

NOTES ON PSOROPHORA (JANTHINOSOMA) HORRIDUS  
DYAR AND KNAB.

BY ROBERT MATHESON.

Dyar and Knab (1906) described *Janthinosoma champerico* from a single female taken at Champerico, Guatemala. They stated that it was close to *Janthinosoma lutzii* Theobald. The same authors (1908) described *Aedes horridus* from a series of 56 females taken at widely separated points in the southern United States (Texas, Mississippi, Arkansas, Tennessee, Oklahoma, Virginia and Maryland). In their monograph (The Mosquitoes of North and Central America and the West Indies) these species are considered distinct and treated under the names, *Psorophora champerico* and *Psorophora horridus*. Under *P. horridus* they placed as a synonym *Janthinosoma lutzii* Felt (nec Theobald). Felt (1904) had described and figured what he considered was the male of *Janthinosoma lutzii* Theobald. Dyar and Knab assumed that this was the male of their *P. horridus* and described it as such and copied the photograph made by Felt. In the monograph *Psorophora champerico* is described in great detail, the description being based on two females,—one from Guatemala (the type) and another from Tabernilla, Canal Zone. The larva and male were unknown and have not as yet been discovered. The larva of *P. horridus* was also unknown.

Dyar (1922) states that *Psorophora horridus* D. & K. is widely distributed in the southern United States. In describing the species he states that the "thorax is black scaled in the middle." (The original description specifically states that this band consists of deep brown scales; all the female specimens that I have examined have deep bronzy brown scales forming a distinct longitudinal band.) Dyar (1928) places *horridus* as a synonym of *champerico* and assumes that the male of *Janthinosoma lutzii* Felt (nec Theobald) is the male of the species *Psorophora (Janthinosoma) champerico* D. & K. The drawing illustrating the male genitalia is evidently copied from the photograph published by Felt.

Recently I received a small shipment of mosquitoes from Prof. H. H. Schwardt of the Arkansas State University, Fayetteville, Arkansas. In this collection the genus *Psorophora* is well represented and among them were two males (no females) of *Psorophora horridus* D. & K. (*champerico* according to Dyar). These males were taken at Fayetteville on August 24, 1933. On examining the genitalia I was amazed to find one of the most bizarre types yet recorded for any male of this genus. It is unique and unlike any previously described. The male genitalia figured by Felt (1904) and copied by Dyar and Knab (1917) and by Dyar (1928) as representing the male of *Psorophora horridus* is undoubtedly that of *Psorophora lutzii* Theobald

or *Psorophora ferox* Humboldt (*posticata* Wied). This conclusion is in agreement with the descriptions and figures given by Bonne and Bonne-Wepster (1925).

*Psorophora horridus* D. & K. should remain as a distinct species. *P. champerico* D. & K. is probably identical with *P. lutzii* Theobald but no definite conclusion should be reached until the male has been discovered. Should it prove identical with that of *P. horridus* then *horridus* would become a synonym of *champerico* D. & K.

#### Description of the male of *P. horridus*, D. & K.

Coloration of male agrees very closely with the description of the female given by Dyar (1928, p. 119). The proboscis is slender black with bronzy reflections. The palpi are longer than the proboscis, black, with the last two segments slightly enlarged and somewhat upturned. Dyar describes the central broad band of the mesonotum of the female as clothed with "small black scales." In all my specimens of both males and females this central band consists almost entirely of dark bronzy brown scales. (In the original description of *Aedes horridus* Dyar and Knab described this band as consisting of "deep brown scales.")

*Hypopygium*. (Figures 1 a and b).—Side-piece cylindrical, short, stout, fully half as wide as long; tip of the lower half terminating in a stout recurved, finger-like process which lies above the clasper (Figure 1 a.); tip and distal margin of the process clothed with numerous yellowish hairs; side-piece with large spines and numerous small setae on distal half; lateral portion with numerous scales. Clasper short, broadly expanded distally, terminating in a short, peg-like spine; on the upper side near the tip is a small triangular expansion bearing 4 to 6 short spines. Claspettes (Fig. 2b) strikingly bizarre in appearance and each fits closely into the large depression on the inner face of each side-piece. The claspettes are united at their bases and each consists of two large branches; the lower branch is short and terminates in two short branches, each of which ends in a stout recurving spine; the upper branch is more than twice the length of the lower branch and it divides into two branches,—the outer long and terminates in a stout spine,—the inner shorter and bears two short, stout, terminal spines. The basal half of the upper branch bears numerous short setae. The phallosome (Fig. 2) presents the appearance of a cone narrowed at the base and open on its ventral face. The tenth sternites (paraprocts) are short and each ends in a short tooth. The ninth segment is prominent with two small detached lobes in front and a most striking structure forms the central portion. This structure projects forward between the lobes and lies below the phallosome. The terminal portion is bulb-like with an invagination which bears a central tooth-like projection. The entire ninth segment is chitinized, strikingly narrowed and is retracted largely within the eighth segment.

Described from two males from Fayetteville, Arkansas, August 24, 1933 (H. H. Schwardt, collector). One male is deposited in the collection of the U. S. National Museum; the other in the collection of Cornell University.

