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The types of *Hemiosus* SHARP, 1882 (Coleoptera, Hydrophilidae) in the Orchymont and Mouchamps collections

by A. OLIVA

Summary

The types of the species of the genus *Hemiosus* (Coleoptera, Hydrophilidae) kept in the Orchymont and Mouchamps collections at the Institut royal des Sciences Naturelles de Belgique (Brussels), have been examined, redescribed and figured. Ten species described by A. d'ORCHYMONT (*H. dimorphus, H. morlestus, H. mornarius, H. mornax, H. mulvianus, H. tenenbaumi, H. toxillus, H. moreirai, H. gahani (= H. moreirai nov. syn.), H. varidius*), three species by A. KNISCH (*H. cognatus, H. bruchi, H. regalis*), one by D. SHARP (*H. maculatus*) and three species and one subspecies described by R. MOUCHAMPS (*H. hartmanni, H. interimus, H. schindleri, H. multimaculatus* (JENSEN-HAARUP) ssp. *intermedius*), are represented by typical material. A brief discussion of *H. dejeani* (SOLIER) is made for purposes of comparation.
Keywords : *Hemiosus*, Hydrophilidae, Neotropical fauna.

Résumé

Les types des espèces du genre *Hemiosus* (Coleoptera, Hydrophilidae) deposés dans les collections Orchymont et Mouchamps à l'Institut royal des Sciences naturelles de Belgique, ont été examinés, redécrits et figurés. Dix espèces décrites par A. d'ORCHYMONT (*H. dimorphus, H. morlestus, H. mornarius, H. mornax, H. mulvianus, H. tenenbaumi, H. toxillus, H. moreirai, H. gahani (= H. moreirai, nov. syn.), H. varidius*), trois espèces d'A. KNISCH (*H. cognatus, H. bruchi, H. regalis*), une de D. SHARP (*H. maculatus*), et trois espèces et une sous-espèce décrites par R. MOUCHAMPS (*H. hartmanni, H. interimus, H. schlinderi, H. multimaculatus* (JENSEN-HAARUP) ssp. *intermedius*) sont répresentées par du matériel typique. Une brève discussion d'*H. dejeani* (SOLIER) est faite pour comparation.
Mots-clefs : *Hemiosus*, Hydrophilidae, faune Néotropicale.

Resumen

Los tipos de las especies del género *Hemiosus* (Coleoptera, Hydrophilidae) depositados en las colecciones Orchymont y Mouchamps en el Institut royal des Sciences naturelles de Belgique han sido examinados, redescritos e ilustrados. Diez especies descritas por A. d'ORCHYMONT (*H. dimorphus, H. morlestus, H. mornarius, H. mornax, H. mulvianus, H. tenenbaumi, H. toxillus, H. moreirai, H. gahani (= H. moreirai, nov. Syn.), H. varidius*), tres especies de A. KNISCH (*H. cognatus, H. bruchi, H. regalis*), una de D. SHARP (*H. maculatus*) y tres especies y una subespecie descritas por R. MOUCHAMPS (*H. hartmanni, H. interimus, H. multimaculatus* (JENSEN-HAARUP) ssp. *intermedius*) están representadas por material típico. Una breve discusión de *H. dejeani* (SOLIER) se incluye para comparación.
Palabras clave : *Hemiosus*, Hydrophilidae, fauna neotropical.

Introduction

The collections of Hydrophilidae of A. d'Orchymont and R. Mouchamps are kept at the Institut royal des Sciences naturelles de Belgique (Brussels). In the first of these collections there are types of ten species described by Orchymont himself, as well as of three species of A. Knisch and also paratypes of *Hemiosus maculatus* SHARP, type-species of the genus. In the Mouchamps collection there are types of three species and one sub-species described by this author. This makes a total of eighteen taxa, one of which, however, was found to be a synonym. Although not represented by typical material, *H. dejeani* (SOLIER) has been included for reference.

As twenty-two species of *Hemiosus* have been described so far, the examination of these collections clears up considerably the taxonomy of the genus.

The neotropical genus *Hemiosus* SHARP includes small aquatic beetles (1.8 - 4.2 mm in length), which have their dorsal surface marked with a sculpture of sunken punctures and with a colour pattern of melanic and testaceous (non-pigmented cuticle) spots. The ventral surface is covered with a short, dense hydrofuge pubescence, which extends to the base of the legs, covering the greater part of the ventral surface of the femora.

The dorsum of the head is always deeply melanic with a strong metallic sheen, which usually makes it appear green; the bottom of the punctures is often purple or cupreous. The pronotum varies in coloration from a strong metallic sheen like that on the head, to testaceous with a slight discal melanization. The scutellum is usually melanic, with or without metallic sheen. The elytra are testaceous, with melanic spots disposed in a pattern which is rather uniform in the whole genus, although the spots themselves may vary greatly in extension. A conspicuous lateral spot near the middle of the length of the elytron corresponds with a raised stridulatory patch on the undersurface. The sternites are always melanic, although in teneral specimens this appears as a reddish color. The pubescent part of the femora is

always deeply melanic in species of the *maculatus*-complex. This coloration has not been observed in all species of the *dejeani*-complex, but this may be due to teneral or subteneral material, since beetles in this condition usually fly more readily to light-traps.

The dorsal sculpture is not uniform. As a rule, the punctures on the clypeus are finer and more regularly disposed than those on the frons; the punctures on the sides of the pronotum and of the elytra are coarser than those on the disc; the elytral sculpture as a whole is finer and more shallow towards the apex, and to a lesser degree towards the base. Descriptions, unless it is otherwise stated, refer to the sculpture on the frons, pronotal disc and anterior three-quarters of elytra.

The sides of the pronotum may be wholly or partly crenulate; often they are margined and bear a row of deep punctures; on the posterior edge, between the scutellum and the elytral humeral humps, there is a pair of round pits, the size of which varies according to the species.

The elytral striae (ten, plus an incomplete one between 1st and 2nd) are punctured. As a rule, the seven inner striae are more finely incised and punctured than the three outer ones; on these, an enlargement of punctures is often observed at the level of the lateral melanic spot. Inner interstriae are in most cases two or three times as broad as the striae and rather flat; outer interstriae are narrower, in most cases convex; the 10th and the 11th are often raised in part of their length, but not under the humeral hump unless it is so stated.

Between the mesocoxae there is a raised mesosternal process, the ventral surface of which carries sensory hairs. The anterior part of this is usually raised and excavated; the posterior part narrows and lowers towards the level of the metasternal process. This last is broad and low, its shape determined by the position of metafemora when directed forwards; in most species it has a raised carina in the anterior portion; it is always deeply excavated at the center, and at the bottom of the excavation there are two further depressions, glabrous, placed the one after the other.

The abdomen has five visible sternites (third to seventh), the basal one always with three lengthwise carinae, the apical sternite widely and deeply notched at the tip. For convenience, visible urosternites will be numbered from one to five. The lateral edge of these sternites (which means the posterior edge in the case of the rounded fifth visible sternite) is crenulate in some species, entire in others. The lateral carinae on the first urosternite never reach the posterior edge; the medial one usually does. Urosternites II to IV may have basal carinae; when this it not mentioned it must be understood that none have been observed.

The femoral pubescence is placed obliquely along the femur. I have considered "extensive pubescence" that which covers the whole femur save the anterior edge and the distal articular end. Claws are slender and feebly arched unless otherwise stated.

