Ent. Mitt. Zool. Staatsinst. Zool. Mus. Hamburg Bd. 3, Nr. 56 (1966)

Notes on Dermaptera in the Hamburg Museum

by A. Brindle*)

(with 16 figures)

Through the kindness of Professor Dr. H. Weidner, I have been able to study an interesting collection of Dermaptera belonging to the Zoologisches Staatsinstitut und Zoologisches Museum, Hamburg. Some of the material is preserved in alcohol whilst a number of specimens are preserved dried and are either pinned or mounted on card. The collection contains a large proportion of Neotropical species, especially from Costa Rica, and it is this which gives an unusual interest to the collection.

The present paper deals with almost all the specimens except for those belonging to the family Carcinophoridae. Whilst four species of this family are included in the present paper, most specimens have been retained for further study in connection with a proposed revision of the family in course of preparation by the present author. In addition, a few specimens of the family Labiidae have been retained for the time being, in order to study the value of certain Neotropical genera.

The collection contains one new genus and two new species, which are described and figured in the present paper; one of the new species belongs to the genus *Esphalmenus,* and modifications to the present keys to the genus published in Hincks (1959) are given. The main difficulty in the taxonomy of the Dermaptera is the almost total lack of modern keys to species, other than those included in Hincks (1955, 1959), and an opportunity has been taken in the present paper to include keys to the species of certain genera, of which representatives are amongst the material of the Hamburg Museum.

It has been thought useful to include the data of all the specimens examined, including the more common species. Our knowledge of the World distribution of the Dermaptera is still very superficial, even of the most abundant and widely distributed species, so that any additional localities may be extremely useful. For example, numerous records exist of the common *Nala lividipes* (Dufour) from many countries in the Old World, but there are apparently no specific records from the Yemen previous to the present record. Such additional records are not indicated in the present paper with the exception of those from the Neotropical Region. Another feature are the records of adventives, of which three are included here, *Euborellia annulipes* (Lucas), *Chelisoches flavipennis* (F.) and *Doru lineare* (Esch.). Whilst these may rarely result in the species being established, it does indicate the species whose distribution is liable to be influenced by artificial and accidental means.

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I wish to express my gratitude to Professor WEIDNER for the opportunity to study the collection, and for his patience in awaiting results.

Pygidicranidae

Pygidicraninae

Dacnodes biaffra (BORMANS).

Kamerun, Mukonje Farm, bei Mundame am Mungo-Fluß, 25. XI. 1904, leg. R. ROHDE. 1 ♂.

A West African species, rather distinctive in colouration, in the shape of the forceps, and in the male genitalia. HINCKS (1959, p. 31) also mentions two females from Mundame (ROHDE) which were determined by BURR.

D. caffra (DOHRN).

Ost-Afrika, Manga estate, bei Tanga, Tanganyika, leg. W. DETHLEFFEN. 1 ♀.

Widely distributed in East Africa; the present specimen is probably this species, but females cannot yet be determined with certainty.

Cranopygia ophthalmica (DOHRN).

Rockhampton, Australia. 1 ♂, 1 nymph.

Only two species of this genus are recorded from Australia. *C. daemeli* is distinguished from the present species by the absence of ridges on the ultimate tergite, and by the shape of the male parameres.

Echinosomatinae

Echinosoma fuscum BORELLI.

Kamerun, Mukonje, bei Mundame, s. Mongo, 23. II. 1931, 1 ♀.

A tropical African species, closely related to both *E. afrum* and *E. occidentale;* the pygidium of the female of the present species is narrow and sharply pointed, a feature which appears to be distinctive of this species, according to HINCKS (1959, p. 120).

Esphalmeninae

Esphalmenus silvestrii (BORELLI), (Fig. 10, 13, 14).

Chile, Feuerland, Porvenir, 9. II. 1931, unter Steinen am Meer, leg. SCHRÖDER. 2 ♂, 3 ♀.

The presence of a spine-like tubercle above the base of each branch of the forceps is a characteristic feature of this species. HINCKS (1959, p. 202) had not seen a male, and the male genitalia has not been figured; it is accordingly figured in the present paper (fig. 13), together with the male and female forceps (figs. 10, 14). The species occurs in the southern part of South America, probably both in southern Chile and in southern Argentine, and it extends to the tip of the continent. Both males and females of this species are amongst undetermined material in the HINCKS Collection in the Manchester Museum, and these, also, are from Tierra del Fuego.

The key in HINCKS (1. c.) is adequate for the separation of this species.

