

Complementary generic revision of the subfamily Chaetomalachiinae

(Insecta: Coleoptera: Dasytidae)

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Abstract

The genera of the subfamily Chaetomalachiinae MAJER are reviewed. Five genera are described as new to science: *Hladilium* gen.n., *Dasythrix* gen.n., *Asiothrix* gen.n., *Euthrix* gen.n., *Brodskyana* gen.n. Thirteen species are described as new to science: *Hladilium perpolitum* sp.n. (Himalayas), *Hladilium molestum* sp.n. (Himalayas), *Hladilium obstinatum* sp.n. (Himalayas), *Hladilium perplexum* sp.n. (Himalayas), *Parathrix tristis* sp.n. (Iran), *Danaceothrix glaberrima* sp.n. (China: Sichuan), *Euthrix sulcicollis* sp.n. (N Pakistan), *Euthrix lata* sp.n. (Afghanistan), *Dasytiscus rufipennis* sp.n. (Turkey), *Dasytiscus amasyanus* sp.n. (Jordan, Turkey), *Brodskyana lubrica* sp.n. (W Iran), *Brodskyana juncta* sp.n. (S Iran), *Brodskyana furcilla* sp.n. (Jordan).

Seven new synonyms are proposed: *Dasytes kuluensis* PIC, 1922, and *Dasytes assamensis* PIC, 1922, syn.n. of *Hladilium cambiense* (GORHAM, 1895); *Chaetomalachius* subg. *Setomalachius* MAJER, 1989 syn.n. of *Chaetomalachius* KRAATZ, 1882, *Dasytidius avius* MAJER, 1989, syn.n. of *Dasytidius latissimus* MAJER, 1989. *Dasytiscus obscuripes* LIBERTI, 1986, *Dasytidius attenuatus* MAJER, 1991, and *Dasytidius svihlai* MAJER, 1991, are all established as syn. n. of *Dasytiscus nigripes* PIC, 1894, *Dasytidius atratus* MAJER, 1991, syn.n. of *Dasytidius alfieri* (WITTMER, 1935), *Dasytiscus (Dasytidius) nigrofemoratus* SCHILSKY, 1897, syn.n. of *Dasytidius wartmanni* (REITTER, 1897), *Dasytes brevis* CHAMPION, 1925, syn.n. of *Danaceothrix monilicornis* (CHAMPION, 1922).

Ten new combination are proposed: *Hladilium himalayanum* (PIC, 1911) comb.n. (from *Dasytes*), *Hladilium insulcatum* (PIC, 1922) comb.n. (from *Dasytes*), *Hladilium cambiense* (GORHAM, 1895) comb.n. (from *Dasytes*), *Hladilium speculiferum* (CHAMPION, 1922) comb.n. (from *Dasytes*), *Hladilium amplexum* (CHAMPION, 1926) comb.n. (from *Dasytes*), *Dasytidius alfieri* (WITTMER, 1935) comb.n. (from *Dasytiscus*), *Asiothrix minuta* (WITTMER, 1954) comb.n. (from *Dasytiscus*), *Danaceothrix monilicornis* (CHAMPION, 1922) comb.n. (from *Dasytes*), *Brodskyana semipallida* (REITTER, 1899) comb.n. (from *Dasytiscus*), *Dasythrix flavoniger* (MAJER, 1991) comb.n. (from *Dasytidius*). *Dasytiscus graminis* is a nom.n. for *Dasytes rufitarsis* LUCAS, 1853, nec *Dasytes rufitarsis* C. R. SAHLBERG, 1822.

The phylogenetic relationships among the genera of the Chaetomalachiinae are investigated by using cladistic analysis. A checklist of the species is provided.

Key words: Insecta, Coleoptera, Dasytidae, Chaetomalachiinae, taxonomy, new genera, new species, new synonymy, new combination, phylogeny, checklist.

