

TWO NEW MOSQUITOES FROM CALIFORNIA

(Diptera, Culicidae)

By HARRISON G. DYAR

Culex badgeri, new species.

Head with narrow curved golden brown scales of the usual type; a small patch of black scales on the side, below which the scales are flat and appressed, whitish brown; mesonotum with the scales fine and small, appearing sparse, shining golden brown as on the head, lighter than the dark brown integument. Abdomen black above, the segments dull yellowish toward their bases, forming a very indistinct paler banding; venter immaculate, light brown scaled. Legs black, femora pale beneath, tips of femora and tibiae indistinctly and narrowly light brown. Wing scales hair-like. In the male there are some white scales on the palpi beneath, chiefly at the bases of the last two joints and on the penultimate one; palpi above bronzy black.

Male hypopygium. Lobe of side piece bearing three rods, a leaf and a hooked filament, with a tubercle on the lateral aspect of the lobe. Clasper curved, concave beneath and with slightly winged margins, bearing a moderately long terminal spine. Mesosomal plate with the upper arm slender and tooth-like, the lower stout, thumb-shaped, seven long slender approximated teeth between; horn from the base exceeding the plate, flattened, twisted, with pointed tip. Tenth sternites tufted with spines, the outer spine triangular, but sharp and not dentiform; basal arm long, curved, its outer portion embrowned.

Types, male and female, Bakersfield, California, January 29, 1924, "Timber, between Catch Basin and River" (C. K. Badger). The specimens are obviously bred, associated with *Culiseta inornatus* Will. and *Culiseta maccrackenae* D. & K.

The formation of the lobe of the side piece in the male hypopygium in *Culex* proper consists of three rods, a leaf and a seta. The three rods and leaf are in line on the crest of the lobe, and the seta is inserted on the lateral aspect of the lobe below the leaf. This condition obtains in *nigripalpus* Theob., *stenolepis* D. & K., *lepostenis* Dyar, *chidesteri* Dyar and *virgultus* Theob., of the species that are before me. The develop-

ment is in the line of multiplication of the appendages of the lobe. The first step is represented by the addition of a small filament adjacent to the leaf, its tubercle lying approximate to the larger tubercle from which the leaf springs, and lateral thereto. Showing this general stage, the following species are before me: *secutor* Theob., *salinarius* Coq., *janitor* Theob., *erythrothorax* Dyar, *bonariensis* Brèthes (?=*dolosa* Lynch) and *federalis* Dyar. In *erythrothorax* and *janitor* the filament is simple and setaform; in *salinarius*, *bonariensis* and *secutor* it is hooked at tip and stouter; in *federalis* it is strongly hooked, and has migrated around the base of the leaf so as to lie beyond it, almost coming into line with the rods and leaf. In *badgeri*, here described, the filament is stout and rod-like, though strongly hooked, and lies nearly in line with the rods and leaf (as in *federalis*); but the seta on the side of the lobe has degenerated, leaving only its insertion tubercle to mark its site. By simply counting the appendages on the lobe, *badgeri* would fall in the *nigripalpus* group, whereas by considering the development, it is seen to belong to the *salinarius* group, and to be most nearly related to *federalis* of Mexico City.

Since writing the above, further material of this form has been received from Major Badger, and the second male mounted shows the seta present on the lobe of side piece and very strong. This brings the form still closer to *federalis*, of which it may be not more than a race. There still remains the difference in shape of the tooth of the mesosomal plate, which forms a strong shoulder in *federalis*, but less in *badgeri*.

Aedes melanimon, new species.

In general as in *Aedes dorsalis* Meig., especially the form *mediolincata* Ludl., except that the wing-scales are all dark or at least unicolorous, there being no contrasting dark and light veins as in *dorsalis*. Nevertheless, I considered this as a variety of *dorsalis* until a male was obtained. The very distinct hypopygium shows that a distinct species is represented.

Hypopygium. Apical lobe large, nearly bare, a few small setae on the inner face; basal lobe of side piece rounded, prominent, the inner area bare, the outer sparsely setose; a

long spine with curled tip and a shorter one, situated on the outer aspect of the lobe, the sparse setae following them and not more than about six in number except very minute ones. Claspette stem moderate, uniform, the filament longer than it, widely expanded and blade-like on the outer two-thirds. Ninth tergites small, rather long, with five small setae. Clasper slender, curved, with a long terminal spine.

Types, fifteen females, October, 1923, and two males, February 26, 1924, Bakersfield, California (C. K. Badger).