

of a new genus, though the hemipterous fauna of St. Helena has not hitherto been shown to have much affinity with that of tropical Africa.

See also pp. 459–67.

VI. Homoptera (Psyllidae and Coccidae) collected in the
Lagos District by W. A. Lamborn. By Prof. R.
NEWSTEAD, F.R.S.

PLATE XXIX.

PSYLLIDAE.

Rhinopsylla lamborni, sp. nov.

Length 3·9–4·2 mm.; greatest width of thorax, 1·4–1·50 mm.; width at vertex of head, ·58–·75 mm.; length of fore-wing 4·5–5 mm.

Head slightly birostrate in front; face lobes wanting; eyes hemispherical, prominent; wings with the upper and lower branches of the cubitus very long, stigma wanting; hind tibiae in ♀ (fig. 1d) and middle tibiae in ♂ (fig. 1e) very strongly pectinated distally; meso-sternites with a lateral and distal horn-like tubercle. General colour ochraceous buff; thorax striped.

FEMALE.—*Head*, inclusive of the eyes, as broad as the thorax; posterior margin of vertex arcuate; front with a sharply defined median suture on either side of which is a deep punctate depression. *Antennae* long and slender, of ten segments, the third incrassate and strongly punctate when seen in optical section in cleared specimens. *Thorax* slightly arched and finely punctate; pronotum clearly defined and normally not depressed below the head. *Abdomen* markedly attenuated distally; pygidium (fig. 1a) with the circum-genital glands (fig. 1b) arranged in curiously contorted double lines. *Legs* with the hind tibiae very strongly pectinated, the teeth black, and each with a faint lateral tooth. *Wings* (fig. 1c) hyaline, nearly twice as long as broad, costa strongly arched; there is a small infuscated, submarginal, spinose area between the radius and the upper fork of the upper cubitus, and a similar marginal infuscation between the four succeeding veins; branches of the upper and lower cubitus very long. *Colour* ochraceous-buff or ochraceous; pronotum with a well-defined and relatively broad dark-brown margin;

thorax in front of the transverse suture with four dark-brown or blackish stripes of which the median pair are the broadest; the median pair of stripes behind the suture pale brown; the second pair of stripes dark-brown or blackish, narrowly ovate and attenuated anteriorly; the third pair of stripes are also very broad but of the same colour as the ovate ones.

MALE, closely resembling the female in colour and markings. *Genital armature* (fig. 2) with the superior claspers widely divergent *dorso-ventrally*, with the inner lateral margin strongly concave, and the outer lateral margin angulate near the middle, tips bluntly rounded. *Vesica* (fig. 2*b*) very short and arising from an almost complete chitinous ring through which the penis (fig. 1*c*) passes. The latter curved suddenly downwards and forwards, base bulbous; inferior claspers (fig. 2*d*) wide and broadly rounded distally, lower margin strongly concave; median process (fig. 2*e*) obliquely truncate distally.

Taking all the salient characters into consideration it would seem that this insect agrees best with the genus *Rhinopsylla*, Riley, as defined by Crawford* in his article on the American Psyllidae; though, as this author has pointed out, this genus may eventually prove to be identical with the European *Bactericera*, Puton. The head of *R. lamborni*, Newst., is not, however, so strongly birostrate as in the American species, but this character varies to a somewhat marked extent even in the few known species described from that country.

I have much pleasure in dedicating this insect to its discoverer. Described from 6 ♂♂ and 8 ♀♀. The type male and female bear the following data:—"A in cop. B. B in cop. A. Feb. 26, 1912. Lagos, 70 m. E. nr. Oni clearing. Dry S. c. Dec. 8-11 to Mch. 23, 1912. W. A. Lamborn." The paratypes (now mounted in Canada balsam) bear the record:—"Fr. mass like 61. Feb. 25, 1912. Lagos, 70 E. Oni clearing. Dry Seas. Dec. 8-11 to Mch. 23, 1912. W. A. Lamborn."

See also p. 498.

COCCIDAE.

Stictococcus sjöstedti, Cockerell.

Stictococcus sjöstedti, Cockerell, Canad. Entom., vol. xxx, p. 64 (1903).

* "Pomona Coll. Journ. of Ent.," vol. iii, p. 440 (1911).

Stictococcus sjöstedti, Newstead, Journ. Econ. Biol., vol. ii, p. 149 (1908).

This remarkable Coccid is one of the recognised cocoa pests of Western Africa. I have already noted* that this species and also *S. formicarius*, Newst., are preyed upon by Lepidopterous larvae, though I was unable to determine the group to which the latter belonged.

