

New Hydrophilidae of the Old World (Coleoptera, Hydrophilidae) by FRANZ HEBAUER

ABSTRACT

Twenty-seven species of Hydrophilidae are described: *Allocotocerus magnus* sp. n. (Africa), *Anacaena luticola* sp. n. (Madagascar), *A. mascarena* sp. n. (Madagascar), *Cercyon basirufus* sp. n. (India), *Cercyon immensus* sp. n. (Vietnam), *Cercyon signifer* sp. n. (China), *Cercyon tenuipunctus* sp. n. (India), *Cercyon thai* sp. n. (Thailand), *Cercyon zambicus* sp. n. (Africa), *Coelostoma homalinum* sp. n. (Madagascar), *Chasmogenus cattienus* sp. n. (Vietnam), *Cyclotypus heidenfelder* sp. n. (Madagascar), *C. tinctus* sp. n. (Madagascar), *Cylorgymus repentinus* sp. n. (S.Africa), *Enochrella dubia* sp. n. (Philippines), *Enochrella viscalis* sp. n. (Philippines), *Helochares (Hydrobaticus) namcatensis* sp. n. (S.Vietnam), *Helochares (Hydrobaticus) skalei* sp. n., (Africa), *Helochares (Hydrobaticus) steffani* sp. n. (Africa), *Helochares (Hydrobaticus) strigellus* sp. n. (Liberia), *Helochares (Hydrobaticus) wagneri* sp. n. (Africa), *Helochares (s. str.) madli* sp. n. (Madagascar), *Helochares (s. str.) sublineatus* sp. n. (Africa), *Laccobius (Microlaccobius) andersi* sp. n., (Far East Russia), *Pachysternum keralense* sp. n. (India), *Paroosternum leytenensis* sp. n. (Philippines); *Rhombosternum dactyloides* sp. n. (India). - *Helochares pallens* ssp. *insolitus* D'ORCHYMONT, 1925 is upgraded to species rank. *Helochares (Hydrobaticus) ubudensis* HEBAUER, 1998 has proved to be a junior synonym of *Helochares (Hydrobaticus) schwendingeri* HEBAUER, 1995. Male genitalia are figured.

KEY WORDS

Coleoptera, Hydrophilidae, Afrotropical, Palearctic, Oriental regions, new species.

INTRODUCTION

Examination of a large amount of material from several museums necessitates occasional description of new species from different genera. Not in all cases it is necessary or desirable to review a whole genus on such occasions.

The genus *Allocotocerus* KRAATZ, 1883 (*Globaria* LATREILLE, 1829) was revised by D'ORCHYMONT (1939) with 16 species; 6 additional species have been described later. Now another new species is found in Eastern Africa. The genus is represented from Africa to Australia.

The genus *Anacaena* THOMSON, 1859 with 57 described species is distributed worldwide, except Australia. Two new species from Madagascar are described in this paper.

The large genus *Cercyon* LEACH, 1817 has never been revised as a whole. The western fauna is best known, while the easternmost fauna has been described and reviewed in several papers, by NAKANE (1965/1966), SHARP (1874, 1884), SHATROVSKIY (1989) etc. Some *Cercyon* species of China were described by WU & PU (1995), and recently discussed and keyed by JIA (1996) in his thesis.

The genus *Chasmogenus* SHARP, 1882 is distributed almost over the whole world, (except the Nearctic region), and has been reviewed by HEBAUER (1992), completed in 1995a, b, containing 27 species so far, another new species is described in this paper.

The genus *Coelostoma* BRULLÉ, 1835 is represented worldwide (except the Neotropics) with at present 99 species, 3 new species being described in this paper. The main area of distribution is the Afrotropical region.

The genus *Cyclotypus* SHARP, 1882 was erected on two species (*godmani*, *latissimus*) from

Central-America. Up to now only the type specimens are known, both sexes from the first species, only a single badly conserved female from the second species (NHM). Now an unexpected record of two new species taken from Madagascar is described. The genus is intermediate between *Dactylosternum* and *Coelostoma* having ten fully developed elytral series and the raised middle portion of metasternum projecting anteriorly between mesocoxae, closely abutting the strongly raised arrowhead shaped mesosternal process.

From *Dactylosternum* *Cyclotypus* differs clearly in the following characters:

- a) Antennal club loosely segmented,
- b) 1st ventrite not or incompletely carinate,
- c) 1st segment of middle and hind tarsi fully twice as long as the 2nd segment.
- d) Mesofemora pubescent

Cyclotypus differs from *Coelostoma* in the presence of ten elytral series.

Though the records of Madagascar differ from the description of the neotropical species in some characters (eyes separated by less than 5 x the diameter of one eye; mentum without the fringe of setae in the male), membership of the genus *Cyclotypus* is evident.

The genus *Cylorygmus* SPANGLER, 1972 belongs to the Hydrophilidae tribe Rygmodini d'Orchymont, 1916. It is distributed over the Australian region and represented by one species in Chile.

Cylorygmus lineatopunctatus D'ORCHYMONT, 1933 was described from Chile by monotypy. Now a surprising record of a second species from Africa is described in this paper.

This genus is one of the larger sized subparallel forms of Sphaeridiinae similar to *Coelostoma* with loosely segmented antennal club but with the first segment of hind tarsi much shorter than the second segment. Elytra with 10 distinct punctured series. The raised middle portion of metasternum is not projecting anteriorly between mesocoxae in contrast to the *Coelostomatini*.

The genus *Enochrella* HANSEN, 1999, established on a single species from the Philippines, differs from the genus *Enochrus* mainly in the presence of 10 punctural series on elytra in combination with nearly glabrous hind femora, a flat mesosternal elevation and the last segment of maxillary palpi not longer than the penultimate. Now two further species of that genus, both also from the Philippines, are recognised as new, showing a strong variability of the elytral sculpture including totally missing series.

The African species of the genus *Helochaeres* MULSANT, 1844 have been listed by HEBAUER (1996). Additional to 66 African species of the subgenus *Hydrobaticus* MACLEAY, 1873, 4 further species of that subgenus are described later (HEBAUER 1998, 1999). Six new species are described here.

After HANSEN (1999), 216 species of the worldwide distributed genus *Laccobius* are described up to now. Another species from Eastern Siberia is described in this paper.

The Oriental species of the genus *Pachysternum* MOTSCHULSKY, 1863 have been treated by D'ORCHYMONT (1926). In his key he listed 8 species (inclusively *P. sibiricum* KUWERT and *P. haemorrhoum* MOTSCHULSKY). A new species very close to *P. apicatum* MOTSCHULSKY will be described in this paper. Perhaps the occurrence of *P. apicatum* in India, supposed by MOTSCHULSKY (f. D' ORCHYMONT 1926), concerns the new species.

The genus *Paroosternum* SCOTT, 1913 was erected on a single species, *P. degayanum* from the Seychelles. Subsequently there came into being a great confusion round the genera *Oosternum* and *Paroosternum* (D'ORCHYMONT, 1914, 1925, 1942). A first step to clarify the delimitation of the two genera was made by HANSEN (1991); a second important step clearing the synonymies was undertaken by HANSEN (1999). On this basis 4 species of *Paroosternum* are described up to now and another species is described in this paper.

The differences between *Oosternum* and *Paroosternum* are recognized as follows:

- a) *Paroosternum*: Raised middle portion of prosternum deeply excised laterally,
Oosternum: Raised middle portion of prosternum without lateral excision.

- b) *Paroosternum*: Metasternum with complete femoral lines, but without anterolateral arcuate ridge.
Oosternum: Femoral lines generally absent, (only in two known species, *soricoides* D'ORCHYMONT and *sharpi* HANSEN, present); anterolateral arcuate ridge always present.
- c) *Paroosternum*: Genital segment of primitive type with a well developed, elongate median sclerite,
Oosternum: Genital segment of a derived type with median sclerite reduced to a basal, transverse crescent.
- d) *Paroosternum*: 1st ventrite without numerous fine longitudinal ridges on each side of median carina;
Oosternum: 1st ventrite with distinct numerous fine longitudinal ridges on each side of median carina.

Updated key to the species of *Paroosternum*

- 1 Elytral intervals at most apically alternatingly convex _____ 2
 - Elytral intervals from base to apex strongly alternatingly convex. Pronotum coarsely punctate [Papua New Guinea] _____ *P. alternans* HEBAUER, 2001
- 2 Mesosternal tablet widest in the middle. Pronotum finely punctate _____ 3
 - Mesosternal tablet widest behind the middle, broadly contacting the elevated metasternal elevation _____ 4
- 3 Pronotum dull, covered with fine reticulate microsculpture. Elytral intervals alternatingly convex in apical third [Japan, China, Taiwan, Africa, Hawaii] _____ *P. sorex* (SHARP, 1874) [= *horni* D'ORCHYMONT, 1914]
 - Pronotum shining. Elytral intervals not distinctly alternatingly convex in apical third [Philippines, Sri Lanka] _____ *P. leytenensis* sp. n.
- 4 Mesosternal tablet coarsely punctate beneath. Prosternum carinate. [Java, Singapore, Vietnam] _____ *P. saundersi* D'ORCHYMONT, 1925
 - Mesosternal tablet smooth, distinctly concave. Prosternum not carinate [Seychelles, Singapore] _____ *P. degayanum* SCOTT 1913 [= *ecarinatum* D'ORCHYMONT, 1942].

The genus *Rhombosternum* BALFOUR-BROWNE, 1942 of the Sphaeridiinae tribe Protosternini HANSEN, 1991 has been revised and their phylogeny was analysed by BAMEUL (1997), validating 6 species, all distributed in the Oriental region. Another interesting species of this evidently polyphyletic genus is described now from India.

