

On the identity of some millipede species described by C. O. von PORAT in 1888 (Diplopoda: Spirostreptida, Spirobolida)

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Summary

The results of a partial revision of the millipede collection of C. O. von PORAT kept at the Institut Royal des Sciences Naturelles de Belgique in Brussels are given. The following taxonomic changes are proposed/reconfirmed: *Orthoporus aequatorialis* (PORAT, 1888) and *Megagymnostreptus occoecatus* (PORAT, 1888), both comb. n. ex *Spirostreptus*, "*Rhinocricus*" *omentatus* (PORAT, 1888), comb. n. ex *Spirobolus*, "*Rhinocricus*" *argentineus* (PORAT, 1888) and *Messicobolus eximius* (PORAT, 1888). A new synonym has been established: *Spirostreptus liber* PORAT, 1888 = *Mardonius parilis* (KARSCH, 1881). Descriptive notes and first illustrations are provided for these species as well as for the completely obscure "*Spirostreptus*" *torifer* PORAT, 1888, "*Spirostreptus*" *corrugatus* PORAT, 1888, "*Spirostreptus*" *fartus* PORAT, 1888, "*Spirostreptus*" *patruelis* PORAT, 1888 and "*Spirostreptus*" *volxemi* PORAT, 1888. At least some of these nomina dubia are deemed identifiable when/if male topotypic material becomes available for study.

Introduction

Carl Oscar von PORAT (1842-1927), who spelt his name as von PORATH in his earlier papers, was an outstanding Swedish myriapodologist of the second half of the last century, one of the most prolific taxonomists of the time. A teacher at a secondary school in the town of Jönköping, southern Sweden, he received myriapod material for identification from various sources. Altogether, he described over 120 millipede species alone, the bulk of which are still kept in the collection of the Swedish Museum of Natural History in Stockholm (cf. SJÖSTEDT, 1927). In 1888 (sometimes referred to as 1889), he published the results of his work on the large collection of exotic juliform millipedes accumulated at the Institut Royal des Sciences Naturelles de Belgique in Brussels (IRSNB) from sources all over the world (PORAT, 1888). In that paper, obviously taking the pattern of his German colleague F. KARSCH who had just published a similar monograph-like treatment of juliform diplopods in the collection of the Berlin Museum (KARSCH, 1881), PORAT presented only verbal descrip-

tions of the 34 species he encountered, including 26 new ones. Regrettably, just like KARSCH and most of his contemporaries and predecessors, PORAT neither described nor illustrated the male genitalia. Reasonably detailed and accurate as they might be concerning the peripheral body characters, with the main ones even repeated in general keys to species, such descriptions alone have since proved insufficient. As gonopods have later acquired paramount importance for the diagnosis of both genera and species among helminthomorphous millipedes, most of the names proposed by PORAT have become nomina dubia and largely ignored ever since. Only relatively few of the PORAT species names have been clarified by subsequent revisionary work.

As regards the PORAT collection kept at the Brussels Museum, it has since received relatively little attention for several reasons. Firstly, already in the 1890's, together with a number of unidentified exotic samples, some of the types of PORAT were sent on loan to F. SILVESTRI in Italy. This was disadvantageous as SILVESTRI published only new species (SILVESTRI, 1897d) and nothing whatever on PORAT's types. Furthermore, he even seems to have returned back only part of the loan, because some gonopods are missing, damaged or incomplete. Unfortunately, this concerns both PORAT's and SILVESTRI's collections currently kept at the Brussels Museum. A revision of the SILVESTRI collection at Portici is likely to reveal many surprises, apparently including those concerning some of the Brussels types. Secondly, what PORAT (1888) treated as representing the erstwhile *Spirostreptus*, *Spirobolus* or *Alloporus* species are currently scattered at least among the families Harpagophoridae, Spirostreptidae (order Spirostreptida), Messicobolidae, Rhinocricidae, Spirobolellidae and Pachybolidae (order Spirobolida), i.e. a wide range of tropical and subtropical families, all mostly large and badly confused taxonomically. Thirdly, most of the names are based only on females, this badly discouraging any revisionary attempts.

The following taxa have been reported and keyed by

PORAT (1888) as based on the collection of the Brussels Museum. The order of listing is retained as in the original.

I. *Spirostreptus*

1. *S. javanicus* BRANDT, 1841 - Java;
2. *S. torquatus* sp. n. - Java;
3. *S. armatus* sp. n. - Java;
4. *S. fuscipes* sp. n. - Brazil;
5. *S. aequatorialis* sp. n. - Ecuador;
6. *S. volxemi* sp. n. - Brazil;
7. *S.occoecatus* sp. n. - Brazil;
8. *S. tristis* sp. n. - Brazil;
9. *S. corticosus* sp. n. - Amboina, Sumatra;
10. *S. torifer* sp. n. - Brazil;
11. *S. patruelis* sp. n. - Brazil;
12. *S. papillaris* PORAT, 1876 - Brazil;
13. *S. corrugatus* sp. n. - Guatemala;
14. *S. microps* PORAT, 1876 - Brazil;
15. *S. fartus* sp. n. - Brazil;
16. *S. ventralis* PORAT, 1876 - Brazil;
17. *S. liber* sp. n. - Liberia;
18. *S. vulgatus* sp. n. - Brazil.

II. *Spirobolus*

1. *S. laetus* KARSCH, 1881 - Brazil;
2. *S. insculptus* sp. n. - Ecuador;
3. *S. omentatus* sp. n. - Ecuador;
4. *S. argentineus* sp. n. - Argentina;
5. *S. nattereri* HUMBERT & SAUSSURE, 1870 - Argentina;
6. *S. adstrictus* sp. n. - Argentina;
7. *S. politus* sp. n. - Antigua;
8. *S. goesi* PORAT, 1876 - Java, Borneo, Sumatra;
9. *S. giganteus* PORAT, 1872 - Liberia;
10. *S. eximius* sp. n. - Guatemala;
11. *S. reptans* sp. n. - Mexico;
12. *S. insulanus* sp. n. - New Caledonia;
13. *S. albidicollis* sp. n. - New Caledonia;
14. *S. pulcher* sp. n. - New Caledonia;
15. *S. punctifrons* sp. n. - New Caledonia.

III. *Alloporus*

1. *A. longicornis* sp. n. - Brazil.

Although PORAT's (1888) identifications of previously known species, including his own ones, often prove questionable or even wrong (e.g., HOFFMAN, 1975a, 1980a, 1997), this is minor from a standpoint of nomenclatorial stability. What makes the PORAT collection at Brussels important indeed, is certainly the types of his 26 species. Of them, only 12 have hitherto been revised and/or reassigned, sometimes tentatively so on the basis of the original descriptions alone. The present paper sheds new light on the identity of several species as a result of an on-site restudy of the type specimens.

The following nomenclatorial changes affecting the PORAT collection kept in the Brussels Museum have heretofore been made:

Spirostreptus fuscipes has since been revised and designated type-species of *Scaphiostreptus* BRÖLEMANN, 1902 (cf. BRÖLEMANN, 1902; ATTEMS, 1914; MAURIÈS, 1969), now in *Orthoporus* SILVESTRI, 1897b (cf. KRABBE, 1982). Complete bibliography concerning this species can be found in KRABBE (1982).