E. weidneri sp. n. (Fig. 9, 11, 12).

This is a black and shining species, with rather long legs, and belongs to the *porteri-dentatus-argentinus* section of the key to males in HINCKS (1959, p. 189) but the male is distinctive in the form of the forceps. This species is closely related to *porteri,* judging from the male parameres.

M a l e : head quadrate; almost smooth, but roughened near the sutures, the latter being well marked; posterior margin of head straight, posterior angles well marked. Eyes small, about half the length of the genae. Antennae blackish basally, dark brown distally, 16-segmented in type; first segment rather shorter than distance between antennal bases, second segment transverse, third long and cylindrical, the second and third combined being about equal in length to the first; fourth short, about half length of the third; remaining segments becoming more elongated distally, all more or less cylindrical.

Pronotum shining black, with scattered punctures, but with surface uneven; transverse, widening posteriorly, proportion of width to length being about 9:7½, measured near to posterior margin. Mesonotum transverse, about half the length of pronotum, punctured, and with a narrow longitudinal median furrow. Metanotum similar but with posterior margin convex. Legs long, femora blackish, tibiae and tarsi brown or dark red, the tips of posterior femora reaching the posterior margin of the seventh tergite. Tergites strongly punctured, black and shining, eighth to tenth with a series of lateral longitudinal ridges. Ultimate tergite strongly punctured, almost rugose, posterior margin truncate. Forceps dark red, curved, with one tooth on each inner margin about the mid-point (fig. 9). Genitalia (fig. 12) similar to that of *porteri,* but with the inner tooth of the parameres more acuminate.

Length: body 10 mm, forceps 2,75 mm.

F e m a l e : as male, but meso- and meta-nota smooth, not punctured; ultimate tergite narrower, forceps dark red, simple, long (fig. 11).

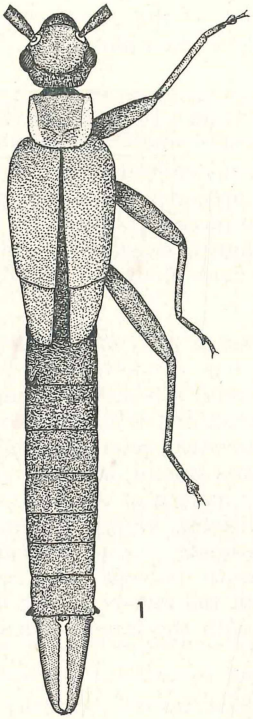
Length: body 14 mm, forceps 3,5 mm.

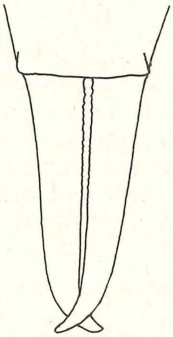
D i s t r i b u t i o n : Chile (wahrscheinlich von Santiago) (♂ holotype, ♀ allotype, 2 ♀ paratypes, 1 nymph).

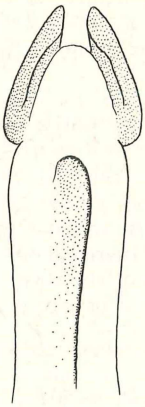
All types in the Hamburg Museum, with the exception of one female paratype retained in the Manchester Museum.

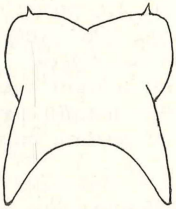
I have much pleasure in dedicating this species to Professor Dr. H. WEIDNER of the Hamburg Museum, in recognition of his work in entomology; work which does include the Dermaptera.

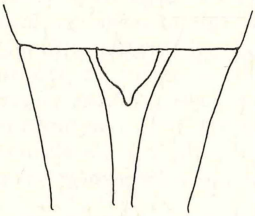
E. weidneri is rather distinctive; it is one of the larger species of the genus; the abdomen is less dilated than is usual, whilst the shining black colouration separates it from almost all the other species of *Esphalmenus.* The male forceps are longer and less curved than usual, the typical form (as fig. 10) has the branches rather sharply curved about the mid-point so that the distal part of each branch is more or less parallel to the posterior margin of the abdomen. I have not seen a male of *E. porteri,* but from