The maxillary palpi are short for Hydrophilidae; in some species the apical segment shows a sexual dimorphism,

PLATE I:

Fig. 1, 2 : – Hemiosus cognatus *Kn. Fig. 1 : mesosternal process in ventral (left) and lateral view. Fig. 2 : apical segment of maxillary palpus (male).* ▷

Fig. 3, 4 : – H. dimorphus *Orch. Fig. 3 : mesosternal process in ventral and lateral view. Fig. 4 : apical palpite.*

Fig. 5, 6 : – H. hartmanni *Mouch. Fig. 5 : mesosternal process, lateral view. Fig. 6 : apical palpite.*

Fig. 7, 8 : – H. morlestus *Orch. Fig.7 : mesosternal process in ventral and lateral view. Fig. 8 : apical palpite of male (above) and female.*

Fig. 9-11 : – H. mornarius *Orch. Fig. 9 : pronotum and elytra, lateral view. Fig. 10 : mesosternal process, ventrul and lateral view. Fig. 11 : apical palpite (male).*

Fig. 12, 13 : – H. mornax *Orch. Fig. 12 : pronotum and elytra, lateral view. Fig. 13 : mesosternal and metasternal processes, ventral and lateral view.*

Fig. 14 : – H. mulvianus *Orch., mesosternal process, ventral and lateral view.*

Fig. 15 : – H. tenenbaumi *(Orch.), mesosternal process, ventral and lateral view.*

Fig. 16 : – H. toxillus *Orch., mesosternal process, lateral view.*

Fig. 17, 18 : – H. interimus *Mouch. Fig. 17 : pronotum and elytra, lateral view. Fig. 18 : mesosternal and metasternal processes, ventral and lateral view.*

Fig. 19 : – H. maculatus *Sharp, mesosternal and metasternal processes, ventral view and mesosternal processes, lateral view.*

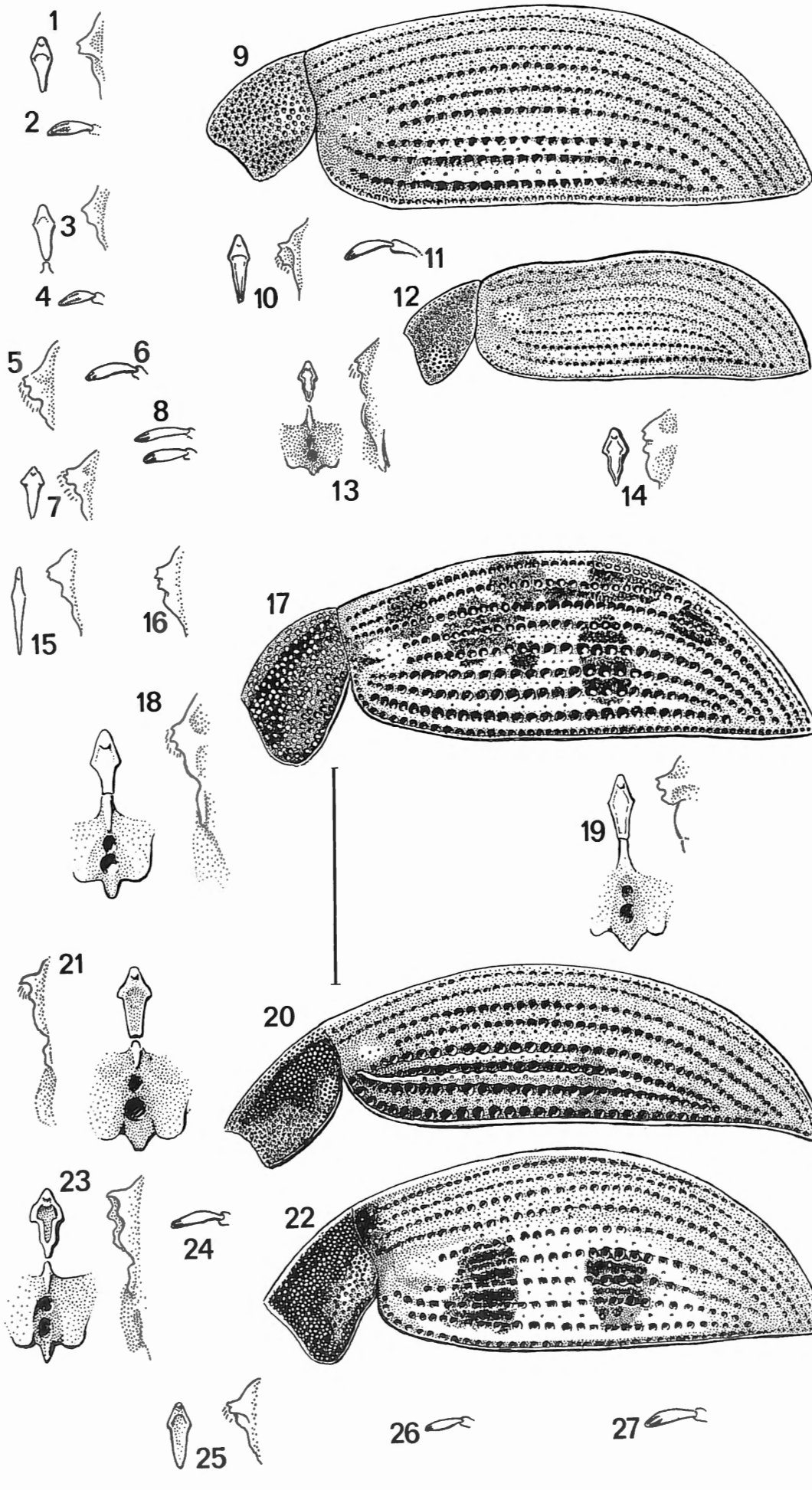
Fig. 20, 21 : – H. moreirai *Orch. Fig. 20 : pronotum and elytra, lateral view. Fig. 21 : mesosternal and metasternal processes, lateral and ventral view.*

Fig. 22, 23, 24 : – H. regalis *Kn. Fig. 22 : pronotum and elytra, lateral view. Fig. 23 : mesosternal and metasternal processes, ventral and lateral view. Fig. 24 : apical palpite (female).*

Fig. 25, 26 : – H. schindleri *Mouch. Fig. 25 : mesosternal process, ventral and lateral view. Fig. 26 : apical palpite.*

Fig. 27 : – H. varidius *Orch., apical palpite.*

Scale = 1 mm.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being longer and more slender in the males than in the females.

A. d'Orchymont (1940) established a difference between those species of *Hemiosus* that have a dark pronotum with metallic sheen, as the type-species *H. maculatus* SHARP, and those that have the pronotum and elytra testaceous, and which he incorporates in what he calls the *dejeani*-complex. I have maintained this division for convenience, although it is somewhat artificial as some species present intermediate patterns of coloration.

In species of the *maculatus*-complex the pronotum and scutellum are the same colour as the head, while the elytra are patterned with extensive melanic spots which often have a slight metallic sheen, appearing only at the bottom of punctures save in very well-melanized specimens. The degree of melanization is correlated with the degree of sclerotization of cuticle, and it depends on the age of the specimen. In species of the *dejeani*-complex the pronotum and elytra are testaceous with melanic spots; the scutellum may have or not have a metallic sheen. On the pronotum, the melanine is usually located on the disc, with a narrow medial testaceous line; it may have a metallic sheen, either slight or strong as that on the head.

Length has been measured from frons to elytral apices. Male genitalia have been drawn from temporary preparations under glass slides, and may therefore appear rather broader than in fresh specimens.

Description of species

DEJEANI-COMPLEX

Hemiosus cognatus (KNISCH, 1921)
(Fig. 1, 2, 28, 35)

Berosus cognatus KNISCH, 1921, Arch. Naturg. A 87 (6) : 16.
B. cognatus : ORCHYMONT, 1940, Bull. Annls Soc. ent. Belg. 80 : 173 (transfers it into *Hemiosus*).

Length of holotype : 2.62 mm.

Head and scutellum melanic with strong metallic sheen. Pronotum and elytra testaceous with extensive melanic spots. Sternites and pubescent part of femora black. Apical joint of maxillary palpi melanic in distal one-third to one-half (fig. 2).

Head and pronotum coarsely and densely punctured; ground finely and sparsely punctulate. Posterolateral pits of pronotum large (three to four times the size of punctures). Scutellum with a few coarse punctures. Inner elytral striae with round, deep, contiguous punctures, similar in size to the pronotal ones; outer striae with slightly larger punctures, not noticeably enlarged on lateral melanic spot. Inner interstriae two to three times as wide as striae, flat, with punctures about half the size of those on striae, irregularly uniseriated. Outer interstriae a little wider than striae, convex, the 11th raised in anterior one-quarter, even under humeral hump, where it is very narrow. External edge of elytron marginate, coarsely and densely punctured in anterior two-fifths, finely so in the rest of the length.

Mesosternal process moderately narrow, with anterior part strongly raised (fig 1). Metasternal process without raised carinae. Urosternal carinae Y-shaped, with the broader part directed backwards, flattened and depressed with respect to the anterior part. Medial carina on first urosternite reaching the posterior edge, strongly raised in anterior half; lateral carinae reaching two-thirds of the length of the sternite. Urosternites II to IV with small basal carinae. Apical notch of fifth urosternite with bottom produced in a large triangular tooth with a bifid apex. Lateral edges of urosternites crenulate (fig. 28). Femoral pubescence extensive. Claws sickle-shaped. Apical joint of maxillary palpi short and thick (fig. 2).

Male genitalia (fig. 35). Basal piece very short (hardly longer than broader, about one-third of total length), asymmetrical in basal three-quarters. Paramera abruptly narrowed in distal two-fifths, with narrowly rounded apices turned slightly inward. Aedoeagus shorter than the paramera, pear-shaped, with apex widely rounded; appendices acuminate, slightly shorter than the aedoeagus.