Zusammenfassung

Die Gattungen der Unterfamilie Chaetomalachiinae MAJER werden revidiert. Fünf Gattungen und dreizehn Arten werden neu beschrieben: *Hladilium* gen.n., *Dasythrix* gen.n., *Asiothrix* gen.n., *Euthrix* gen.n. und *Brodskyana* gen.n.; *Hladilium perpolitum* sp.n. (Himalaya), *Hladilium molestum* sp.n. (Himalaya), *Hladilium obstinatum* sp.n. (Himalaya), *Hladilium perplexum* sp.n. (Himalaya), *Parathrix tristis* sp.n.

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(Iran), *Danaceothrix glaberrima* sp.n. (China: Sichuan), *Euthrix sulcicollis* sp.n. (N Pakistan), *Euthrix lata* sp.n. (Afghanistan), *Dasytiscus rufipennis* sp.n. (Türkei), *Dasytiscus amasyanus* sp.n. (Jordanien, Türkei), *Brodskyana lubrica* sp.n. (W Iran), *Brodskyana juncta* sp.n. (S Iran) und *Brodskyana furcilla* sp.n. (Jordanien).

Sieben neue Synonyme werden vorgeschlagen: *Dasytes kuluensis* PIC, 1922, syn.n. und *Dasytes assamensis* PIC, 1922, syn.n. zu *Hladilium ambiense* (GORHAM, 1895); *Chaetomalachius* subg. *Setomalachius* MAJER, 1989, syn.n. zu *Chaetomalachius* KRAATZ, 1882, *Dasytidius avius* MAJER, 1989, syn.n. zu *Dasytidius latissimus* MAJER, 1989. *Dasytiscus obscuripes* LIBERTI, 1986, syn.n., *Dasytidius attenuatus* MAJER, 1991, syn.n. und *Dasytidius svihlai* MAJER, 1991, syn.n. zu *Dasytiscus nigripes* PIC, 1894, *Dasytidius atratus* MAJER, 1991 syn.n. zu *Dasytidius alfieri* (WITTMER, 1935), *Dasytiscus* (*Dasytidius*) *nigrofemoratus* SCHILSKY, 1897, syn.n. zu *Dasytidius wartmanni* (REITTER, 1897), *Dasytes brevis* CHAMPION, 1925, syn.n. zu *Danaceothrix monilicornis* (CHAMPION, 1922).

Zehn neue Kombinationen werden vorgeschlagen: *Hladilium himalayanum* (PIC, 1911) comb.n. (von *Dasytes*), *Hladilium insulcatum* (PIC, 1922) comb.n. (von *Dasytes*), *Hladilium ambiense* (GORHAM, 1895) comb.n. (von *Dasytes*), *Hladilium speculiferum* (CHAMPION, 1922) comb.n. (von *Dasytes*), *Hladilium amplexum* (CHAMPION, 1926) comb.n. (von *Dasytes*), *Dasytidius alfieri* (WITTMER, 1935) comb.n. (von *Dasytiscus*), *Asiothrix minuta* (WITTMER, 1954) comb.n. (von *Dasytiscus*), *Danaceothrix monilicornis* (CHAMPION, 1922) comb.n. (von *Dasytes*), *Brodskyana semipallida* (REITTER, 1899) comb.n. (von *Dasytiscus*), *Dasythrix flavoniger* (MAJER, 1991) comb.n. (von *Dasytidius*). *Dasytiscus graminis* is a nom.n. for *Dasytes rufitarsis* LUCAS, 1853 nec *Dasytes rufitarsis* C. R. SAHLBERG, 1822.

Die phylogenetischen Verwandtschaftsbeziehungen zwischen den Gattungen der Chaetomalachiinae werden mithilfe einer kladistischen Analyse untersucht. Eine Check-Liste der Arten wird beigefügt.

Introduction

The subfamily Chaetomalachiinae has been treated in twelve of my papers (MAJER 1987, 1988a, b, 1989a, b, c, d, 1990a, b, 1991a, b, 1995). Since then, extensive material was placed at my disposal, which resulted in the description of 5 new genera.

