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A CURRENT LIST OF MOSQUITOES
KNOWN TO OCCUR IN UTAH
WITH A REPORT OF NEW RECORDS

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In 1961, Nielsen and Rees reported the occurrence in Utah of 40 species of mosquitoes belonging to six genera. This paper presents a current list which includes six additional records, one of which represents a new generic record for the state. In addition, one formerly reported species is now believed to be of doubtful status and has been removed from the state list.

The following list of 45 species belonging to 7 genera represents the species now known to occur in Utah. A brief distributional note is included after each species name.

Names preceded by an asterisk were not included in the Identification Guide to Utah Mosquitoes (Nielsen and Rees, 1961).

- Aedes atropalpus* (Coquillett) — Common rock hole mosquito — Desert regions of southern Utah
- A. campestris* Dyar and Knab — Widespread in valleys of state
- A. cataphylla* Dyar — Widespread in mountains and mountain valleys
- A. cinereus* Meigen — Mountain valleys of northern Utah
- A. communis* (De Geer) — Mountains, northern Utah to La Sal Mtns. in S.E.
- A. dorsalis* (Meigen) — Dominant mosquito in valleys of state
- A. excrucians* (Walker) — Uinta Mountains
- A. fitchii* (Felt and Young) — Mountains and valleys of entire state
- A. flavescens* (Muller) — Valleys of northern Utah
- A. hexodontus* Dyar — Mountains throughout state
- A. implicatus* Vockeroth — Mountains throughout state
- A. impiger* (Walker) — Uinta Mountains and extreme northern Wasatch Mountains
- A. increpitus* Dyar — Common throughout state along streams and in southern mountains
- A. intrudens* Dyar — Uinta Mountains
- A. melanimon* Dyar — Common in valleys and along streams in eastern Utah, uncommon elsewhere
- A. nigromaculis* (Ludlow) — Common in valleys throughout state
- A. niphadopsis* Dyar and Knab — Common in Great Basin area of Utah
- A. pullatus* (Coquillett) — Common in mountains

throughout state

- A. schizopinax* Dyar — Widespread, but rare in mountain valleys of state
- **A. sierrensis* (Ludlow) — Tree hole mosquito. Known only from Weber Co.
- A. spencerii idahoensis* (Theobald) — Floodwater species, chiefly along rivers of northern and central Utah
- A. sticticus* (Meigen) — Floodwater mosquito along streams of northern Utah
- **A. trivittatus* (Coq.) — Known only from Bluff area, San Juan Co.
- A. varipalpus* (Coquillett) — Tree hole mosquito, southern Utah and Utah County
- **A. ventrovittis* Dyar — Known only from Logan Canyon summit area
- A. vexans* (Meigen) — Abundant along valleys and streams throughout state
- Anopheles earlei* Vargas — Known only from Juab, Rich and Summit Counties
- A. franciscanus* McCracken — Widespread in southern half of state
- A. freeborni* Aitken — Widespread throughout state
- Culex apicalis* Adams — Known only from southern Utah
- C. erythrothorax* Dyar — Widespread in state
- C. pipiens* Linnaeus — House mosquito — widespread in state
- C. quinquefasciatus* Say — Southern house mosquito. Known only from Salt Lake and Washington Counties
- C. restuans* (Theobald) — Known only from Duchesne Co.
- C. tarsalis* Coquillett — Abundant throughout state
- C. territans* (Walker) — Known only from mountain valleys of northern Utah
- **C. thriambus* Dyar — Known only from Washington Co., southern Utah
- Culiseta impatiens* (Walker) — Mountains of entire state
- C. incidens* Thomson — Mountains and valleys of entire state
- C. inornata* Williston — Mountains and valleys of entire state
- **C. morsitans dyari* Coq. — Known only from Weber Canyon
- C. silvestris minnesotae* Barr — Known only from Morgan and Weber Counties
- Mansonia perturbans* (Walker) — Valleys of northern Utah
- **Orthopodomyia signifera* (Coq.) — Known only from San Juan Co. Tree hole species
- Psorophora signipennis* (Coquillett) — Widespread throughout desert valleys of state