Material examined : Male holotype, labelled : "Bras. Corumba / (Matto Grosso)" "Coll. A. Kniz /Typus" "Kniz det / cognatus m". Female paratype with same data, labelled "Cotypus". Also two specimens from Mouchamps collection, labelled : "Caceres, Bras. / Mato Grosso / Alvarenga, XII-56" "Museum Frey / Tutzing" "R. Mouchamps det / Berosus / cognatus Knisch"

This species can be separated from most of those that have a testaceous pronotum by its coarse dorsal sculpture. It differs from *H. dejeani* by its smaller size and finer punctures on the elytral interstriae, and from *H. tenenbaumi* by the shape of the mesosternal process (fig. 1), by the extension of the apical melanization on the maxillary palpi (fig. 2), and by the coarseness of the crenulation of the urosternal edges.

Hemiosus dejeani (SOLIER, 1849)

Berosus Dejeani SOLIER, 1849, *in* Gay, Hist. Fís. Polít. Chile, Zool. 4 : 301-302, pl 5 fig. 8.
Hemiosus dejeani : ORCHYMONT, 1940, Bull. Annls Soc. ent. Belg., 80 : 173, 175.
H. dejeani : OLIVA, 1987, Revta Soc. ent. arg., 44 (3-4) : 380-381.

Length : 3.12 - 3.31 mm (no types in the collection).

Metallic sheen on pronotal paramedial spots, on scutellum, often on elytral spots. Apical segment of maxillary palpi melanic on distal third.

Punctures on head and pronotum dense, moderately coarse; ground punctulate. Elytral striae coarsely punctured; interstriae wide, the inner ones flat, 10th and 11th convex, all coarsely and very densely punctured, the punctures as large as those on striae. Punctures of both striae and interstriae enlarged on lateral spot and also behind humeral hump.
Mesosternal process narrow, neither raised nor broadened in its anterior part. Apical notch of fifth urosternite with the bottom bidenticulate.
Male genitalia : Basal piece long, asymmetrical in basal third. Paramera gradually acuminate, the tips not turned inwards, but appearing so at the first glance because of subapical broadening of paramera. Aedoeagus bottle-shaped, truncate at the apex; appendices nearly as long as the aedoeagus, acuminate.
Material examined : a male and a female from Chili, labelled "Col. Gay 1848". A male labelled "Chili / Collection Léon Fairmaire / 1906". A male labelled "Santiago (Chili) / Rialma 5.5". A male labelled "Chili / P's Constitucion".
H. dejeani is the only species of this genus in which the punctures on elytral interstriae are as large as those on striae. The narrow mesosternal process is also most characteristic.

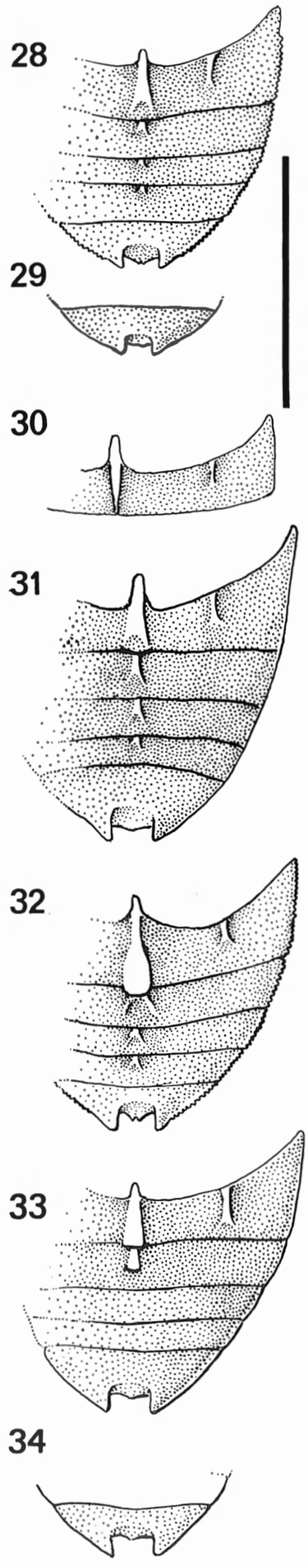
Hemiosus dimorphus ORCHYMONT, 1940
Fig. 3, 4, 29, 35

Hemiosus dimorphus ORCHYMONT, 1940, Bull. Annls Soc. ent. Belg. 80 : 182-183

Length of male paratype : 2.12 mm.
Head, pronotal disc and scutellum melanic with strong metallic sheen. Edges and anterior angles of pronotum testaceous; no medial testaceous line. Elytra without definite melanic spots in observed paratypes. Pubescent part of femora melanic. Apical segment of maxillary palpi melanic in distal half (fig. 4).
Head and pronotum finely, moderately densely punctured; punctures about the size of ommatidia. Posterolateral pits small (about twice the size of punctures). Edge of pronotum margined, only anterior angles crenulate. Scutellum nitid, with a few fine punctures. Inner elytral

PLATE II

Fig. 28 : – H. cognatus : *visible urosternites.*
Fig. 29 : – H. dimorphus, *fifth urosternite.*
Fig. 30 : – H. hartmanni, *first urosternite.*
Fig. 31 : – H. morlestus, *urosternites.*
Fig. 32 : – H. interimus, *idem.*
Fig. 33 : – H. moreirai, *idem.*
Fig. 34 : – H. regalis, *fifth urosternite.*



striae with punctures about twice the size of those on pronotum, spaced by about their own diameter.
Outer striae with deep, contiguous punctures about three times the size of pronotal ones. Inner interstriae flat, moderately broad; 8th flat, slightly narrower than inner ones; 9th convex, one and a half times as broad as outer striae; 10th and 11th raised in anterior three-quarters. Punctures on inner interstriae about the size of those on pronotum. Elytral apices of male separately rounded, of female produced and narrowly rounded.
Mesosternal process narrow, the anterior part only a little raised (fig. 3). Metasternal process with very low anterior carina. First urosternite with narrow carinae, the medial reaching three-quarters of its length, the lateral ones short. Apical notch in fifth urosternite with bottom not produced (fig. 29). Lateral edges of urosternites entire. Femoral pubescence moderately extensive (one quarter of femur glabrous). Apical segment of maxillary palpi short and thick in both sexes.
Male genitalia (fig. 36) : Basal piece very long (more than three times as long as broad, about three-fifths of total length), asymmetrical only at the base. Paramera long, with apical sixth turned inwards. Aedoeagus shorter than paramera, subcylindrical, with apex rounded; appendices nearly as long as the aedoeagus, broadly acuminate.
Material examined : A paratype of each sex, the male labelled : "Bras" "Paratype" "A. d'Orchymont det / Hemiosus / dimorphus m."; the female labelled : "Brasilia / Rio Jan." "Paratype" "A. d'Orchymont det / Hemiosus / dimorphus m."
N.B. "Brasilia" does not refer to the state called nowadays by that name. The type-locality is "Rio de Janeiro".
This species can be recognized by its fine dorsal sculpture and by the produced elytral apices of the female. It can be distinguished from *H. mulvianus* which also presents these characters, by the extensive apical melanization of the maxillary palpi (fig. 4), and by the narrow urosternal carinae, restricted to the first urosternite.

