

TWO NEW SPECIES OF DERMAPTERA FROM BRAZIL

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ABSTRACT

Mecomera reichardti, sp. n. (type-locality, Brazil, São Paulo, São Paulo) and *Sarcinatrix quadrimaculata*, sp. n. (type-locality, Brazil, São Paulo, Diadema) are described. The relations of these species with allied species is discussed, together with notes on their generic affinities.

Through the kindness of Dr. Hans Reichardt, of the Museu de Zoologia, Universidade de São Paulo, I have been able to examine a small collection of Dermaptera from Brazil. Although a relatively large proportion of the known Neotropical species of this order are recorded from Brazil, there has not been much systematic collecting of these insects in the past, and the present list of Brazilian Dermaptera may only include the more common species. The size of the country, its vast forests, and its climate, suggest that future collecting will add considerably to its known fauna.

One problem is the confusion which exists between a number of Neotropical species, and in dealing with specimens from this Region, it is important to check all previously recorded species of any particular genus. The generic characters, as given in Burr (1911) are now sometimes most unsatisfactory, since new species have been found with intermediate characters, and so reference has to be made to species in related genera as well. However, the Neotropical species are becoming better known, and the provision of keys now avoids some of the laborious checking of individual species.

Although the collection examined was small, there were a series of two species which are undescribed; these consisted of a new species of *Mecomera* Serville (Labiidae, Sparattinae) and a new species of *Sarcinatrix* Rehn (Forficulidae, Opisthocosmiinae), both of which are described in the present paper. I am indebted to Dr. Reichardt for the opportunity to study the collection.

Mecomera Serville

Amongst the collection were a series of specimens, some of which were determined as *Metasparatta chacoensis* Borelli, and some as *Sparatta semirufa* Kirby, by Menozzi. The specimens were, however, conspecific, and Dr. Reichardt pointed out that the males did not correspond with the description of *chacoensis*, or with *semirufa*.

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The specimens clearly belonged to the genus *Mecomera*, and are quite distinct from the only known species, *gracilis* Illiger; they are also quite distinct from *Metasparatta chacoensis* and *Sparatta semirufa*. As a further check it was thought advisable to check some species of *Parasparatta*, although this genus, as defined in Brindle (1968) is now very distinctive. The only species of *Parasparatta* which, from the original description, possibly resembled the new species of *Mecomera* was *P. quinquepunctata* Borelli. Fortunately, in the same collection were specimens of an undetermined species of *Parasparatta* which clearly agree with *quinquepunctata*, and these are the first specimens of this species that the present author has seen. Although there are slight differences in the shape of the male pygidia between the original description and the present specimens, the latter show a good deal of variation in the exact form of this, so that these differences do not seem to be important. The essential feature is that the pygidia of the male specimens always have five small teeth or projections, although the middle tooth of these is not smaller than the others as in the original description. The differences in the male pygidia of these Brazilian specimens examined are shown in figures 18-20. The pygidium of the female was stated, in the original description, to have three teeth, and this corresponds with the present specimens; again there is some variation in the exact form of the pygidia of the present specimens (figures 21-23).

The figures of the pygidia of both sexes in Brindle (1968) should be amended accordingly; the median tooth of the female pygidium was omitted in the figure in that publication. The generic characters given in Brindle (1968) to separate the genus *Parasparatta* from the other genera of the Sparattinae, are correct for *P. quinquepunctata*.

The specimens of *P. quinquepunctata* have been collected at different dates at Estação Biológica de Boracéia, Salesópolis, São Paulo, most in Bromelias.