NEW RECORDS

Aedes sierrensis (Ludlow)

The occurrence of this tree hole species in northern Utah was reported by Nielsen, Arnell and Linam (1967). The species has been collected in cottonwood tree holes along the Weber River in Weber County. It is not considered to be an important pest species in Utah. *A. sierrensis* is very similar to *Aedes varipalpus* which occurs in southern Utah and Utah County. However, there are reliable differences in all stages. *Adult female*: *A. varipalpus* has several light bristles arising among the scales of the subspiracular patch; *A. sierrensis* lacks these bristles. In *A. sierrensis* there is a broad basal white ring on the fourth tarsal segment which covers one-third to one-half of the segment; in *A. varipalpus* this basal white ring covers only one-fifth of the segment or less. *Larvae*: The most conspicuous difference is the shape of the siphon. In *A. varipalpus* the siphonal index is 3.0 (length divided by basal diameter) or less. The siphon is expanded mesally and tapers to become much narrower distally; in *A. sierrensis* the siphonal index is about 3.5 and the siphon lacks the distinct mesal expansion and is more parallel sided. Another reliable difference is prothoracic hair no. 5, which is double in *A. varipalpus* and usually single in *A. sierrensis*. *Male terminalia*: The most conspicuous difference is the basal lobe which in *A. varipalpus* bears one long single spine and several shorter spines and setae and in *A. sierrensis* bears a large brush-like cluster of long stout spines.

Aedes trivittatus (Coq.)

This valley species is known only from Bluff, Utah, in San Juan County, where biting females were collected by G. C. Collett on August 19, 1968. *Adult female*: Females are not likely to be confused with other Utah species: Tarsi without bands; Wings dark brown scaled; Mesonotum with a pair of broad stripes of white scales separated by a median brown stripe of equal width, anterior margins of mesonotum dark brown scaled; Scale patch on sternopleuron does not extend to upper anterior border; Mesepimeron lacking scales on ventral third; Abdominal tergites dark brown scaled with white scales occurring on lateral basal margins and often in very small median basal patches. *Larvae*: The larvae of *A. trivittatus* have single head hairs and the anal plate completely encircles the anal segment. The larvae may be confused only with *Aedes nigromaculis*. In *A. trivittatus* the comb scales are not spine-like and the pecten teeth are evenly spaced; in *A. nigromaculis* the comb scales are distinctly spined and the last 2-4 pecten teeth are more widely spaced. *Male terminalia*: This structure in *A. trivittatus* is unlike any other Utah species. See Carpenter and La Casse (1955:249).

Aedes ventrovittis Dyar

This mountain species is known only from the summit area of Logan Canyon, Cache County, where

it was collected in a roadside pool on May 23, 1964, by L. T. Nielsen at an elevation of 7500 ft. Females are severe biters of man, but the species is too rare in Utah to be of pest importance. *Adult females*: Tarsi unbanded; Wings dark scaled usually intermixed with a few to many white scales along the anterior wing veins; Post coxal scale patch present; Scales on sternopleuron extending to or near the anterior margin; Lower one-third of mesepimeron bare, lower mesepimeral bristles absent; Abdomen with narrow basal white bands which widen laterally. On some segments mesal portions may lack basal white scales. *Larvae*: Upper and lower head hairs single; Siphonal index 2.5 to 3.0; pecten usually extending past middle of siphon with 1-4 detached teeth; Comb scales 8-12, each scale slender and spinelike, anal plate extending to near mid ventral line. *Male terminalia*: The male terminalia is very similar to *A. spencerii idahoensis*, and cannot be reliably separated from that species. The two are not likely to be confused as *A. spencerii idahoensis* is a valley species.