Hemiosus hartmanni MOUCHAMPS, 1957
Fig. 5, 6, 20, 37

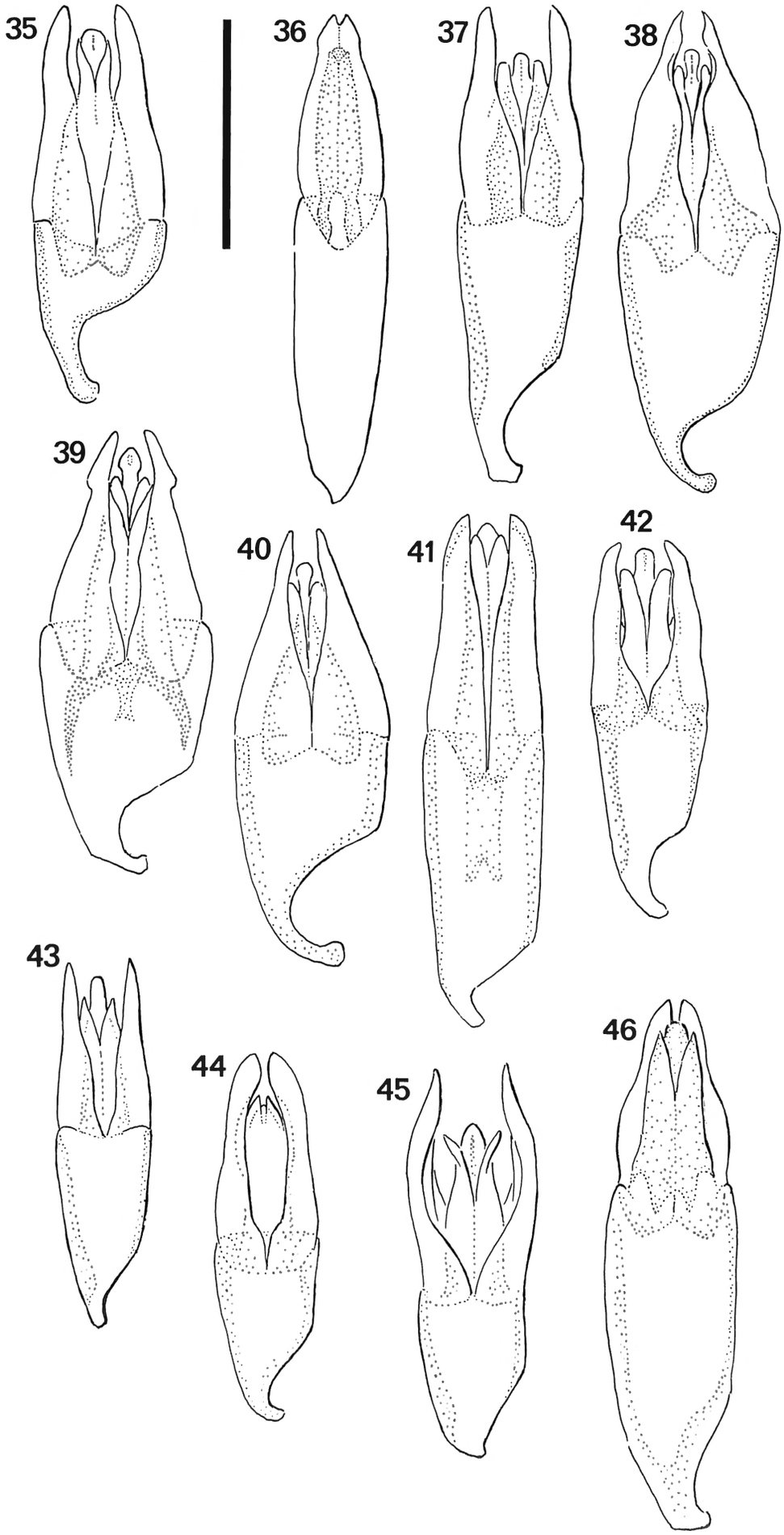
Hemiosus hartmanni MOUCHAMPS, 1957, Senckenbergiana biologica 38 : 309.

Length of male paratype : 3.0 mm.
Head and scutellum with metallic sheen. Disc of pronotum diffusely melanic, with (paratypes) or without (allotype) a medial testaceous line. Elytra with small melanic spots without metallic sheen, excepting the humeral in one of the paratypes. Pubescent part of mesofemora testaceous in female allotype, of metafemora only diffusely melanic. Apical segment of maxillary palpi melanic only at the tip (fig. 6).
Punctures on head fine and dense, on pronotum moderately fine, disposed in an irregular pattern, sometimes spaced by three to four times their diameter. Ground rather densely punctulate, the punctules about one quarter of the size of punctures. Posterolateral pits large, but shallow and ill-defined. Edges of pronotum finely crenulate. Scutellum finely and densely punctured. Inner elytral striae with round dense punctures, two to three times as large as the pronotal ones. Outer striae with slightly larger punctures, contiguous; the 8th and 9th with slight inwards inflection and enlargement of punctures on lateral spot, and also just behind humeral hump. Inner interstriae three to four times as broad as striae, flat; outer interstriae narrower, 8th and 9th slightly convex, 10th raised in posterior half. Punctures on interstriae about half of those on striae. Lateral edge of elytron finely punctured.
Mesosternal process with anterior part prominent, sloping gradually backward (fig. 5). First urosternite with narrow carinae, the medial one just reaching the posterior edge, the lateral ones about half of the length of the sternite (fig. 20). The original description states that there are no abdominal carinae (meaning probably the medial one since "deux petites élévations latérales nettes" are mentioned). This appears to be an error of observation. Apical notch of fifth urosternite with bottom produced in a triangular tooth. Lateral edges of urosternites entire. Femoral pubescence moderately extensive. Apical segment of maxillary palpi longer than the preceding one, slightly longer in males than in female allotype.
Male genitalia (fig. 37) : Basal piece long (about two and a half times as long as wide, three-fifths of total length); asymmetrical in basal third, again in contradiction to original description. Paramera narrowed in apical third, with apices broadly acuminate, slightly turned inwards. Aedoeagus much shorter than the paramera, pear-shaped, rounded at apex; appendices nearly as long as the aedoeagus, with rounded tips.

PLATE III

Male genitalia.

Fig. 35 : – H. cognatus.
Fig. 36 : – H. dimorphus.
Fig. 37 : – H. hartmanni.
Fig. 38 : – H. morlestus.
Fig. 39 : – H. mornarius.
Fig. 40 : – H. mornax.
Fig. 41 : – H. mulvianus.
Fig. 42 : – H. tenenbaumi.
Fig. 43 : – H. toxillus.
Fig. 44 : – H. interimus.
Fig. 45 : – H. maculatus.
Fig. 46 : – H. moreirai.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Examined material : Female allotype, very damaged (one elytron missing, abdomen broken, lacking tip and center). Labelled "Perou (Cusco) / Gay 1849" "A. d'Orchymont det / Berosus (s.str.) / multimaculatus Jensen-Haarup" "Allotype" "R. Mouchamps det / Berosus / hartmanni n.sp. / 57". Also two male paratypes, both labelled : "Sud Peru / Syst. d. Rio Majes / Hartmann 1955" "Paratype" "R. Mouchamps det / Hemiosus / hartmanni n. sp. / 57".
This species can be distinguished from most of those with a testaceous pronotum by the large size. The comparatively fine punctuation of the elytral interstriae and the shape or the mesosternal process (fig. 5) allow to separate it easily from *H. dejeani*. From *H. multimaculatus*, which is very similar in appearance, it differs by the punctures on elytral striae much larger than those on pronotum.

Hemiosus morlestus ORCHYMONT, 1940
Fig. 7, 8, 31, 38

Hemiosus morlestus ORCHYMONT, 1940, Bull. Annls Soc. ent. Belg. 80 : 177.

Length of Holotype : 2.50 mm.
Head with metallic sheen. Disc of pronotum diffusely melanic, in some specimens with, in others without medial testaceous line; edge testaceous. Scutellum with or without metallic sheen, in some specimens with a testaceous margin. Elytral humeral spots small, with slight metallic sheen; remaining spots without sheen. Sternites reddish in the type-series. Femora diffusely melanic at base. Apical segment of maxillary palpi melanic at tip (fig. 8).
Head and pronotal disc rather finely and sparsely punctured, sides of pronotum with coarser punctures. Ground sparsely but rather coarsely punctulate. Posterolateral pits rudimentary. Edge of pronotum entire, but with a regular row of punctures on margin. Scutellum with a few coarse punctures and a smooth unmarked margin. Inner elytral striae with round punctures 1-2 times the size of the pronotal ones; striae 1st and 2nd, and the accesory one, obsolete near the base. Outer striae deep, with coarse, contiguous punctures. Inner interstriae wide, flat; outer ones narrow, convex, the 10th and 11th raised in anterior three-quarters. Punctures on interstriae nearly as large as those on inner striae, dense. Lateral edge of elytron finely but deeply punctured, coarsely so near humeral angle.
Mesosternal process narrow, with anterior part raised in two distinct humps (fig. 7). Metasternal process with fine low anterior carina. Carinae on first urosternite narrow, slightly broadened backwards, the medial one just reaching posterior edge of sternite, the lateral ones about two-thirds of length. Apical notch in fifth urosternite with bottom produced in a triangular tooth (fig. 31). Lateral edges entire. Femoral pubescence moderately extensive. Apical segment of maxillary palpi longer and slimmer in males than in females (fig. 8).
Male genitalia (fig. 38) : Basal piece short (one and a half times as long as broad, about half of total length). Paramera gradually acuminate. Aedoeagus shorter than paramera, rounded at apex; appendices shorter than aedoeagus, with rounded tips.
Material examined : Male holotype, labelled : "R. S. Francisco, Boa Vista / Schubart / Br(azil); 1039" "Br 1039 Pernambuco (Mun) /Boa Vista Rio S. Francisco / 8-9 1937 O. Schubart" "A. d'Orchymont det / Hemiosus / morlestus m. "Type". Also 27 paratypes with the same data.
This species can be distinguished from *H. mornarius* by the lack of carinae on urosternites II to IV, by the sparsely and coarsely punctulate pronotal ground, and by the coarse punctures on elytral striae.