Spirostreptus patruelis has been revised and assigned tentatively to *Cladostreptus* BRÖLEMANN, 1902 by BRÖLEMANN (1902), and *Spirostreptus corrugatus* to *Scaphiostreptus* (cf. ATTEMS, 1950). Yet both taxa are currently among nomina dubia (KRABBE, 1982).

Spirostreptus vulgatus has since been revised and assigned first to *Kochliogonus* ATTEMS, 1950, then to *Pseudotobiozus* DEMANGE, 1970, now in *Gymnostreptus* BRÖLEMANN, 1902 (cf. HOFFMAN, 1975b). Full bibliography concerning this species can be found in KRABBE (1982).

Spirostreptus tristis has since been revised (BRÖLEMANN, 1902; ATTEMS, 1914) and is currently assigned to *Megagymnostreptus* SCHUBART, 1950 (cf. KRABBE, 1982).

The samples which PORAT (1888) and BRÖLEMANN (1902) misidentified as *Spirostreptus ventralis* PORAT, 1876 have very recently been shown to actually represent a different species, *Gymnostreptus porati* HOFFMAN, 1997, while the identity of the IRSNB specimens determined by PORAT (1888) as *Spirostreptus microps* PORAT, 1876 has been confirmed, and the species assigned to *Gymnostreptus* as well (cf. HOFFMAN, 1997).

Regrettably, the bulk of the spirostreptid species proposed by PORAT in 1888, as well as some more congeners he described earlier, have been entirely omitted - even as nomina dubia - from the most recent review of the family Spirostreptidae by KRABBE (1982). This is strange, because at least ATTEMS (1914) had listed all of PORAT's species of Spirostreptidae.

Spirobolus insulanus, *S. albidicollis*, *S. pulcher* and *S. punctifrons* have been revised and placed in *Spirobolellus* POCOCK, 1894 (Spirobolellidae) by CARL (1926), while *Spirobolus reptans* and *S. eximius* have been transferred tentatively to *Messicobolus* BRÖLEMANN, 1913 (Messicobolidae) by LOOMIS (1968).

Finally, *Spirobolus argentineus* has been transferred to *Rhinocricus* KARSCH, 1881 (cf. BRÖLEMANN, 1902), and *Spirobolus politus* has become the type-species of *Anadenobolus* SILVESTRI, 1897 (see also MAURIÈS, 1980).

The present paper aims at a partial revision of the old types of PORAT (1888) in order to clarify the identity of several long enigmatic millipede taxa. It copes with 11 species, all restudied during my brief stay at IRSNB in November-December 1996.

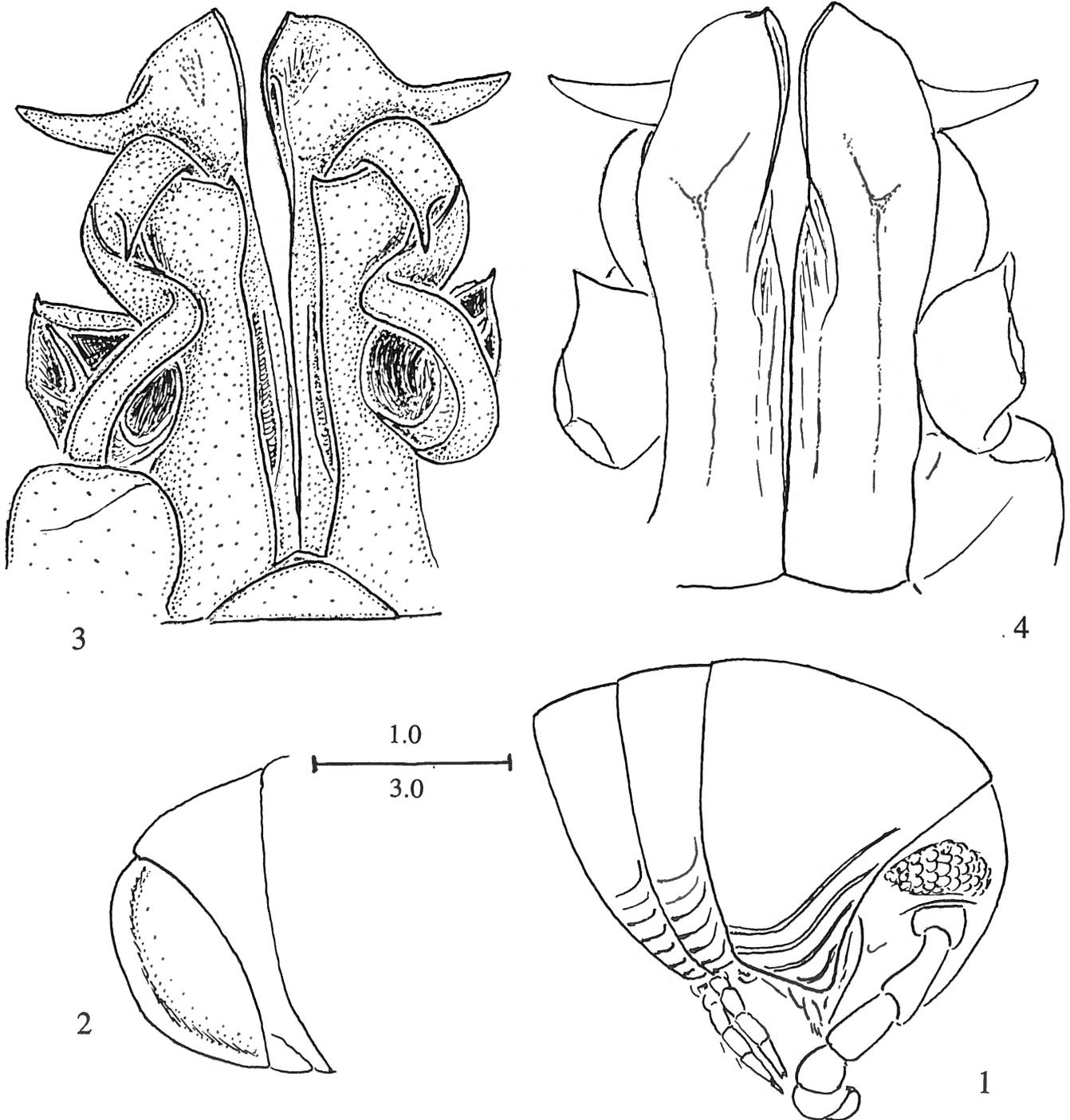
Taxonomic part

The species will be dealt with in a sequence somewhat different from the original one (PORAT, 1888) referred to above. Several hitherto enigmatic spirostreptoid species based on males will be treated first, followed by the "females only" species. Finally, three male-based spirobolidan species will conclude this paper.

Orthoporus aequatorialis (PORAT, 1888), comb. n.
(Figs 1-4)

Spirostreptus aequatorialis PORAT, 1888: 215.

Material: 1 ♂ (designated as lectotype herewith), 2 ♀♀, 1 incomplete specimen (with head and several anterior segments missing), all broken into numerous pieces; Ecuador, De VILLE leg.



Figs 1-4. — *Orthoporus aequatorialis* (PORAT, 1888), ♂ lectotype: 1, Anterior body portion, lateral view; 2, Telson, lateral view; 3-4, Gonopods, caudal and frontal views, respectively. Scale bar in mm.