In examining the material kindly furnished by Prof. E. B. Poulton, I have discovered that the larvae of *S. sjöstedti* are undoubtedly dimorphic. In one of the females there is one embryo larva of each sex still remaining in the body of the parent, so that there can be no possible doubt as to the authenticity of this record. This discovery clears up the marked discrepancies existing between the descriptions of the larvae given by Prof. Cockerell and myself, respectively. Now that I have the larvae of both sexes before me it is perfectly obvious that the larva described by myself was that of the male, while that described by Cockerell was undoubtedly that of the female. The differential characters may be briefly summarised as follows :—

	<i>Male larva.</i>	<i>Female larva.</i>
Mouth . . .	? Obsolete.	Normal.
Anal orifice .	Anal.	In the middle of the back.
Marginal spines	Of great length.	Short, of two types: one broad and dactyliform, the other curved and serrated.

The examples in question are so much distorted in the preparation that it is impossible to add any further particulars at this juncture; neither can I be quite certain as to whether there is a mentum present in the male larva or not, but as there is no trace of the buccal filaments I assume that the mouth is obsolete, as is certainly the case with the male larva of *S. dimorphus*,† Newst. Thus we now have two well-marked instances of sexual dimorphism in the larvae of the *Coccidae*, both belonging to the genus *Stictococcus*: characters which are not only very remarkable but quite unique and unprecedented in this group of insects.

See also pp. 447–50, 460, 462, 491–2.

* “ Journ. Econ. Biol.,” vol. v, p. 22.

† “ Bull. Ent. Res.,” vol. i, p. 63, fig. 2 (1910).

Dactylopius longispinus, Targioni-Tozzetti.

A common and widely distributed pest. Fernald* and many other students now refer *Dactylopius*, Targ.-Tozz., to the genus *Pseudococcus*, Westwood. I have thought best to retain the name which has been so long in use, so as to avoid confusion in this communication.

See also pp. 446, 475.

Dactylopius virgatus, var. *madagascariensis*, Newst.

The specimens are all in very bad condition and are denuded of their characteristic covering; but there can, I think, be little doubt as to the correct identity of the species as all the morphological characters agree with typical examples of this Coccid. This insect seems to have established itself in other parts of Western Africa, as I have recently received examples from Illorin, Northern Nigeria, also on "Pride of Barbados," *Caesalpinia pulcherrima*, Sw.

See also p. 475.

Lecanium punctuliferum, var. *lamborni*, n. var.

Female, adult, ovate, moderately convex, margin broadly flattened though in some individuals it is slightly reflexed; integument apparently strongly rugose at the margins; but is so thickly coated with dirt, that the true texture is practically obliterated. *Colour* (dead examples) pale brownish-ochraceous, dusky greenish-yellow, reddish-brown or chocolate-brown. *Antennae* of seven segments of which the third and seventh are the longest. *Legs* well developed; tarsus exclusive of the claw nearly as long as the tibia. Scales of *anal operculum* rounded distally; base much longer than distal margin. *Derm cells* small, oval, widely separated and visible only towards the margin. *Stigmatic cleft* extremely shallow; spines three, the median one of great length. *Marginal* spines long fimbriated distally; short simple spines occur between the larger ones, sometimes alternately.

The young females are much paler than the adults—varying between yellowish-buff and reddish-buff; two examples also exhibit traces of lateral black markings, and in one of them these coalesce posteriorly and form an interrupted U-shaped line. The *anal operculum* in the young females is markedly attenuated and very narrow. The *antennae* are similar to those of the adults, but in one example these organs are asymmetrical, the right antenna

* "Cat. Coccidae of the World," p. 104 (1903).

being short, stumpy and of five segments; the other normal, consisting of seven segments.

This insect differs from *L. punctuliferum*, Green,* in the greater length of the tarsus, in having seven instead of eight segments to the antennae, in the sparseness of the oval derm cells, and in the form of the anal operculum.

With the limited supply of specimens it is impossible to say if there is any variation in the character of the antennae; but so far as one can judge this insect appears to be a well-marked race of *L. punctuliferum*.

All the adult female Coccids had evidently been protected by ants, as portions of the coverings or "sheds" are still attached to the twig and partly cover the little colony of Coccids. On tearing out a small fragment of one of these coverings one finds that it is composed largely of finely comminuted vegetable detritus, among which there are fragments of bud-scales and numerous, unicellular, epidermal plant hairs; interspaced at rare intervals there are traces of the mycelium of a fungus. It is difficult to understand how this material is held together as there are certainly no silken threads employed in its formation; moreover, it has no constituent readily soluble in water, so that, apparently, no gum-like material is used in cementing the fragments of leaves together.