Hemiosus mornarius ORCHYMONT, 1940
Fig. 9, 10, 11, 39

Hemiosus mornarius ORCHYMONT, 1940, Bull. Annls Soc. ent. Belg. 80 : 177-178.

Length of holotype : 2.87 mm.
Head with metallic sheen. Melanic spots on pronotum and elytra and the melanic scutellum, without metallic sheen. Pubescent part of femora diffusely melanic. Apical segment of maxillary palpi melanic in distal one-quarter (fig. 11).
Head coarsely and densely punctured. Pronotum with medium to coarse, sparse but deeply impressed punctures. Ground finely but deeply punctulate. Posterolateral pits shallow, with four or five punctures crowded into the depression. Edge of pronotum coarsely punctured, finely crenulate. Scutellum densely and deeply punctured, with unmarked raised margin. Elytral striae coarsely and densely punctured, the punctures round, contiguous. Interstriae narrow, the inner ones one and a half times as wide as striae, the outer ones about the same breadth, convex, with sparse punctures much smaller than the pronotal ones. Interstria 10th raised in anterior three-quarters, 11th in most of its length (fig. 9). Lateral edge of elytron with a deep, finely punctured groove.
Mesosternal process strongly raised, especially the anterior part, which is moderately broad; posterior part gradually narrowing, more raised that the flat anterior carina of the metasternal process (fig. 10). Urosternal carinae Y-shaped; on sternite I the medial carina reaching posterior edge, the lateral ones about three-quarters of the length, very broad. Urosternites II to IV with flat basal carinae. Apical notch of fifth urosternite with bottom produced in a triangular tooth. Lateral edges entire. Femoral pubescence and maxillary palpi as in *H. morlestus*.

Male genitalia (fig. 39) : Basal piece short, asymmetrical in basal two-fifths. Paramera graduately acuminate, with apices turned in. Aedoeagus a little shorter than paramera, rounded at the apex; appendices noticeably shorter than the aedoeagus, with rounded apices.
Material observed : Type and 22 paratypes (not labelled as such) : "Br(azil). 1196 Pernambuco (Mun. / S. Jose Egypto. Riacho / Jatoba 6-X-37 O. Schubart".
H. mornarius can be distinguished from *H. morlestus* by the finely punctulate ground of the pronotum and by the presence of basal carinae in urosternites II to IV.

Hemiosus mornax ORCHYMONT, 1940
Fig. 12, 13, 40

Hemiosus mornax ORCHYMONT, 1940, Bull. Annls Soc. ent. Belg., 80 : 176, 178-179.

Length of holotype : 1.81 mm.
Head with metallic sheen. Pronotum with melanic discal and posterolateral spots, these and the melanic scutellum without metallic sheen. Elytra with small melanic spots, only the humeral ones with metallic sheen in some specimens. Pubescent part of femora melanic. Apical segment of maxillary palpi melanic in distal one-quarter.
Head and pronotum with moderately coarse punctures, dense on head, on pronotum spaced by two to three diameters. Ground not punctulate. Scutellum finely punctured. Elytra with rounded basal hump in addition to humeral humps, therefore concave in the second 1/6 of their length (fig. 12). Striae deep, with contiguous round punctures two to three times as large as those on pronotum, not noticeably enlarged on lateral spot. Inner interstriae flat, about three times as wide as striae; outer interstriae narrower than inner ones, the 10th raised.
Mesosternal process narrow, with anterior part slightly broadened and raised (fig. 13). Metasternal process with narrow low anterior carina. Urosternites as in *H. mornarius*.
Male genitalia (fig. 40) : Basal piece short, asymmetrical in basal half. Paramera tapering gradually towards the apices, which are not turned inwards. Aedoeagus noticeably shorter than paramera, with rounded apex; appendices shorter than the aedoeagus, with rounded tips.
Material observed : male holotype and 11 paratypes, labelled : "Br. 1009 Pernambuco (Mun. / Cabrobo) Riacho Ouricu / ry 4-9-1937 O. Schubart".
This species can be recognized by its exceptionally small size and by the peculiar shape of the elytra (fig. 12).

Hemiosus mulvianus ORCHYMONT, 1940
Fig. 14, 41

Hemiosus mulvianus ORCHYMONT, 1940, Bull. Annls Soc. ent. Belg. 40 : 176, 179-180.

Length of male paratype : 2.69 mm.
Head, and often scutellum, with metallic sheen. Pronotum and elytra with small diffuse melanic spots. Pubescent part of femora diffusely melanic at base. Apical segment of maxillary palpi melanic at tip.
Head densely, pronotum moderately densely punctured, punctures fine but deeply impressed, regular in distribution. Ground of pronotum sparsely but coarsely punctulate. Posterolateral pits small and very shallow. Lateral edge very finely crenulate, with a line of coarse dense punctures. Scutellum with several punctures like those on pronotum. Inner elytral striae with round dense punctures one to two times the size of pronotal ones. Outer striae with much coarser punctures, contiguous, enlarged on lateral spot. Inner interstriae flat, moderately broad, with punctures one-half to two-thirds of those on striae; outer interstriae narrow and convex, with finer punctures; 10th and 11th raised, narrower than in *H. mornarius*. Elytral apices separately rounded, in females slightly produced.
Mesosternal process narrow, with anterior part widened and strongly raised (fig. 14); posterior part broad, hollow, raised. Anterior carina of metasternal process broadening backwards. First urosternite with Y-shaped carinae, II to IV with basal carinae. Apical notch of fifth urosternite with bottom scarcely produced. Femoral pubescence moderately extense. Apical segment of maxillary palpi thick in both sexes.
Male genitalia : Basal piece long (two and a half times as long as broad, a little less than one-half of total length), asymmetrical in basal third. Paramera long, broadly acuminate. Aedoeagus subcylindrical, scarcely shorter than the paramera; appendices nearly as long as the aedoeagus.
Material examined : A large series, labelled : "Br(azil). 503 Pernambuco : / (Mun. Caruaru : Riacho / Doce 10-II-36 Schubart". A smaller series : "Br. 1124. Ceara Rio / Caras (Crato) / 26.9.37 O. Schubart". Another : "Br. 1070 Pernambuco (Mun. / Ouricury Rio S. Pedro / 17.9.1937 O. Schubart". Another : "Br. 587. Alagoas : Cacho / eira Paulo Affonso / 24. III. 1936 Schubart"; one specimen labelled "Hochwasser zesttümpel Characeen". Another : Br. 577 : Alagoas / Mata Grande Bach / rest flach 23. III. 1936 / O. Schubart". Another : Br. 563 Pernambuco : / (Mun. Sao Benito) Capoeira 20. III. '36 Schubart". Another : "Br. 984 Pernambuco (Mun. / Tacaraju) Cachoeira / Itaparica 1. 9. '37 Schubart". All presumed paratypes but not labelled as such.
This species is easily recognized by the fine dorsal sculpture and by the produced elytral apices of the female. It differs from *H. dimorphus*, which also presents those characters, by the apical melanization of the maxillary palpi, restricted to the tip, as well as by the shape of the mesosternal process (fig. 14).

Hemiosus multimaculatus (JENSEN-HAARUP, 1910)

Berosus multimaculatus JENSEN-HAARUP, 1910, Deutsch. ent. Zeit., 1910 : 542-543.
Hemiosus multimaculatus : ORCHYMONT, 1940, Bull. Annls Soc. ent. Belg., 80 : 173, 176.
H. multimaculatus intermedius MOUCHAMPS, 1960, Senk. Biol., 38 (5/6) : 309.
H. multimaculatus : OLIVA, 1983, Revta Soc. ent. arg., 42 (1-4) : 52-53 (Lectotype).
H. multimaculatus : OLIVA, 1987, Revta Soc. ent. arg., 44 (3-4) : 378-380.