ABBREVIATIONS

CHG	-	Coll. F. Hebauer, Grafing, Germany
CSB	-	Coll. A. W. Steffan, Bochum
CSH	-	Coll. A. Skale, Hof/Saale
MKB	-	Museum Alexander Koenig, Bonn
MNB	-	Museum für Naturkunde an der Humboldt-Universität Berlin
MNS	-	Staatl. Museum für Naturkunde, Stuttgart
NHM	-	Natural History Museum (British Museum) London
NME	-	Naturkundemuseum Erfurt
NMW	-	Naturhistorisches Museum Wien
SMS	-	Swedish Museum of Natural History Stockholm
SMWN	-	State Museum Windhoek, Namibia
TMB	-	Temészettudományi Múzeum Budapest
ZML	-	Zoological Museum Lund

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THE SPECIES

Allocotocerus magnus sp. n.

Holotypus (male): Kenya, 35 km W Kitale, 21.-25.XII.1990, Almost dry stream, leg. Sven Persson (ZML).- **Paratypes:** 1 female (same data, CHG).- 3 females: Kenya, Kahamega F. 0°22'N/ 34°50'E, 1800 m, 7.-11.II.1999, leg. Th. Wagner (2 MKB, 1 CHG).- 2 ex.: Uganda: Distr. Masindi, Budongo Forest n. Sonso, 1°45'N-31°35'E, 15.-25.I.1995, leg. Th. Wagner (MKB).

Diagnosis: This species is most close to *A. seriatus* RÉGIMBART, but separated from this by its larger size and by the abdominal segments being all carinate.

Description: Length: 4.0 mm.- Oblong globular, black, shining, underside piceous. All abdominal segments carinate. Head finely, very densely punctate, evidently shagreened between the punctures, with metallic reflections. Pronotum laterally punctate as head, dorsally extremely finely punctate, fore angles narrowly rounded. Elytra laterally distinctly stronger punctate than pronotal sides, dorsal punctuation fine to very fine. Mouthparts yellow; last segment of maxillary palpi apically slightly darkened. All abdominal segments carinate. Aedeagus nearly as long as abdomen; basal piece twice as long as parameres; the latter wide, narrowed at outside middle, broadly rounded apically, straight on inner face. Median lobe much shorter than parameres (Fig. 21).

Etymology: From Latin: magnus = large-sized.

DISTRIBUTION: Kenya.

Anacaena luticola sp. n.

Holotypus (male): "MADAGASCAR, Antseranana distr. Sambirana riv. Maroato vill., 5.-12-XII-01 [=2001], D. Hauck lg." (CHG).

Diagnosis: This species comes closest to the European *A. lutescens* in its ventral sculpture and femoral pubescence, but differs from that species in the almost impunctate surface, the colour of the maxillary palpi and the quite different aedeagophore.

Description: Length: 2.3 mm; width: 1.4 mm.- Broadly oval, strongly convex; dark yellowish brown with paler sides of pronotum and elytra, also with pale elytral base and sutural interval. Head smooth, almost impunctate, strongly shining black with large diffuse preocular patches and pale labrum. Maxillary palpi yellow, ultimate segment asymmetrical, infuscated apically. Antennae 9-segmented. Mentum trapezoid, uneven, rugosely punctate. Pronotum strongly convex, smooth, microscopically finely, very distantly punctate, black with sides and angles broadly yellow. Scutellum dark, very finely but distinctly punctate. Elytra widest behind shoulders, broadly rounded at apex. ca. 1.1 x as long as their combined width, punctate as pronotum. Sutural stria abbreviated in basal fourth. Mesosternum with large, pointed transverse carina. Hair-line on underside of hind femora oblique as in *A. lutescens*. Legs castaneous. Aedeagophore: Median lobe much shorter than parameres, included by the strongly widened and inwards pointed apices of the parameres. (Fig. 4).

Etymology: Derived from Latin: lutum = swamp; incolat = inhabitant.

Anacaena mascarena sp. n.

Holotypus (male): Madagascar, Parc d'Ambre, 16.IX.-21.IX.1997, leg. P. u. H. Schüle. (MNS).- **Paratypes:** 2 exs.: same data as holotype (MNS, CHG).

Diagnosis: Until now this is the second known species of the genus from Madagascar; it is characterized between all known species of this genus by the particular colour pattern and the strongly reduced pubescence of hind femora. It belongs to the '*globulus*'-type of mesosternal shape.

Description: Length: 2.2 mm; width: 1.5 mm.- Oval, moderately convex; black with sides well-defined yellow and with longitudinal yellow stripes in posterior third of elytra. Head extremely finely, moderately densely punctate; shining black with pale preocular patches as wide as diameter of one eye. Maxillary palpi unicoloured testaceous; ultimate segment subcylindrical. Antennae 9-segmented. Pronotum extremely finely, very distantly punctate.

tate; shining black with sides broadly testaceous, the pale colour of the sides lobed to midline as in some *Laccobius*. Elytra moderately coarsely, moderately densely punctate; shining black with pale sides and apex; the latter with a few pale stripes reaching forward to posterior third, one or two pairs of pale spots at elytra base, more or less recognizable; sutural stria deeply impressed posteriorly, abbreviated in basal third. Underside piceous; legs castaneous; hind tarsi much shorter than tibial length. Mesosternal elevation forming an elevated transverse ridge without a tubercle. Pubescence of hind femora reduced; exceeding slightly the trochanter on posterior margin, and reaching to about basal two thirds of anterior margin. Aedeagophore with apically rounded median lobe imbedded in the lobe-shaped ends of parameres (Fig. 5).

Etymology: Named in reference to the type locality.

DISTRIBUTION: Known only from the type locality.

Cercyon (s. str.) basirufus sp. n.

Holotypus (male): 2.5 x 1.5 mm. Indien: Tamil Nadu, Ootacamund, Pykara, Mysore, 22.VIII.1989, leg. A. Riedel (MNS).- **Paratypes:** 7 exs. (same data, 5 MNS, 2 CHG).- 2 exs.: India, Tamil Nadu, Kodaikanal, Madurai, 28.VIII.1989, 1400 m, leg. A. Riedel (MNS).

Diagnosis: Closely related to *C. pseudodilutus* SATÔ, from which it is separated by colour, the stronger punctuation of the elytral interstices, by the longer mesosternal lamina, and the more slender aedeagus.

Description: Length: 1.9-2.6 mm; width: 1.3-1.5 mm.- Broadly oval, moderately convex, surface black with sides of pronotum, basal third and apical portion of elytra rufotestaceous, rather strongly and densely punctate, seriate striate.

Head rather coarsely and densely punctate, shining black; maxillary palpi testaceous. Pronotum punctate like head, margin continued round fore and hind angles, shining black, sides and angles well delimited yellowish. Elytra broadly oval, about 1.5 x as long as their combined width, with 10 deeply impressed series of rather strong punctures; the 6th, 8th and 9th series abbreviated basally, the 5th – 8th series not attaining the apex; interstices distinctly convex, more in posterior half, moderately coarsely punctate, shining black with basal third inclusively shoulders rufotestaceous and with large pale preapical patches. Underside piceous with yellow legs and epipleura. Mesosternal lamina high, very narrow linear, about 10 x as long as wide, anteriorly not abruptly but obliquely raised. Elevated portion of metasternum shining, extremely finely, obsoletely punctate, sides of metasternum heavily shagreened and rather strongly but shallowly punctate, without femoral lines. Aedeagus very slender with lancet-shaped median lobe, not longer than the parameres; the latter waisted at outer margin and dilated apically with rounded apices (Fig. 18).

Etymology: From Latin: basis = base; rufus = red.

Cercyon (s. str.) immensis sp. n.

Holotypus (male): 4.0 x 2.5 mm. Vietnam, Tamdao, 80 km N of Hanoi, Prov. Vinh phu, 900 m, 20.IV.1986 (MNS).- **Paratypes:** 1 ex.: (same data, CHG).

Diagnosis: Because of the large size and entirely piceous colour hardly to confuse with other species, except *C. lazarensis* D'ORCHY-MONT from the Philippines, which has the elytral series nowhere sulcate even at the extremity. The new species is less strongly punctate than *C. densipunctatus* D'ORCHY-MONT from Malaysia.

Description: Length: 4.0 mm; width: 2.5 mm. Rather broadly oval, moderately convex, entirely piceous, with 10 striate elytral series, very finely punctate head and pronotum and extremely narrow mesosternal lamina.

Head very finely, moderately densely punctate, without shagreen, shining rufo-piceous; maxillary palpi reddish, very slender. Pronotum punctate and coloured like head, the lateral margin slightly rounded, border not continued round hind angles. Elytra about 1.3 x as long as their combined width; widest before middle, broadly rounded at apex, with 10 moderately strong and dense punctural series, progressively more striate behind, the 6th, 8th and 9th stria abbreviated basally, the 10th abbreviated apically, only the 9th stria is reaching the apex including all others; interstriae extremely finely, distantly punctate, with irregular scratches of

microsculpture. Underside and legs rufo-piceous, mentum rather flat, with scattered irregular punctures. Mesosternal lamina extremely narrow, about 10 x as long as wide, rugosely sculptured beneath. Elevated middle portion of metasternum pentagonal, without femoral lines, moderately coarsely, moderately densely punctate, shining; lateral parts of metasternum strongly shagreened. Aedeagus with broad median lobe, arcuately narrowed and acute in apical third; parameres narrow, nearly parallel-sided, apical membrane slightly curved inwards (Fig. 17).

Etymology: From Latin: immensus = immense.

Cercyon (s. str.) signifer sp. n.

Holotypus (male): China, Qinghai or. Annemaqen Mts., Huashixia, 4400 m, 23.-30.VI. 1998, leg. L. Bieber (CHG).- **Paratypes:** 2 females (same data, CHG); 2 males, 1 female: China, E-Tibet Anjula, 4600-4800 m, 15 km N Raog Ravu, 18.VI.97, leg. A. Wrzecionko (CHG).

Diagnosis: This species is well characterized by the peculiar colour of the elytra remembering *C. melanocephalus* and by the entirely black extremities.

After JIA (1996) there are only known 12 species of the genus in China up to now.

