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TWO NEW SPECIES OF *BIDESSUS* FROM THE
APALACHICOLA FLATWOODS OF FLORIDA
(COLEOPTERA, DYTISCIDAE)*

BY FRANK N. YOUNG

THE two species of *Bidessus* described below represent part of a group of aquatic beetles apparently confined to the flatwoods area around the mouth of the Apalachicola River in western Florida. *Bidessus rogersi* Young¹ has already been described, and other forms will be treated in a subsequent paper. So far none of the species have been taken outside of a restricted area in Walton, Bay, Calhoun, Gulf, Liberty, Franklin, Wakulla, and Leon counties.

Bidessus inflatus, new species

DIAGNOSIS.—A small aberrant *Bidessus* having the general habitus of the *Bidessus granarius* complex, but differing from any species known to me by the remarkable dilatation of the sides of the elytra above the epipleura. This dilatation is

* Contribution No. 419 from the Department of Zoology, Indiana University, and from the Department of Biology, University of Florida.

¹ *Fla. Ent.*, 24(1941): 29.

so marked that what appear to be the epipleura are in reality false epipleura bordered below by the normal outer border of the epipleura and above by a sharp carina running down the side of each elytron. The elytral and pronotal plicae vary, the elytral usually being distinctly longer than the pronotal.

HOLOTYPE (sex not known).—Ovate, the dilations of the sides of the elytra giving an abnormal appearance to the outline (Fig. 1), widest at about the basal third of elytra where

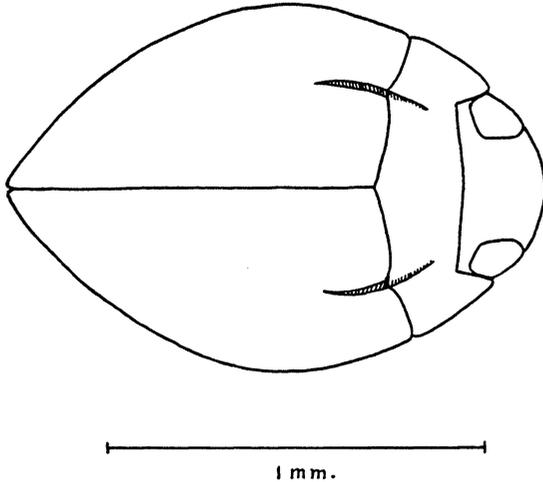


FIG. 1. Dorsal outline of *Bidessus inflatus*, sp. nov.

the lateral dilatation is greatest. Length, 1.47 mm.; greatest width, 0.96 mm.; width at base of pronotum, 0.72 mm. *Head*: Scarcely perceptibly punctate above; coarser punctures on vertex not conspicuous; width between eyes, 0.25 mm.; antennae having fifth to tenth segments moderately dilated anteriorly. *Pronotum*: Moderately coarsely and closely punctate; punctures separated by about two and one-half to three times their diameter; pubescent; (more finely and closely punctate than in *B. granarius* and more pubescent); ratio of greatest width (at base) to length (along mid-line) about 3.1;

pronotal plica about one-third length of pronotum along middle, rather deeply impressed and curved inward. *Elytra*: Moderately coarsely and closely punctate; punctures separated by about two to three times their diameter; strongly pubescent; (more finely and closely punctate than in *B. granarius* and more pubescent); broadest about basal third, and tapering to a moderately acute point; a relatively acute carina on basal one-half of each elytron above the margin of the epipleuron and dilated over the epipleuron so as to give the appearance of a false epipleuron; plicae twice as long as those of pronotum; no sutural striae. *Venter*: Coxal plates medially rather coarsely and sparsely punctate with aciculate punctures; abdominal sternites finely, sparsely aciculate-punctate. *Color*: Head brownish yellow; pronotum very light brownish yellow, slightly infuscate along base and apex, elytra dark reddish brown; antennae light yellow with outer segments infuscate; venter light brownish yellow with darker areas on coxal plates and along sutures; legs brownish yellow. *Variation*: The paratypes are all very similar, differing largely in intensity of color, and in the relative lengths of the pronotal and elytral plicae. Dilatation of the sides of the elytra is quite uniform throughout the series. I have been unable to distinguish males from females on the basis of external characters, nor have I found a male among the several specimens dissected. The first two specimens taken were thought to be abnormal, but further collecting in the same habitat produced twenty-eight more of exactly the same general form.

