

A NEW SPECIES OF *CULICOIDES* (DIPTERA:
CERATOPOGONIDAE) FROM HONDURAS)¹

JAMES F. MATTA

Department of Entomology, University of Florida, Gainesville

During the summer of 1966 extensive light trap collections were obtained from Honduras. In preparation for the writing of a monograph of the *Culicoides* of that country the following new species is described.

Culicoides (Culicoides) hayesi n. sp.

FEMALE:—Head: Eyes narrowly separated, bare. Antennae (Fig. 7) with flagellar segments in proportion of 20:15:15:15:15:15:15:16:33:33:36:36:48. Antennal ratio 1.48 (1.44-1.53, n=4); distal sensorial pits in segments III-XV. The first eight flagellar segments yellowish, the last five brown. Palpal segments (Fig. 5) in proportion of 15:31:45:12:12; the third segment swollen, 2.48 (2.44-2.53, n=4) times as long as the greatest width; with a large deep sensory pit with a circular opening. The proboscis shorter than the head; the mandible with 15 (14-18, n=4) well developed teeth.

Thorax: On slide mounted specimens the thorax appears to be uniformly yellowish brown; however, no pinned material was available for comparison. The legs are light brown; the femora with a subapical, and the tibia with a subbasal pale ring; all knees black. Hind tibial comb with four spines, (Fig. 6) the one nearest the spur the longest.

Wing: Length of wing 1.36 (1.34-1.42, n=4) mm; the costa extending 0.58 (0.57-0.60, n=4) of the wing length. Wing pattern (Fig. 8) with markings distinct; the pale markings well separated. The second radial cell in a light spot, the distal pale spot broadly reaching the wing margin and nearly filling the apical portion of cell R₅. A large round pale spot on vein M₂; the distal pale spots in cells M₁ and M₂ broadly reaching the wing margin. The anal cell with one distal pale spot which fills the entire distal portion of the cell. Few macrotrichia present, these distributed evenly over the surface of the wing. The halter entirely clear.

Abdomen: Two spherical spermathecae present; the ducts sclerotized for only a very short distance. The larger 0.079 (0.067-0.098, n=2) mm by 0.058 (0.055-0.060, n=2) mm; the smaller 0.065 (0.060-0.072, n=3) mm by 0.053 (0.048-0.055, n=3) mm.

MALE:—Genitalia: The ninth sternite shallowly excavated; ninth tergite with apicolateral processes well developed, slightly divergent and with blunt ends; the caudal margin strongly indented and with a deep trough-shaped notch. Basistyle with dorsal root well developed, blunt ended; the ventral root longer and tapering to a weakly curved point. Dististyle with the base swollen; nearly straight, with a slender, blunt, slightly curved tip. Aedeagus strongly arched; with ends of arms bent; tapering to a blunt tip. Parameres (Fig. 2) separate, with abruptly bent, knobbed bases and a sensible swelling medially, tapering to fine sharply bent simple tips.

¹This investigation was supported in part by U. S. Army Contract No. DA-49-193-MD-2177.

FOURTH INSTAR LARVA:—1 specimen examined. Dorsal head length 0.192 mm, comb with seven unequal teeth on each half; total comb width 0.029 mm; head capsule pale yellow. Dorsum of all thoracic and abdominal segments lighter than the head capsule; yellowish-white.

PUPA:—Respiratory horn brown, slightly darker than rest of pelt; with 7-9 apical and 3 lateral spiracular openings; $\frac{2}{3}$ of the median surface with scattered spicules. The horn long and slender, cylindrical in shape;