Classification within this paper is based upon the current cladistic character analysis, each genus within this subfamily is primarily erected upon autapomorphies which are represented at least by the unique character state of the tegmen and mostly that of the phallus.

Abbreviations:

Collections

BMNH	British Museum, Natural History, London, U. K.
KMBC	Karel MAJER, private collection, Brno, Czech Republic
MSNM	Museo Civico di Storia Naturale, Milano, Italy
MNHN	Muséum National d' Histoire naturelle, Paris, France
NHMB	Naturhistorisches Museum Basel, Switzerland
NHMW	Naturhistorisches Museum Wien, Austria
NMPC	Národní Muzeum, Praha, Czech Republic
RCSL	Private collection of Dr. R. Constantin, Saint - Lô, France
HNHM	Természettudományi Muzeum, Budapest, Hungary
ZMHB	Zoologisches Museum, Humboldt - Universität, Berlin, Germany

Morphology

eme	hypomeral process (projection of hypomeron)	mtn	mesepisternum
eph	epipharynx	mtp	metathoracic intercoxal process
ltp	lateral tormal process	pip	prosternal intercoxal process
mes	mesosternum	sct	sclerites of seminal canal
mms	median projection of sternite 8	sps	sternopleural suture
		spt	spermatheca

Cladistics

- (0) plesiomorphic character state
- (1) apomorphic character state
- (2), (3), ... apomorphic character states in multistate characters
- > trend (partial apomorphy): derived character state not present in all subordinated taxa
- * homoplasy: analogous characters (parallelisms or convergence, repeated apomorphy within the major group examined)
- ? structure could not be examined (unique specimens could not be dissected)
- structure not present (wings in apterous taxa)

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Taxonomy

Character analysis

The adelphotaxon of the ingroup Chaetomalachiinae are Listrinae + Dasytinae, mutual relationships of dasytine subfamilies are as follows: (Rhadalinae (Danaceinae (Chaetomalachiinae (Listrinae + Dasytinae)))). Outgroup of the Chaetomalachiinae are Danaeinae, of which the tribe Amauronioidini is most similar to the Chaetomalachiinae. From the Amauronioidini, both the genera *Amauronia* WESTWOOD (= *Aphycetus* DUVAL) and *Mauroania* MAJER in lit. (= *Amauronia* auct.) were selected to polarise characters in all terminal taxa.

Characters in the terminalia have generally been considered strikingly multistate, without recognizable plesiomorphies in the terminal taxa. A polarised sequence of the character states shows the transformation series as defined by KOLIBÁČ (1992).

Character 1 (multistate): tormal processes.

Outgroup: *Amauronia*. Character state: (0), median processes subparallel with lateral ones (MAJER 1989c: figs. 49, 110); (1), lateral ones bent down and interconnected (MAJER 1989c: fig. 62); (2), median processes diverging (Figs. 31, 131); (3), as (1), basal projection distinct (MAJER 1989c: fig. 96).

State (0) is the most ancestral because it is present analogically in all subfamilies of Dasytinae, but only in a few subgroups of Danaceinae, state (1) is a common state as

distributed as (0), it is very likely correlated with heavier sclerotization of the whole body (analogically correlated states are found over many of the families of the Melyrid stock), state (2) is within Dasytinae known in several species of *Hladilium* and *Brodskyana* only, state (3) is rather a trend in some of Chaetomalachiinae but extremely developed in many Dasytinae genera.

Character 1 is generally considered homoplasious though its all above states define the whole Chaetomalachiinae and are mostly stable within particular genera.

Character 2 (not multistate): galea

Outgroup: *Mauroania*. Character states: (0), unarmed (MAJER 1989c: fig. 66); (1), with spiny projection (MAJER 1989c: figs. 24, 40).