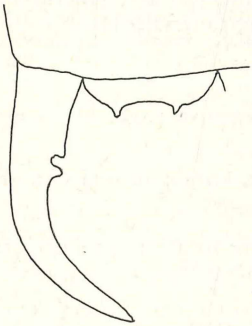


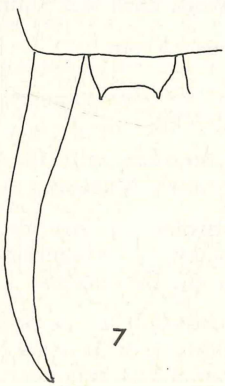


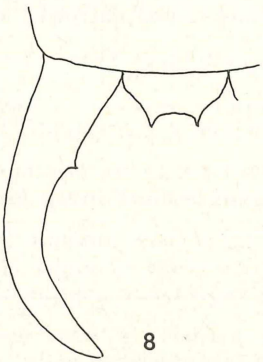




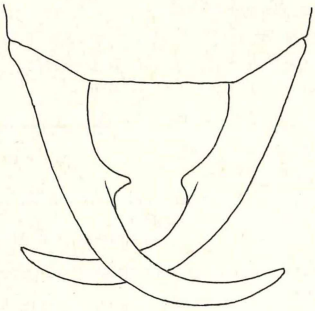








Vara nevermanni sp. n. — 1, male, dorsal; 2, female forceps; 3, male genitalia; 4, male penultimate sternite. *Labia arcuata* Scudder — 6, 7, male and female forceps. *L. dorsalis* (Burm.) — 5, 8, female and male forceps.



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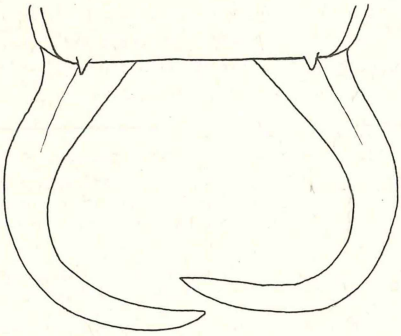

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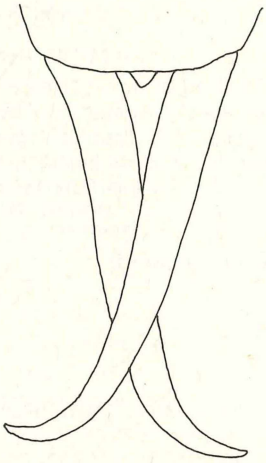

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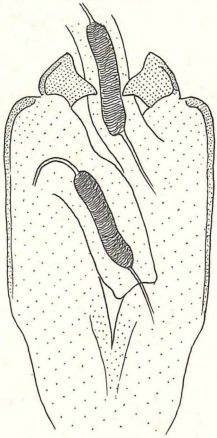

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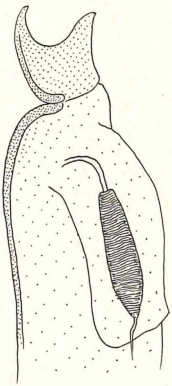

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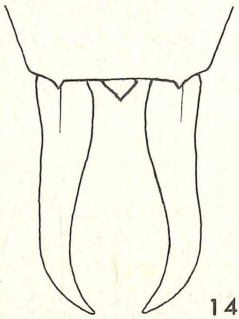

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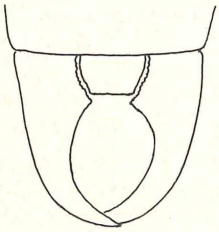

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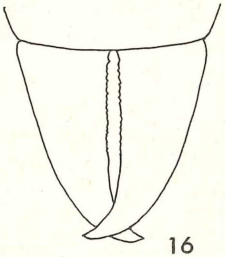

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Esphalmenus weidneri sp. n. — 9, 11, forceps of male and female; 12, male genitalia. *E. silvestrii* (Borelli) — 10, 14, forceps of male and female; 13, male genitalia (only half shown). *Labia curvicauda* (Mots.) — 15, 16, forceps of male and female.

the figure given by BURR (1913, fig. 21) the forceps are shaped as fig. 10, with a ridge-like basal tooth on each inner margin. The forceps of the female of *E. weidneri* are unusually long and straight for the genus, the typical form being as in fig. 14.

The key to the males of the genus in HINCKS (1959, p. 189) should be modified as below in order to accommodate *E. weidneri*.

14 (13) Outer parameral process larger, simple.
15 (16) Forceps without a tooth on inner or upper margins of branches; pronotum less transverse; brown or dark brown in colour
argentinus HINCKS

16 (15) Forceps with a tooth on inner or upper margins of branches; pronotum more transverse; blackish in colour.

17 (18) Forceps longer, with inner tooth about mid-point (fig. 9).
weidneri sp. n.

18 (17) Forceps shorter, with tooth near base.
19 (20) Forceps with tooth on inner margin . . . . . *porteri* BURR
20 (19) Forceps with strong conical tooth on upper margin
dentatus HINCKS

The key to females in HINCKS (1. c.) was only partial, and the female of *dentatus* is not known. The females of the other species above can best be separated by the size. All have a transverse pronotum, that of *argentinus* being less so, and the pronota of all these species widens posteriorly.