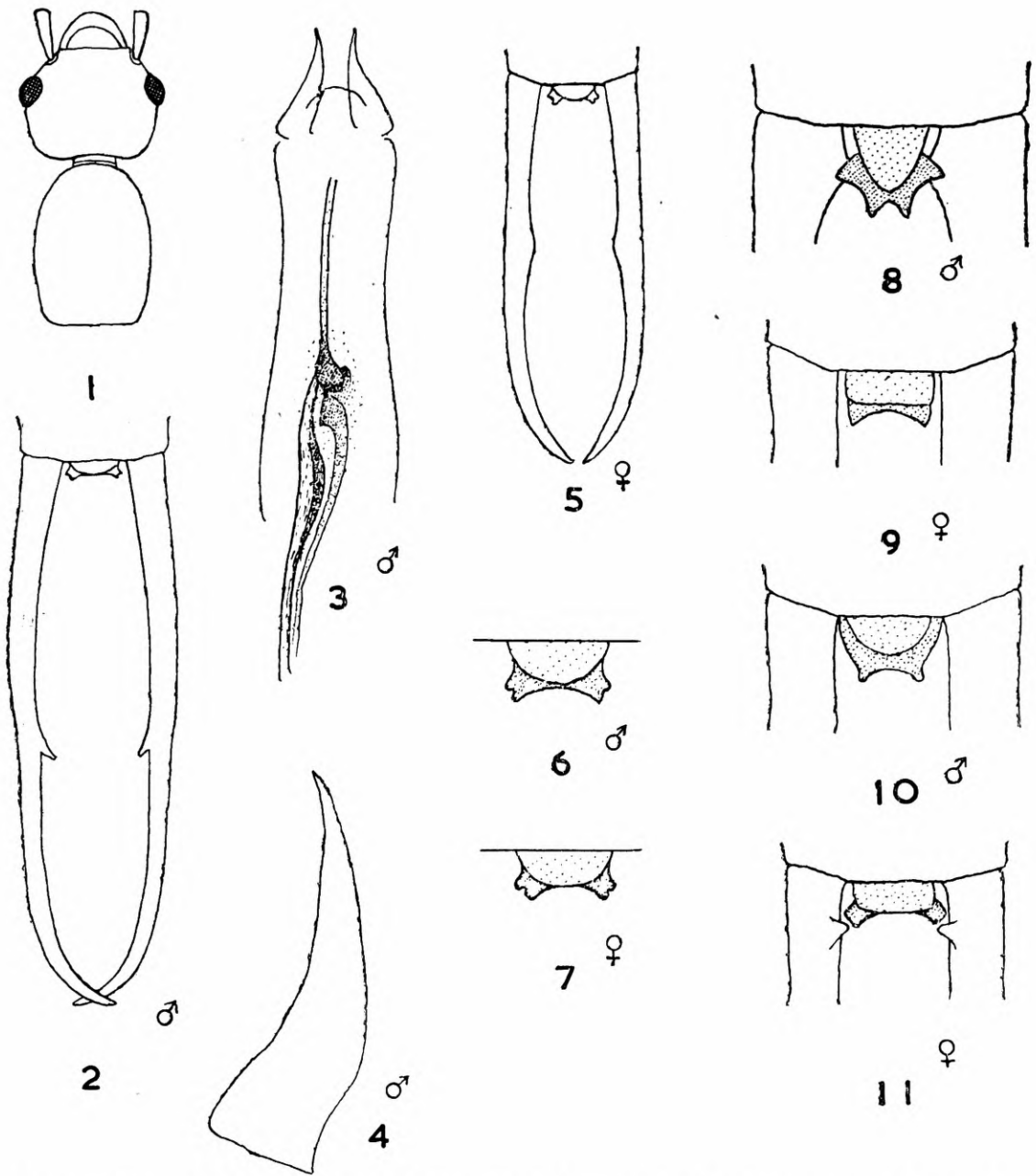
After all possible checks, it has been found that the species of *Mecomera* in the present collection represents a new species, and I have great pleasure in naming the species after Dr. Reichardt; this seems to be very appropriate, since Dr. Reichardt was the first to recognise that it was distinct.

***Mecomera reichardti*, sp. n.**

(Figs. 1-7)

Strongly depressed; shining; reddish-yellow, elytra and wings blackish in fresh specimens, fading to brown in older specimens; head sometimes rather darker than pronotum; legs yellow; antennae yellow basally, brown distally.