Brief description: Width of ♀♀ paralectotypes 5-7 mm, of ♂ lectotype 6 mm. Colour brown-orange-yellow, often mottled with grey, obviously somewhat faded, pattern indistinctly annulated due to paler yellowish rear halves of metazonites. Main somatic features as in the original description (PORAT, 1888) and in Figs 1 and 2. Ozopores starting from somite 6. Gonopods as in Figs 3 and 4.

Remarks: Unquestionably, *S. aequatorialis* is a species of the prolific genus *Orthoporus* SILVESTRI, 1897b ranging from the southwestern United States to Brazil (and occurring also in South Africa?). This species seems a "good" one, apparently devoid of junior synonyms, with several very closely related forms encountered in the same general, mainly Andean, area: *O. cavicollis* (KARSCH, 1881) from Venezuela (apparently introduced also in Trinidad, Barbados, Grenada and ?St. Thomas), *O. reluctator* SILVESTRI, 1897c from Ecuador, a species now considered as a junior synonym of *O. rugifrons* (PORAT, 1876) (HOFFMAN, personal communication), *O. centralis* SILVESTRI, 1898 from Venezuela, *O. peregrinans* SILVESTRI, 1898 (?and *O. levigatus* ATTEMS, 1950) from Colombia, and possibly some others. The characters that bring them together lie in the origin of the ozopores starting on the 6th body segment and the similarity of the gonopods, particularly so due to the presence of a "prefemoral" spine and, above all, deeply grooved telocoxites (cf.

HOFFMAN, 1996). The differences are expressed in some minor details of body size, sculpture and colouration, as well as in gonopod conformation.

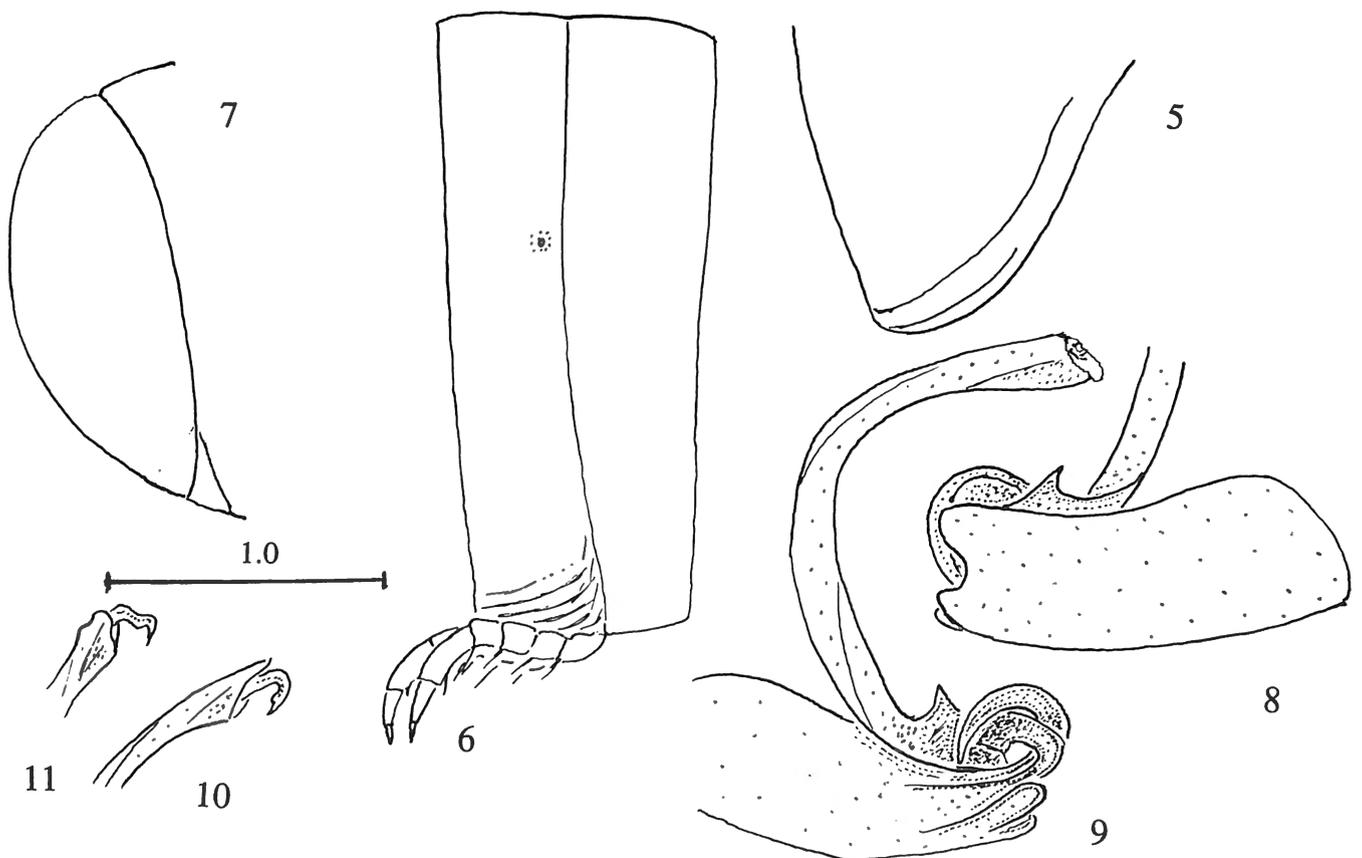
HOFFMAN (1996) believes the genus is heterogeneous, with one group of species purely South American, and the other Mesamerican. MAURIÈS (personal communication) thinks that many *Orthoporus* taxa may actually prove to represent only infraspecific varieties of fewer polymorphous widespread species. Hence, more studies on the variation of Neotropical *Orthoporus* are necessary to finally assess the status of *O. aequatorialis*. However, in any event the name is likely to survive as having priority over the vast majority of its congeners.

?*Megagymnostreptus occoecatus* (PORAT, 1888),
comb. n. (Figs 5-11)

Spirostreptus occoecatus PORAT, 1888: 217.

Material: 1 ♂ (designated as lectotype by HOFFMAN in 1983, but never published, validated herewith), 1 juv. ♂; Brazil, Pedro de Cerra, C. van VOLXEM leg.

Brief description: Width 2.3 mm. Body with 51 segments in lectotype, so it must be incomplete, because the original description states 61-63 segments for this species. In



Figs 5-11. — ?*Megagymnostreptus occoecatus* (PORAT, 1888), ♂ lectotype: 5, Lateral part of collum; 6, Midbody segment, lateral view; 7, Telson, lateral view; 8-9, Gonopods, frontal and caudal views, respectively; 10-11, Tip of gonopod. Scale bar in mm.

addition, paralectotype with 57 body segments. Colour pale grey-brown-yellow, pattern slightly annulated, must have been considerably faded (even ocellaria almost indistinct). Collum with two lateral striae, rather narrowly rounded (Fig. 5). Striation of metazonites only subventral, very close to coxae (Fig. 6). Anal valves regularly convex throughout (Fig. 7). Gonopods (Figs 8-11) damaged.