Length of Holotype of *H. m. intermedius* : 3.31 mm.
Head and scutellum with strong metallic sheen. Pronotal and elytral spots small, without metallic sheen. Apical segment of maxillary palpi melanic at tip.
Punctures on head dense, on pronotum moderately dense, of medium size; ground punctulate. Pronotal edge entire, grossly punctured. Posterolateral pits small. Scutellum very densely punctulate, with a few coarse punctures. Inner elytral striae shallow, with round, moderately dense punctures hardly larger than the pronotal ones. Outer striae with somewhat coarser, contiguous punctures, slightly enlarged on lateral spot. Interstriae wide, flat, only the 9th to 11th slightly convex, 11th remarkably wide. Punctures on interstriae rather coarse (one-half to one-third of strial ones). Edge of elytron finely margined.
Mesosternal process narrow, the anterior part strongly raised and broadened, the posterior part not broadened or hollowed. Metasternal process with very flat anterior carina (easily obscured by pubescence). Urosternal carinae narrowly Y-shaped, on first sternite the medial one just reaching the posterior edge, the lateral ones long (three-quarters of length of sternite). On sternite II the carina wide, about three-quarters of length; on III and IV vestigial. Apical notch of V with bottom produced in a triangular tooth. Femoral pubescence moderately extensive. Apical segment of maxillary palpi thick and short in both sexes.
Male genitalia : Basal piece of medium length, asymmetrical in basal one-quarter. Paramera gradually acuminate, the tips turned in. Aedoeagus shorter than the paramera, pear-shaped, with rounded apex; appendices about the same length as aedoeagus, acuminate.
Material examined : Type-series of *H. multimaculatus intermedius* : Holotype, labelled : "Tiguipa / Bol(ivia). Af. 1. 22 / Harrington" "A. d'Orchymont det / Hemiosus multima- / culatus Jes.Haar. var." "R. Mouchamps det / Hemiosus 57 / multimaculatus / ssp. intermedius / n. ssp. type !". Allotype labelled : "Bolivia / Boyuiba to Yacuiba 9. 11. 23". Paratypes : One male labelled "Bolivia / Coll. G L / Harrington" "Boyuiba to Yacuiba XI.'23". Two males and one female labelled "Boyuiba". The characters described by Mouchamps are trivial. Lighter colouring is due to a less sclerotized condition. There does not appear to be any significant difference in sculpture and femoral pubescence. The male genitalia, dry-mounted, are subject to small distortions. Furthermore, the supposed subspecies shares the geographical distribution of the nominotypical subspecies. I consider that there is no justification for this distinction inside a species which shows considerable intraspecific diversity.
The large size of this species sets it apart from all those with a testaceous pronotum except *H. dejeani* and *H. hartmanni*. From the first it can be distinguished by the punctures on the elytral interstriae, distinctly smaller than those on striae; from the second, by the strial punctures, hardly larger than those on pronotum; from both by the mesosternal process, broadened in the anterior, but not in the posterior part.

Hemiosus tenenbaumi (ORCHYMONT, 1937)
Fig. 15, 42

Berosus (s. str.) Tenenbaumi ORCHYMONT, 1937, Bull. Annls Soc. ent. Belg., 77 : 473-475. *Hemiosus Tenenbaumi* : ORCHYMONT, 1940, Bull. Annls Soc. ent. Belg., 80 : 181.

Length of male paratype : 2.31 mm.
Head and scutellum with metallic sheen. Pronotum (in type-series) with two paramedial melanic spots which have a strong metallic sheen. Elytra with medium-sized melanic spots, in some specimens the humeral spots with metallic sheen. Femora diffusely melanic at base. Apical segment of maxillary palpi melanic in distal one-quarter.
Head and pronotum coarsely and densely punctured, ground densely punctulate. Posterolateral pits rudimentary. Lateral edges of pronotum marginate, with a row of punctures, anterior angles crenulate. Scutellum punctulate, with a few coarse punctures. Elytral striae with round, deeply impressed punctures, those on inner striae slightly larger than pronotal punctures, spaced by about their own diameter; punctures on outer striae twice the size of pronotal ones, contiguous. Inner interstriae moderately wide, flat; outer ones narrow, convex; 10th and 11th interstriae raised in anterior three-quarters, even under humeral hump. Punctures on interstriae about half the size of those on inner striae, deeply impressed; on 1st, 3rd, 5th and 7th about two-thirds of strial punctures.
Mesosternal process narrow, with anterior part little elevated, posterior part at same level than low anterior carina of metasternal process (fig. 15). First urosternite with narrow carinae, the medial one not quite reaching the posterior edge, the lateral ones about two-thirds of the length of urosternite. Urosternites II to IV with narrow vestigial carinae. Apical notch of V urosternite with bottom produced in a triangular tooth. Lateral edges of urosternites very finely crenulate. Femoral pubescence moderately extensive. Apical segment of maxillary palpi thick, slightly longer in males than in female paratype.

Male genitalia (fig. 42) : Basal piece of moderate length, asymmetrical in basal two-fifths. Paramera gradually acuminate with tips slightly turned inwards. Aedoeagus only a little shorter than paramera, with rounded apex; appendices shorter than the aedoeagus, obtuse.
Material examined : Five paratypes, four males and one female, labelled : "Morretes / (Savana) / 27-VIII-23". (This corresponds to the Brazilian state of Parana). Female labelled "disséqué / vu mésoc."
The coarse dorsal sculpture together with a moderate size set this species apart from all others except *H. cognatus*, from which it can be distinguished by the melanization of maxillary palpi restricted to the apical one-quarter, and by the narrow mesosternal process (fig. 15).

Hemiosus toxillus ORCHYMONT, 1940
Fig. 16, 43

Hemiosus toxillus ORCHYMONT, 1940, Bull. Annls Soc. ent. Belg., 80 : 181-182.

Length of holotype : 2.37 mm.
Head and disc of pronotum up to posterior edge and scutellum, melanic with strong metallic sheen. Anterior and lateral edges of pronotum, and also anterior angles of the latter, testaceous. Elytra testaceous with small diffuse melanic spots. Legs testaceous; femora diffusely melanic at base. Apical segment of maxillary palpi melanic on apical third.
Head and pronotum with coarse punctures, regular but moderately dense; ground sparsely but deeply punctulate. Posterolateral pits rudimentary. Anterior angles of pronotum crenulate. Scutellum coarsely and densely punctured. Punctures on inner elytral striae hardly larger than those on pronotum, dense; punctures on outer striae twice the size of those on pronotum, contiguous. Striae 7th, 8th and 9th with enlarged punctures on lateral spot. Inner interstriae moderately broad and flat, outer ones narrow, convex; 10th and 11th slightly raised. Punctures on inner interstriae about half the size of those on striae. Mesosternal process with anterior part strongly raised, the posterior part raised with respect to the anterior carina of metasternal process (fig. 16). Urosternites I to IV with low flat carinae, only medial carina of I flattened and slightly broadened towards posterior end, which does not quite reach the posterior edge of sternite. Apical notch of urosternite V with bottom produced in a triangular tooth. Lateral edges of urosternites finely crenulate. Femoral pubescence moderately extensive. Apical segment of maxillary palpi longer and slimmer in male than in female.
Male genitalia (fig. 43) : Basal piece moderately long, asymmetrical in basal one-quarter. Paramera acuminate, apices not turned inward. Aedoeagus shorter than paramera, blunt; appendices much shorter than aedoeagus, acuminate.
Material examined : Male holotype, labelled : "Mx. (= Mexico) Mazatlan / brack. pools 25 / V-1934 H. Hinton" "A. d'Orchymont det /Hemiosus / toxillus m. " Female paratype, labelled : "Sinaloa / Mex."
This species does not appear in South America, but in any case, the characters of the urosternites should be enough to distinguish it from other species of *Hemiosus* with a testaceous pronotum, save *H. cognatus* and *H. tenenbaumi* that have crenulate urosternal edges. The first of these has a coarse crenulation and distinctly broad carinae, while *H. tenenbaumi* can be easily distinguished by the mesosternal process (see fig. 15, 16).

MACULATUS-COMPLEX

Hemiosus bruchi KNISCH, 1924

Hemiosus Bruchi KNISCH, 1924, Wiener ent. Zeitg., 41 : 139-140.
H. Bruchi : BRUCH, 1927, Physis 8 (31) : 546 (Catal.).
H. bruchi : OLIVA, 1987, Revta Soc. ent. argent., 44 (3-4) : 381.