Green (*l. c.*) says that *L. punctuliferum* is "attended by ants (*Oecophylla smaragdina*), which had fastened the leaves (of the food-plant) together, forming a shelter." Wheeler,† in discussing the relation of ants to plant-lice, scale insects and caterpillars, gives an illustration of a "carton aphid tent built by *Cremastogaster lineolata*" which is of similar form to those built over the colonies of the *Lecanium* herein described.

One of the co-type females of *L. punctuliferum*, var. *lamborni*, contains the pupa of a Chalcidid parasite, and another example *in situ* upon the stem of the food-plant has a small perforation in the dorsum indicating the escape of a similar or identical parasite.

See also p. 447.

* "Coccidae of Ceylon," p. 205, pl. lxx, figs. 5-13 (1904).

† "Ants: Their Structure and Development," p. 341, fig. 205 (1910).

EXPLANATION OF PLATES XXVI-XXIX.

(See Explanation facing the PLATES.)

EXPLANATION OF PLATE XXIX.

- FIG. 1. *Rhinopsylla lamborni*, Newstead; *a*, pygidium of ♀, ventral; *b*, circumgenital glands; *c*, wing; *d*, pectinated extremity of hind tibia of ♀; *e*, pectinated extremity of middle tibia of ♂.
2. *Rhinopsylla lamborni*, Newstead; male genital armature; *a*, superior claspers; *b*, vesica; *c*, penis; *d*, inferior claspers; *e*, median process.