Remarks: According to HOFFMAN (personal communication), who has compared the lectotypes of *occoecatus* and *Megagymnostreptus tristis* at IRSNB, both these species are congeneric (cf. KRABBE, 1982). Hence the above formal reallocation. However, according to my own inclinations supported by the opinion of MAURIÈS (personal communication), *occoecatus* is a distinct species to be assigned rather to *Tubostreptus* SCHUBART, 1950, because the solenomerite seems to start inside the tibiotarsal tube, not to the much more disjunct *Exallostreptus* HOFFMAN, 1988, in which the solenomerite begins at the distal edge of the tibiotarsal lobe (cf. HOFFMAN, 1988). Only fresh topotypic material, including males, can result in a final solution of the riddle. Hence the necessary qualifications.

"Spirostreptus" torifer PORAT, 1888
(Figs 12-15)

Spirostreptus torifer PORAT, 1888: 221.

Material: 1 incomplete ♂ (designated as lectotype here-with), 1 complete ♀ (paralectotype); Brazil, Therezopolis, C. van VOLXEM leg.

Brief description: Lectotype with head and gonopods missing (most probably located in the SILVESTRI collection at Portici, see above). Colour dark grey-brown up to blackish, obviously not faded. Collum characteristically grooved laterally (Fig. 12). Striation of relatively convex metazonites very deep, less deep and regular dorsally (Fig. 13). Anal valves margined (Fig. 14). Legpair 1 of ♂ with conical prefemoral process frontally (Fig. 15).

Remarks: The identity of this rather large species is bound to remain obscure until the gonopods are studied. These are believed to be located at Portici. Otherwise strict topotypes, in particular male ones, must be found and properly studied using the available descriptions for comparative purposes.

"Spirostreptus" corrugatus PORAT, 1888
(Figs 16-18)

Spirostreptus corrugatus PORAT, 1888: 225.

Material: 1 ♀ holotype; Guatemala, BOUCARD leg.

Brief description: Body slender, pattern slightly annulated, definitely faded (even ocellaria partly faded). Striation very distinct, especially so on collum (Fig. 16), on

midbody segments more superficial and traceable only below ozopore level (Fig. 17). Anal valves margined (Fig. 18). Other somatic characters as in the original description (PORAT, 1888).

Remarks: The identity of this rather large species is bound to remain obscure until fresh topotypes are located.

"Mardonius" parilis (KARSCH, 1881)
(Figs 19-21)

Spirostreptus parilis KARSCH, 1881: 36.

Spirostreptus liber PORAT, 1888: 222, syn. n.

?*Mardonius parilis* – KRABBE, 1982: 429.

Material: 1 ♀ (holotype of *liber*); Liberia, MÖDDERMAN?T-CAPS> LEG. – 1 ♀ (IDENTIFIED AS *PARILIS* BY C. ATTEMS, COLL. ZOOLOGISCHES MUSEUM HAMBURG); HOS, TOGO, 1892, ROSS-MANN LEG.

Brief description: Body moderately robust, pattern slightly annulated, definitely faded (even ocellaria partly faded). Striation very distinct, especially so on collum (Fig. 19), on midbody segments more superficial but traceable also a little above ozopore level (Fig. 20). Anal valves margined (Fig. 21). Other somatic characters as in the original description (PORAT, 1888).

Remarks: The holotype of *liber* has been compared with the female of *parilis* kept in the Hamburg Museum and referred to by ATTEMS (1914), and both samples appear definitely conspecific. Hence the above new synonymy. Since, according to HOFFMAN (personal communication), *parilis* is not conspecific with *Mardonius sculpturatus* ATTEMS, 1914, the type-species of *Mardonius* ATTEMS, 1914, the allocation of this rather large species quite widely distributed at least in Guinea, Liberia, Ivory Coast, Togo and Cameroon is only provisional. Hence the necessary qualifications in full agreement with KRABBE (1982). Complete information concerning *parilis* can be found in KRABBE (1982).

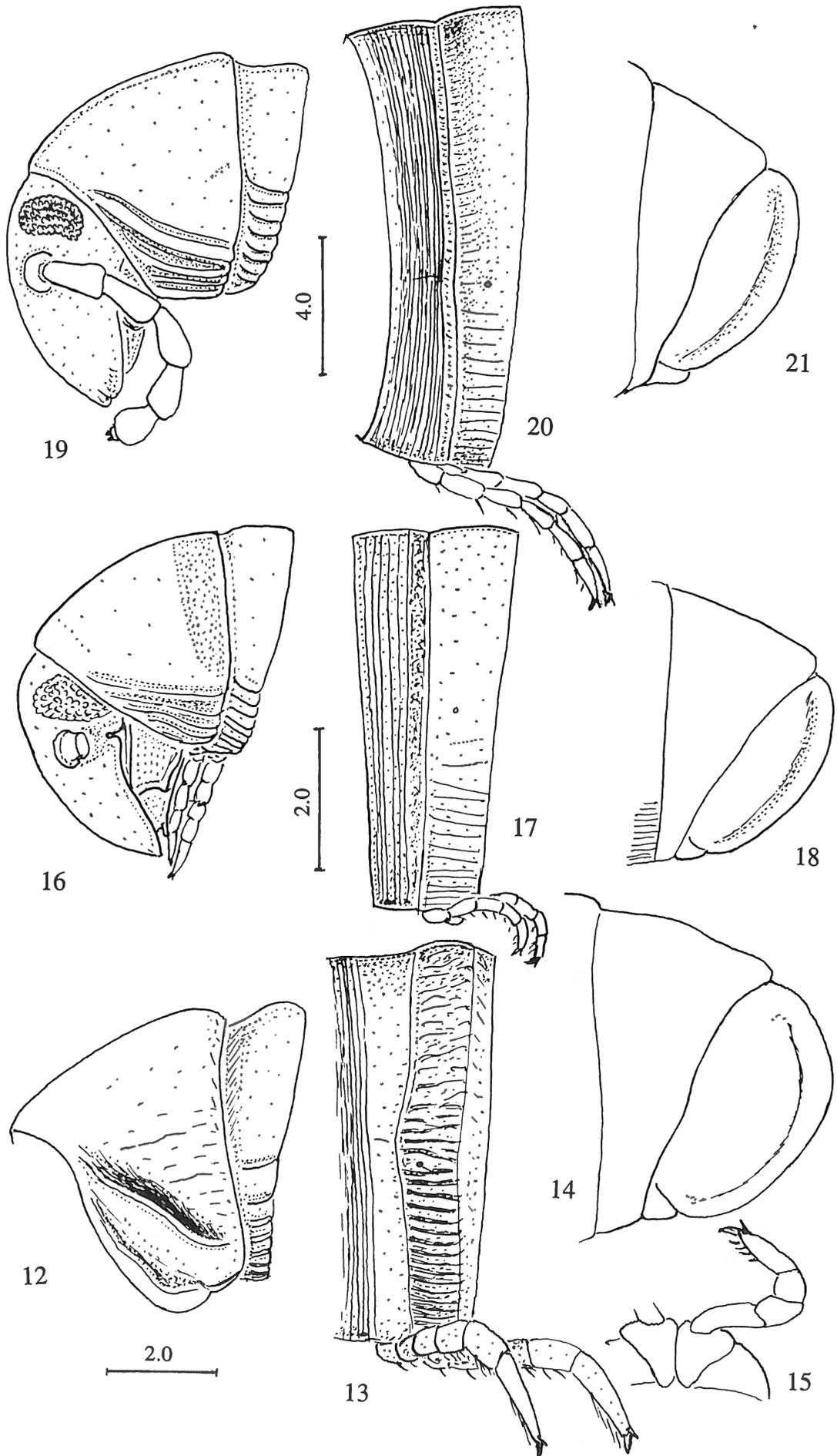
"Spirostreptus" fartus PORAT, 1888
(Figs 22-24)