State (0) is common in all the Dasytidae, excepting *Chaetomalachius* and *Parathrix* where state (1) occurs. Character 2 is considered synapomorphic for *Chaetomalachius* and *Parathrix*.

Character 3 (not multistate): lacinia

Outgroup: *Mauroania*. Character states: (0), unarmed (MAJER 1989c: fig. 66); (1), armed, with a spiny projection (MAJER 1989c: fig. 40).

State (0) is common in all the Dasytidae, excepting autapomorphic state (1) in *Parathrix*.

Character 4 (not multistate): pronotum, perimeter

Outgroup: *Amauronia*. Character states: (0), at most finely bordered (MAJER 1989c: figs. 2, 26, 33, etc.); (1), strikingly bordered (Figs. 1, 3, 24, etc.).

State (0) is very frequent in the Dasytinae, state (1) less so. Also by the frequency of occurrence criterion, (0) is considered plesiomorphic. State (1) within Chaetomalachiinae occurs in *Hladilium* only, is therefore considered autapomorphic, although it occurs as a weak trend also in *Chaetomalachius*.

Character 5 (not multistate): pronotum, prelateral carina (or line)

Outgroup: *Amauronia*. Character states: (0), absent (Figs. 1, 67, 74, etc.); (1), present (MAJER 1989c: fig. 26, 65).

State (0) occurs frequently, state (1) less so in the Dasytidae. State (1) within Chaetomalachiinae occurs in all species of *Chaetomalachius*, *Asiothrix*, some of *Haplothrix* and *Dasytiscus* where it is coded as a distinct trend. In general, it is homoplasy within the Dasytidae.

Character 6 (not multistate): prosternum, side view

Outgroup: *Mauroania*. Character states: (0), evenly convex; (1), elevated (Figs. 2, 10, 16, 22).

State (0) occurs in all Dasytidae excepting for *Hladilium*, where state (1) occurs and is therefore inferred as autapomorphic.

Character 7 (not multistate): prosternal intercoxal process

Outgroup: *Mauroania*. Character states: (0), fully developed (MAJER 1989c: figs. 4, 19, 35, etc.); (1), reduced (Fig. 21).

State (0) occurs in all Dasytidae excepting for *Hladilium*, where state (1) occurs and is therefore inferred as autapomorphic.

Character 8 (not multistate): hypomeral process

Outgroup: *Mauroania*. Character states: (0) fully developed (MAJER 1989c: figs. 4, 19, 35, etc.); (1), reduced (Fig. 21).

State (0) occurs in all Chaetomalachiinae genera excepting *Hladilium*, where state (1) is correlated with generally derived prothorax and is inferred as autapomorphic.

Character 9 (not multistate): metathoracic wings

Outgroup: *Mauroania*. Character states: (0), Rc large, 4 anal and one transverse interconnecting vein present (MAJER 1987: figs. 398 - 403); (1), Rc strongly reduced, almost round in outline, 3 anal veins and one transverse interconnecting vein present (Figs. 25, 36, 95, 108, 134).

State (1) is a unique combination within the subfamilies of Dasytidae and is then inferred as subfamiliar autapomorphy.

Character 10 (not multistate): tarsi in general

Outgroup: *Mauroania*. Character states: (0), tarsomeres subequal in size, claws with complete membranous appendages (MAJER 1987: figs. 185, 186); (1), tarsomere 4 strikingly smaller than adjacent tarsomeres, claws simple (Figs. 37, 48, 57).

State (1) is a unique combination within the subfamilies of Dasytidae and is therefore inferred as subfamiliar autapomorphy. Reduction of tarsomere 4 and that of claws seems to be the same genetic mechanism.

Character 11 (not multistate): male mesotarsi

Outgroup: *Mauroania*. Character states: (0), simple (MAJER 1989a: figs. 15 - 17); (1), modified: widened, or tarsomeres 2 and 3 incurved (Figs. 37, 48, 57).