Total length 8—10 mm . . . . . *argentinus* HINCKS
Total length 10—12 mm . . . . . *porteri* BURR
Total length 17—18 mm . . . . . *weidneri* sp. n.

That of *dentatus* is probably larger than that of *weidneri*.

All the species occur in Chile or Argentine.

Pyragrinae

Pyragra fuscata SERVILLE.

Brazil, Theresopolis, FRUHSTORFER (1 ♂, 2 ♀). Costa Rica, Farm Hamburg, am Reventazon, leg. F. NEVERMAN (1 ♀).

The former specimens belong to the typical form, *fuscata*, which is recorded from Mexico southwards to Guatemala and Ecuador, whilst the latter specimen is referable to the ssp. *brasiliensis* Gray, recorded previously from Bolivia, Paraguay and Argentine, but not from Costa Rica. Since the difference between these subspecies only consists of the colour of the wings, the value of these subspecies seems doubtful.

Carcinophoridae

Carcinophorinae

Carcinophora americana (BEAUVOIS).

Costa Rica, Farm Hamburg, am Reventazon, 5. VI. 1933, leg. F. NEVERMAN (2 ♂, 2 ♀). Dominican Republic, Monte Christi, VIII. 1935, leg. P. THUMB. (2 ♂, 1 ♀); Haiti, 7. 1937, leg. P. THUMB. (1 ♂).

The first four specimens are blackish with a reddish-yellow blotch on each elytron, whilst the latter four specimens have these blotches almost obscured. The genitalia of the males of both types have been examined and they are identical.

A number of different names have been given to forms of this species, and it is not yet certain if any of these are really distinct species. REHN and HEBARD (1917, p. 637) gave a key to these forms which is reproduced, somewhat modified, below: —

1. Each elytron with a reddish-yellow blotch; wings visible, antennae and legs dark
. . . . . *procera* (BURMEISTER, 1838) West Indies.
. . . . . *distincta* (GUERIN-MENEVILLE, 1856) Cuba.
— Elytra unicolorous, dark 2
2. Wings visible, antennae and legs dark
. . . . . *americana* (BEAUVOIS, 1817) Haiti.
. . . . . *gagatina* (KLUG in BURMEISTER, 1838) Porto Rico.
. . . . . *buscki* (REHN, 1903) Porto Rico.
— Wings entirely concealed, antennae and legs pale.
. . . . . *robusta* (SCUDDER, 1869) Ecuador.
. . . . . *columbiana* (BORMANNS, 1883) Columbia.

The present specimens, which are referable to *americana* (form *procera* or *distincta*), show that reliance cannot be placed on the colour, but there seems to be a doubt if all the above names are synonymous. The parameres of the genitalia of *robusta*, mounted on a slide in the BURR Collection, in the British Museum (Natural History) are different from those of *americana*. This is to be investigated further, but it would appear that, although the first five names, all of Central American species, may be synonymous, those of the last two, which have a much more southerly distribution, may represent distinct species.

C. femoralis DOHRN.

Nieder Burma, oberhalb Rangoon, leg. H. SCHRADER, 1913 (4 ♀).

Widely distributed in S. E. Asia, from India to Viet-nam.

Euborellia annulipes (LUCAS).

India, North Kanara, Dandheli, 28. XII. 1956; Bara-Jamda. — Lebend eingeschleppt mit Orchideen aus Sikkim, 25. VI. 1933, leg. BOHLMANN.

Very widely distributed in subtropical and tropical countries. The record of living specimens in orchids from Sikkim illustrates the opportunities for extending the range, providing the introduction is to a country suitable for their survival.

Gonolabina spectabilis (PHILIPPI).

Chile, Umgebung von Santiago, Gebrada, Macual, 1000—1500 m, in den Anden (G. RAHM); Las Cruces bei S. Antonio, über der Küste des Stillen Ozeans, 70 km südl. Valparaiso, 8. X. 1930, leg. SCHRÖDER. 6 ♀.

Restricted to the Andean region.

Labiidae

Nesogastrinae

Nesogaster erichsoni (DOHRN).

Australia (5 ♂, 1 ♀, 2 nymphs).

Sparattinae

Parasparatta bolivari (BORMANS).

Costa Rica, Farm la Caja, 8 km westl. S. Jose, XII. 1925 (1 ♂, 1 ♀); Farm Hamburg, am Reventazon, 27. IV. 1934, leg. F. NEVERMAN. (1 ♂).

A widely distributed Neotropical species, but not previously known from Costa Rica.