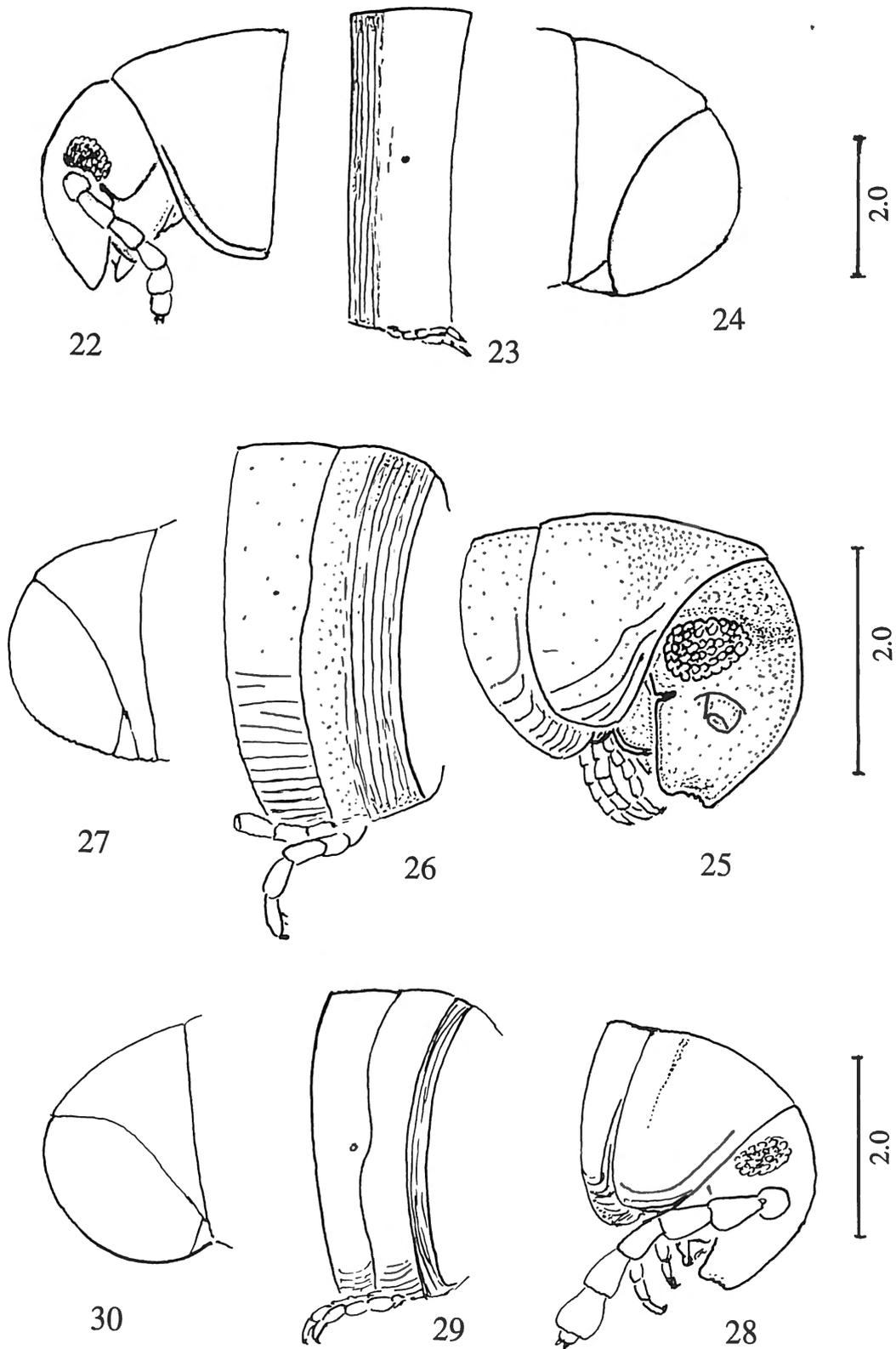
Spirostreptus fartus PORAT, 1888: 227.

Material: 1 ♀ holotype; Brazil, C. van VOLXEM leg.

Brief description: Body slender. Colour beige, pattern slightly annulated, definitely faded (even ocellaria almost indistinct). Striation indistinct even on collum (Fig. 22), on midbody metazonites virtually untraceable (Fig. 23). Anal valves not margined, lateral outline strongly convex (Fig. 24). Other somatic characters as in original description (PORAT, 1888).

Remarks: The identity of this rather large species is bound to remain obscure until fresh material is located.





Figs 22-30. - "*Spirostreptus*" *fartus* PORAT, 1888, ♀ holotype (22-24), "*Spirostreptus*" *patruelis* PORAT, 1888, ♀ holotype (25-27) and "*Spirostreptus*" *volxemi* PORAT, 1888, ♀ lectotype (28-30): 22, 25 & 28, Anterior body parts, lateral view; 23, 26 & 29, Midbody segment, lateral view; 24, 27 & 30, Telson, lateral view. Scale bars in mm.

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Figs 12-21. - "*Spirostreptus*" *torifer* PORAT, 1888, ♂ lectotype (12-15), "*Spirostreptus*" *corrugatus* PORAT, 1888, ♀ holotype (16-18) and "*Spirostreptus*" *liber* PORAT, 1888, ♀ holotype (19-21): 12, 16 & 19, Anterior body parts, lateral view; 13, 17 & 20, Midbody segment, lateral view; 14, 18 & 21, Telson, lateral view; 15, Legpair 1, frontal view. Scale bars in mm.

The remarkably convex anal valves seem to be a characteristic of the species aiding in the recognition of future samples.

