

KEYS TO THE GENERA OF LARVAE AND ADULT MOSQUITOES OF THE UNITED STATES¹

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The collection of *Haemagogus equinus* Theobald in the lower Rio Grande valley near Brownsville, Texas, by Trapido and Galindo in 1955 (1) increased the number of recognized genera of mosquitoes in the United States from eleven to twelve. The addition of this genus to the mosquito fauna of the United States created a problem in taxonomy in that identification keys have not been available in the literature for separating the genus *Haemagogus*

from the other United States genera. The Entomology Department of the Fourth U. S. Army Medical Laboratory, Fort Sam Houston, Texas, is responsible for the identification of arthropods of medical importance within the jurisdiction of the Fourth Army which comprises five southwestern states (Texas, New Mexico, Oklahoma, Arkansas, Louisiana). Keys to the genera of larvae and adult mosquitoes of the United States were prepared to include the genus *Haemagogus*, for use by military personnel within the Fourth Army area. It is presented here for interested personnel who are engaged in the identification of mosquitoes.

H. equinus is a tree-hole breeder, and its present known range extends from the Rio Grande valley of Texas south to Colombia (1). The adult is easily separated from other U. S. genera by the bright

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ADULTS (Female)

1. Proboscis stout on basal half, apical half tapered and strongly curved downward; large species, with broad scales of metallic luster on head, thorax, abdomen, and legs.... TOXORHYNCHITES
Proboscis slender, of nearly uniform thickness, never strongly curved downward on apical half. 2
2. Scutellum evenly rounded on posterior margin; palpi of female nearly as long as proboscis; abdomen bare of scales or only sparsely scaled..... ANOPHELES
Scutellum trilobed on posterior margin; palpi of female less than one-half the length of proboscis; abdomen densely scaled..... 3
3. Wing vein-6 ending at the bifurcation of vein-5..... URANOTAENIA
Wing vein-6 ending well beyond the bifurcation of vein-5..... 4
4. Spiracular bristles present..... 5
Spiracular bristles absent..... 7
5. Postnotum with a tuft of setae; squamae without a fringe of hairs..... WYEOMYIA
Postnotum bare; squamae with a fringe of hairs..... 6
6. Postspiracular bristles present; tip of abdomen pointed..... PSOROPHORA
Postspiracular bristles absent; tip of abdomen blunt..... CULISETA
7. Anterior pronotal lobes large, almost joining dorsally, collar like; abdominal scales bright metallic violet and silver..... HAEMAGOGUS
Anterior pronotal lobes small, widely separated dorsally; abdomen without bright metallic scales. 8
8. Postspiracular bristles present..... 9
Postspiracular bristles absent..... 10
9. Wing scales very broad; tip of abdomen blunt (in part)..... MANSONIA
Wing scales narrow (rarely moderately broad) tip of abdomen pointed..... AEDES
10. Antennae much longer than proboscis, first flagellar segment longer than the next two combined. DEINOCERITES
Antennae not longer than proboscis or only slightly so, first flagellar segment about as long as each succeeding segment..... 11
11. Fourth tarsal segment of fore tarsi very short, only about as long as wide; scutum with delicate longitudinal lines of white scales..... ORTHOPODOMYIA
Fourth tarsal segment of fore tarsi much longer than wide; scutum without longitudinal lines of white scales..... 12
12. Wing scales very broad, brown and white mixed..... MANSONIA
Wing scales narrow, uniformly dark..... CULEX

LARVAE

1. Eighth abdominal segment without an elongate dorsal siphon..... ANOPHELES
Eighth abdominal segment with an elongate dorsal siphon which is as long as or longer than wide. 2
2. Siphon with a pecten..... 3
Siphon without a pecten..... 9
3. Head longer than wide; eighth abdominal segment with a prominent sclerotized plate with the comb scales on posterior margin..... URANOTAENIA
Head at least as wide as long; eighth abdominal segment without a prominent sclerotized plate (small plate present in some species of *Psorophora*)..... 4
4. Head with a prominent triangular pouch on each side; anal segment with divided dorsal and ventral sclerotic plates..... DEINOCERITES
Head without a prominent triangular pouch on each side; anal segment without divided dorsal and ventral sclerotic plates..... 5
5. Siphon with a pair of large basal tufts, or if tufts are small, the comb scales are arranged in a single row, and bar-like..... CULISETA
Siphon without a pair of basal tufts or single hairs; comb scales in a patch or single row.. 6
6. Siphon with several pairs of tufts or single hairs..... CULEX
Siphon with one pair of median or subapical tufts, (sometimes vestigial) or one pair of single hairs..... 7
7. Anal segment completely ringed by the dorsal saddle and pierced on the midventral line by tufts of the ventral brush..... PSOROPHORA
Anal segment not completely ringed by the dorsal saddle, or if ringed, not pierced on the midventral line by tufts of the ventral brush..... 8
8. Dorsal saddle with a prominent group of long spines on posterior margin; comb scales in a single row..... HAEMAGOGUS

- Dorsal saddle without a prominent group of long spines on the posterior margin, or if long spines are present on posterior margin, comb scales in a patch.....AEDES
9. Eighth abdominal segment without comb scales; mouth brushes prehensile, each composed of about ten stout rods.....TOXORHYNCHITES
- Eighth abdominal segment with comb scales, either in a patch or single row; mouth brushes composed of 30 or more hairs..... 10
10. Apical half of siphon strongly tapered, with a lateral saw-toothed projection.....MANSONIA
- Apical half of siphon never strongly tapered, cylindrical or spindle shaped, without a lateral saw-toothed projection..... 11
11. Anal segment with a prominent median ventral brush; comb of eighth segment with a double row of long scales.....ORTHOPODOMYIA
- Anal segment without a median ventral brush, but with a pair of ventro-lateral tufts, comb scales in a single row.....WYEOMYIA

coloration of the abdominal scales and the large anterior pronotal lobes. As a group, the larvae of *Haemagogus* are inseparable from the genus *Aedes* (2). However, *H. equinus* can be separated from *Aedes* of the U. S. by the characters presented in this key. These characters are the presence or absence of long spines on the posterior margin of the dorsal saddle, and the arrangement of comb scales. The nomenclature and generic status as used by Car-

penter and LaCasse (3) have been followed in part in these keys.

Literature Cited

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