

THE LARVA, PUPA AND ADULTS OF WYEOMYIA
(WYEOMYIA) MELANOPUS DYAR (Diptera, Culicidae)

BY JOHN LANE¹

In March 1946 we received from Mr. Kenneth E. Frick a batch of *Wyeomyia* to identify, including larvae, pupae and adults of both sexes. The specimens were identified by us as *Wyeomyia* (*Wyeomyia*) *melanopus*. As to our knowledge, the larva and pupa of this species remain undescribed, and, as there are some corrections to be made in our Monograph (1), we have decided to prepare this paper.

Wyeomyia (*Wyeomyia*) *melanopus* Dyar, 1919

- 1919 *Wyeomyia melanopus* Dyar, Ins. Ins. Mens., 7: 130, pl. 5, fig. 4.
1923 Dyar, id., 11: 173; 1924 Dyar, id., 12: 115.
1924 Dyar and Shannon, J. Wash. Ac. Sci., 14: 480.
1925 Bonne and Bonne-Wepster, Mos. Surinam, 78, 116.,
1925 Dyar, Ins. Ins. Mens., 13: 115.
1928 Dyar, Mos. Am., 46.
1932 Edwards, Gen. Ins., 85.
1939 Lane, Bol. Biol., Ser. Mon., 1: 154.
1942 Lane and Cerqueira, Arq. Zool. E. S. Paulo, 3 (9): 551.
syn. 1925 *Wyeomyia culebrae* Dyar, Ins. Ins. Mens., 11: 65.

FEMALE.—*Head*. Proboscis approximately of the length of fore femur, slightly enlarged on the distal third, blackish except on the ventral surface where there is a line of white scales; palpus blackish and slightly longer than clypeus; clypeus blackish, slightly longer than broad, nude; antenna with the torus of the same color as clypeus, flagellum about two thirds the length of proboscis, the segment sparsely covered with long hairs; occiput with a patch of white scales on vertex and others, of this color, on the lower margin of eyes reaching the mentum where they form a patch; remaining scales dark with bluish reflection.

Thorax. Pronotal lobes approximate dorsally, large, covered with blue-violaceous scales, with metallic luster except on the posterior border where there are some white ones; the setae are inserted on the upper margin and are brown. Mesonotum with blackish integument, covered

¹From the Departamento de Parasitologia (Director Dr. P. C. A. Antunes), Faculdade de Higiene e Saúde Publica, Universidade de S Paulo, Brasil.

with broad, dark scales with slight metallic reflection which, on the posterior border, are still broader; the setae are restricted to the anterior border and over wing-roots where they are brown. Scutellum covered with broad scales. Postnotum blackish with about five setae on a posterior tuft (in one specimen a few white scales were observed). Pleura with yellowish integument and densely covered with silvery scales.

Wing covered with unicolorous, narrow scales which are broader on the branches of the second, the third, the branches of the fourth and in the upper branch of the fifth veins; squamula nude. Haltere with yellowish stem and blackish knob.

Legs. Coxae with yellowish integument and setae of this color but covered with large patches of silvery scales; hind femur and tibia whitish internally, the remainder covered with dark scales.

MALE.—Antenna slightly more plumose than in the female; other characters as in the female.

Genitalia. We have the following data to add to the description given by Lane and Cerqueira (1): Dististyle (Fig. 5) with the distal portion longer than in the illustration given for this species and with a small lateral protuberance covered with hairs; mesosome with median plate elongate on the upper portion and having a digitiform process; ninth tergite convex and with three setae on each lobe (rarely a fourth seta is also found).

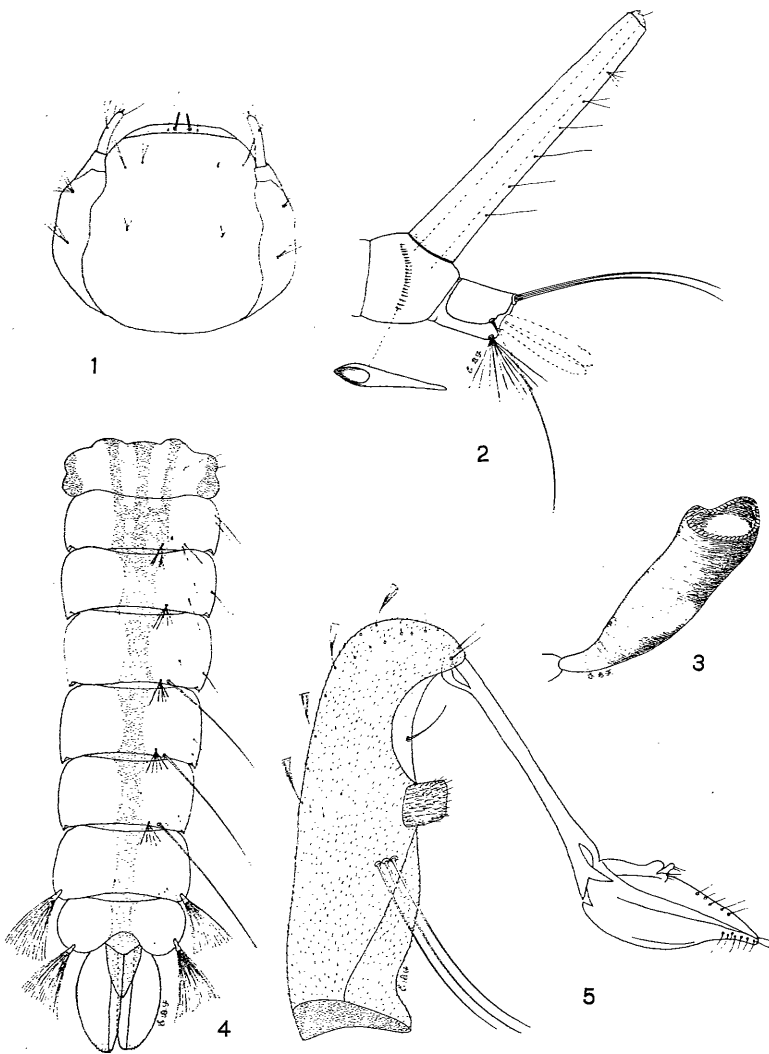
PUPA.—Strongly marked with brown on both cephalothorax and abdomen. The cephalothorax has an anterior swelling and shows large sublateral marks which, from the anterior portion, and involving the breathing tubes, reach the first abdominal tergite. The abdomen has a dark, broad, longitudinal stripe which narrows posteriorly and ends at the tip of segment VIII.