Male (figs. 1-4, 6): head flat, lateral margins parallel, posterior margin slightly concave; eyes small. First antennal segment shorter than distance between antennal bases; proportions of basal antennal segments as follows: 1st, 10; 2nd, 2; 3rd, 7; 4th, 5; 5th, 6; 6th, 7; segments pubescent, hairs rather long. Pronotum longer than broad, narrowed anteriorly and posteriorly, a distinct neck present, elytra and wings smooth, shining, impunctate, normally developed. Legs with femora strongly broadened; tibiae about two-thirds of length of femora in posterior legs, relatively shorter in



Mecomera reichardti: 1, head and pronotum; 2, 5, forceps; 3, genitalia; 4, paramere, enlarged; 6, 7, pygidia, enlarged. *Metasparatta chacoensis*: 8, 9, pygidia. *Mecomera gracilis*: 10, 11, pygidia.

anterior four legs; tarsi slightly shorter than tibiae; legs pubescent. Abdomen flat, parallel-sided except at base which is narrowed; tergites 4-9 coriaceous, and sparsely punctured; tubercles of fourth segment prominent, scarcely visible in third segment; last tergite transverse, smooth. Forceps with branches long and slender, cylindrical, except at extreme base where they are trigonal; small teeth occur on the ventral edge, and a larger median tooth on inner margin just beyond mid-point; pygidium transverse, with postero-lateral projections which have two lobes (fig. 6), dorsal part

rounded. Penultimate sternite rectangular, postero-lateral angles rounded.

Length: body 8.25 mm, forceps 4 mm.

Female (figs. 5, 7): as male, pygidium rather similar in shape (fig. 7); forceps with branches slender but shorter than those of male, cylindrical, slightly broadened about mid-point, but without a distinct inner tooth (fig. 5).

Length: body 8.75 mm, forceps 2.5 mm.

Holotype male (São Paulo, São Paulo, Santo Amaro, 29.VI.1966, E. X. Rabello col.) in the Museu de Zoologia, Universidade de São Paulo. Paratype (allotype) female, data as above, in the same Institution, together with the following paratypes: 1 ♀ paratype, data as above; 1 ♀ paratype, São Paulo, Ipiranga, XII.1906, H. Lüderwaldt col., determined as *Sparatta semirufa*; 1 ♂ paratype, same data, determined as *Metasparatta chacoensis*; 2 ♂, 2 ♀ paratypes, Santa Catarina, Blumenau, II.1919, H. Lüderwaldt col., determined as *Metasparatta chacoensis*; 1 ♀ paratype, same data, determined as *Sparatta semirufa*. The following paratypes have been retained in the Manchester Museum: 1 ♀, São Paulo; 1 ♂, 1 ♀, Santa Catarina, all determined as *Sparatta semirufa*; the first listed paratype is to be passed over to the British Museum (Natural History).

Metasparatta chacoensis was described from a single male and the female has not yet been described. One female specimen in the present collection, however, agrees so well with the original description that it is provisionally determined as this species. It is clearly closely related to *Mecomera*, since the forceps are of the same type as those of *reichardti* and *gracilis*; the branches are slender but are thickened about the mid-point; such a shape does not occur elsewhere in the Sparattinae.

The present specimen has the head yellowish-brown, with the middle of the vertex and occiput darker; rest of the body is dark brown; the wings are yellow, brown on the external margin. The eyes are larger than in *Mecomera*, and this agrees with the type of *Metasparatta*. The legs are yellowish-brown, with the tibiae and tarsi darker, and this darker colouration extends along the dorsal edges of the femora. The specimen is from Brazil, São Paulo, Rio Claro, 18.I.1962, H. Reichardt col., and the length of the body is 10 mm, and that of the forceps 3 mm.

The three species now known in *Mecomera* and *Metasparatta* can be distinguished as follows:

1. Head reddish-yellow, vertex or occiput darker; wings mainly yellow; male forceps with two inner teeth on each branch, pygidium with four large projection (fig. 8); female pygidium transverse, postero-lateral angles not oblique (fig. 9). Length of body 10-11 mm, forceps 5.5 mm (male), 3 mm (female) *Metasparatta chacoensis* Borelli
- Head entirely reddish-brown or blackish; wings usually dark brown, sometimes partly yellow; male forceps with only one inner tooth on each branch, pygidium without four large projections; female pygidium transverse, with postero-lateral angles oblique (*Mecomera*) 2

2. Head and pronotum reddish-yellow; male pygidium short, transverse (fig. 6); female pygidium with two lobes on postero-lateral angles (fig. 7). Length of body 8-9 mm, forceps 4 mm (males), 2.5 mm (females) *reichardti*, sp. n.