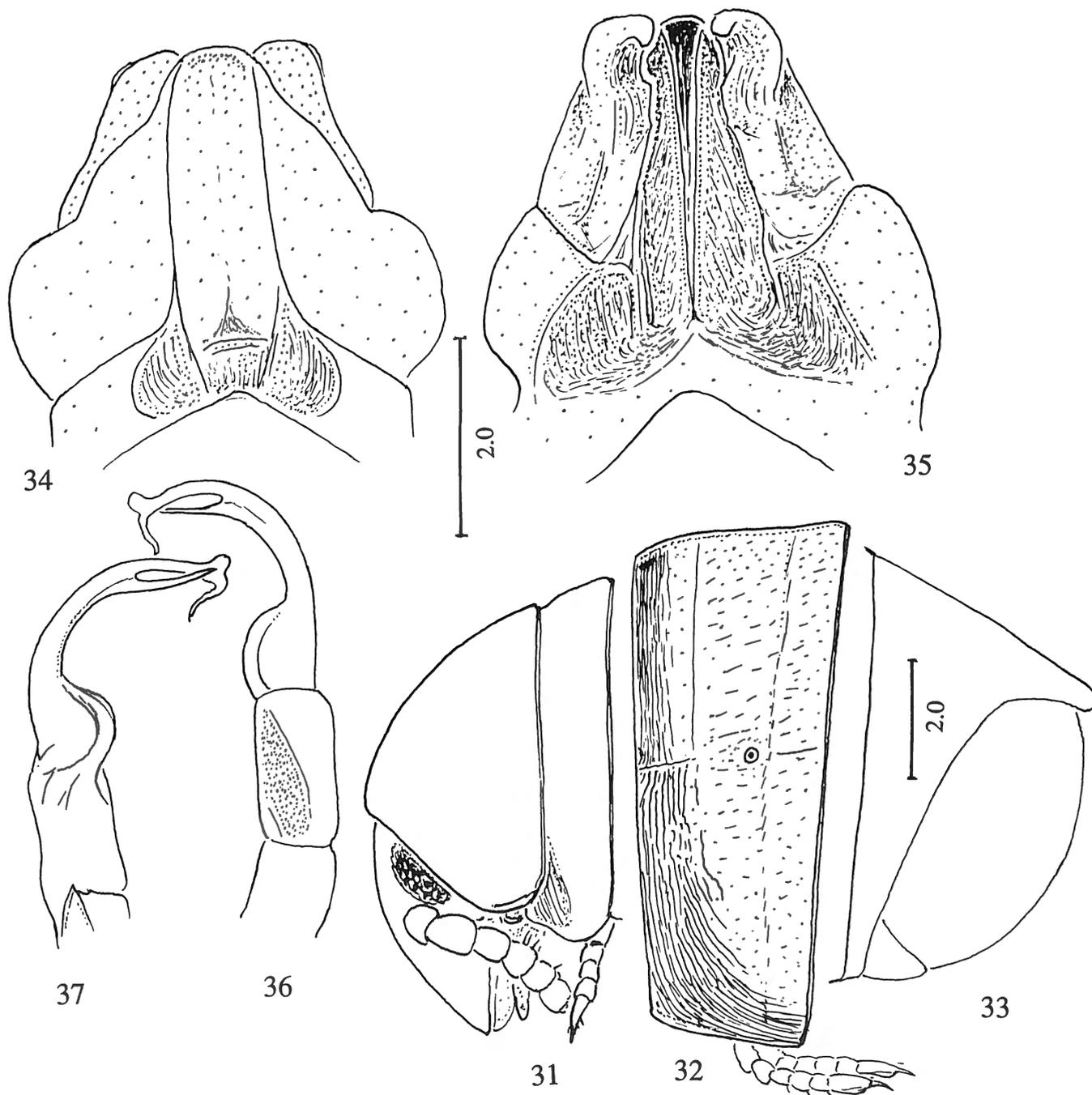
"Spirostreptus" patruelis PORAT, 1888
(Figs 25-27)

Spirostreptus patruelis PORAT, 1888: 222.

Material: 1 ♀ holotype; Brazil, Therezopolis, C. van VOLXEM leg.

Brief description: Body slender. Colour marbled yellowish-brown, ozopores like yellowish spots, pattern slightly annulated due to paler metazonites. A darker interocular band. Striation rather deep on collum (Fig. 25), on midbody metazonites more superficial and traceable only below ozopore level (Fig. 26). Anal valves not margined, lateral outline strongly convex (Fig. 27). Other somatic characters as in original description (PORAT, 1888).

Remarks: The identity of this rather large species is



Figs 31-37. — *"Rhinocricus" omentatus* (PORAT, 1888), ♂ paralectotype (31-33) and ♂ lectotype (34-37): 31, Anterior body part, lateral view; 32, Midbody segment, lateral view; 33, Telson, lateral view; 34 & 35, Anterior gonopods, frontal and caudal views, respectively; 36 & 37, Posterior gonopod, mesal and lateral views, respectively. Scale bars in mm.

bound to remain obscure until conspecific material is discovered.

"Spirostreptus" volxemi PORAT, 1888
(Figs 28-30)

Spirostreptus Volxemi PORAT, 1888: 216.

Material: 4 badly fragmented ♀♀ syntypes (the largest ♀ selected as lectotype, the remaining ♀♀ as paralectotypes); Brazil, Therezopolis, C. van VOLXEM leg.

Brief description: Width of lectotype 4.5 mm. Colour pale yellowish-brown, often with indistinct annulations and traces of a more or less wide, pale, axial stripe. Main

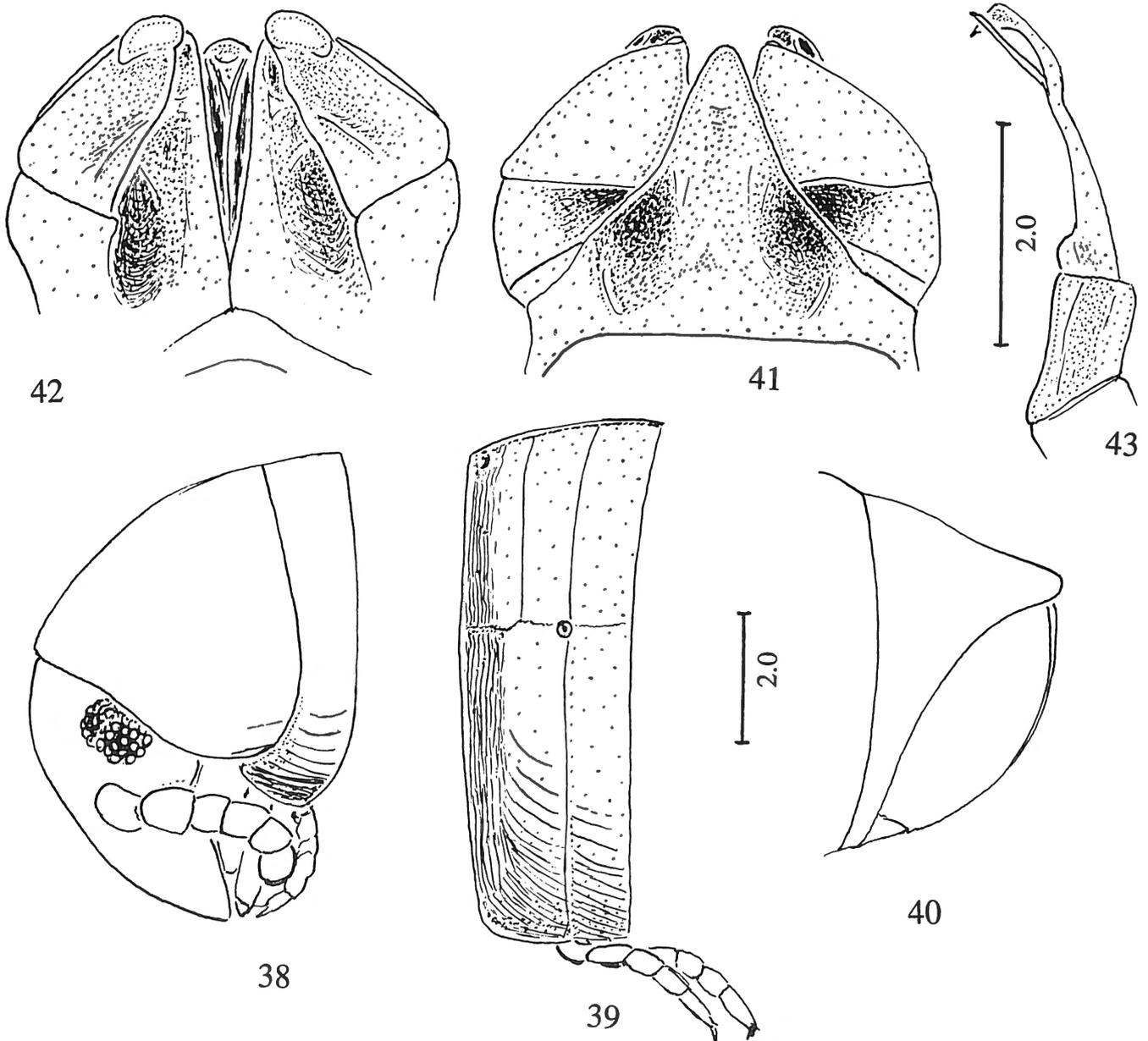
somatic features as in the original description (PORAT, 1888) and in Figs 28-30.