Description: Length: 2.6 mm; width: 1.5 mm.- Head and pronotum black, shining; elytra yellow with a black triangular basal patch, continued by the black sutural intervals until apex. Head and mouthparts, maxillary palpi and antennae entirely black. Head and pronotum moderately finely and densely punctate, shining. Sides of pronotum weakly rounded finely margined, the margin not continued round posterior angles. Elytra evenly convex, widest before middle, a little attenuate to rounded apex; yellowish-brown, with black triangular basal patch and black sutural interval. This patch is connected very narrowly at extreme base with a black shoulder patch. (Fig. 23c). Elytra with ten series of moderately strong punctures, series 6-9 anteriorly crowded; series 4-8 not attaining the apex. Legs black. Underside and legs black, only tarsi paler. Mesosternal lamina narrow, about 6 times as long as wide, anteriorly pointed, posteriorly rounded, finely punctate beneath. Metasternum moderately strongly, densely punctate, without femoral lines. Aedeagus with nearly parallel-sided parameres, these apically abruptly continued by a membrane; median lobe in about apical sixth evenly narrowed and pointed (Fig. 23a, b).

Etymology: Derived from Latin: signifer = sign bearer.

Cercyon (s. str.) tenuipunctus sp. n.

Holotypus (unicum, sex not examined): 2.2 x 1.3 mm. India: Tamil Nadu Mysore, Pykara, Ootacamund, 20.-21.VIII.1989, 2100 m, leg. Riedel (MNS).

Diagnosis: Shape and colour of this species is very similar to the North Indian *C. aequalipunctus* HEBAUER, piceous, shining, with reddish head, pronotum and elytral apex, but distinct by the much finer punctate pronotum, also by the clypeus barely punctate without any shagreen, the elytral series hardly striate, also by the mesosternal tablet much narrower and distinctly bulging ventrally, with similar scattered punctures as on the elevated middle portion of metasternum.

Description: Length. 2.2 mm; width: 1.3 mm.- Broadly oval, moderately convex, widest much behind the shoulders, piceous-black with reddish head, pronotum and elytral apex. Pronotum finely, sparsely punctate, elytral series very coarse but hardly striate. Head rather finely, distantly punctate, shining castaneous, without any shagreen. Maxillary palpi slender, pale yellow. Pronotum punctate and coloured like head, sides strongly narrowed to fore angles, fitted with a narrow lateral bead not continued round anterior and posterior angles and without a punctural series. Elytra broadly oval, widest just before middle, continuously narrowed behind, with 10 very coarse and dense punctural series which are hardly striate even apically. The intervals impunctate and shining, slightly convex. Colour piceous-black with yellowish apex. Underside and legs castaneous. Prosternum strongly carinate at middle. Mesosternal tablet ca 3 x as long as wide, narrowed and acute both anteriorly and posteriorly, bulging ventrally, very isolatedly punctate. Elevated middle portion of metasternum shining, punctate like mesosternal tablet; without femoral lines.

Etymology: Derived from Latin: tenuis = teneral; punctus = punctate.

Cercyon (s. str.) thai sp. n.

Holotypus (male): N-Thailand: Lom Sak, 40 km N Phetchabun, ca 120 m, August 1987, leg. W. Thielen (MNS).

Diagnosis: Smallest known *Cercyon*, extensively corresponding with *C. nigriceps* (MARSHAM) in habitus, colour and sculpture but differing from that in the absence of femoral lines (besides the smaller size).

Description: Length: 1.0 mm; width: 0.6 mm.- Regularly oval, moderately convex; surface testaceous with black head; elytra with 9 striae of rather strong punctures. Metasternum without femoral lines.

Head very finely shallowly punctate, black with yellow mouthparts and antennae.- Pronotum evenly convex, nearly impunctate, diffusely shagreened, shining yellow; sides slightly angled, the lateral border is continued along the base.- Elytra uniformly testaceous, with 9 distinct striae; 6th-9th striae shortened anteriorly, 7th-9th striae not attaining the apex; striae distinctly impressed apically, less basally; series rather large but shallowly impressed; interstriae progressively more convex behind; punctuation extremely fine and dense, almost disappearing.- Underside piceous-black; legs rufotestaceous. Elevated middle portion of mesosternum extremely elongate and narrow. Metasternum without femoral lines; elevated middle portion glabrous with a few very shallow larger punctures. Epipleura nearly horizontal. Aedeagus not examined.

Etymology: This species is named after Thailand.

Cercyon (s. str.) zambicus sp. n.

Holotypus (unicum, sex not identified): 1.5 x 0.7 mm. Zambia, 13°S/31°E, South Luangwa NP, elephant dung, ca 450 m, leg. Uhlig (MNB).

Diagnosis: This species is hardly to be confused with any among the very small (1.0-1.7 mm) African species (*C. feai* RÉGIMBART, *C. minax* BALFOUR-BROWNE, *C. nigriceps* MARSHAM, *C. oosternoides* KNISCH, *C. puellaris* KNISCH) because of the completely shagreened surface and the entirely (except the middle of the anterior margin) bordered pronotum.

Description: Length: 1.5 mm; width: 0.7 mm.- Oblong oval, slightly depressed, with black head and pronotum, elytra brown. The whole surface densely shagreened, black. Pronotum nearly completely bordered.

Head moderately finely, densely punctate, densely shagreened, dull black. Maxillary palpi shining black. Pronotum strongly, densely punctate, densely shagreened, dull black, sides slightly rounded, not strongly narrowed anteriorly, margin with a lateral bead shaped as a deeply separated border all around (except at the middle of the anterior margin), laterally marked by a regular series of coarse punctures in the furrow. Elytra oblong oval, widest at middle, less convex, yellowish brown with dark suture and with 10 strongly and densely striate punctural series; the 5th-8th series not reaching the apex, the 7th-9th series progressively shortened antero-laterally; the interstriae progressively more convex apically, finely shallowly punctate, entirely shagreened. Prosternum longly and sharply carinate at middle. Mesosternal tablet very low, broadly drop-shaped with a characteristic tubercle behind. Step-like elevated middle portion of metasternum strongly but distantly punctate, shagreened, without distinct femoral lines.

Etymology: Derived from the type locality.

Chasmogenus cattienus sp. n.

Holotypus (male): "VIETNAM, S (Cat Tien), 120 km NNE Ho Chi Minh, Cat Tien Nat. Park, 30.-VI.-4.VII.1995, leg. A. Napolov." (NME).- **Paratypes:** 1 male: same data as holotype (CHG).

Diagnosis: This species is adequately separated from the Oriental *Chasmogenus* by the broadly oval body shape and the reddish colour with black frons. As in all species of this genus the females are doubtful without a male of the same locality.

Description: Length: 2.3 mm; width: 1.7 mm.- Broadly oval, moderately convex. Castaneous to ferruginous, with black frons and diffusely infuscated pronotal disc, shining. Head finely, moderately densely punctate, without microsculpture. Maxillary palpi striking long, reaching hind angles of pronotum; antennae 9-segmented, pale with infuscated club. Pronotum rather coarsely and densely punctate, shining, hind angles rectangular; systematic

punctures distinct. Elytra broadly oval, ca. 1.2 x as long as their combined width, punctate as pronotum dorsally, distinctly finer laterally and apically; the irregular rows of coarser punctures distinct. Sutural stria sharply impressed posteriorly, abbreviated in basal fifth. Aedeagophore characteristic with the parameres very slender and simple, not widened or pointed apically, without a subapical tooth; median lobe very broad medially, strongly attenuated distally with extreme narrow apex (Fig. 3).

Etymology: Named after the type locality, the National Park of Cat Tien, Vietnam.

***Coelostoma (Lachnocoelostoma) homalinum* sp. n.**

Holotypus (male): "Madagascar, Parc d'Ambre, 16.IX.-21.IX.1987, P. u. H. Schüle. (MNS).-

Paratypes: 3 males, 1 female: same data as holotype (MNS, CHG).

Diagnosis: Extremely close to *C. horni* (RÉGIMBART). Separated from that species only in the male genitalia.

Diagnosis: Length: 4.5 mm; width: 2.8 mm.- Broadly oval, subhemispherical. Surface unicoloured black, smooth and shining, without microsculpture; underside castaneous. Elytra moderately coarsely, very densely punctate; laterally and apically not coarser punctate than dorsally, without traces of series; pronotum not denser punctate than elytra. Elytral apex simply sloping. Maxillary palpi and antennae (except infuscated antennal club) unicoloured yellow. Prosternum distinctly dentate anteriorly. Mesofemora densely pubescent except apical portion. First ventrite with blunt carina in anterior half. Metafemora normally flattened. Aedeagophore shorter than parameres, with median lobe distinctly widened distally, and with the ventral gonopore situated terminally. Parameres convex on outer face, fairly deeply emarginate in the middle of the apex, sinuate and narrowed in apical third, with apices obliquely truncate and curved to midline. (Fig. 6).

Etymology: Derived from Greek: homalos = of the same kind (as *C. horni*).

***Cyclotypus heidenfelderii* sp. n.**

Holotypus (male): "MADAGASCAR 1995, Antananarivo distr., Manankazo env., Nov. 10. XII., J. Stolarczyk leg." (CHG).- **Paratypes:** 1 female: same data as holotype (CHG).

Diagnosis: Resembling a *Dactylosternum* without explanate elytra and fully developed elytral series, but with loosely segmented antennae and the 1st ventrite incompletely carinate.

Description: Length: 5.5 mm; width: 3.5 mm.- Broadly oval, subhemispherical, surface black, shining.