State (0) occurs in all Chaetomalachiinae genera excepting *Hladilium*, where state (1) is present and is inferred as autapomorphy.

Character 12 (multistate): male sternite 8

Outgroup: *Amauronia*. Character states: (0), sternite entire, median process fused (MAJER 1987: figs. 125, 194, etc.); (1), sternite divided in two or nearly so, median projection more or less isolated (Figs. 27, 39, 60); (2), sternite divided in two crescents, median projection absent (Fig. 90); (3), as (1), process long, filiform (Figs. 27, 39); (4), as (1), base of projection swollen or forked (Figs. 68, 69, 79); (5), as (4), sternal halves modified (MAJER 1989a: figs. 26, 49, 124, 165, etc.); (6), as (4), projection strongly abbreviated (Fig. 79).

Ancestral state (0) is absent in Chaetomalachiinae, (1) and (2) are synapomorphies dividing Chaetomalachiinae in two main subgroups, (3) is autapomorphy for *Hladilium*, (4) synapomorphy for genera 2 - 5, (5) autapomorphy for *Chaetomalachius* and (6) for *Parathrix*.

Character 13 (multistate): tegmen, ventral view

Outgroup: *Mauroania*. Character states: (0), base long, almost half as long as whole length of tegmen, with median line, apex weakly emarginate, with indicated lateral lobes, each with several bristles (MAJER 1987: figs. 134, 137); (1), base strongly modified (flattened or swollen), without defined basal keel (Figs. 5, 11, 17, 29, etc.); (2), base modified in another way, basal keel present but tends to be reduced; (3), tegminal opening more or less incised towards base (Figs. 82, 92, 97); (4), basal margin of tegminal opening even (Figs. 80, 71, 75); (5), basal keel and submedian dilation distinct, opening with deep basal incision, apex attenuate with a very few setae (MAJER 1989a: figs. 29, 54, 62, etc.); (6), basal keel and submedian dilation indistinct, opening without deep basal incision (Fig. 80); (7), base not turned up, neither basal keel nor median line present (MAJER 1991b: figs. 47, 48); (8), base turned up, either basal keel or median line present (Figs. 70, 71, 75); (9), basal keel strongly swollen, apex with indicated lobes (Fig. 100); (10), basal keel not swollen, lobes not indicated, apex entire with tendency to be reduced; (11), basal third without median line, apical third not dilated on sides; (12), base keeled, basal part with median line, apical third with rounded lateral dilation, apex evenly and broadly rounded (Figs. 82, 92); (13), median keel distinct, apex strongly attenuate (see MAJER 1995); (14), median keel indistinct, apex thin, truncate (see MAJER, in press, a); (15), as 12, but lateral dilation angulate or indistinct, apex more or less acuminate, basal margin of tegminal opening even (see MAJER 1989b); (16), tegmen strongly constricted in middle, neither basal keel nor median line present; (17), base slightly turned up, apex strongly attenuate and pointed (Figs. 104, 110); (18), base strongly turned up, apex more or less reduced; (19), apex membranous (Fig. 116); (20), apex forked (Figs. 142 - 143).

States (3) and (4) are homoplastic, (2), (11), (10), (18) are synapomorphies, remaining states are particular generic autapomorphies.

Character 14 (multistate): phallus, side view

Outgroup: *Mauroania*. Character states: (0), base large, well differentiated, dorsal side not extended, phallus subsinuate (MAJER 1987: fig. 137); (1), apex modified (claw-like, folded over, etc.) (Figs. 6, 30, 13, etc.); (2), phallus slender, arcuate (see MAJER 1990a); (3), phallus almost straight, apex incurved, phallotreme with sclerite (MAJER 1991b: figs. 65, 66); (4), base extended dorsally, ventrally not modified; (5), base not extended dorsally, ventrally modified; (6), apex widened, truncate and claw-like (Fig. 98); (7), base very large, quadrate (Figs. 105, 111); (8), base lobate, apex widened and truncate; (9), base not incised, apical part evenly widened and obliquely truncate (Figs. 115, 118); (10), base incised, distal part rhomboidal (Figs. 125, 128, etc.).