Sphongiphorinae

Vostox brunneipennis (SERVILLE).

Satipo, Peru (1 ♂).

Labiinae

Chaetospania thoracica (DOHRN).

Formosa, Ranjinke, Koshun, II. 1909, leg. H. SAUTER (1 ♂, 4 ♀).

The pygidium of this species varies in size and a little in shape, but all are apparently conspecific and such a variation does occur in other species of this genus.

Homotages feae (BORMANS).

India, Himalaya, Chakrata, 17. VI. 1956, D. Indien Exp. (2 ♂, 1 ♀).

This species was placed in the Anechurinae in BURR (1911) and was first described as a species of *Anechura*, but BURR (1916) transferred it to the Labiinae, a position which seems to be correct.

Labia.

Numerous specimens of this genus are amongst the material of the Hamburg collection, all those examined, except *curvicauda,* being from Costa Rica. The Neotropical species of this genus are not well characterised and some revision is certainly desirable. HEBARD (1917) however gave a key to five species of *Labia* which include those most widely distributed, and three of these species are represented in the present material. The determination of these has been made using the key of HEBARD (1. c.) and checked by comparison to specimens in the HINCKS Collection (Manchester Museum) and in the BURR Collection (British Museum, Natural History). The above key, which includes what could be termed the *arcuata* group of the Neotropical *Labia,* is given below, modified from HEBARD (1. c.). The group is characterised in the males by having strongly arcuate forceps.

1. Elytra and wings fully developed male forceps greatly widened basally, without internal teeth (fig. 15); male abdomen without lateral ridges on tergites; female forceps contiguous, very wide basally (fig. 16). Almost cosmopolitan in distribution . . . . . *curvicauda* MOTS

— Elytra and wings fully developed or reduced; male forceps not geatly widened basally; male abdomen usually with lateral ridges on at least two tergites; female forceps contiguous or well separated, never very wide at base. Neotropical only 2

2. Male abdomen with tergites 8—9 produced and with weak lateral ridges; elytra and wings thickly supplied with minute hairs 3

— Male abdomen with tergites 5—9 produced or with lateral ridges; elytra and wings smooth, without numerous minute hairs 4

3. Male forceps simple, without a tooth on inner margin; male pygidium with posterior angles bluntly rounded; female pygidium convex, about as long as broad . . . . . *annulata* (F.)

— Male forceps with teeth on inner margins; male pygidium with two sharp spines (fig. 6); female pygidium concave, much shorter than broad (fig. 7) *arcuata* SCUDDER

4. Elytra and wings reduced; male abdomen with tergites 5—9 produced but without lateral ridges; male forceps simple, without teeth on inner margins;

male pygidium with posterior angles bluntly rounded; female pygidium elongate, conical, apex truncate . . . . . *rotundata* SCUDDER

— Elytra and wings fully developed; male abdomen with tergites 5—9 produced and with lateral ridges; male forceps with one tooth on each inner margin (fig. 8); male pygidium with posterior angles produced (fig. 8); female pygidium triangular (fig. 5) . . . . . *dorsalis* BURMEISTER

Labia arcuata SCUDDER (Fig. 6, 7).

Costa Rica, Farm Hamburg, am Reventazon, 26. I. 1931, 26. I. 1934, 22. XI. 1934, leg. F. NEVERMANN.

There are numerous examples of this species, including adults and immature specimens. Some of the specimens (26. I. 1931) were taken from the nest of *Gymnostinops montezouma* (großer Webervogel, or the Montezuma Oropendola), a bird restricted to Central America.

L. dorsalis (BURMEISTER) (Fig. 5, 8).

This species is not so numerous in the material, but the specimens were taken in the same locality as the species above, and also from the nest of the same species of bird.

L. curvicauda MOTSCHULSKY (Fig. 15, 16).

Africa, Missellele, 21. IX. 1935, Umg. Kamerunberg, leg. Dr. F. ZUMPT (1 ♂); Formosa, Ranjinke, Koshun, II. 1909, leg. H. SAUTER (2 ♂, 2 ♀).

No specimen from the Neotropical Region is represented in the present material.

Eugerax poecilum HEBARD.

Costa Rica, Farm la Caja, 8 km westl. S. José, 25. VII. bis 30. VIII. 1924 (2 ♀).

This is a very interesting species, and no record other than the original description has been traced. HEBARD (1917) described the species from a series taken in the Canal Zone, Panama, and in the same publication he described three other new species, all of which were placed in separate genera. The genera were *Geracodes, Barygerax, Gerax* and *Eugerax*. These genera show close relationships with each other, but in the possession of arolia on the tarsi (except for *Geracodes*) they are unlike the Labiinae and more like the primitive Diplatyidae. They are amongst the smallest of known Dermaptera, *Eugerax* being the smallest of all.