Head finely, very densely punctate; palpi and antennae ferruginous; antennae 9-segmented, ca. 5 x as long as wide, piceous; cupule ca. as wide as the 1st club segment. Eyes of moderate size, separated by 3 x the diameter of one eye (seen from above). Pronotum punctate as head, sides evenly curved, strongly narrowed anteriorly; lateral rim narrow. Elytra broadly oval, 1.4 x as long as their combined width, broadly rounded apically, punctate as head and pronotum, with ten series of moderate strong but densely arranged punctures, anteriorly almost reaching the elytral base, laterally and apically becoming stronger and more impressed. Sutural stria basally seriate, apically striate; the series 3 and 4 (juncted), 6 and 7 (juncted), and 10 not reaching the apex. Underside and legs piceous. Mentum smooth and shining, sparsely and finely punctate, anterior margin strongly impressed. Prosternum tectiform, not carinate, with a strong anteromedian tooth. Profemora and mesofemora with very fine pubescence except apical portion. Metasternum with raised pentagonal middle portion rather narrowly projecting anteriorly between mesocoxae, abutting in a single point the mesosternal elevation, which is arrowhead-shaped and strongly margined anterolaterally. First ventrite incompletely carinate. Tibiae strongly flattened. First segment of middle and hind tarsi twice as long as the second segment. Epipleura strongly oblique. Aedeagophore of the *Coelostoma* type, with the parameres sinuate on outer face, the apices truncate and pointed to midline. Median lobe a little shorter than the parameres, broadly subparallel and slightly emarginate at apex. Gonopore medially; genital segment very broad with the middle sclerite strongly widened apically, as usual in *Dactylosternum* (Fig. 15a, b).

Etymology: This peculiar species is dedicated to the entomologist Ferdinand Heidenfelder, the editor of the Acta Coleopterologica.

***Cyclotypus tinctus* sp. n.**

Holotypus (male): "MADAGASCAR, Sambiranotal, 16.IX.-21.IX.1987, P. u. H. Schüle." (CHG).

Paratypes: MALAWI: Salima env., 5.-6.I.2002, 8 m, 3 f, leg Bezdek; Balaka env., 19.-20.XII.2001, 1 m, leg J. Bezdek; Nkhotakota env., 2.-3.I.2002, 1 m, leg. J. Bezdek (CHG).

Diagnosis: Resembling a small subhemispheric *Dactylosternum*, but differing from that by the loosely segmented antennae and the first ventrite not carinate. Separate from other known *Cyclotypus* by the characteristic colour pattern.

Description: Length: 3.5 mm; width: 2.2 mm.- Broadly oval, strongly convex; surface black with the apical third of elytra and the sides of pronotum well delimited yellow, shining. Head rather finely, very densely punctate; palpi and antennae yellow, antennae 9-segmented; antennal club loosely segmented, 3 x as long as wide; cupule a little smaller than the 1st club segment. Eyes of moderate size, separated by ca. 3.5 x the diameter of one eye (seen from above). Pronotum more finely and distantly punctate than head, the punctures shallowly impressed; sides evenly curved, strongly narrowed anteriorly; lateral rim narrow. Elytra broadly oval, ca. 1.25 x as long as their combined width, broadly rounded at apex, sides not explanate, with 10 series of punctures, almost reaching the elytral base, much coarser laterally, irregular and hardly traceable apically; intervals finely, moderately densely punctate; the intervals 2, 4, 6 with irregular rows of coarser punctures; whole elytra covered with reticulate microsculpture. Sutural stria sharply impressed in apical half, simply seriate anteriorly. Underside castaneous. Prosternum highly convex in middle, not carinate, but with a strong anteromedian tooth. Mesosternum with a rhomboid, arrowhead-shaped posteromedian process, margined anterolaterally. Metasternum with the pentagonal middle portion deeply impressed medially, rather narrowly projecting anteriorly between mesocoxae, connected with mesosternal elevation there. Tibiae strongly flattened. Profemora and mesofemora finely and densely pubescent except distally. First ventrite not carinate. First segment of middle and hind tarsi twice as long as second segment. Epipleura strongly oblique. Aedeagophore of the *Coelostoma* type, with the parameres sinuate on outer face and acute at apex. Median lobe much shorter than the parameres, narrowly tongue-shaped. Gonopore terminally. Genital segment extremely wide, with the middle sclerite abruptly and strongly widened apically. (Fig. 16a, b).

Etymology: Derived from Latin: tinctus = coloured.

***Cylorygmus repentinus* sp. n.**

Holotypus (male): "R. S. Africa, 34°27'S/20°24 E, Cape Province, De Hoop Nat. Res., lake shore, reed sievings, 17.XI.1993, leg. M. Uhlig (ZMB)."- Paratypes: 1 female (CHG).

Diagnosis: This species is separated from *C. lineatopunctatus* D'ORCHYMONT from Chile by the larger size and the elytra entirely covered with reticulate microsculpture. Up to now this is the only known species of the genus from the Old World.

Description: Length: 5.0 mm; width: 2.9 mm.- Broadly oval-subparallel, moderately convex; black, sides of pronotum and elytra, also elytral apex ferruginous. Head moderately coarsely, very densely punctate; punctural interstices less than punctural diameter; shining black; the Y-groove weakly impressed; eyes rather large, distance between eyes c. 3 x as wide as diameter of one eye; without preocular patches; mouthparts and antennae pale. Pronotum punctate as head, with a single weak anterolateral impression on each side; sides, anterior margin and lateral portions of posterior margin rufotestaceous. Elytra subparallel, apex broadly rounded, c. 1.15 x as long as their combined width; puncture as head and pronotum, punctural interstices covered with weak reticulate microsculpture; elytra with about 10 series of punctures, dorsally hardly traceable, laterally very distinct; sutural stria effaced in basal fifth. Underside black; legs rufotestaceous. Aedeagophore with basal piece as long as parameres; the latter knife-shaped, slightly convex on outer face, concave on inner face in distal third, apices curved to midline; median lobe narrow and parallel-sided, with rounded tip, as long as parameres (Fig. 1).

Etymology: Derived from Latin: repentinus = unexpected, surprising.

DISTRIBUTION: Known only from the type locality. Presumably endemic in the Cape Province.

***Enochrella dubia* sp. n.**

Holotypus (female): 3.0 x 1.8 mm. Philippines: Leyte, Lake Danao, forest edge, 500 m, 19.II-8.III.1991, leg. Schawaller & al. (MNS).- **Paratypes:** 1 female, ibidem (CHG).

Diagnosis: Separated from *E. aberrans* HANSEN and *E. viscalis* sp. n. by the distinctly explanate elytra and the absence of elytral series.

Description: Length: 3.0 mm, width: 1.8 mm.- Broadly oval, rather flat; rufotestaceous (types immature!); elytra densely punctate without traceable punctural series, in posterior half distinctly explanate.

Head finely, moderately densely punctate, without microsculpture, shining rufotestaceous; maxillary palpi testaceous; last segment not shorter than penultimate. Pronotum moderately finely, moderately densely punctate, without microsculpture, shining, rufotestaceous. Elytra distinctly coarser and denser punctate than pronotum, without recognizable punctural series, though here and there the common punctuation shows a tendency of linear arrangement; shining rufotestaceous, without microsculpture; elytral margin distinctly explanate in posterior half. Sutural stria abbreviated in basal third. Underside and legs coloured like surface. Mesosternal elevation low and flat, cone-shaped, with a low apical keel. Hind femora pubescent only at anterior margin. Last abdominal segment with a distinct ciliate emargination apically.

Etymology: Derived from Latin: dubius = doubtful; referring to the absence of elytral series.

***Enochrella viscalis* sp. n.**

Holotypus (male): 3.5 x 2.2 mm. Philippines: Leyte Visca N Baybay, sec. forest, 100-200 m, 4.3.1991, leg. Schawaller & al. (MNS).

Diagnosis: This species is separated from *E. aberrans* HANSEN by the larger size, the black colour and the much finer elytral series, hardly coarser than the punctures of the interstices, besides the male genitalia.

Description: Length: 3.5 mm; width: 2.2 mm.- Broadly oval, moderately convex; black, shining; elytra with recognizable punctural series, not coarser than the punctures of the interstices, margin not explanate.

Head nearly impunctate, without microsculpture, black, with red clypeus and labrum; maxillary palpi testaceous, the last segment not shorter than the penultimate. (Fig. 24b). Pronotum smooth, with microscopical fine and very distant but sharply impressed punctures; black, with diffusely reddish sides and angles. Elytra with 10 regular fine punctural series of the same strength as the punctures of the interstriae; black, shining, without microsculpture; sutural stria abbreviated at basal fourth. Underside and legs castaneous. Mesosternal elevation low cone-shaped with a short apical keel. (Fig. 24c). Hind femora pubescent only at anterior margin. Hind margin of the ultimate abdominal segment apically flattened, without a distinct ciliate excision. Aedeagus with narrow parallel-sided median lobe, shorter than the parameres; the latter broad basally, strongly and evenly narrowed at outer face to the bluntly rounded, a little converging tips (Fig. 24a).

Etymology: Derived from the type locality.

***Helochares (Hydrobaticus) namcatensis* sp. n.**

Holotypus (male): S-Vietnam, Nam Cat Tien nat. Park, 1.-15.V.1994, Pacholatko & Dembicky. (NMW).

Diagnosis: Between the Oriental species of the subgenus attached to the group with very fine elytral series as *H. densus* SHARP, *loticus* HEBAUER, *schwendingeri* HEBAUER, *yangae* HEBAUER, all of about the same size. To identify with certainty only by examination of the aedeagophore.

Description: Length: 4.2 mm; width: 2.3 mm.- Short and broad oval, rather flat, uniformly yellowish brown, whole surface finely and very densely punctate, the elytral series hardly stronger than the interstitial punctures, very finely striate. Pronotum barely twice as wide as long. Elytra 1.2 x as long as their combined width, widest behind middle. Aedeagophore characteristic with filiform median lobe and band-like prolonged ends of parameres (Fig. 10).

Etymology: Named after the type locality.

***Helochares (Hydrobaticus) schwendingeri* HEBAUER, 1995**

1995 *Helochares (Hydrobaticus) schwendingeri* HEBAUER, Acta coleopterologica 11(3): 7.

1998 *Helochares (Hydrobaticus) ubudensis* HEBAUER, Acta coleopterologica 14(2): 44. **Syn. n.**

New record: 1 male: S-Vietnam, Nam Cat Tien Nat. Park, 1.-15.V.1994, Pacholatko & Dembicky (NMW).

Corrigendum: In HEBAUER 1998 the figs. 4/5 (*H. nigroseriatus* sp. n. and *H. ubudensis* sp. n.) are interchanged!