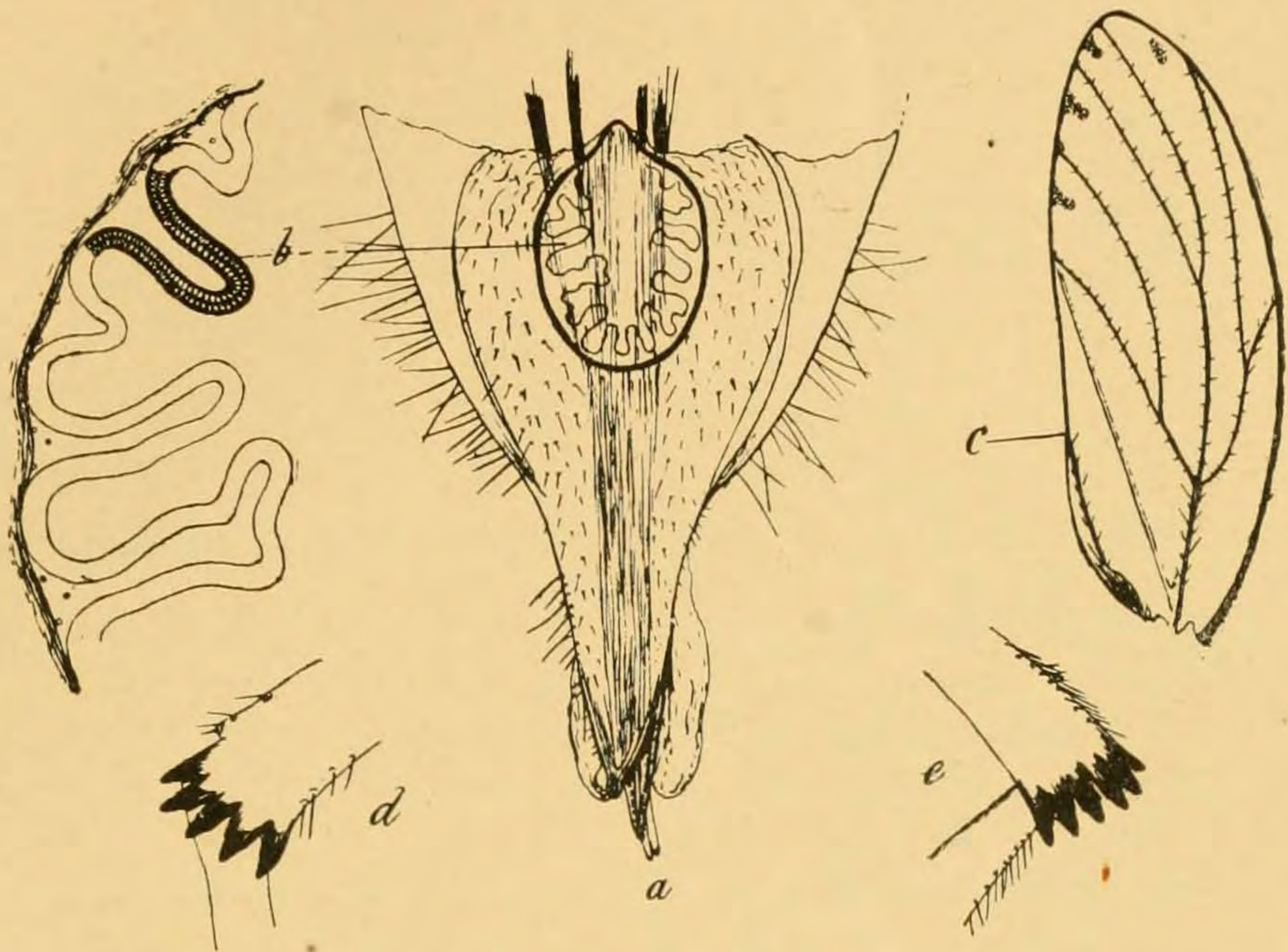
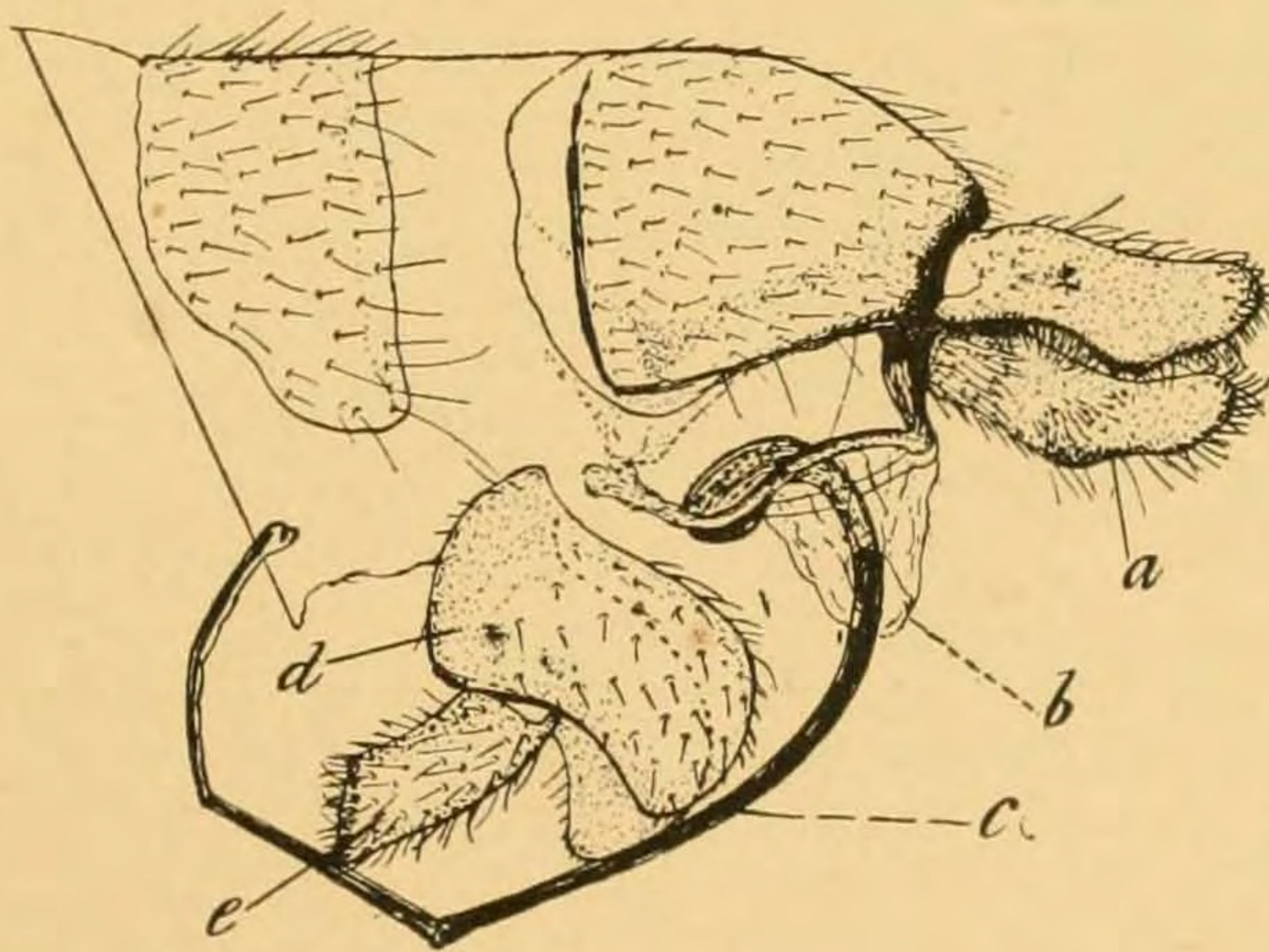


FIG. 1.



R. Newstead, del.

C. Hentschel.

FIG. 2.

RHINOPSYLLA LAMBORNI, *Newstead.*

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