Remarks: Until topotypes, particularly males, have been located best matching the available descriptions and illustrations, the identity of this species is also bound to remain obscure.

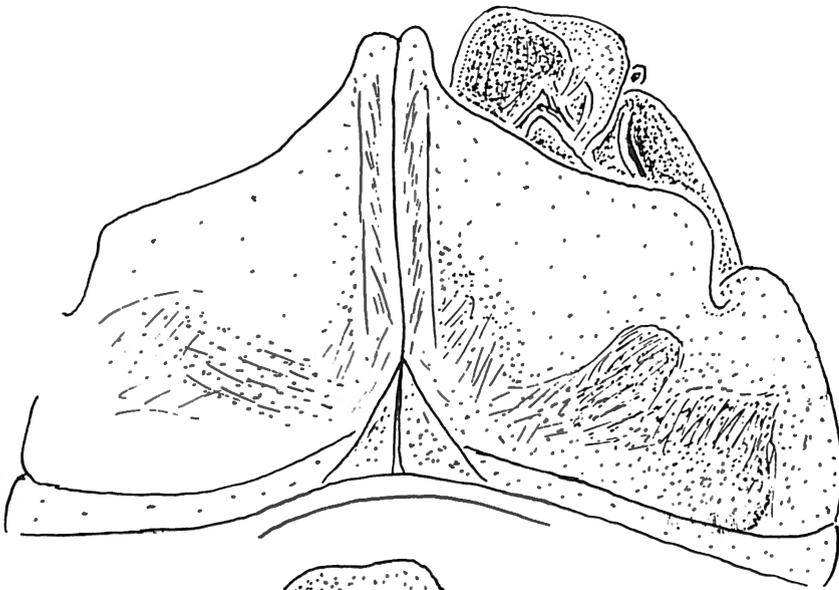
"Rhinocricus" omentatus (PORAT, 1888), comb. n.
(Figs 31-37)

Spirobolus omentatus PORAT, 1888: 236.

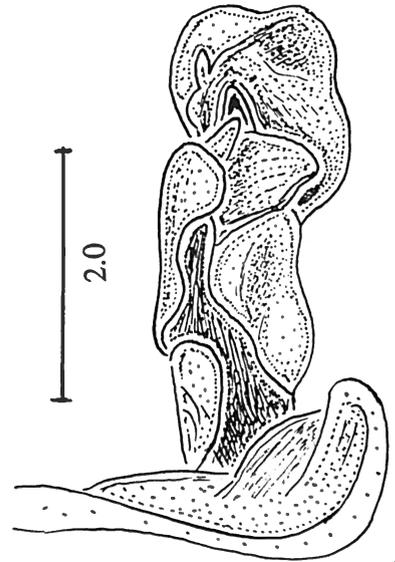
Material: 16 badly fragmented specimens (including several juveniles), of which only 5 ♂♂ and 7 ♀♀ have



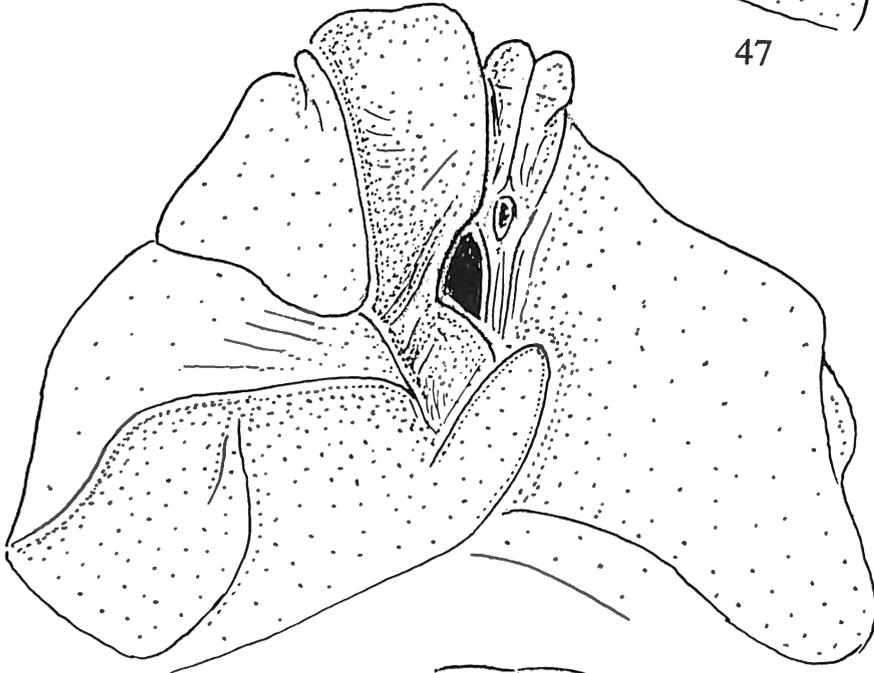
Figs 38-43. - *"Rhinocricus" argentineus* (PORAT, 1888), ♂ lectotype: 38, Anterior body part, lateral view; 39, Midbody segment, lateral view; 40, Telson, lateral view; 41 & 42, Anterior gonopods, frontal and caudal views, respectively; 43, Posterior gonopod, mesal view. Scale bars in mm.



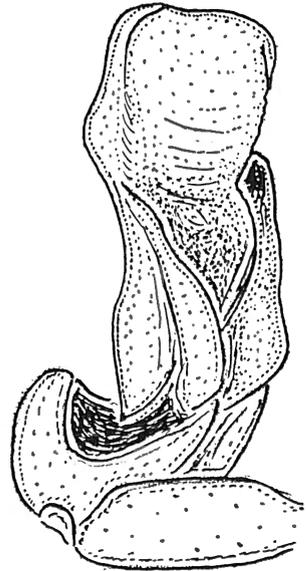
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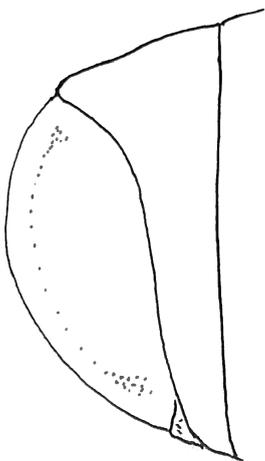
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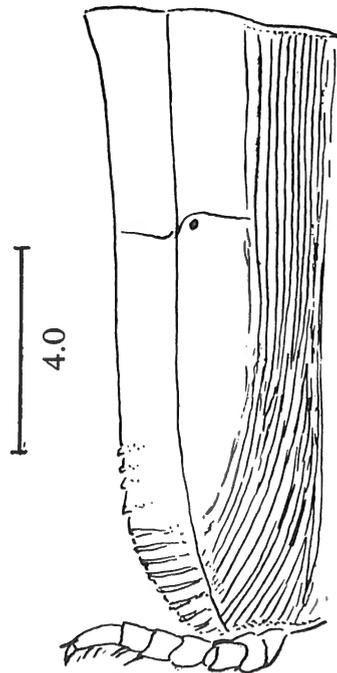
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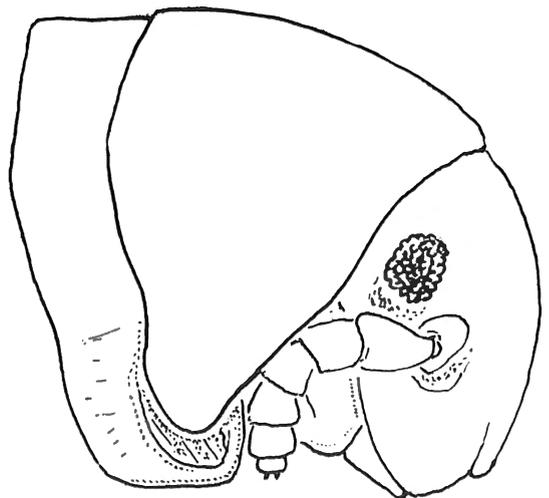
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retained the front body part (1 incomplete ♂ designated as lectotype herewith); Ecuador, De VILLE leg.

