtns., V-19-48; **Cache**: Logan Cave, II-23-54. **San Juan**: LaSal Mtns., VI-9-39.

*C. incidens* (Thomson): ARIZONA: Common and widespread. Collected in every county except **Graham**, **Greenlee**, and **Pinal**. NEVADA: Common and widespread. Collected in the following counties: **Douglas**, **Lyon**, **Ormsby**, **Storey**, and **Washoe**. UTAH: Common and widespread in the following counties: **Box Elder**, **Cache**, **Davis**, **Juab**, **Kane**, **Millard**, **Salt Lake**, **San Juan**, **Tooele**, **Utah**, **Washington**, and **Weber**.

*C. inornata* (Williston): ARIZONA: Common and widespread. Collected in every county except **Gila**, **Graham**, and **Greenlee**. NEVADA: Common and widespread. Collected in every county except **Esmeralda**, **Humboldt**, **Mineral**, and **Storey**. UTAH: Common and widespread in the following counties: **Beaver**, **Box Elder**, **Cache**, **Davis**, **Juab**, **Kane**, **Millard**, **Salt Lake**, **San Juan**, **Tooele**, **Utah**, and **Washington**.

*C. maccrackena* Dyar and Knab: ARIZONA: **Santa Cruz**: Patagonia, V-9-53 (1).

#### Genus *Mansonia*

*M. perturbans* (Walker): UTAH: **Box Elder**: Perry, VI-28-51. **Cache**: Lo-

gan, VI-15-54; Mendon, VI-23-54. **Davis**: August 1951. **Weber**: Ogden, VII-8-43.

#### Genus *Orthopodomyia*

*O. signifera* (Coquillett): ARIZONA: **Santa Cruz**: Madera Can., VIII-17-55 (WM).

#### Genus *Psorophora*

*P. confinnis* (Lynch-Arribalzaga): ARIZONA: Common and widespread in the following counties: **Cochise**, **Graham**, **Greenlee**, **Maricopa**, **Pima**, **Pinal**, **Yavapai**, **Yuma**.

*P. discolor* (Coquillett): ARIZONA: **Cochise**: St. David, VIII-4-53; Douglas, VIII-8-53. **Santa Cruz**: Canelo, VIII-8-53.

*P. howardii* Coquillett: ARIZONA: **Pinal**: Casa Grande, June 1942 (WR).

*P. signipennis* (Coquillett): ARIZONA: Common and widespread. Collected in every county except **Apache**, **Gila**, **Navajo**, and **Yuma**. UTAH: **Tooele**: Dugway, VIII-4-53 (E).

#### Genus *Uranotaenia*

*U. anhydor* Dyar: ARIZONA: **Cochise**: St. David, V-9-53. NEVADA: **Nye**: Fairbanks Springs, Ash Meadows, VIII-21-49 (P).

#### PUBLISHED RECORDS OF UNCERTAIN OR INVALID STATUS

##### *Anopheles pseudopunctipennis* Theobald

ARIZONA: Records of this species reported by Murphy (1953) from Maricopa and Santa Cruz counties are probably *Anopheles franciscanus* McCracken. (See Aitken, 1945:344.)

UTAH: Specimens recorded by Rees (1942, 1943) as this species are *Anopheles franciscanus*.

##### *Anopheles quadrimaculatus* Say

ARIZONA: Adult females reported

from Pima County by Murphy (1953) are probably *Anopheles freeborni* Aitken.

### *Culiseta impatiens* (Walker)

ARIZONA: This species was recorded from Flagstaff, Coconino County, by Murphy (1953). As the locality reported is very atypical for this northern mountain species it is likely that another *Culiseta* species is involved.

UTAH: Specimens reported by Rees (1943) from Millard County in western Utah are actually *Culiseta inornata* (Williston).

### *Culiseta melanura* (Coquillett)

ARIZONA: Specimens recorded as this species by Murphy (1953) from Maricopa County are actually *Culiseta inornata*.

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