Length of female paratype : 3.50 mm.
Head, pronotum and scutellum melanic with metallic sheen, the bottom of the punctures usually a different colour than the rest of the surface. Elytra testaceous; black spots very large, with a slight metallic sheen. Sternites black. Legs testaceous; pubescent part of femora black. Apical segment of maxillary palpi melanic only on the tip.
Punctures on head and pronotum two to four times the size of ommatidia, spaced by one diameter or less; ground coarsely and deeply punctulate. Posterolateral pits large and deep. Edges of pronotum coarsely crenulate. Scutellum punctulate, with a few coarse punctures and a smooth raised margin. Punctures on inner elytral striae twice the size of those on pronotum, on outer striae about four times those on pronotum, all of them round, contiguous. Punctures slightly enlarged on lateral spot. Inner interstriae flat and wide (three to four times the width of striae), with punctures about half the size of pronotal ones. Outer interstriae about as wide as striae, convex, 8th and 9th slightly raised on lateral spot, 10th and 11th raised in anterior half; punctures obsolete. Outer margin coarsely punctured, more densely on anterior half; humeral edge of elytron crenulate.
Mesosternal process wide; anterior part strongly raised, widely triangular; posterior part wide, excavated. Metasternal process with broad raised anterior carina. First urosternite with flat carinae, the medial one wide, strongly raised, broadening backwards and just reaching the posterior edge of sternite; lateral carinae low, about two-thirds of the length of sternite. Urosternites II to IV with rudimentary Y-shaped carinae. Apical notch in urosternite V with bottom produced in a triangular tooth.

Lateral edges of urosternites crenulate, finely on basal sternites and quite coarsely on fifth. Femoral pubescence moderately extensive. Claws with small basal tooth. Apical segment of maxillary palpi subcylindrical, longer than the preceding one.
Male genitalia : Basal piece long (nearly three times as long as broad, about three-fifths of total length), slightly asymmetrical in basal one-fifth. Paramera long, sinuate, gradually acuminate. Aedoeagus much shorter than the paramera, pear-shaped, rounded at the apex; appendices much shorter than the aedoeagus, broadly acuminate.
Material examined : Two specimens of typical series, probably holotype and paratype, both females. Labelled "Alta Gracia / Cordoba I - 22 / C.Bruch leg" "Knisch det.1923 / Hemiosus / Bruchi Kn." "Typus" and "Cotypus" respectively. The presumptive holotype is in very poor condition; it had been attacked by a dermestid larva (an exuvia was actually found inside the abdomen); the head was missing, the mesofemora and the abdominal sternites were badly gnawed; the whole specimen came apart when the drop of arabic gum which glued it to the card was dissolved. Also : a male of the same locality, 3-II-1922, leg. Bruch. A specimen labelled "Argentina / Cordoba / 1 - 1939 M. J. Viana".
Found in all the North-West and center of Argentina (cf. OLIVA, 1987), where it is the only species of the *maculatus*-complex found; it can be distinguished from other species by the wide inner elytral interstriae.

Hemiosus interimus MOUCHAMPS, 1963
Fig. 17, 18, 32, 44

Hemiosus interimus MOUCHAMPS, 1963, Mitt. münchner ent. Ges. 53 : 145.

Length of paratype : 2.81 mm.
Coloration as in *H. bruchi*. Pubescent part of femora black. Apical segment of maxillary palpi melanic at the tip.
Head coarsely and very densely punctured. Pronotum very coarsely (four to six times the size of ommatidia) and irregularly punctured, the punctures ellyptical or polygonal, very deeply impressed; ground very densely punctulate. Posterolateral pits rudimentary. Lateral edges of pronotum crenulate. Scutellum densely punctulate, with a few coarse punctures. Inner elytral striae with punctures a little larger than those on pronotum; outer striae with punctures 2-3 times the size of pronotal ones; the punctures contiguous, round or ellyptical, very deeply excavated, slightly enlarged on lateral spot. Interstriae narrow, convex, the inner ones about as wide as striae (save the 2nd and 3rd, a little broader); outer interstriae rather narrower than striae, the 10th and 11th raised in anterior 3/4. Punctures on interstriae about 1/4 of those on pronotum (fig. 17).
Mesosternal process broadly rhomboidal, hardly more raised than anterior carina on metasternal process; this last very wide and deeply excavated in the middle (fig. 18). First urosternite with broad tabular medial carina, the rounded rear end of which overlaps the posterior edge of sternite, and lateral carinae flattened and broadening backwards. Urosternite II with very broad flat carina, which does not reach posterior edge. Third and IV with vestigial carinae. Apical notch in urosternite V produced in a triangular tooth with a bifid tip. Lateral edges of urosternites coarsely crenulate (fig 32). Femoral pubescence extensive. All claws with short basal tooth besides basal angular process. Apical segment of maxillary palpi in male paratype long, but thick.
Male genitalia (fig. 44) : Basal piece moderately long, asymmetrical in basal half. Paramera widely rounded at the tips which are turned inwards. Aedoeagus much shorter than the paramera, broarly acuminate at the apex; appendices as long as the aedoeagus, acuminate.
Examined material : A male paratype, labelled : "Chiquitos / Robore 300 m / 27-28-12-53" "Bolivia 1954 leg. W. Forster".
The very coarse pronotal sculpture sets it apart from all other species with a similar colouring. The description of *H. variegatus* (BOHEMAN) by A. d'Orchymont (1940) mentions a similar pronotal sculpture, but also square punctures on the external elytral series; these are round in *H. interimus*.

Hemiosus maculatus SHARP, 1882
Fig. 19, 45

Hemiosus maculatus SHARP, 1882, Biol. Centrali-americana, Col. I (2) : 84-85.

Length of male paratype : 2.31 mm.
Coloration as in *H. bruchi*. Pubescent part of femora black. Apical segment of maxillary palpi melanic only on tip.
Head, pronotum and scutellum densely punctured, the punctures moderately coarse, distributed in irregular lines; ground punctulate. Posterolateral pits large, but ill-defined. Lateral edges of pronotum coarsely crenulate. Punctures on inner elytral striae about twice the size of pronotal ones, those on outer striae about three times the size of pronotal ones, round, not enlarged on lateral spot. Interstriae narrow and convex, save the 2nd and 3rd, flat and moderately wide; all with shallow punctures, one-third to one-half the size of those on pronotum. Outer interstriae narrower than striae, the 11th raised from one-thirds to about three-quarters of elytral length.
Mesosternal process moderately wide; anterior part much raised, posterior part less so, sloping to a lower plane that the metasternal process; this last with a very flat anterior carina,broadened backwards (fig. 19). First urosternite with narrow flat carinae, the medial one

Y-shaped, less raised towards the rear end which just reaches the posterior edge of sternite; lateral carinae short. Urosternites II to IV with flat basal carinae broadened at posterior end. Apical notch in urosternite V with bottom produced in a bifid tooth. Lateral edges of urosternites crenulate as in *H. bruchi*. Femoral pubescence moderately extensive. Claws remarkably small, with small, slender basal tooth. Apical segment of maxillary palpi short and thick in both sexes.

Male genitalia (fig. 45) : Basal piece about twice as long as broad, a little asymmetrical in basal half. Paramera gradually acuminate, sinuate, turned inwards at about two-third of their length, the tips then slightly turned outwards. Aedoeagus much shorter than the paramera, thick, blunt; appendices as long as the aedoeagus, the tips acuminate and turned outwards.

Material examined : Two paratypes labelled : "Pantaleon / 1700 ft / Champion" "B. C. A. Col.I-2 / Hemiosus / maculatus / Sharp" "Paratype". Also a female labelled "Las Cruces / Cz 23-3-11 Pan(ama)." "E. A. Schwarz / Collector" Also a male and a female labelled : "E. A. Schwarz / collector" "Las Cruces / Cz 23-3-11. Pan.". A male labelled "N. Perou / Prov. Tumbez / Grau / C.A. Baer" "Coll. H. Paschet" "Coll. A. d'Orchymont" is not *H. maculatus*. The basal piece of male genitalia is distinctly shorter than in the latter species.

No other species of this group are known from Central America; the species can be identified, in any case, by the mesosternal process (fig. 19)

Hemiosus moreirai ORCHYMONT, 1921
Fig. 20, 21, 33, 46

Hemiosus Moreirai ORCHYMONT, 1921, Bull. Annls Soc. ent. Belg., 61 : 251-253.
H. Gahani ORCHYMONT, 1921, ibid. : 253-255 (nov. syn.).
H. moreirai, H. gahani : ORCHYMONT, 1940, Bull. Annls Soc. ent. Belg., 80 : 172.

Length of cotypus : 2.62 mm.

Head melanic with strong metallic sheen. Pronotum and scutellum melanic with slight metallic sheen; pronotum diffusely testaceous on anterior angles. Elytra testaceous with large melanic spots. Pubescent part of femora melanic. Apical segment of maxillary palpi melanic in distal one-quarter.