***Helochares (Hydrobaticus) skalei* sp. n.**

Holotypus (male): South Africa, Mpumalanga White River, White River behind Staudamm, Quelle, 31.V.2001, leg. A. Skale (NME).- **Paratypes:** 4 males, 2 females: same data as holotype (4 CSH, 2 CHG).

Diagnosis: This species closely resembles *H. subtilis* D'ORCHYMONT in the very fine elytral series which are hardly stronger than the interval punctuation, but is next to *H. steffani* sp. n. from Namibia in the shape of aedeagophore with the parameres more vertically pen-shaped.

Description: Length: 5.5 mm; width: 3.0 mm.- Oval, elytra widest in posterior half, rather flat; testaceo-brunneous with various infuscations.

Head finely and very densely punctate, distance between punctures less than diameter of one puncture; shining black with large diffuse preocular patches. Antennae 9-segmented, testaceous with dark club. Maxillary palpi as long as width of head, unicoloured testaceous. Pronotum punctate as head, testaceous with large diffuse discal patch; sides evenly rounded. Elytra widest behind middle, with 10 very fine and densely arranged series, hardly stronger than interval punctuation; rows of coarser punctures conspicuous on 2nd (in apical half) and 4th interval; colour testaceous with black shoulder patch and diffusely darkened dorsal portion. Tibiae and tarsi rufotestaceous, underside and femora black. Aedeagophore with parallel-sided basal piece and strongly converging parameres; the latter vertically pen-shaped and pointed apically, the tips shortly curved downwards as also the tip of the median lobe; this is accompanied basally by two pairs of short and strong spines, partly covered by the very long and pointed dorsal lobes (Fig. 11).

Etymology: This species is named after its finder, the entomologist André Skale, Hof/Saale, Germany.

DISTRIBUTION: Presumably endemic.

***Helochares (Hydrobaticus) steffani* sp. n.**

Holotypus (male): Namibia, Ongongo falls, source-pool drain, 13°49'W / 19°08'S, 798 mNN, ca 6 km upp. Warmquell, Februar 1998, leg. A. W. Steffan (SMWN).

Paratypes: 1 female: Ongongo Falls, Februar 1998; 2 males, 1 female: Namibia, Palmwag, source-pool drain, 13°56'W / 19°53'S, 885 mNN, (Uniab, upper course), Februar 1999, leg. A. W. Steffan & J. Bork & S. Berhoff (CSB, CHG); 1 male: Ongongo Falls loc. 41, 17.I.2000 (CSB); 1 female: Ongongo Falls loc. 117, 25.II.2000 (CSB); 1 female: Khowarid-Schlucht loc. 65, 09.III.2000 (CSB); 1 female: NW-Namibia, Uniab river nr Palmwag Lodge, 13°50'W-19°53'S, PQ III (3), 9.II.1997, leg. C. Mentzel (CHG).

Ecology: After rich experience with African members of this subgenus (HEBAUER 1996) this new species seems to be restricted to edges of mountainous source waters. See also STEFFAN 1997. The Ongongo-Falls with rapid running water, rich of oxygen and with heavy rubble on ground, the Khowarid-Gorge (about 50 km west of the Ongongo-Falls in the North of Damaraland, near the border with Kaokoveld) is a slow running water with gravel and loam on ground.

Diagnosis: This species comes very close to *H. structus* D'ORCHYMONT, though a little shorter oval, nevertheless hardly to separate from that without a male from the same place. In contrast the male genitalia of both species are distinctly different in some specific characters.

Description: Length: 4.8 mm; width: 2.5 mm.- Broadly oval, depressed, castaneous, shining. Head and pronotum moderately finely, very densely punctate; punctural interstices less than punctural diameter. Maxillary palpi moderately long, reaching back to middle of pronotum. Labrum wide, with shallow antero-median impression. Hind margin of labrum, middle of cly-

peus and postfrons black. Elytra broadly oval, widest behind middle. Series fine and very dense, shallowly striiform; the interstriae wide and flat, about 4-5 punctures horizontally; punctuation of interstriae finer than serial punctuation. The irregular rows of coarser punctures distinct, about as strong as the serial punctures. Suture and shoulders black. Legs dark brown. Underside black. Aedeagus moderately long, widest at base of parameres. Basal piece in dorsal view closed terminally, not divergent, not cornered, nearly horizontally limited. Parameres pen-shaped, in dorsal view very narrow, straight, the apices nearly touching one another. Median lobe broad membranous, with median sclerite, shorter than the parameres, accompanied by 3 pairs of strong straight and short spines; these covered by a pair of pointed membranes. (Fig. 9).

Etymology: This difficult species is dedicated to its discoverer Prof. Dr A. W. Steffan from the Ruhr-University Bochum, Germany.

***Helochares (Hydrobaticus) strigellus* sp. n.**

Holotypus (male): LIBERIA: Saclepea, 16.III.1988, leg. F. Krell. (MNS).- **Paratypes:** 7 males: same data as holotype (MNS, CHG); 7 males: Liberia: Bong Town, 25.II.1988, leg. F. Krell (MNS, CHG); 1 male: Liberia: Peter Town, Montserrado County, 26.III.1988, leg. F. Krell (MNS).- Females are not included in the type series.

Diagnosis: This new species belongs to the species group around *H. subtilis* D'ORCHYMONT, *H. striatus* BOHEMAN and *H. strictus* D'ORCHYMONT etc. characterized by almost effaced elytral series, hardly to distinguish from one another. It comes closest to *H. striatus* BOHEMAN in the sculpture but the aedeagophore is closer to that of *H. ivani* HEBAUER; in contrast the latter has the elytral series much stronger. In *H. striatus* the parameres are shorter and slightly curved to the midline. The very similar, sympatric *H. densepunctus* RÉGIMBART has a much more different aedeagophore.

Description: Length: 5.5 mm; width: 2.3 mm.- Broadly oval, rather flat; ochre-coloured with diffuse darkening; whole surface very finely and densely punctate; elytral series dorsally not stronger than the interval punctuation, hardly traceable, but laterally increasing more stronger, more coarser; the irregular rows of coarser punctures distinct only on 5th interval. Maxillary palpi almost as long as width of head. Aedeagophore of the 'strictus'-type with straight and strongly converging parameres and with a filiform median lobe imbedded in a large membrane, accompanied by a pair of robust and straight spines of more than half the length of parameres; a second pair of smaller straight spines is less striking (Fig. 12).

Etymology: Derived from Latin: strigellus = weakly striate.

***Helochares (Hydrobaticus) wagneri* sp. n.**

Holotypus (male): Kenya, Kahamega F. 0°22'N/ 34°50'E, 1600 m, 7.-11.II.1999, leg. Th. Wagner (MKB).- **Paratypes:** 3 males, 1 female (same data as holotype, MKB, CHG).

Diagnosis: Like the greater number of African *Hydrobaticus* the females are absolutely not able to be distinguished from related species without males from the same locality. This new species is belonging to a group with rather fine and dense elytral series and with black labrum, with medially blackened clypeus and black frons.

Description: Length: 5.0 mm.- Broadly oval, elytra broadest behind middle, surface dirty yellowish to brown, elytra nearly black except base, first interval and sides. Maxillary palpi slender, yellowish, but distinctly darkened. Elytral series rather fine and dense, slightly striiform; punctuation of interstriae much finer and denser than the serial punctuation. Aedeagus characteristic with very short basal piece and very long parameres; the latter evenly narrowed from base to apex, there shortly bent outwards. Median lobe much shorter than parameres, accompanied laterally by a pair of strong and straight spines (Fig. 7).

Etymology: This species is dedicated to its discoverer Dr T. Wagner from the Forschungsinstitut und Museum Alexander Koenig, Bonn.

***Helochares* (s. str.) *insolitus* D'ORCHYMONT, 1925 stat. n.**

1925 *Helochares pallens insolitus* D'ORCHYMONT, p. 202.

Locus typicus: Philippines (Manila).

Material examined: 2 males, 1 female: S-Vietnam, Nam Cat Tien Nat. Park, 1.-15.V.1994, leg. Pacholatko & Dembicky (NMW, CHG).

D'ORCHYMONT (1925) described this species from a rather damaged single specimen from Manila as a variety of *H. pallens* MAC LEAY. After the rules of ICZN this variety represents a valid name. Now a few more specimens, including a male, are available and encouraged me to upgrade this taxon to species rank for the following reasons:

1. The male genitalia shows a recognizable difference to those of *H. pallens* (Figs. 13 and 14).
2. The punctuation on surface of *H. insolitus* is distinctly coarser than in *H. pallens*.
3. The entirely black colour is observed in all examined specimens, and is not considered to be a local melanism.
4. Lokal races are unlikely with such a widespread distribution.

Diagnosis: This species is separated from *H. pallens* by the black colour of the surface, showing clear preocular patches, in combination with yellow legs and mouthparts, also by the distinctly coarser punctuation of the whole surface and by the aedeagus, though very similar, however recognizable distinct.

Redescription: Length: 2.2 mm; width: 1.2 mm.- Broadly oval, widest at middle; moderately convex. Black with yellow palpi, legs and preocular patches.

Head, pronotum and elytra moderately finely, moderately distantly punctate, shining. Surface black; sides and angles of pronotum, sides and apex of elytra widely yellow. Head with large preocular patches. Maxillary palpi slender, reaching back to middle of pronotum, entirely yellow. Legs castaneous. Aedeagus as in *H. pallens*, but the apical section of the parameres shorter and deeper excavated (Fig. 14).

DISTRIBUTION: Philippines, Vietnam.

***Helochares* (s. str.) *madli* sp. n.**

Holotypus (female): Madagascar, Mahajanga Katsepi, 28.XII.1993, leg. Madl (NMW).

Diagnosis: This species resembles in habitus and colour a smaller specimen of *H. dilutus* (ERICHSON), it is characterized and differs from the latter by much shorter maxillary palpi in combination with an extremely fine and dense punctuation of the elytra.

Description: Length: 6.0 mm; width: 3.0 mm.- Broadly oval, widest behind middle of elytra, moderately convex; rufotestaceous, shining; elytra extremely finely, densely punctate; maxillary palpi not surpassing the antennae.