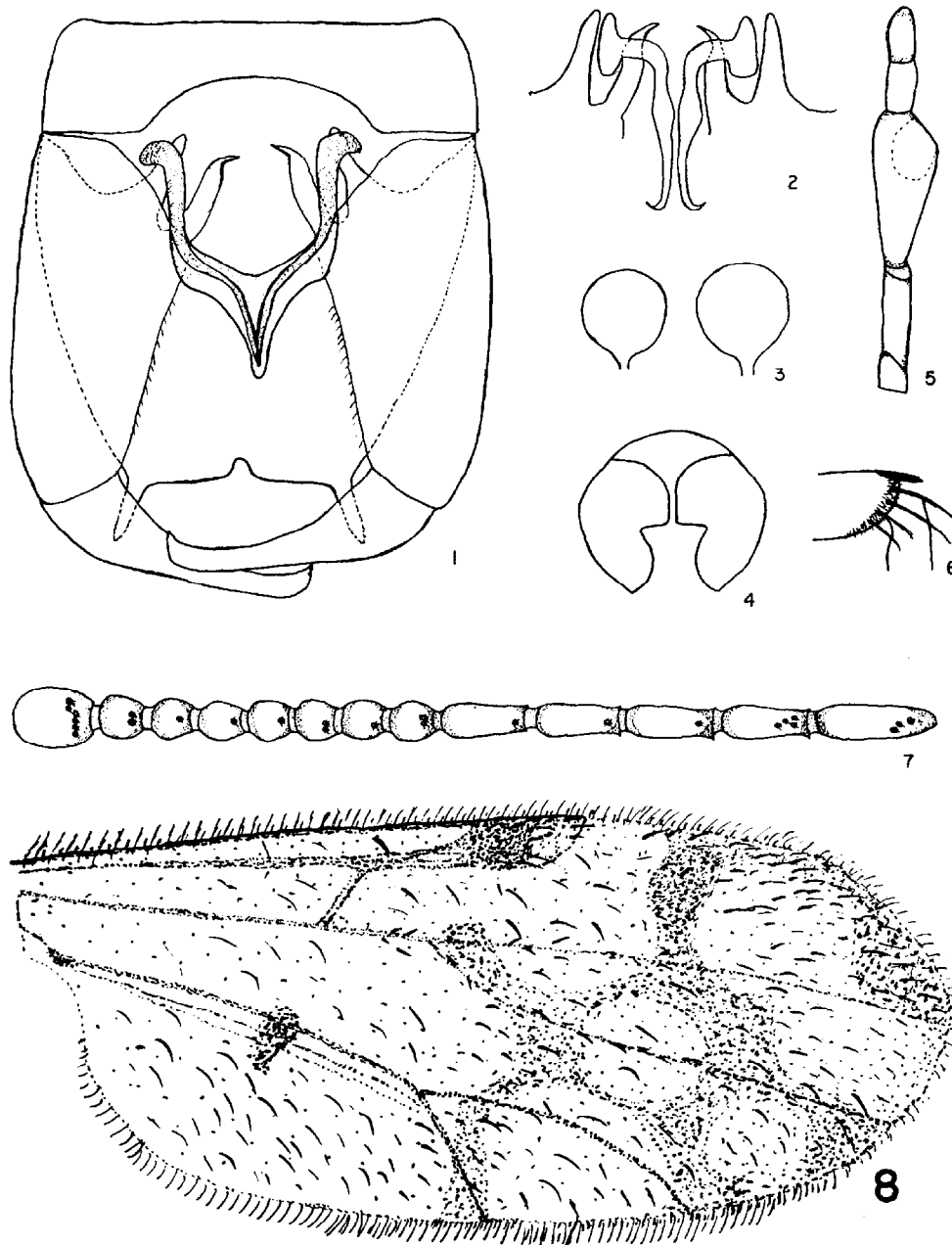


Fig. 1-8. *Culicoides haysei* n. sp.; Fig. 1. male genitalia, parameres removed. Fig. 2. parameres. Fig. 3. spermathecae. Fig. 4. head. Fig. 5. palp. Fig. 6. tibial comb Fig. 7. antennal flagellar segments. Fig. 8. wing.

L/W ratio 8.5-9.0. Operculum with *am* seta long and thin, *ad* setae long and thin and located on a tubercle. The *d* tubercles with 1,2, and 3 almost in line, 4 and 5 form a line parallel to 1,2, and 3; seta 3 very long.

Abdomen: With 4 lateral spines per segment, each located on a separate and distinct tubercle, the penultimate segment with the tubercles located in a line on the posterior margin. The last segment with caudal apicolateral processes long and slender, forming an angle of about 45° to the longitudinal axis of the body; small spines cover the entire surface of the last segment.

TYPES:—Holotype female, (Type No. 69360, U.S.N.M.), allotype, La Tigra, Distrito Central, Honduras, 10 June 1966, J. F. Matta (light trap).

Paratypes: Honduras—3 females, 1 male, same data as types. 2 females, 1 male, 1 larva, 1 pupal case, Mexico, Tamaulipas, Ciudad Victoria, Rancho del Cielo 4 April 1963, (H. A. Trevino, raised from bromeliad) courtesy of Dr. Richard B. Eads and Dr. W. W. Wirth. 1 female Mexico, Veracruz, Fortin, 22 May 1964 F. S. Blanton. All types and paratypes are deposited in the U. S. National Museum.

DISCUSSION:—The type locality, La Tigra, is a mountain about 10 miles outside of Tegucigalpa, Honduras. The collection area (at an altitude of 6000 ft) is a subtemperate cloud forest with a heavy overgrowth of moss, lichens, and orchids.

This species is closely related to *C. leutealaris* W.&B. in wing pattern and in the dark bases of the femora. It is also closely related to *C. nigri-genus* W.&B.; having bicolored antennae, each segment with a sensory tuft, the conspicuous black knees, and a marked similarity in the male structures. It may be distinguished by the wing pattern, smaller antennal ratio, and greater palpal ratio; and in the male by the comparatively greater development of the ventral root, the shape of the tip of the aedeagus, and the stouter apicolateral processes.

This species is named after Dr. Richard O. Hayes of the U. S. Public Health Service. I wish to thank Dr. W. W. Wirth for his kindness in reviewing material and offering suggestions.

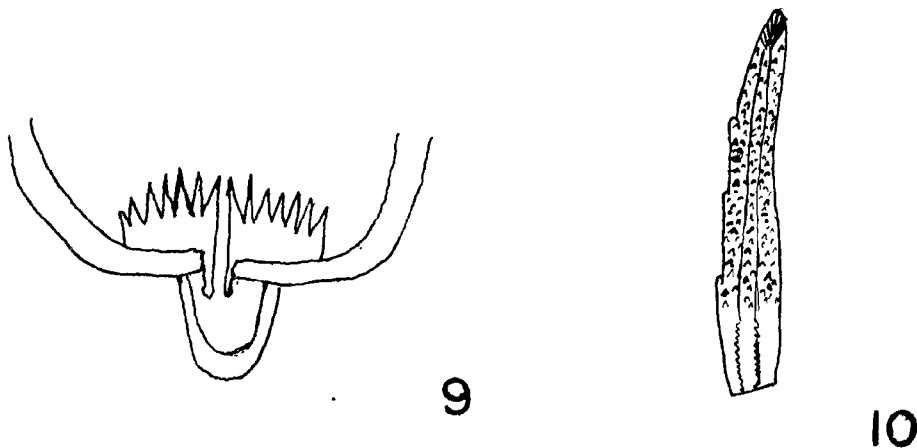


Fig. 9-10. *Culicoides hayesi* n. sp.; Fig. 9. larval comb.
Fig. 10. pupal horn.