Geracodes was described from a single female, whilst both *Gerax* and *Barygerax* were described from single males; a number of specimens of *Eugerax* were recorded.

In 1918 HEBARD transferred two previously described species of *Labia* to *Barygerax*, and in 1933 he erected a new genus *Cosmogerax* for *Prolabia formica* BURR. HEBARD (1. c.) regarded the latter species as being very closely related to *Barygerax*, even though it possessed no arolia on the tarsal claws. HINCKS (1952) transferred *Geracodes* from the Labiidae to the Brachylabiinae (Carcinophoridae), so that at present this group of the Neotropical Labiidae contains four genera and six species.

The present specimens are referred to *Eugerax* from the excellent figure given by HEBARD (1917) and from the original description. The key given by HEBARD (1. c.) to separate these genera is given below, but it has been modified to include the two species of *Labia* transferred to *Barygerax*, and also the single species now in *Cosmogerax*. *Geracodes* is, of course, omitted. The key therefore includes all the present known species of this group.

1. Third antennal segment pyriform, succeeding segments short, flattened, and moniliform; pronotum not greatly narrower than the head; elytra about three times as long as pronotum; total length 4—5 mm *(Barygerax)* 2

— Third antennal segment subcylindrical or conical; succeeding segments either partly pyriform or elongate, not moniliform; pronotum much narrower than the head 4

2. Eyes smaller, about one third as long as genae; elytra bluish-black; pronotum yellow . . . . . *B. auricoma* (REHN)

— Eyes larger, about as long as genae 3

3. Almost uniformly yellowish-brown . . . . . *B. breviforceps* (CAUDELL)

— Elytra blackish-brown, with a metallic lustre; pronotum blackish anteriorly, light brown posteriorly . . . . . *B. esau* (HEBARD)

4. Eyes smaller, shorter than genae; elytra about twice as long as pronotum; elytra and wings with minute hairs; blackishbrown or variegated with white or yellow: total length 3—4 mm . . . . *Eugerax poecilum* (HEBARD)

— Eyes larger, at least twice as long as genae; total length 4,5—5 mm . . 5

5. Third antennal segment conical; tarsal claws without arolia; elytra hairy; greyish or reddish-brown, variegated with black, white, or yellow *Cosmogerax formica* (BURR)

— Third antennal segment cylindrical; tarsal claws with arolia; elytra smooth, glabrous; yellowish-brown, not variegated . . *Gerax phantasma* (HEBARD)

Labiduridae

Labidurinae

Nala lividipes (DUFOUR).

India, Sunderbans; Bishanpur; Chittagong; Chandpur. Nigeria, Bituin, Kebbi. Arabien, Yemen, Sanas. Burma, Nieder Burma, oberhalb Rangoon. (8 ♂, 6 ♀).

A common and widely distributed species in subtropical and tropical regions, but absent from the New World.

Labidura riparia (PALLAS).

S. W. Africa, Okaundus, bei Okahandja, 1933/34. Brasilien, Umgebung von Santos. 16. VI. 1953. (1 ♂, 2 nymphs).

All are referable to this species. *L. xanthopus* STÅL, the only other member of the genus likely to be confused with *riparia*, has small longitudinal ridges on the posterior margins of some abdominal tergites, and is entirely Neotropical in distribution.

Forcipula gariazii BORELLI.

Port Gentil, II. 1955 (1 ♀).

An African species; the ventro-median tooth on the forceps of the female distinguishes this species from the closely similar *quelchi* from South America.

Apachyinae

Apachys depressus (Beauvois).

Afrika, Liberia, Bolahun, 1930, leg. Dr. Vogel (1 ♀).

Chelisochidae

Chelisoches morio (F.).

Sierre Leone, 4. I. 1957, H. B. Prestor (1 ♂); Indonesia, Tomaka, Wallace Exp., 28. III. 1934, Prof. Woltereck (1 ♀); Java, 1930, coll. Le Moult (1 ♀).

C. flavipennis (F.).

Afrika, Lagos, 11. II. 1965, leg. F. Zielinski (1 ♂); B. Congo (eingeschleppt aus Boma) leg. Schmidt (1 ♂); Frankreich an wahrscheinlich in Grenoble gekauften Bananen, 13. VIII. 1962, Exkursion Hamburger Biologiestudenten leg. (1 ♀).

Forficulidae

Anechurinae

Mesochelidura bolivari (Dubrony).