Head finely, very densely punctate, without shagreen, rufotestaceous. Maxillary palpi hardly surpassing the antennae (in *H. dilutus* the maxillary palpi are double the length of antennae!); uniformly yellow. Antennae 9-segmented, basally yellow, the club blackish. Pronotum nearly as finely and densely punctate as head, rather flat. Elytra broadly oval, broadest behind middle, moderately convex, flattened apically, broadly rounded there. The elytra are distinctly finer (nearly microscopically) punctate than head and pronotum, shining. The irregular rows of coarser punctures large and shallow. Legs coloured like the whole surface; underside piceous.

Etymology: This new species, presumably endemic, is dedicated to its discoverer the entomologist Dr Madl from the Naturhistorisches Museum Wien.

***Helochares* (s. str.) *sublineatus* sp. n.**

Holotypus (male): 4.0 x 1.8 mm. West Africa, Ghana, Northern region, Tamale, leg. Dr. S. Endrödy-Younga/ No. 27, light trap, 18.VII.1970 (TMB).

Paratypes: 1 female (4.5 mm): ibidem, No. 39, light trap, infrared, 4.VIII.1970 (CHG); 1 female (4.5 mm): West Africa, Nigeria, Samaru, Dr S. Endrödy-Younga/ No. 403, light trap, 20.X.1969 (TMB).

Diagnosis: At first glance this species resembles a large *H. pallens* MACLEAY, with pale surface and dark lines translucent from the underside of the elytra. Maxillary palpi striking short, not exceeding the antennae.

Description: Length: 4.0-4.5 mm; width: 1.8-2.0 mm.- Oval, rather depress, uniformly testaceous, with short maxillary palpi and dark elytral series translucent from the underside.

Head moderately finely, very densely punctate, shining testaceous. Maxillary palpi striking short, not surpassing the antennae, 2nd to 4th segments of about the same length. Pronotum flat, sides moderately rounded, slightly narrowed anteriorly, punctate like head. Anterior rows of systematic punctures arcuate; posterior rows composed of only a few punctures. Elytra rather flat, widest behind middle, distinctly finer punctate than pronotum; the irregular rows of coarser punctures distinct; colour uniformly dirty testaceous, shining. Underside and legs coloured like surface. Claws slender, half the length of the last tarsal segment. Aedeagophore characteristically fist-shaped with an outline recalling the shape of a virus, with narrow basal piece and polygonal apical part (Fig. 8).

Etymology: From Latin: sub = under; linea = line.

DISTRIBUTION: West Africa

***Laccobius (Microlaccobius) andersi* sp. n.**

Holotypus (male): Russia: Primorskij Kr., 6 km NE Ryazanovka Coastal fen, 16.VII. 1992, leg. AN Nilsson. (SMS).- **Paratypes:** 1 male, 3 females (2 coll. A. Nilsson, Umea University; 2 CHG).

Diagnosis: Close to *L. (s. str.) cinereus* MOTSCHULSKY and *L. (Microlaccobius) roseiceps* RÉGIMBART (recently also collected in Japan!) in the heavily shagreened head and pronotum, the more as the secondary elytral series both in *L. andersi* and *L. roseiceps* are subequal in size. To distinguish from both allies by the shape of the pronotal patch large in *L. cinereus*, but small and more rectangular in *L. roseiceps*, rhomboid in *L. andersi*. *L. roseiceps* is moreover much smaller than both the other species and with more shining elytra.

Description: Length: 2.5-2.8 mm; width: 1.5 mm.- Oval, moderately convex; testaceous; head black with pale preocular patches as wide as diameter of one eye; rather coarsely and densely punctate, heavily shagreened; eyes large, nearly circular, slightly oval; interocular space in dorsal view c. 3 x the diameter of one eye. Pronotum punctate and shagreened as head; discal patch widely rhomboid, reaching anterior margin in a single point. Scutellum black; nearly equilateral. Elytra testaceous with black shoulder patches, a pair of lateral patches behind middle and some diffuse dark patches; punctural spots of elytral series not confluent; primary series a little sulciform; secondary series almost as strong as primary series; intervals weakly shagreened. Maxillary palpi testaceous, ultimate segment apically blackened, penultimate segment swollen. Legs testaceous, hind tibiae curved; tarsi slender, as long as tibiae. Aedeagophore with narrow and convergent parameres; median lobe moderately wide and parallel-sided in basal half, strongly narrowed before (Fig. 2).

Etymology: This species is dedicated to its discoverer, the specialist in Dytiscidae Dr. Anders Nilsson, Umea University, Sweden.

***Pachysternum keralense* sp. n.**

Holotypus (male): India: Kerala, Thekkadi, Peryar W. L. S., 2.IX.1989, leg. A. Riedel (MNS).- **Paratypes:** 1 ex. (same data as holotype, CHG).

Diagnosis: Between the Oriental species next to *P. apicatum* MOTSCHULSKY, but different in the more globular body shape with more rounded apex, distinctly more convex elytral intervals, evidently shagreened head and pronotum, essentially by the absence of femoral lines on metasternum.

Description: Length: 3.2 mm.- Broadly oval, strongly convex; uniformly piceous. Head finely, very densely punctate, shagreened. Clypeus separated from prefrons by two short lateral ridges starting from eyes. Punctuation of pronotum double sized, shagreened between punctures. Elytra entirely black, shining, with 10 deeply impressed punctural striae; interstriae distinctly convex from base to apex, very shallowly and distantly punctate. Prosternum with a longitudinal median carina. Mesosternal tablet pentagonal, not longer than wide; finely rugosely punctate as whole metasternum; the latter laterally with scattered large shallow punctures. Anterior tibia widened on outer margin, but without an emargination.

Aedeagus narrow, long; basal piece one third the length of the parameres; the latter nearly parallel-sided, apically distinctly widened, tips shortly curved inwards; inner margin straight until tips. Median lobe much shorter than parameres, lengthily narrowed and pointed at apex (Fig. 22).

Etymology: The type locality is situated in the South Indian province Kerala.

***Paroosternum leytenis* sp. n.**

Paroosternum sorex; Hebauer, 2000:7 (Sri Lanka).

Holotypus (male): Philippines: Leyte, Visca, N Baybay, cultiv. land, 1991, leg. Schawaller & al. (MNS).- **Paratypes:** 1 female: Sri Lanka: Ceylon, S. Prov. Stream 6 mls NW Hulandawa, 20 mls NE Galle, 29.I.62, Loc. 35/ Grassy ground/ In sweep net/ Lund University Ceylon Expedition 1962, Brinck-Andersson-Cederholm (ZML); 1 male: Sri Lanka: Ceylon, Centr. Prov. Kunundu Oya, Alt. 2900 ft. 11 mls NE Nuwara-Ellya, 15.III.62, Loc. 147/ Under stones/Ravine with stream/ Lund University Ceylon Expedition 1962, Brinck-Andersson-Cederholm. (CHG).

Diagnosis: This species comes next to *P. sorex* (SHARP). It differs from that in the shining pronotum and in the elytral intervals not alternatingly convex in apical third. The tips of the parameres are shorter and stouter than in the compared (Fig. 20) species.

Description: Length: 1.3-1.4 mm.- Broadly oval, strongly convex, ferruginous. Head and pronotum very finely and distantly punctate, shining, without reticulate microsculpture. Pronotum with a transverse series of coarse punctures along posterior margin. Elytra 9-striate; intervals slightly convex but nowhere alternating, very finely punctate, finely pubescent. Raised middle portion of prosternum deeply excised laterally (as usual in *Paroosternum*), with strong median carina. Mesosternal tablet large elongate oval, widest in the middle, ca. 2.5 x as long as wide, flat and coarsely punctate beneath. Metasternum with complete femoral lines, without anterolateral arcuate ridge. Elevated middle portion of metasternum strongly punctate. 1st ventrite with median carina. Aedeagus with the median lobe evenly narrowed in distal half, point, surpassing the parameres; the latter with short and stout distal hook (Fig. 19a). Genital segment with well developed, elongate median sclerite (Fig. 19b).

Etymology: Named after the type locality, the isle Leyte (Philippines).

DISTRIBUTION: Philippines, Sri Lanka.

***Rhombosternum dactyloides* sp. n.**

Holotypus (sex not identified) : 3.0 x 2.0 mm. Indien: Tamil Nadu, Ootacamund, Pykara Mysore, 22.VIII.1989, leg. A. Riedel (MNS).- **Paratypes:** 1 ex. ibidem (CHG).

Diagnosis: This species resembles *R. birmanense* BALFOUR-BROWNE in size and basally not abbreviated or interrupted 1st and 2nd elytral striae, but differs from all seen *Rhombosternum* by the presence of distinct irregular rows of coarser punctures in the elytral intervals not at all convex, essentially by the intimately fused mesosternal-metasternal elevation like in *Dactylosternum*.

Description: Length: 3.0-3.2 mm; width: 2.0 mm.- Broadly oval, rather convex, black, with 10 elytral series and irregular rows of coarser punctures in all intervals. Head black, with yellow mouthparts and antennae; very finely, moderately densely punctate, shining, without shagreen. Pronotum punctate like head, sides evenly rounded, with a very fine marginal rim. Elytra short oval, rather convex, border progressively more explanate behind; with 10 regular series of punctures, fine at inner side and basally, much coarser laterally, all beginning at base, except the 6th series; all intervals flat, bearing irregular rows of coarser punctures (as coarse as the regular series), besides a microscopical fine and scattered ground punctuation; shining black. Underside black, legs piceous. Prosternum with a fine median carina. Mesosternal process narrow anteriorly, with a distinct tubercle there, bulging ventrally, apically increasing wider and intimately fused with median elevation of metasternum forming a common sternal keel, like in *Dactylosternum*.

Etymology: The name refers to the particular shape of the mesosternal process.