States (1), (2), (3), (6), (9), (10) are inferred as autapomorphies, whereas (4), (5), (7), (8) are synapomorphies.

Character 15 (multistate): internal sac

Outgroup: *Amauronia*. Character states: (0), spines very numerous, almost inconspicuous, homogeneous; (1), large spinules not very numerous (Fig. 81) of one kind; (2), large spinules as (1) of two, three or four kinds (e.g. MAJER 1989d: figs. 70 - 74).

State (0) occurs as the most ancestral state analogically in each dasytine subfamily, in the primitive Rhadalinae exclusively, (1) and (2) are of parallel nature. Character 15 makes definitions of particular genera more complete, it is inferred as homoplastic.

Character 16 (multistate): seminal canal

Outgroup: *Amauronia*. Character states: (0), poorly defined (Figs. 64 - 66); (1), defined, membranous; (2), as (1), sclerotized (Fig. 121); (3), as (1), with internal sclerites (Figs. 106, 107, 112).

State (0) is in general considered herein an ancestral state over all Dasytidae, but it is likely preceded with Heberdey's saccular type which occurs in some of Rhadalinae only, (3) is a striking generic autapomorphy within the whole Dasytinae.

Character 17 (not multistate): bursa copulatrix

Outgroup: *Amauronia*. Character state: (0), membranous; (1), sclerotized and modified distally (Fig. 102).

State (0) is generally considered ancestral, (1) is an autapomorphy within the all Dasytidae.

Character 18 (not multistate): spermatheca

Outgroup: *Amauronia*. Character states: (0), not sinuous (e.g. Figs. 8, 64); (1), sinuous to spiral (e.g. Fig. 65).

State (0) is considered ancestral, also by the criterion of Hennig's frequency of occurrence, (1) occurs in *Neothrix*, *Mimothrix* and *Achaetomalachius* and is inferred as homoplasy.

Chaetomalachiinae MAJER, 1987

Chaetomalachiini MAJER, 1987: 799, 804. Type genus: *Chaetomalachius* KRAATZ, 1882.

Chaetomalachiini: MAJER, 1989: 358, 364.

Chaetomalachiinae: MAJER, 1995: 3.

Diagnosis. The subfamily has primarily been erected upon two autapomorphies (within the whole melyrid stock): (1), Rc strongly reduced, almost round in outline, 3 anal veins and one transverse interconnecting vein present (Figs. 25, 36, 95, 108, 134); (2), tarsomere 4 strikingly smaller than adjoining, claws without either appendages or teeth.

Biology. Immature stages of the Chaetomalachiinae are unknown. Adults are usually swept from vegetation or beaten from foliage. In general, larvae of the Dasytidae are at least partly carnivorous, preying on larvae of small xylophagous insects. Secondly, the larvae are also partly sapro- or xylophagous. Imagines are rather polinivorous, to a lesser extent carnivorous. Most of the species develop under decaying bark of trees or shrubs, or in the wood parts of plant stems.

Distribution. The subfamily is distributed in all temperate zones of the Palaearctic region, westwards it deeply penetrates into Afrotropical region (but no species has recently been collected on the Iberian Peninsula or in the Macaronese subregion), eastwards into Oriental region (Indochinese subregion) but it is lacking in the most part of East-Palaearctic subregion.