Escorial (2 ♂).

These do not show the three points on the pygidium at all well, but the genitalia is identical with those examined in the Hincks Collection. It is a species of Central Spain.

Forficulinae

Forficula senegalensis Serville.

Dakar, Senegal, 6. II. 1954 (1 ♂).

Doru lineare (Eschscholtz).

Hamburg, Botanischer Garten, aus Orchideen von San Salvador, 17. IX. 1951; Panama, Colon, 22. V. 1936, leg. Rödinger; Costa Rica, Coronda, 1935, leg. Assmann; Peru, La Salud, 1000 m, VII. 1932, leg. F. Nevermann (total 3 ♂, 6 ♀).

D. luteipenne (Serville).

Guatemala, Haciendo, Cerro Redonto, F. Ohaus; Brasil, Santa Catharina, Boiteuxburg, 1930, leg. Missfeld (1 ♂, 2 ♀).

Opisthocosmiinae

Vara gen. nov.

The elongated antennal segments, the strongly cordiform second tarsal segments, and the narrow slender body which is not depressed, all indicate that this genus belongs to the Opisthocosmiinae, but it does not appear to be closely related to any of other genera. The genitalia is unusual in not having a obvious vesicle.

Form slender (fig. 1); head quadrate, first antennal segment long, much longer than distance between antennal bases, distal segments narrow and very long; elytra and wings normally well developed, smooth and impunctate; legs long, femora dilated and rather compressed; forceps of both sexes contiguous (figs. 1, 2) except at base, where the branches are emarginate on the inner margin to accommodate a pygidium. This is best seen in specimens preserved in alcohol, the dried specimens have the pygidium hidden. Penultimate sternite of male distinctive (fig. 4). Genitalia (fig. 3) with simple parameres, virga without an obvious vesicle.

Type species — *V. nevermanni* sp. n.

Vara nevermanni sp. n. (Fig. 1—4).

Yellowish-brown to blackish-brown, some of the latter specimens with lighter elytra and wings.

M a l e (fig. 1) Head brown or blackish, tumid and smooth anterior to coronary sutures, depressed and rugose posterior to these sutures; lateral margins of head strongly narrowed posteriorly, hind angles well rounded. Eyes large, about equal in length to genae. Antennae 12-segmented in type, first segment much longer than distance between antennal bases, second segment quadrate, third about twice as long as second, fourth rather longer than third, fifth and succeeding segments becoming elongated; distal segments very long, each segment gradually widening distally. Antennae brown, segments 9 or 10 and part of 11 white.

Pronotum transverse, lateral and posterior margins rather convex; smooth, blackish-brown or brown with a wide lateral yellow margin. Elytra smooth, impunctate, shining, yellowish-brown or blackish-brown, rather more than twice as long as pronotum, obliquely truncate distally; surface sparsely covered with pale hairs; wings similar in texture and colour, rather less than half the length of eleytra. Legs long, yellowish-brown or darker, tarsal segments lighter in colour.

Abdomen slender, shining, yellowish brown or blackish, strongly but not closely punctured; lateral tubercles on fourth segment well developed; surface sparsely covered with long pale hairs. Ultimate tergite quadrate, coriaceous, with a shallow median triangular depression, posterior margin with small tubercles, one at each postero-lateral angle, and directed laterad. Forceps contiguous, straight except at apices, inner margin evenly dentated. Penultimate sternite (fig. 4) with two lobes anteriorly, and two long processes posteriorly, the latter curved dorsad and visible from a dorsal view. Genitalia fig. 3.

Length: body 8 mm, forceps 1,25 mm.

F e m a l e : similar to male but abdomen less punctured; penultimate sternite simple; ultimate tergite narrowed posteriorly, forceps simple (fig. 2).

Distribution: Costa Rica, Farm Hamburg, am Reventazon, 5. IX. 1933, am trockenen Laub (♂ holotype, ♀ allotype); same data, 3. III. 1933, an welken Blättern (1 ♂ paratype); same data, 3. VII. 1933, auf welkem Laub (1 ♂, 1 ♀ paratypes); same data, Urwald, welkes Laub, 3. XII. 1932 (1 ♂,

1 ♀, paratype); same data, an Blättern von *Heliocarpus* (1 ♀ paratype); Turrialba, auf welkem Laub, 29. VII. 1932 (2 ♀ paratypes). All leg. F. NEVERMANN.

I am pleased to be able to name this species after the collector, Herr F. NEVERMANN, whose specimens have been of great interest.

All types in the Hamburg Museum, except for one male and two female paratypes, one pair of which will be retained in the Manchester Museum, and one female placed in the British Museum (Natural History).