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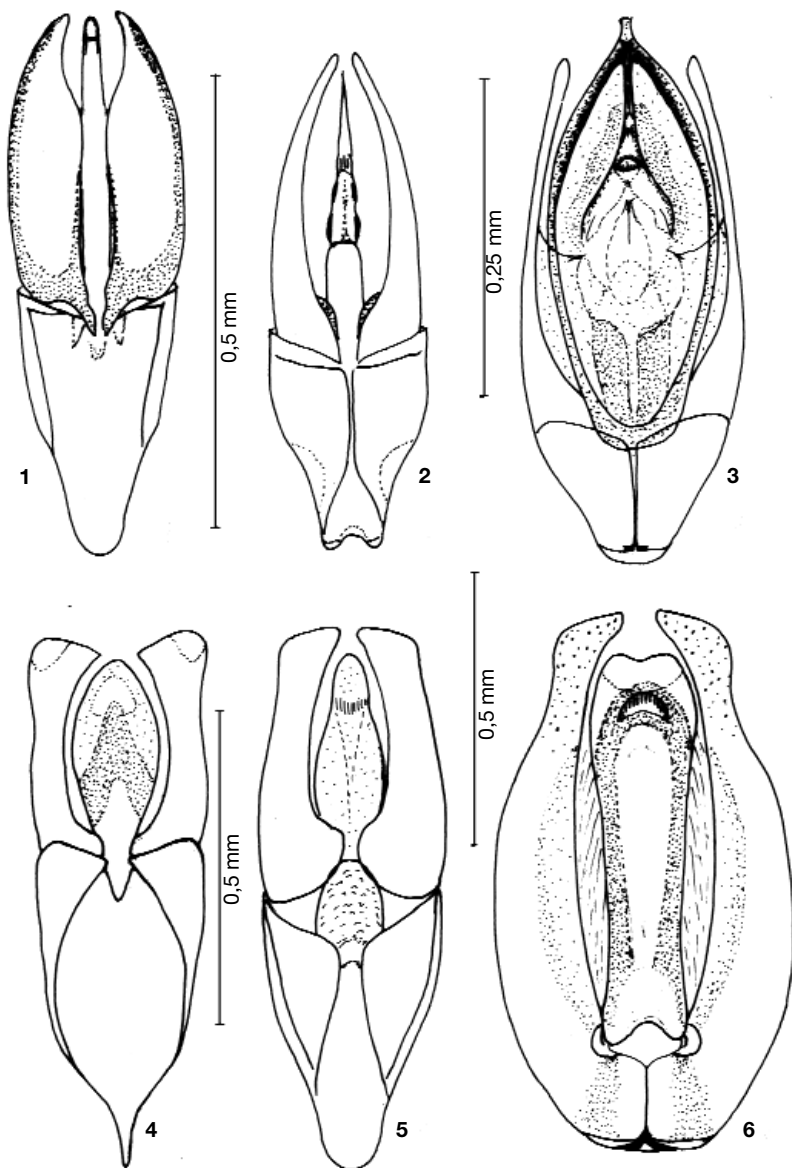


Fig. 1: *Cylorgymus repentinus* sp. n., aedeagus.
 Fig. 2: *Laccobius andersi* sp. n., aedeagus.
 Fig. 3: *Chasmogenus cattienus* sp. n., aedeagus.
 Fig. 4: *Anacaena luticola* sp. n., aedeagus.
 Fig. 5: *Anacaena mascarena* sp. n., aedeagus.
 Fig. 6: *Coelostoma homalinum* sp. n., aedeagus.

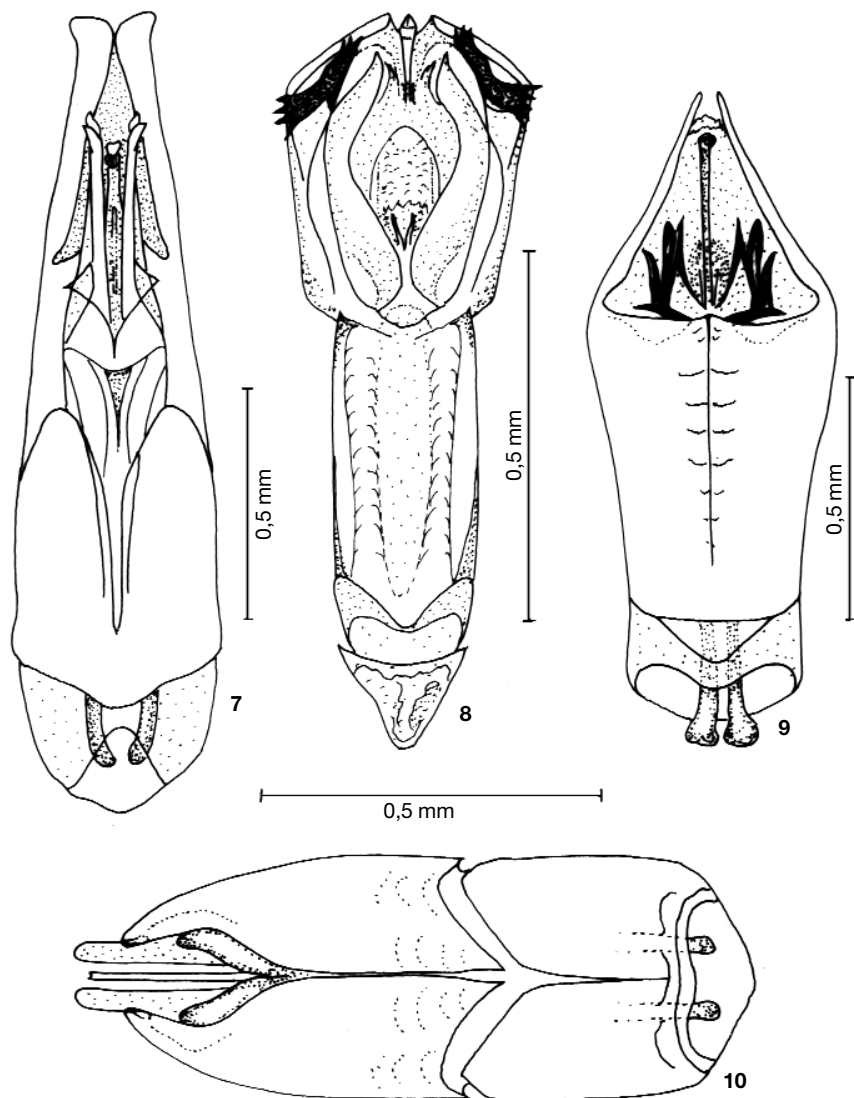


Fig. 7: *Helochaeres (Hydrobaticus) wagneri* sp. n., aedeagus.

Fig. 8: *Helochaeres (s. str.) sublineatus* sp. n., aedeagus.

Fig. 9: *Helochaeres (Hydrobaticus) steffani* sp. n., aedeagus.

Fig. 10: *Helochaeres (Hydrobaticus) namcatensis* sp. n., aedeagus.

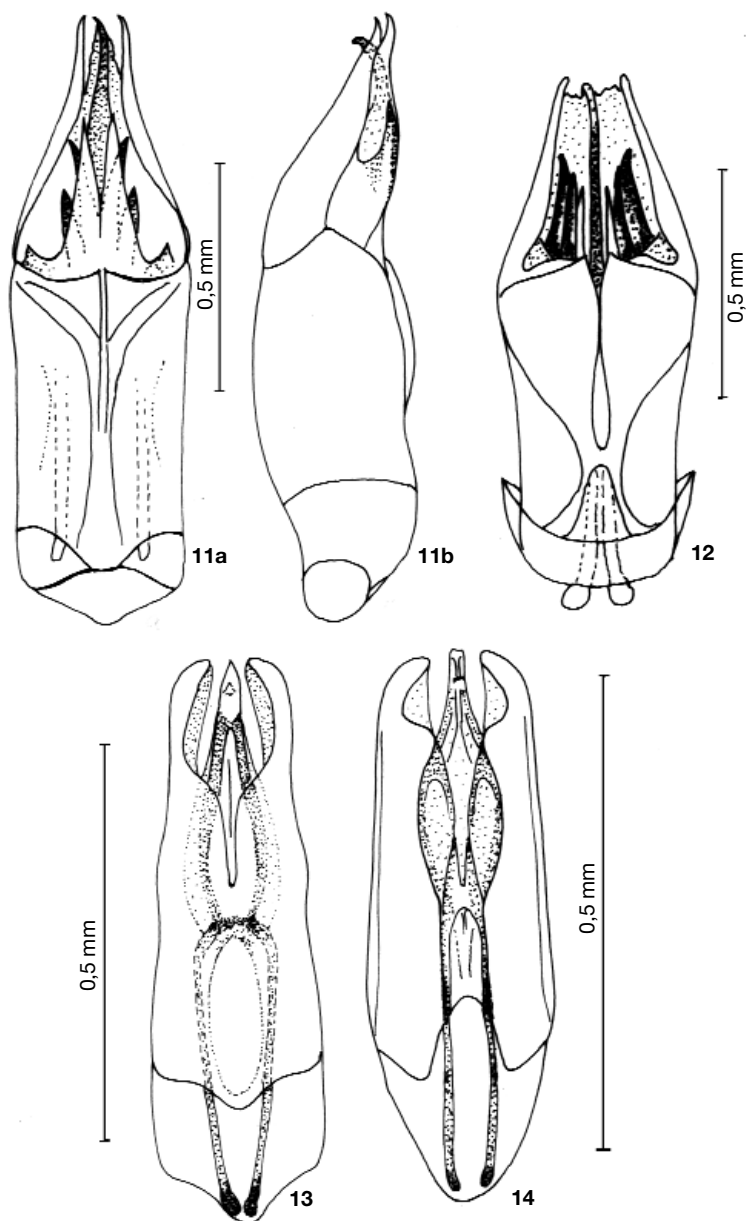
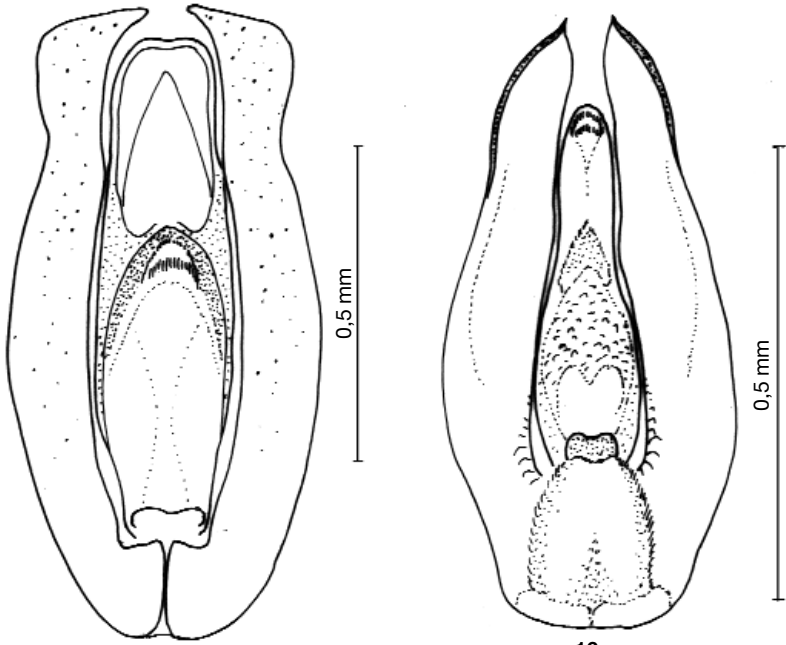


Fig. 11: *Helochares (Hydrobaticus) skalei* sp. n., aedeagus, a) dorsal, b) lateral.