Culex thriambus Dyar

This species was first reported for Utah by Nielsen, Linam and Rees (1963). It is a southern species and has been collected only in Washington County in the vicinity of St. George. Females do not feed on man. *Adult female*: Females of this species are very similar to *Culex tarsalis* and easily confused with that species. *C. thriambus* lacks the distinctive longitudinal line of white scales present on the femora and tibiae of *C. tarsalis*, as well as the characteristic V-shaped dark patch of scales present on the venter of each abdominal segment in *C. tarsalis*. The broad white ring present on the proboscis of *C. tarsalis* is incomplete in *C. thriambus*, being present ventrally and around the sides, but never conspicuous on the dorsal surface. *Larvae*: The siphon of *C. thriambus* has the siphonal tufts present as three pairs of long single (rarely double) irregularly placed hairs. In this character *C. thriambus* is distinct from all other Utah *Culex* except *C. restuans*. However, the siphonal index in *C. thriambus* is usually at least 6.0 as compared to 4.0 to 4.5 in *C. restuans*. In addition the antennae of *C. thriambus* are greatly constricted beyond the antennal tuft which is situated near the outer third of the antennal shaft; in *C. restuans* the antennae are nearly uniform in shape and the antennal tuft is situated near the middle of the antennae. *Male terminalia*: The terminalia of *C. thriambus* is similar to *C. tarsalis*. The most conspicuous differences occur in the leaf-like filament of the subapical lobe, which is broad in *C. thriambus*, narrow and clublike in *C. tarsalis* and in the crown of the tenth sternite which in *C. thriambus* has the spines all pointed, while in *C. tarsalis* the outer spines are blunt.

Culiseta morsitans dyari Coq.

This species was first collected in Utah at Trout Springs near the mouth of Weber Canyon by L. T. Nielsen on May 23, 1968. Females do not normally

attack man. *Adult female*: The female is very similar to *Culiseta silvestris minnesotae*, but differs in the abdominal tergite markings. In *C. s. minnesotae* both basal and apical bands of white scales are present; in *C. m. dyari* only narrow basal white bands are present. *Larvae*: The larvae of *C. m. dyari* are very similar to *C. s. minnesotae* and cannot always be separated with certainty. In the former species the upper frontal head hairs are 3-7 branched, and the pre-antennal hair is 5-9 branched. In the latter species the upper head hairs are 6-11 branched, and the pre-antennal hair is 8-14 branched. The number of tufts in the ventral brush is 19-22 in *C. m. dyari* and 16-19 in *C. s. minnesotae*. *Male terminalia*: The terminalia of *C. m. dyari* are very similar to *C. s. minnesotae*. However, in the former species, the phallosome tapers to a point at the apex; in the latter species the apex of the phallosome is blunt and broadly rounded.

Orthopodomyia signifera (Coq.)

This species was reported from southeastern Utah by Nielsen *et al.* (1968). It has been collected in tree holes in San Juan County along the San Juan River near Bluff, and along Salt Creek in Canyonlands National Park. Females do not feed on man. *Adult female*: Females are characterized by the presence of three pairs of narrow longitudinal lines of silvery white scales on the mesonotum; Pleuron with narrow white lines and patches of white scales; Tarsal segments conspicuously white banded; Wing scales broad, intermixed brown and white. *Larvae*: Larvae can easily be recognized by the absence of pecten on the siphon, and the presence of large sclerotized dorsal plates on segments VIII and often on segments VI and VII. Anal segment is completely ringed by the anal plate. Head hairs are multiple. *Male terminalia*: The terminalia are distinctive and unlike any other Utah genus. See Carpenter and La Casse (1955).

Culex salinarius Coq.

This species has been reported as occurring in Utah (Nielsen and Rees, 1961). A study of existing material reveals that no valid record of this species exist. All specimens identified as this species are actually *Culex erythrothorax* or *Culex pipiens*. The presence of this species in Utah is, therefore, considered questionable and it has been removed from the state list.

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