This species must be placed in the Opisthocosmiinae on account of its external characters. Only a comparatively few species of this subfamily and of the closely related Ancistrogastrinae have been examined for the genital structure so that the apparent difference in the genitalia of *Vara* and certain other Opisthocosmines may not be significant. It is hoped to study this problem further.

Neolobophora SCUDDER.

An examination of this and allied specimens in the present material, as well as the specimens in the Manchester Museum, has suggested that certain genera allied to *Neolobophora* may have been erected on rather small characters. The main characters used to separate these genera consist of the presence or absence of a lateral longitudinal ridge on the elytra, together with the texture of the elytra.

In some genera of the Dermaptera, such as *Forcipula* (Labiduridae) the same genus contains species with and without such a ridge, and with smooth or with rugose elytra. On the other hand the presence of such a ridge is used in the Labiidae to separate the subfamilies, whilst it is a useful character in some Forficulidae. In these latter however, the separation segregates species or genera dissimilar in appearance and other distinguishing features usually occur.

The species contained in the genera allied to *Neolobophora,* however, are very closely similar to each other in general features. All are Neotropical, and all have the elytra reduced whilst the wings are absent or concealed, and the forceps are usually long and slender in both sexes, those of the males often being very long. The relationships between these genera is to be studied further in connection with a proposed revision of the Forficulidae, and at present the genera are retained. Their systematic position however is clearly not that given in BURR (1911). In this work *Neolobophora* was included with the African genus *Archidux* in a separate subfamily, the Neolobophorinae, which was placed near to the Forficulinae, in the first group of subfamilies.

Although POPHAM (1965) followed BURR (1. c.) in retaining the Neolobophorinae, I have shown elsewhere (BRINDLE, 1966) that the long antennal segments of *Neolobophora* and *Archidux* would, in the key in BURR (1911), place them in the second group of subfamilies, and not the first, and they would be accommodated excellently in the Opisthocosmiinae. There seems to be, therefore, no reason to retain the Neolobophorinae, since all the species agree with the characters of the Opisthocosmiinae, and should be

transferred to this subfamily. They are considered to belong to this subfamily in the present paper.

Key to *Neolobophora* and allied genera

1. Surface of elytra rugose 2
— Surface of elytra smooth 4
2. Entirely black; elytra with a strong lateral longitudinal ridge *Neocosmiella atrata* HEBARD
— Legs partially yellow; lateral longitudinal ridge not strongly developed *(Metresura)* 3
3. Forceps of male long and slender, as long as body; male pygidium with two spines . . . . . *M. ruficeps* (BURMEISTER)
— Forceps of male shorter, hardly as long as body; male pygidium broad, without spines . . . . . *M. insolita* (BORELLI)
4. Elytra with a strong lateral longitudinal ridge *Rhyacolabis anachoreta* (REHN)
— Elytra without a lateral longitudinal ridge 5
5. Head unicolorous, male pygidium without spines 6
— Head with occiput much lighter in colour than anterior part; male pygidium with spines 7
6. Head reddish-brown . . . . . *Neolobophora* borellii BURR
— Head black . . . . . *N. handlirschi* BURR
7. Legs black or almost so . . . . . *N. bogotensis* SCUDDER
— Legs partly yellow . . . . . *N. bicolor* BORELLI

Since some of the characters, especially those of colour, are likely to be variable, there may be some synonymy involved in the above species.

Metresura ruficeps (BURMEISTER).

San Salvador, Finealas, Tablas, San Julia, leg. Frau M. LANGBECK (1 ♂).

Neolobophora bogotensis SCUDDER.

Costa Rica, San José, leg. F. NEVERMANN, 4. X. 1930 (2 ♂, 1 ♀, 3 nymphs).

The first record for Costa Rica.

Ancistogastrinae

Ancistrogaster luctuosus STÅL.

Costa Rica, San José, 8. II. 1930, leg. F. NEVERMANN (1 ♂). This is identical with specimens in the Manchester Museum so named, and is the first record from Costa Rica.

Paracosmia silvestrii BORELLI.

Costa Rica, Vulkan Poas, 2500 m, 27. IV. 1930, unter Holz und loser Rinde. F. NEVERMANN (2 ♂).

Diaperasticinae

Diaperasticus erythrocephalus (OLIVIER).

Africa: Angola, Cabinda, 15./20. VI. 1954, leg. F. ZIELINSKI; Canzele, III. 1955; Farm Bavaria; Portuguese Ost-Afrika, Plantage, Nangororo, 1929, leg. M. ZITZMANN (total 2 ♂, 2 ♀).

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