The holotype and twenty-nine paratypes are all from Bay County, Florida, about 4.8 miles north of Southport on Florida Highway 77. Two specimens were collected on May 3, 1941, and twenty-eight more (including the holotype) were taken by means of a modified Berlese funnel technique on October 16, 1941. All specimens were in a mass of *Persicaria* and *Ludwigia* in muddy water along the edge of a stagnant cypress swamp. The species is apparently similar to *Bidessus rogersi*

and *B. granarius* in preferring the muddy margins of standing water.

Holotype in Museum of Zoology, University of Michigan. Paratypes in same collection and in collections of California Academy of Science, Museum of Comparative Zoology, and United States National Museum.

Bidessus hobbsi, new species

(Fig. 2)

DIAGNOSIS.—Similar in general appearance to *Bidessus flavicollis*, to which it is doubtless closely related, but it differs in being much more strongly acuminate behind and more strongly constricted at the base of the elytra and pronotum. The dorsal punctation in *hobbsi* is coarse and sparse in comparison with

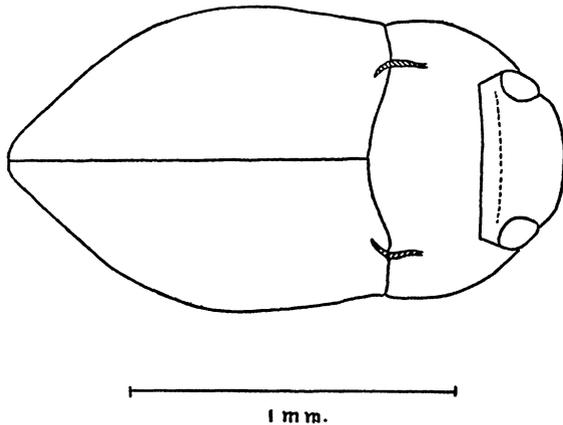


FIG. 2. Dorsal outline of *Bidessus hobbsi*, sp. nov.

that of *flavicollis* in which it is fine and dense. The genitalia are distinctive in having the aedeagus abruptly flexed at the tip, a condition only vaguely suggested in the genitalia of *flavicollis*, *granarius*, and *rogersi*. The species is best placed near *flavicollis*, with which it shows affinities in genitalia, general shape, and in having the pronotal plicae only slightly extended onto the elytra.

HOLOTYPE (male).—Elongate-ovate, moderately convex; acuminate behind and constricted at base of elytra and pronotum. Length, 1.74 mm.; greatest width, near middle of elytra, 0.99 mm. *Head*: Coarsely, and irregularly punctate in comparison with *B. flavicollis*; width between eyes 0.35 mm.; vertex flattened. *Pronotum*: Sparsely punctate with coarse, aciculate punctures; punctures separated by about one to three times their diameter; punctation finer and sparser on the disc, coarsest at the sides; ratio of greatest width (near middle) to length (along mid-line) about 2.43; pronotal plicae a little less than half as long as length of pronotum at mid-line, moderately impressed and clearly visible. *Elytra*: Coarsely punctate with irregular series of aciculate punctures separated by one to two times their diameter; punctures of stria along suture slightly more impressed than others but not enough to be considered a continuous impression; tapering rather abruptly from about the apical third and appearing truncate when viewed from above; elytral plicae very short, barely perceptible. *Venter*: Anterior tarsi moderately dilated; tarsal claws fine and equal; hind coxae very coarsely and in part confluent punctate; abdominal sternites finely aciculate-punctate; last visible sternite more coarsely punctate and narrowed behind. *Genitalia*: Similar to those of the *B. granarius* male but with tip of aedeagus abruptly reflexed. *Color*: Almost uniformly testaceous above and below; antennae infusate on last five or six segments; legs uniformly testaceous; no indication of the basal, median, or postmedian light fasciae on elytra, characteristic of *B. flavicollis*.

PARATYPE (male).—Similar to holotype except in being smaller (1.52 by .76 mm.) and darker above and below and in having the elytral plicae evident but very short (Fig. 2).

The holotype and paratype were both taken in a roadside pool choked with filamentous algae, seven miles southeast of Wilma, Liberty County, Florida, in the Apalachicola National Forest. It is probable that *B. hobbsi* has habits very similar to those of *B. flavicollis*. The species is named in honor of Dr. Horton H. Hobbs, Jr., of the University of Virginia.

Holotype and paratype in Museum of Zoology, University of Michigan.

The accompanying figures were drawn by Miss Ester Coogle, Department of Biology, University of Florida. They were prepared with the aid of an ocular grid which allows the outline to be drawn exactly to scale.