Brief description: Width of lectotype 8.0 mm. Colour rather uniform grey- to chocolate-brown, narrowly annulated by pale yellowish rings at rear edges of metazonites. Collum with a short premarginal stria laterally (Fig. 31). Striation of midbody metazonites dense, superficial, subventral (Fig. 32). Scobinae small, semilunar, lying relatively close to each other. Epiproct short, anal valves not margined (Fig. 33).

Anterior gonopods as in Figs 34 and 35, posterior gonopods as in Figs 36 and 37.

Remarks: Attribution of this species to the highly prolific Neotropical genus *Rhinocricus* KARSCH, 1881 is only provisional. HOFFMAN (1960, 1980b) redefined this genus as one encompassing only a handful of the species from Puerto Rico and Cuba that share a flagelliform posterior gonopod telopodite. However, since the generic classification of the Rhinocricidae is very badly confused (e.g. HOFFMAN, 1980b), following the traditionally broader usage of *Rhinocricus*, some species with bifid posterior gonopods have been included there as well, e.g. *Spirobolus nattereri* HUMBERT & SAUSSURE, 1870 (cf. HOFFMAN, 1980a). Since *omentatus* clearly is congeneric with *nattereri*, I transfer it to *Rhinocricus*, though with the necessary qualifications. Sometimes the name *Anadenobolus* SILVESTRI, 1897 is applied to encompass species with branching posterior gonopods (cf. MAURIÈS, 1980), but this question has never been fully investigated, as no strict male topotype of the type-species *politus* from Antigua has ever been described.

Among the congeners, *R. omentatus* seems particularly close to *R. blancus* CHAMBERLIN, 1955 and *R. elattus* (CHAMBERLIN, 1955) (the latter species originally described in *Eurhinocricus* BRÖLEMANN, 1903), both also from Ecuador. Unfortunately, too many Andean (and not only) rhinocricids have been described far too poorly (e.g., virtually all species in CHAMBERLIN, 1922, 1955) to warrant further comparisons. In any event, the name *omentatus* is most likely to survive just because of priority.

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Figs 44-50. – *Messicobolus eximius* (PORAT, 1888), ♂ lectotype: 44, Anterior body part, lateral view; 45, Midbody segment, lateral view; 46, Telson, lateral view; 47 & 48, Anterior gonopods, frontal and caudal views, respectively; 49 & 50, Posterior gonopod, sublateral and submesal views, respectively. Scale bars in mm.

"Rhinocricus" argentineus (PORAT, 1888)
(Figs 38-43)

Spirobolus argentineus PORAT, 1888: 238.

Material: 1 ♂ (designated as lectotype herewith), 1 ♀ (paralectotype); Argentina, Buenos Aires, C. van VOLXEM leg.

Brief description: Colour pale grey-yellowish with contrastingly blackish to dark grey head, legs and most of anal valves; annulation indistinct, rear halves of metazonites paler. Collum barely striate laterally (Fig. 38). Striation of midbody metazonites dense, superficial, more or less subventral (Fig. 39). Scobinae very small, semilunar, lying close to each other. Epiproct short, anal valves not margined (Fig. 40).

Anterior gonopods as in Figs 41 and 42, posterior gonopods as in Fig. 43.

Remarks: Attribution of this species to *Rhinocricus* is likewise provisional (see above). *R. argentineus* differs easily from most of the formal *Rhinocricus* and *Argentocricus* VERHOEFF, 1941 known from Argentina, being perhaps especially closely related to the sympatric *R. segmentatus* SILVESTRI, 1897b and *R. unicornis* SILVESTRI, 1897b, as well as to *R. nattereri* (HUMBERT & SAUSSURE, 1870) from Brazil (cf. SILVESTRI, 1897b; HOFFMAN, 1980a).

Messicobolus eximius (PORAT, 1888)
(Figs 44-50)

Spirobolus eximius PORAT, 1888: 248.

Material: 1 ♂ (designated as lectotype herewith), 1 ♀ (paralectotype); Guatemala, BOUCARD leg.

Brief description: Lectotype larger, a little darker, more evidently annulated than paralectotype. Collum barely striate laterally (Fig. 44). Striation of midbody metazonites very rough, rib-like though only subventral (Fig. 45). Anal valves very faintly margined (Fig. 46).

Anterior gonopods as in Figs 47 and 48, posterior gonopods as in Figs 49 and 50.

Remarks: Beyond any doubt, this species is a member of the family Messicobolidae. Furthermore, it seems extremely close to *Oxobolus virilis* CHAMBERLIN, 1922 from Guatemala, the type-species of *Oxobolus* CHAMBERLIN, 1922. However, since *Oxobolus* seems to be only a junior synonym of *Messicobolus* BRÖLEMANN, 1913 (HOFFMAN, personal communication), the earlier transfer by LOOMIS (1968) is confirmed.

Acknowledgements

I am most grateful to Dr. Patrick GROOTAERT, Head of the Entomology Department of the IRSNB, as well as

to all staff of the Department, for having provided me with the necessary support and logistic help during my work at IRSNB in November 1995 and November-December 1996. The great help and hospitality of my friend R. Desmond KIME (Brussels) and his nice family are also greatly acknowledged. Prof. Dr. Richard L. HOFFMAN (Virginia Museum of Natural History, Martinsville, U.S.A.) and Dr. Jean-Paul MAURIÈS (Muséum national d'Histoire naturelle, Paris, France) have been very kind as to share with me their opinions and certain unpublished information concerning the identity of some of the taxa treated above, and both Prof. Dr. Richard L. HOFFMAN and Prof. Dr. Henrik ENGHOF (Zoologisk Museum, University of Copenhagen, Denmark) have reviewed the manuscript. Dr. H. DASTYCH (Zoologisches Museum der Universität Hamburg, Germany) kindly allowed to re-examine some reference material under his care, and Dr. Torbjörn KRONESTEDT (Swedish Museum of Natural History, Stockholm, Sweden) has very helpfully supplied me with information pertaining to PORAT's myriapodological activities.

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