

No frontal callus but a pair of curved grooves, deepest and narrowest above, weakly outline a central raised area; subcallus small, flat, with a median groove and without hairs. Antenna: Scape and pedicel small, dark brown, with short dark hairs; first flagellar segment small, nearly round in profile, the extreme base slightly paled; second and third flagellar segments straw yellow, the second segment very short, the third long, narrowest at base, with a few pale hairs at tip. Clypeus and genae dark brown, with black hair. Palpus short, stout; second segment distinctly longer than first, curved and tapering distally. Proboscis very short, the palpi extending well beyond the labellae. Thorax brown, the dorsum tinged with gray, but with no stripes. Halteres brown. Wings brown, somewhat darker along anterior margin; vein R_4 with stump parallel to vein R_{4+5} . Legs dark brown with concolorous hair; hind tibial spurs short but distinct. Abdomen stout, dark brown, subshining.

Male: As in female except: Length 9 mm;

head large, holoptic, the facets above level of antennae distinctly enlarged; ocelli on an even more prominent tubercle. Abdomen somewhat tapering posteriorly. Hind tibial spurs slightly longer.

Holotype, female, paratype male: U. S. Nat. Mus. no. 61677; paratypes, 2 females, 2 males, American Museum of Natural History.

Type locality: Columbus, Tex.

The type bears no further data. The male in the U. S. National Museum was collected at Victoria, Tex., on May 3, 1913, by Mitchell and Coad. The two pairs in the American Museum of Natural History, lent me by C. H. Curran, were collected at Weser, Goliad County, Tex., May 11, 1952, by Cazier, Gertsch, and Schrammel. The generic name was suggested to M. D. Leonard in 1921 by E. A. Schwartz. At that time the family position of the species was very uncertain, but it is quite evidently closely related to *Merycomyia* in spite of its small size and unusual antennae.

ZOOLOGY.—*A new genus of bonelliid worms (Echiuroidea)*. WALTER K. FISHER.

Associate in Zoology, Smithsonian Institution. (Communicated by Fenner A. Chace, Jr.)

The new genus and species described herein belongs in the phylum Echiuroidea, order Echiuroina, family Bonelliidae, and was taken from the depths of the central lagoon of Onotoa, Gilbert Islands, by Dr. P. E. Cloud, Jr., on August 25, 1951.

Achaetobonellia, n. g.

Diagnosis.—Differing from typical *Bonellia* in the absence of setae; in the presence of a thick-walled bulbous expansion of the neck of the nephridium between the subbasal nephrostome and body wall, functioning as a specialized androecium; in having an extraordinarily long segment of the gut between the mouth and point of attachment of the neurointestinal blood vessel to gut; siphon apparently rudimentary; anal vesicles numerous. Type, *Achaetobonellia maculata*, n. sp.

Achaetobonellia maculata, n. sp.

Description.—Body form a broad ellipsoid, 45 mm long; body wall thin, translucent; skin smooth with slight rugosities at ends of body; skin marked by small dark brown spots, most numerous on proboscis. The latter is 95 mm

long and about 6 mm broad when flattened; each terminal branch is about 20 mm long. The mouth is inconspicuous, in the base of proboscis the margins of which do not fuse to form a definite lower lip. The nephridiopore is very inconspicuous.

The alimentary canal is very long, about 400 mm, the first 150 mm being the segment between mouth and attachment of neurointestinal blood vessel (B^3). Pharynx subspherical, thin-walled, distended by white coral mud. A rather short esophagus follows, beyond the end of which the entire gut is filled with chalk-white pellets. There is no clear differentiation into gizzard and stomach. At certain places on the badly preserved intestine traces of what may be a rudimentary siphon can be seen, but there is not observable a definite beginning at or near the attachment of the neurointestinal vessel as is normal in bonelliids. A portion of the intestine just anterior to the small, very thin-walled cloaca is enlarged but there is no trace of a ciliated groove such as is obvious in the "hind gut" of *Nellobia eusoma* (Fisher, 1946, pl. 29, fig. 3).