Fig. 12: *Helochares (Hydrobaticus) strigellus* sp. n., aedeagus.

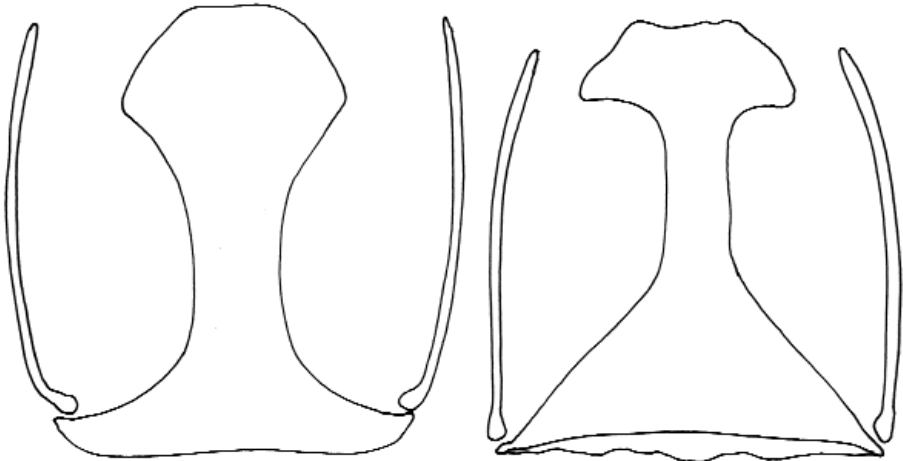
Fig. 13: *Helochares (s. str.) pallens* McLEAY, aedeagus.

Fig. 14: *Helochares (s. str.) insolitus* D'ORCHYMONT, aedeagus.



15a

16a



15b

16b

Fig. 15: *Cyclotypus heidenfelder* sp. n., a) aedeagus, b) genital segment.
Fig. 16: *Cyclotypus tinctus* sp. n., a) aedeagus, b) genital segment.

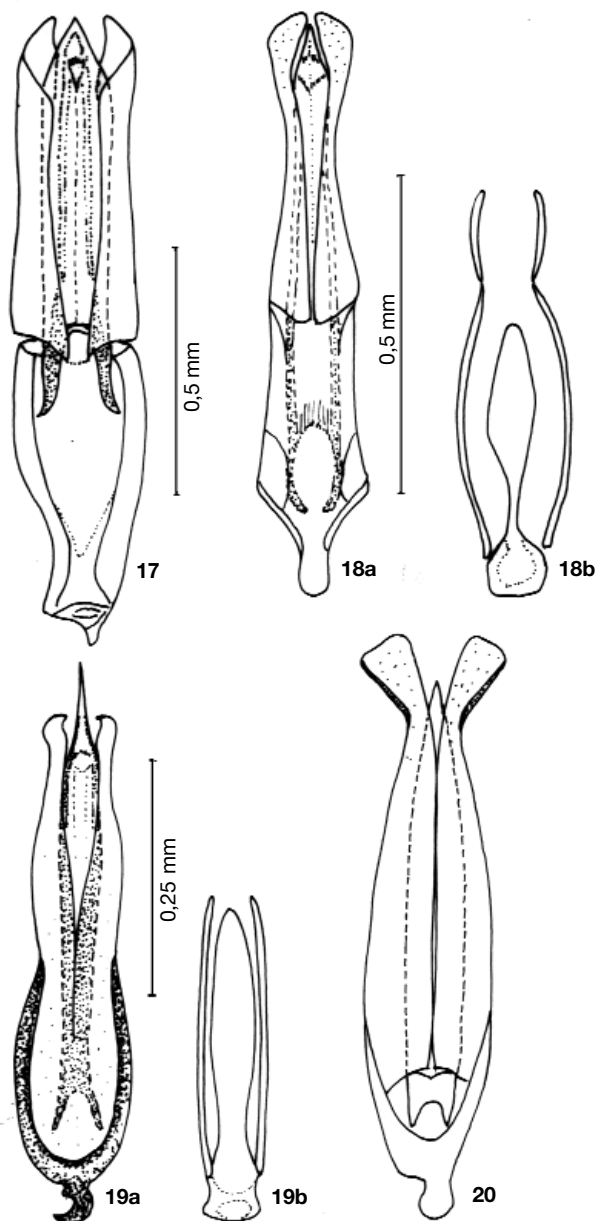


Fig. 17: *Cercyon immensus* sp. n., aedeagus.

Fig. 18: *Cercyon basirufus* sp. n., aedeagus.

Fig. 19: *Paroosternum leytensis* sp. n., a) aedeagus, b) genital segment.

Fig. 20: *Paroosternum sorex* (SHARP) [Rwanda], aedeagus.

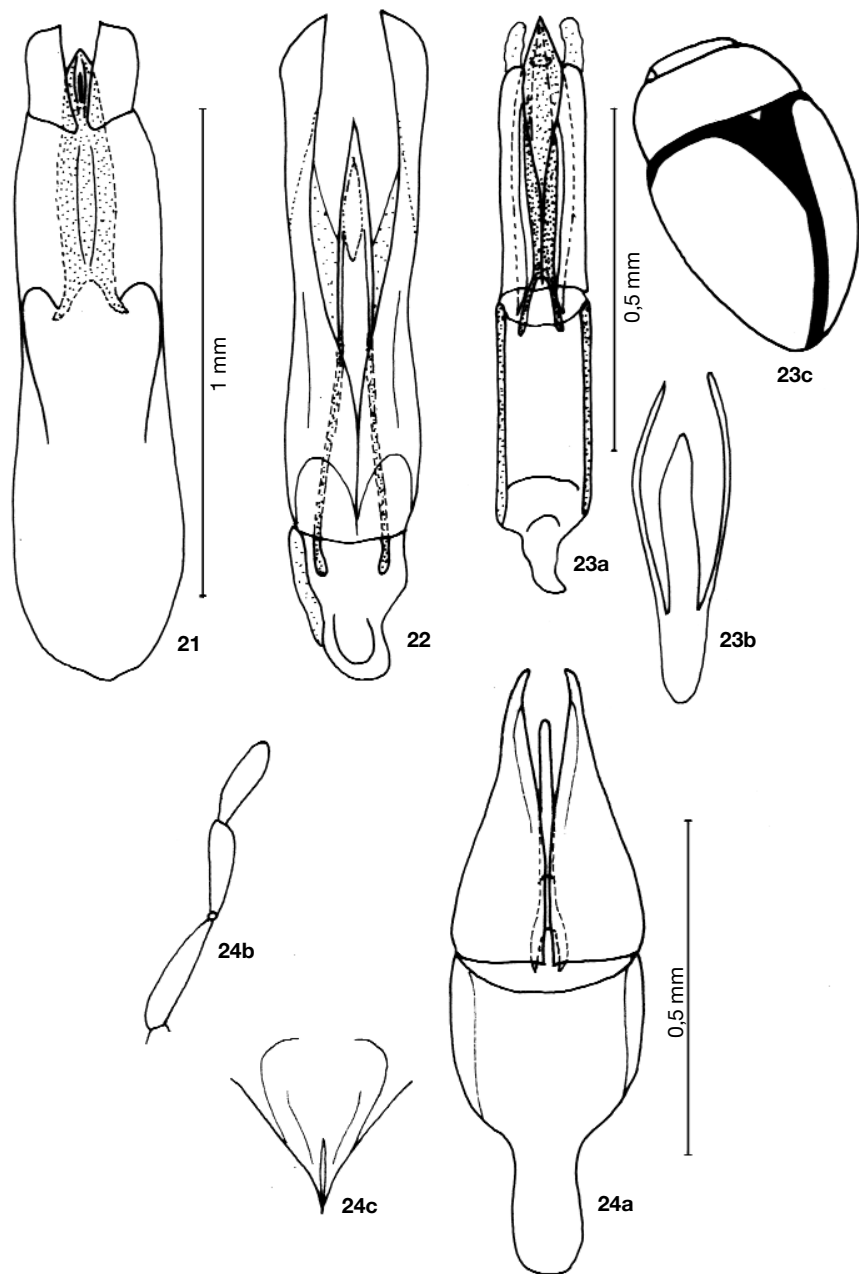


Fig. 21: *Allocotocerus magnus* sp. n., aedeagus.

Fig. 22: *Pachysternum keralense* sp. n., aedeagus.

Fig. 23: *Cercyon signifer* sp. n., a) aedeagus, b) genital segment, c) surface.

Fig. 24: *Enochrella viscalis* sp. n., a) aedeagus, b) right maxillary palpus, c) mesosternal elevation.

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