Head and pronotum dark brown or blackish; male pygidium large, apex with two lobes (fig. 10); female pygidium with postero-lateral projections square (fig. 11). Length of body 12-14 mm, forceps 6-7 mm (males), 3.5-4.5 mm (females) *gracilis* (Illiger)

Sarcinatrix Rehn

This genus has only one known species, *anomalía* Rehn. When Rehn (1903) originally described this species he regarded *Sarcinatrix* as a subgenus of *Opisthocosmia*. Burr (1907) raised *Sarcinatrix* to generic rank and included a second species, *rehni*, in the genus. *S. rehni* was described as new in the same paper and the genus was retained in the subfamily Opisthocosmiinae. In 1910 Burr transferred *rehni* to a new genus *Dinex*, so leaving *Sarcinatrix* with the single species, *anomalía*. Burr (1911) however included *Sarcinatrix* in the subfamily Ancistrogastriinae, which is an error, since this subfamily is characterized by the broad body, and Hebard (1917) transferred *Sarcinatrix* back to the subfamily Opisthocosmiinae. It agrees with this subfamily in the very narrow body. *Sarcinatrix* is very distinctive; it has a very slender and narrow body, and the forceps of both sexes are simple (fig. 12), but the most distinctive character of the male is the structure of the penultimate sternite. In some features this resembles some of the species of *Ancistrogaster*, which seems to be the reason why Burr (1911) transferred *anomalía* to this subfamily. The posterior margin of the penultimate sternite is drawn out into long, pointed processes, which are strongly curved upwards (figs. 14-15). The pronotum is unusually small (fig. 12) and the elytra and wings are narrow but fully developed.

The present specimens are easily separable from *anomalía*, which, on present records, is confined to Costa Rica and Panama, and they represent a new species which is described below. Burr (1911: 87) records *anomalía* from Brazil, but the details of this record have not yet been located: the record could refer to the new species described in the present paper.

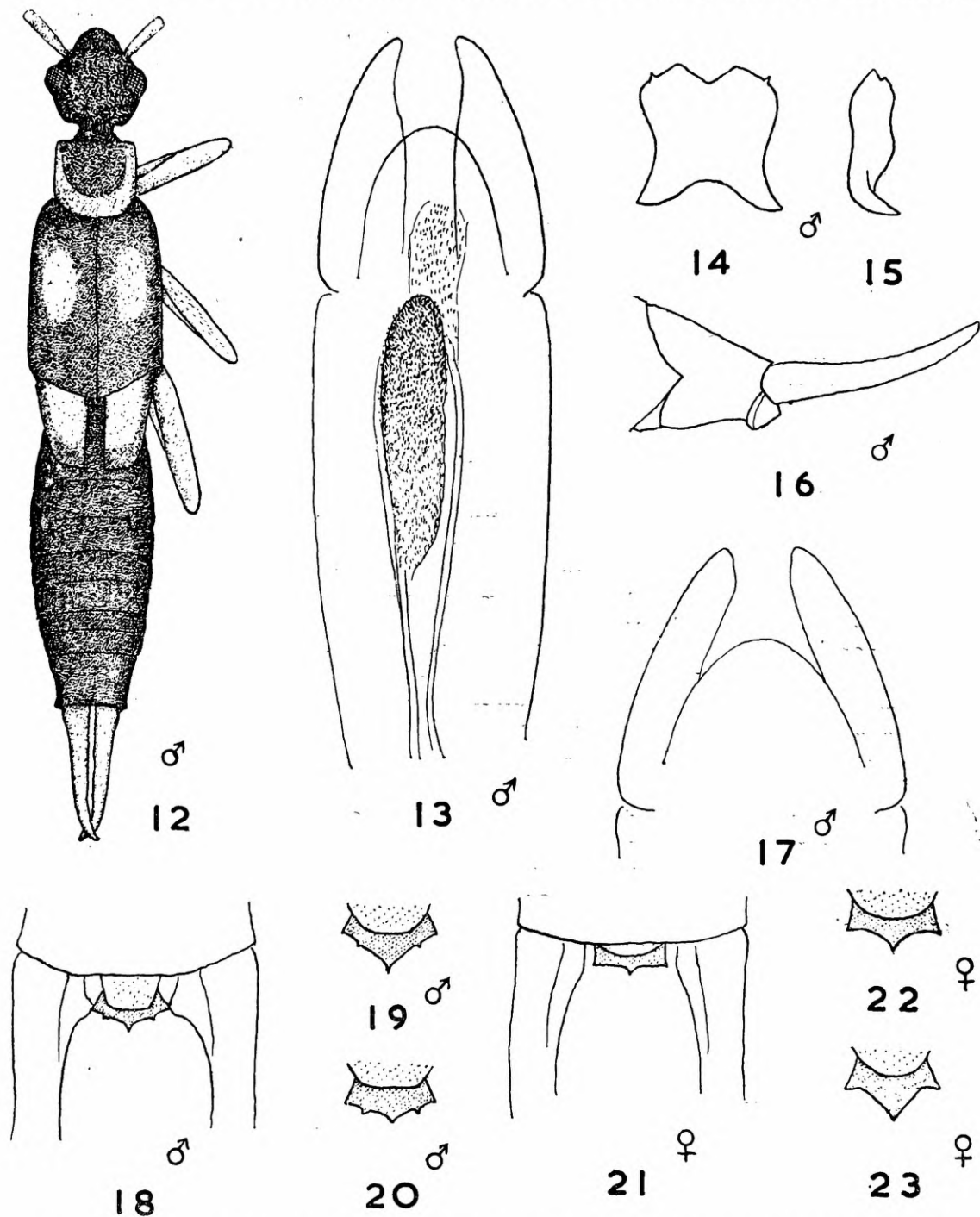
Sarcinatrix quadrimaculata, sp. n.