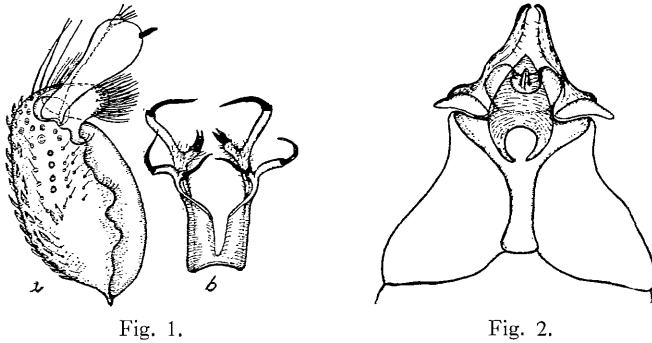


Fig. 1.

Fig. 2.

*Explanation of Figures.*

- Fig. 1a. Side-piece of hypopygium of *P. horridus*, dorsal view.  
 b. The claspettes, dorsal view. Both drawn to the same magnification.  
 Fig. 2. Dorsal (lower) view of the phallosome, tenth sternites and ninth segment of the hypopygium of *P. horridus*.

REFERENCES.

DYAR, H. G. AND KNAB, F. Proc. Biol. Soc. Wash. 19, 134. 1906.  
 DYAR, H. G., AND KNAB, F. Proc. U. S. Nat. Mus. 35, 56. 1908.  
 DYAR, H. G. Proc. U. S. Nat. Mus., 62, 36. 1922.  
 DYAR, H. G. Carnegie Institution of Washington. Pub. No. 387, 119. 1928.  
 FELT, E. P. Bull. 97, N. Y. State Museum, 471, Fig. 2, plate V. 1904.

DESCRIPTIONS OF FIVE PARASITIC HYMENOPTERA.

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The descriptions given below were prepared a number of years ago when the specimens were submitted for identification and are presented at this time in order that the names may be available.

***Bruchobius magnus*, new species.**

Of the described species of *Bruchobius* this new species is more closely allied to *B. colemani* Crawford than to others but it may easily be distinguished from that species by the color of the legs, large size, coppery color, etc. Like *colemani* it differs from the genotype in the better developed knob at the end of the stigmal vein.

*Female*.—Length, 4 mm. Interocellar line but little shorter than the ocellular line; pedicellum subequal in length with the second joint of funicle, which is distinctly shorter than the first funicle joint; punctation of propodeum

somewhat finer than that of the mesoscutum; marginal vein only a little longer than the postmarginal; stigmal club well developed, its greatest width (with the longitudinal axis of wing) half the length of the rest of the stigmal vein. Bright cupreous, abdomen black with a cupreous luster; body with white hairs; legs beyond coxae rufo-ferruginous, bases and apices of tibiae, and most of the tarsi, white. Wings hyaline; venation pale brown, stigmal club dark brown.

*Male*.—Length, 2.5 mm. Like the female except for the much shortened abdomen, the basal dorsal middle of which is pale. Stigmal knob somewhat more elongate so its greatest length is with the transverse axis of the wing; marginal and postmarginal veins thicker than in female.

Paratypes show that the white markings on the legs, especially the two anterior pairs, may be greatly reduced or wanting.

*Type locality*.—Uitenhage, Cape Province, South Africa.

*Allotype locality*.—Grahamstown, Cape Province, South Africa.

*Hosts*.—*Bruchus pisorum* L., *B. rufimanus* Boh., and *B. cicatricosus* Fahr.

Described from three females and one male from the type locality, reared from *Bruchus pisorum* by J. G. Cuyler under Accession Number Department of Agriculture of South Africa 2757. Also three females and one male (allotype) from the allotype locality reared from *B. rufimanus* by B. B. Wright, under number 2761. Also one female and one male from the same locality reared from *Bruchus cicatricosus* by W. R. Goulde. All material received from Dr. L. Peringuey.

*Type, allotype, and paratypes*.—Cat. No. 23112, U. S. N. M.

This species has been intercepted by inspectors of the United States Department of Agriculture engaged in the enforcement of plant quarantines in shipments from Capetown, South Africa, and recorded under number 28362.

#### *Catolaccus fragariae*, new species.

This new species runs to the genus *Catolaccus* in Kurdjumov's key<sup>1</sup> and agrees with the characters given. It differs from all the North American species which have been placed in this genus in having a distinct median carina on the base of the propodeum.

*Female*.—Length 1.5 mm. Head seen from above as wide as the thorax, seen from the side narrowing towards the vertex, longest (antero-posteriorly) at the level of the antennae; face convex; anterior margin of the clypeus rather broadly emarginate; face finely reticulate-punctate dorsally, ventrally with fine striae which converge towards the clypeus; frons and vertex with punctures slightly coarser than those below antennae; vertex narrow; postocellar line distinctly longer than the ocellular line; antenna with two ring-joints, six funicle joints,

<sup>1</sup>Rev. Russ., 1913, vol. 13, p. 6.