Head and pronotum densely, rather finely punctured; ground punctulate. Posterolateral pits rudimentary. Lateral edges of pronotum marginate and finely crenulate, anterior angles coarsely crenulate. Scutellum punctulate. Inner elytral striae finely (punctures hardly larger than pronotal ones) and rather shallowly punctured. Outer striae with coarse contiguous punctures. Inner interstriae wide and flat; the outer narrow and convex; 10th slightly raised in the anterior two-thirds of its length, even under humeral hump; 11th slightly raised in all its length; lateral edge of elytron coarsely and deeply punctured, marginate (fig. 20). Interstriae finely and sparsely, but deeply punctured.

Mesosternal process very broad, anterior part hardly raised, the whole ventral surface almost on a level with the low flat anterior carina on the very wide metasternal process (fig. 21). First urosternite with narrowly tabular medial carina and narrow lateral carinae that broaden backwards. Urosternites II to IV with flat basal carinae (fig. 33). Apical notch in fifth urosternite with bottom produced in a triangular tooth. Lateral edges very finely crenulate, appearing entire at low manification (less than 50 x). Femoral pubescence extensive. Apical segment of maxillary palpi short and thick in both sexes.

Male genitalia (fig. 46) : Basal piece long, asymmetrical in basal third. Paramera slightly narrowed in apical three-fifths, the tips turned inward. Aedoeagus shorter than paramera, blunt; appendices shorter than the aedoeagus, acuminate.

Material examined : Male holotype, labelled : "Rio de Janeiro / Brasil 1903 / C. Moreira 7" "Coll. A. d'Orchymont" "Type" "A. d'Orchymont det / Hemiosus 1921 / moreirai Orch". Two specimens labelled "Cotypes" with the same data. One male labelled "Brasilia / Rio Jan." (This is to be understood as "Brazil : Rio de Janeiro"). Holotype of *H. Gahani*, labelled : "Rio de Janeiro / Bresil 1903 / C.Moreira 7" "Coll. A. d'Orchymont" "Type" "A. d'Orchymont det. / Hemiosus 1911 / Gahani Orch". A very large specimen, which does not differ from the typical series of *H. moreirai* in any significant way. In spite of Orchymont's description, the 10th elytral interstria is distinctly raised even under the humeral hump, a character that I have not observed in any other species of *Hemiosus*. This, together with the diffusely testaceous anterior angles of the pronotum, makes it unmistakable. The fine dorsal sculpture is also different from that of all other species, except *H. regalis* which has a very different shape ans colouring.

Hemiosus regalis KNISCH, 1922
Fig. 22, 23, 24, 34

Hemiosus regalis KNISCH, 1922, Arch. Natg., A 87 (6) : 125-126.

Length of Holotype : 2.81 mm.

Head, pronotum, scutellum, basal band on elytra comprising five inner interstriae, sutural and external interstriae in their whole length, bottom of six inner striae and small elytral spots, melanic with strong metallic sheen. Ground of elytra testaceous. Humeral humps testaceous, but there is a large spot just behind and below each of them. Pubescent part of femora melanic. Apical segment of maxillary palpi melanic at the tip (fig. 24).

Head and pronotum densely and regularly punctured, the punctures one to two times the size of ommatidia;

ground punctulate. Posterolateral pits rudimentary. Pronotum narrower than base of elytra; anterior angles crenulate. Scutellum punctulate, with two rows of fine, deeply impressed punctures. Punctures on inner elytral striae slightly larger than those on pronotum; those in outer striae much larger, round, enlarged on lateral spot and also on posthumeral spot. Punctures on outer edge of elytron coarse and deep. Inner interstriae flat, moderately narrow; outer interstriae narrow, convex, the 10th and 11th raised in anterior half (fig. 22). Interstriae with fine, sparse, shallow punctures, hardly larger than the pronotal punctulation. Lateral edge of elytron with a row of coarse but regular round punctures.
Mesosternal process broad, strongly raised; posterior part excavated and more raised than the metasternal process; this last with a broad flat anterior carina and a shallow median depression (fig. 23). First urosternite with flat carinae, the medial broad, raised between metacoxae and flattened in the rest of its length, overlapping with its rounded rear end the posterior edge of the sternite; lateral carinae broadening abruptly backwards, about two-thirds of the length of sternite. Urosternites II to IV with broad basal carinae. Apical notch in fifth urosternite with bottom produced in a triangular tooth (fig. 34). Lateral edges of sternites entire under 50 x magnification. Femoral pubescence moderately extensive. Claws with a rather long basal tooth.
Material examined : Female holotype, labelled : "Brasil. Sta. Cathar. / Bez. Humboldt, /Ort Isabelle" " W. Ehrhardt, leg / vend. 1-11-1910" "Hemiosus / regalis Knisch / A. Knisch det 1921" "Coll. A. Knisch / Typus". Female paratype with same data, labelled "Cotypus".
This species can be easily recognized by the pattern of elytral coloration, by the mesosternal process (fig. 23) and by the urosternites with entire lateral edges. The shape, with the pronotum narrower than the base of elytra, distinguishes it from *H. moreirai*, which also has a fine dorsal sculpture.

Hemiosus schindleri MOUCHAMPS, 1963
Fig. 25, 26

Hemiosus schindleri MOUCHAMPS, 1963, Mitt. münchner Ent. Ges., 53 : 144.

Length of allotype : 2.44 mm.
Coloration as in *H. bruchi*. Pubescent part of femora melanic. Apical segment of maxillary palpi melanic at the tip.
Head and pronotum coarsely and densely punctured; pronotal punctures alveolar, contiguous, 3-4 times as large as ommatidia, spaced by punctulate ridges. Posterolateral pits deep, 2-3 times as large as punctures. Anterior angles of pronotum crenulate. Elytral striae with coarse punctures much larger than the pronotal ones, round, contiguous,those on outer striae larger than the inner ones, enlarged on the lateral spot. Inner interstriae narrow (hardly wider than striae), slightly convex; outer interstriae narrower than striae, convex, the 10th and 11th (wider than the 10th) raised in anterior half. All interstriae finely and sparsely, but deeply punctured.
Mesosternal process moderately wide, anterior part raised, posterior part less elevated than the flat anterior carina of metasternal process (fig. 25). First urosternite with raised, narrowly Y-shaped medial carina. Second urosternite with broad low carina. Apical notch in fifth urosternite with bottom not produced. Pubescence of mesofemora covering about basal half, of metafemora moderately extensive. Claws small, with two small basal teeth. Apical segment of maxillary palpi about twice as long as the preceding one, thick (female) (Fig. 26).
Material examined : Female allotypus, labelled : "Chapare-Gebiet / oberer Rio Chipiriri / 400 m 2/5-11-53" "Bolivia / 1954 / leg; W. Forster" "Allotype" "R. Mouchamps det / Hemiosus / schindleri n.sp.".
This species can be recognized by the shape of the mesosternal process (fig. 25); the narrow elytral interstriae distinguish it from *H. bruchi* and the pronotal sculpture from *H. interimus* in which this is much coarser.

Hemiosus varidius ORCHYMONT, 1940
Fig. 27

Hemiosus varidius ORCHYMONT, 1940, Bull. Annls Soc. ent. Belg., 80 : 183-185

Length of holotype : 3.06 mm.
Coloration as in *H. bruchi*, except that the apical segment of maxillary palpi is melanic on distal third.
Head and pronotum coarsely and densely punctured; ground punctulate. Posterolateral pits large and shallow, with three or four punctures crowded thogether in the depression. Lateral edges of pronotum crenulate. Scutellum sparsely punctulate, with a few coarse punctures. Inner elytral striae with coarse, deep, contiguous punctures about twice the size of those on the side of pronotum. Outer striae with larger square punctures, not noticeably enlarged on lateral spot. Inner interstriae one and a half to two times the breadth of striae, slightly convex, densely punctured, the punctures about the size of ommatidia, disposed in more than one row. Outer interstriae convex, almost carinate, narrower than striae, punctured, the 10th and 11th raised in anterior three-quarters, the 10th even under humeral hump, but only slightly. Lateral edge of elytron margined, coarsely and densely punctured; humeral angle crenulate.
I have not dared to unglue the single type to examine the sternal characters. However, it can be seen that the first urosternite has a flat, raised medial carina which overlaps its posterior edge, and lateral carinae in about two-thirds of its length.

Material examined : Female Holotype, labelled : "Br(azil); 970 Pernambuco : / (Mun. Buique) Brejos / José 30-8-1937. Schubart" "Type" "A. d'Orchymont det / Hemiosus / varidius m.".

The square punctures on outer elytral striae set this species apart from all the others with a similar coloration (see A. d'Orchymont, 1940, for differences with *H. variegatus* (BOHEMAN)).

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