Breathing tube (Fig. 3) about three times the apical breadth, darker on base and before apex, subcylindrical, the opening diagonal; cephalothorax with a long double or triple hair, the other hairs small and double or triple.

Abdomen (Fig. 4) with the A² element small on segments II to VI; on VII with a large multiple tuft which is nearly as large as the one on segment VIII; element B single, three-fourths the length of segment in II and III, on segments IV to VI it is much longer than the length of the segments; element C long and dichotomised on segment II, with five branches and long on segments III to VI; paddle nearly twice the length of segment VIII, finley spiculose on apex.

LARVA.—Head rounded (Fig. 1), slightly longer than broad, hairs very small; antenna very short, less than half the length of head, cylindrical, smooth, with a single two branched preapical hair and ending in four simple and short hairs; clypeal plate with a large median tooth and about eleven smaller, subequal teeth on each side; mandibles with a

²The pupal nomenclature here given is the one adopted by A. M. Evans in *Mosquitoes of the Ethiopian Region*, vol. 2, pp. 18-20, fig. 9.



Wyeomyia melanopus Dyar. Fig. 1, Head of larva. Fig. 2, Segments VIII and IX of larva. Fig. 3, Breathing tube of pupa. Fig. 4, Abdomen of pupa. Fig. 5, Basistyle and dististyle of male genitalia.

long tooth on upper border, the lower one divided into four teeth of which the apical one is largest.

Thorax smooth. Prothorax with hairs 1 to 3 small and in multiple tufts, hairs 4 to 6 with one or two long feathered branches; mesothorax with long lateral hairs.

Abdomen smooth. Elements 6 and 7 very long on segments I to VII; segment VIII with the pecten in a single row of isolated and pointed scales; breathing tube (Fig. 2) about six times the basal width, false pecten absent, with five long, single hairs on posterior margin followed by a small double hair and a smaller four-branched one; anal segment with the plate saddle-shaped, dorsal setae (1+1), lateral seta single and long, ventral brush represented by an eight-haired tuft; anal gills longer than the anal segment.

LOCALITY OF STUDIED SPECIMENS.—Panama, Canal Zone, Nuevo Limon. IX to XII 1945 (K. E. Frick col.). Six males, six females, five pupae and sixteen larvae registered under numbers 6217 to 6250 in our collections.

HABITS.—In August 1946, Mr. Kenneth E. Frick sent us the following notes on the habits of this species: "It was during latter September, October and November that the rain fell daily and hard enough to keep the leaf bases full of water. The larvae were all from pineapple plants. *W. scotinomus* was slightly more abundant than *W. melanopus*. A single specimen of *W. clasoleuca* was found, out of the hundreds that we examined. Two *Megarhinus superbus* were found in the center of one plant (both larvae); they fed freely upon the *Wyeomyia* spp.

"*W. melanopus* was collected only in the very center apex of the plants. Although water was held by each leaf it was of a minute quantity, while the cone-shaped growing point of the plants held 3-6 pipettes-full of water and some even more.

"Robert Olson found the record of 28 third and fourth instar *W. melanopus* in one plant, with *W. scotinomus* present as well. He threw out the first and second instars which were even more plentiful. My record was 15 larvae (all instars) and 3 pupae from one plant, the water of which was thick and yellow with refuse. However, the water was usually clearer, although dirty on the bottom.

"All plants were in the open, exposed to sun and rain. Some, just cleared from deep shade within 4 days, had many larvae of all instars in them as well. So, breeding had been going on in the shaded areas as well."

OBSERVATIONS.—In Lane and Cerqueira's (1) monograph the female of this species is placed on dichotomy 10 (species with pronotal lobe marked with white on top and below. *W. melanopus* must be removed from this dichotomy and placed

on dichotomy 13, from thence to 20 and from there to 21 (together with *W. pertinans* and *W. abebela*). With regards to the genitalia the key is correct. In the key for pupae this species could be placed in the beginning of the key as it is the only known species with all the abdominal segments marked with blackish brown. In the key for larvae this species goes into the same dichotomy as *W. scotinomus*.

ACKNOWLEDGMENT

We take this opportunity to thank Dr. Kenneth E. Frick for letting us study and keep specimens of *W. melanopus*.

REFERENCE

1. Lane, J. and Cerqueira, N. L. 1942, Os Sabetíneos da América. Arq. Zool. E. S. Paulo, 3 (9): 473-849.