The anal vesicles are rather numerous

arborescent structures on the walls of the cloaca rather than 2 definite elongate sacs with branches. They are not so voluminous as in *Nellobia eusoma*. The elements are similar to those of *Eubonellia valida* (Fisher, 1946, pl. 28, fig. 2), but the ciliated funnels have disappeared. The gonads could not be found.

The single, left, nephridium, about 25 mm long, has a subbasal nephrostome on a short stalk directed toward the nerve cord. Its distinctive feature is a thick-walled proximal chamber between the nephrostome and body wall, functioning as an androecium. One male was found with its posterior end immersed in the soft glandular lining, to which it may be permanently attached. Distal to the nephrostome

the walls are translucent and small eggs occupied the middle portion.

The male is without hooks, and is slenderer than that of *Bonellia viridis*. The posterior part is missing; possibly it remained attached to the tissue of the androecium. The spermatheca is relatively small. Its duct opens at or close to the anterior end.

Type.—U.S.N.M. no. 24618.

Type locality.—Onotoa, Gilbert Islands, in deep central part of lagoon. P. E. Cloud, collector, August 25, 1951.

Remarks.—It is regrettable to have to add another monotypic genus to the Bonelliidae, but until we learn the value of the characters available for taxonomic purposes analysis will have to precede synthesis. In my review of the Bonelliidae (1948) I gave a synopsis of the 16 genera into none of which the present species fits, although it seems to be nearest *Nellobia*. If *Nellobia eusoma* has a typical Bonelliid proboscis it may be possible to squeeze *Achaetobonellia maculata* into that genus but there will remain the big discrepancy in structure of the gut, for *Nellobia* has a normal siphon, does not have the same nephridial structure, nor the excessively long "foregut". It has about the thickest body wall of any known Bonelliid.

The new genus will fall into section a^1 , b^2 of my synopsis, as follows:

- c^1 . Two nephridia; no setae—*Hamingia* Koren and Danielssen
- c^2 . One nephridium.
 - d^1 . Two typical setae; no specialized androecium. *Bonellia* Rolando
 - d^2 . Setae numerous, seated in two muscular pads from which muscles radiate; no androecium. *Acanthobonellia* Fisher
 - d^3 . No setae; a specialized androecium at base of nephridium. Differing also from d^1 and d^2 in having an abnormally long foregut and rudimentary siphon, and more diffuse anal vesicles. *Achaetobonellia*, n.g.

LITERATURE CITED

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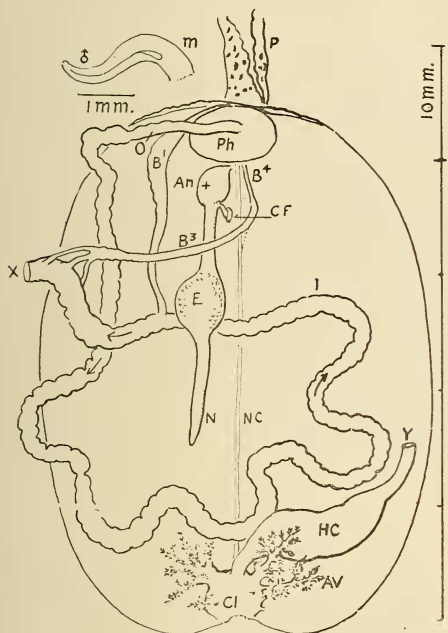


FIG. 1.—*Achaetobonellia maculata*, $\times 1.5$: Map of the anatomy from above, to show especially the single nephridium or "uterus" and the very long segment of gut anterior to attachment of dorsal blood vessel, B^1 . Between X and Y 300-350 mm of intestine have been removed. (An, androecium; AV, anal vesicles; B^1 , B^3 , B^4 , dorsal, neurointestinal, ventral blood vessels respectively; CF, nephrostome; Cl, cloaca, E, eggs in nephridium; HG, enlarged terminal part of intestine; I, presiphonal segment of gut; m, anterior part of a male taken from androecium; N, nephridium; NC, nerve cord; O, esophagus; P, proboscis; Ph, pharynx; +, position of male in the androecium.)