(Figs. 12-16)

Blackish-brown, shining; antennae and legs dark reddish-yellow; pronotum broadly reddish-yellow laterally and posteriorly; a vaguely defined but conspicuous reddish-yellow spot placed medially on each elytron, wings with a large basal reddish-yellow spot; forceps reddish.

Male (figs. 12-16): head transverse, rather depressed, cuticle rugose; eyes large and protruding; first antennal segment long, longer than distance between antennal bases; ratio of basal antennal segments as follows: 1st, 17; 2nd, 2.5; 3rd, 7; 4th, 9; 5th, 12; 6th, 15; 7th, 16. Pronotum transverse, small, lateral margins slightly convex, posterior margin strongly convex, cuticle pubescent

and with short dark brown and yellow setae, metazona strongly depressed; elytra and wings long, rather narrow, cuticle with very shallow impressions, sparsely pubescent and with short dark brown and yellow setae; legs long, femora not strongly broadened, tibiae almost equal in length to femora, tarsi shorter; femora and tibiae



Sarcinatrix quadrimaculata: 12, male; 13, genitalia; 14, 15, penultimate sternite, ventral and lateral; 16, last segment and forceps, lateral. *Sarcinatrix anomalia*: 17, parameres. *Parasparatta quinquepunctata*: 18-23, pygidia.

each with four longitudinal rows of setae, widely spaced, one row on each of the dorsolateral and ventrolateral edges.

Abdomen fusiform, cuticle coriaceous, and with yellow pubescence; tubercles on third segment relatively large, those on fourth segment very large, last tergite narrow, declivent, with a quadrate projection below each of the bases of the branches of the forceps (fig. 16). Each branch of the forceps cylindrical, inner margins dentated almost to apex, branches straight, apices incurved.

Length: body 7 mm, forceps 1.5 mm.

Female: unknown, but likely to be very similar to the male.

Holotype male, 1 ♂ paratype, Brazil, São Paulo, Diadema, 12.III.1961, W. Bokermann col., in the Museu de Zoologia, Universidade de São Paulo; 1 ♂ paratype, São Paulo, Estação Biológica de Boracéia, Salesópolis, 13-18.IV.1961, H. Reichardt col., in the Manchester Museum.

The two species of *Sarcinatrix* may be separated as follows:

1. Elytra and wings uniformly brown to blackish; pronotum as broad as long; abdominal tubercles less prominent; male parameres more or less parallel-sided (fig. 17). Costa Rica and Panama *anomalía* Rehn
 Elytra and wings blackish, each elytron with a median yellow spot; wings yellow at base; pronotum transverse; abdominal tubercles very large; male parameres narrowed distally (fig. 13). Brazil *quadrimaculata*, sp. n.

In both species the male genitalia is simple, with one distal lobe; a virga is not visible, and the main feature is the elongated dark area of denticulations; other less prominent denticulated areas also occur in the lobe (fig. 13).

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