ADDITIONAL RECORDS AND OBSERVATIONS ON NEVADA MOSQUITOES

H. C. CHAPMAN
Entomology Research Division, Agric. Res. Serv., U.S.D.A.

The mosquito fauna of Nevada was recently reported to contain 29 species, including five new State records (Chapman 1959). In this report, the writer stated that Dyar's (1922) record from Steamboat Springs of *Anopheles maculipennis* Meigen with brassy wingtips as *A. carlei* Vargas, which was in error since the specimens were undoubtedly *A. freeborni* Atkinson. *A. carlei* has not as yet been collected in Nevada.

Recent larval collections of *Culex apiicalis* Adams and *Psorophora confinis* (Lynch-Arribalzaga) bring the number of species known from the State to 30. Localities, dates, and ecological notes are herein included for these species as well as for *Aedes sierrensis* (Ludlow) and *Uranotaenia ankydor* Dyar, which were collected as larvae for the first time in the State.

*Culex apiicalis* Adams

This species was listed by Carpenter and LaCasse (1953) from Arizona, California, and Mexico, by Nielsen and Roes (1959) from Utah, and from Texas by Breland (1956). It is commonly found in California in woodland pools and never occurs at elevations above 5,000 feet, according to Freeborn and Bohart (1951).

Larvae were collected in Nevada in many areas at elevations ranging from 4,000 to 6,500 feet. Larval habitats were open and shaded pools, streams, and a roadside ditch, all of which contained water emanating from fresh-water springs. Companion species at higher elevations were *Culiceta incidenis* (Thomson) and *Culex pennis* Underwood. *Culiceta incidenis*, *C. inornata* (Williston), *Culex pennis* Speiser, and *C. boharti* Brookman and Reeves were noted with *C. apiicalis* at lower elevations.

Another species of the subgenus *Neo-culex*, *C. tortians* Walker, was common in open permanent ponds in the vicinity of Lake Tahoe in several counties but was never noted breeding with *C. apiicalis*.

**Collection Data:**

**DOUGLAS COUNTY:** Glenbrook, VIII-6-59, 6,400 feet; Stateline, VIII-6-59, 6,300 feet.

**LYON COUNTY:** Silver City, VIII-26-59, 5,000 feet; X-13-59; IX-12-59, 4,700 feet; Dayton, larvae, XI-17-60, 4,500 feet.

**WASHINGTON COUNTY:** Mt. Rose, IX-10-59, 5,500 to 6,000 feet.

*Psorophora confinis*

**LYNCH ARRIBALZAGA**

This species is known from 33 States (Carpenter and LaCasse, 1953) and is found in the East, South, Midwest, and in the West. Richards et al. (1956) reported it from many counties in adjacent Arizona, and Bohart and Freeborn (1951) noted it from two counties in the southernmost corner of California. It is a notorious biting pest in many irrigated areas throughout the country.

Many third- and fourth-instar larvae were collected in several drain ditches adjacent to an alfalfa field just north of Moapa in Clark County. Associated species were *Aedes dorsalis* (Meigen) and *A. texanus* (Meigen). No adults of *P. confinis* were observed. Male and female *P. confinis* adults were reared from these larvae as an identification check. This is the first record of the occurrence of this genus in Nevada.

**Collection Data:**

**CLARK COUNTY:** Moapa, larvae, VII-21-60.

*Aedes sierrensis* (Ludlow)

The only records of this species in the State were adult collections by Dyar (1922) and Richards et al. (1956). Both...
of these adult collections were made in or adjacent to the Sierra Nevada Mountains where its presence is probably restricted owing to climatological and ecological factors.

The writer first noted second-instar larvae of _A. sierrensis_ in a treehole in quaking aspen (_Populus tremuloides_ (Michx.) in the Sierra Nevada Mountains in April at 7,500 feet. Both this treehole and one in black cottonwood (_Populus trichocarpa_ T. and G.) in the Sierras at 6,500 feet yielded many first-instar larvae within 15 minutes after the holes were flooded by the writer with water from an adjacent stream. According to Peyton (1956), _A. sierrensis_ larvae have never been recorded breeding in quaking aspen or above 7,200 feet. Biting adults were observed in a shaded forest in July and September in the Lake Tahoe area.

Although this species is multivoltine in most States, it apparently is both rare and usually univoltine in Nevada because of the paucity of precipitation (except snow) and hardwood host trees with suitable treeholes. The second larval brood observed in September resulted when an unusual storm deposited 0.91 inch of rain in the general area in late July.

The fourth hind-tarsal segment of adult females reared from these larvae is white ringed at the base. The larvae possess hair 11 of the first abdominal segment and, therefore, according to Belkin and McDonald (1957), are _A. sierrensis_ (Ludlow) and not _A. varipalpus_ (Coq.).

Collection Data:


_Oramsby County:_ Carson City, adult, VII-2-53 (Richards _et al._, 1956).

_Washoe County:_ Mt. Rose (Thomas Creek), IV-19-60, 6,500 and 7,500 feet; larvae, IX-13-60, 6,500 feet; Lake Tahoe, females, VII-12-60, females, IX-13-60, 6,700 feet.

_Uranotaenia anhydor_ _Dyar_

This species was previously known from Nevada only by six females collected at lights by C. B. and R. N. Philip at Fairbanks Springs in Ash Meadows, Nye County (Freeborn and Bohart, 1951). In addition _U. anhydor_ is known from Arizona and California. Belkin and McDonald (1956) presented an excellent taxonomic and ecological discussion of the _U. anhydor_ complex.

The writer surveyed a small portion of Ash Meadows in the Amargosa Desert in July and collected several dozen larvae in the fourth-instar stage only from one small, partially shaded depression adjacent to a fresh-water spring. The dominant vegetation was common three-square (_Scirpus olneyi_ Gray). No adults of this species were observed. Larvae of _Culex tarsalis_ Coq., _C. erythrothorax_ Dyar, and _Anopheles freeborni_ Aitken were found in adjacent pools. The water level of the various springs was apparently much lower than usual, which might have contributed to the scarcity of _U. anhydor_ larvae.

The chaetotaxy of these larvae appears to be very similar to the Saratoga Springs population of _U. anhydor_ depicted by Belkin and McDonald (1956).

Collection Data:


Summary. _Culex apicalis_ and _Psorophora confinis_ are added to the mosquito fauna of Nevada. Larvae of _Aedes sierrensis_ and _Uranotaenia anhydor_ were collected for the first time in the State. Ecological information, associated species, and localities are given for these four species.

References Cited


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Salt Lake City M.A.D.
451 City & Co. Bldg.
Salt Lake City, Utah

Vice-President: DR. GEORGE F. KNOWLTON
Utah State University
Logan, Utah

Sec.-Treas.: JAY E. GRAHAM
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