Key to genera (males only)

- 1 Male sternite 8 with median projection (Fig. 27) 2
- Male sternite 8 without median projection (Fig. 90) 6
- 2 Pronotum without submarginal lines, perimeter strikingly bordered (Figs. 1, 9, 15, 24). Prosternum modified (elevated in side view) (Figs. 3, 14), intercoxal and hypomeral process reduced (Fig. 21). Male mesotarsi more or less modified (37, 48, 57). Median projection of male sternite 8 simple, filiform. Tegmen with strongly modified (constricted, dilated, etc.) base, without normal basal median keel, which is mostly replaced by thickening (Figs. 5, 11, 17, etc.) **1. *Hladilium* gen.n.**
- Pronotum with submarginal lines or not, distinctly bordered along perimeter. Prosternum not modified, intercoxal and hypomeral process well defined. Male mesotarsi not modified. Median projection of male sternite 8 more or less swollen or forked at base. Tegmen with not modified, more or less turned-up base, mostly with median keel 3
- 3 Base of tegmen not turned up, submedian dilation absent. Phallus parallel-sided, with a sclerite at phallotreme. Internal sac without visible spinules .. **4. *Dasythrix* gen.n.**
- Base of tegmen more or less turned up, submedian dilation at least indicated. Phallus more or less, without sclerite at phallotreme. Internal sac with or without visible spinules 4
- 4 Lacinia without spine. Male sternite 8 consists of two crescents, median projection long (Figs. 68, 69) **5. *Dasytidius* SCHILSKY**
- Lacinia with spine. Male sternite 8 more or less modified or median projection strongly abbreviate 5
- 5 Pronotum with submarginal lines. Male sternite 8 more or less modified, median projection long. Spinules in internal sac very tiny **2. *Chaetomalachius* KRAATZ**
- Pronotum without submarginal lines. Male sternite 8 not modified, median projection very short (Fig. 79). Spinules in internal sac distinctive (Fig. 81) **3. *Parathrix* MAJER**
- 6 Tegmen with submedian to prebasal dilation 7
- Tegmen without dilation, strongly constricted in middle 12
- 7 Pronotum never with submarginal lines. Tegmen strongly extended at sides of anterior third, basal portion of tegmen, if parallel-sided, neither differentiated nor with median line 8
- Tegmen not strongly extended at sides at anterior third, basal portion of tegmen parallel-sided, differentiated, the portion with median line and/or pronotum with prelateral lines 10
- 8 Base of tegmen seemingly bipartite, apex emarginate with two setae at each side (Fig. 100) **6. *Neothrix* MAJER**
- Base of tegmen simply folded, apex entire with a row of setae 9
- 9 Base of tegmen with distinct medial keel, apex narrowed. Internal sac with more or less distinct spinules **7. *Mimothrix* MAJER**
- Base of tegmen at most with strongly reduced medial keel, apex truncate. Internal sac with indistinct spinules **8. *Achaetomalachius* MAJER**

- 10 Pronotum without prelateral lines, texture scabrous. Tegmen with round dilation at sides of anterior third, apex evenly rounded (Figs. 82, 92). Internal sac with distinct spinules (Figs. 83, 93) **9. *Danaceothrix* MAJER**
- Pronotum sometimes with prelateral lines, texture not scabrous. Tegmen with angulate dilation at sides of anterior third, apex more or less acuminate. Internal sac with indistinct spinules 11
- 11 Basal portion of tegmen without median line (Fig. 97). Apex of phallus strongly widened, truncate and incurved (Fig. 98) **10. *Asiothrix* MAJER**
- Basal portion of tegmen with median line. Apex of phallus sometimes broadened but never incurved **11. *Haplothrix* SCHILSKY**
- 12 Pronotum always with prelateral lines. Base of tegmen with fine median keel and indication of median line, apex entire and setose (Figs. 104, 111). Seminal canal in ♀♀ with a large paired sclerite (Figs. 106, 107, 112) **12. *Euthrix* gen.n.**
- Pronotum sometimes with prelateral lines. Base of tegmen without a spur of median keel or with indication of median line, apex membranous to absent, without setae. Seminal canal in ♀♀ without sclerite 13
- 13 Base of tegmen moderately broadened, apex membranous (Fig. 116). Phallus with simple base, apex strongly dilated and truncate (Figs. 115, 118) **13. *Dasytiscus* KIESENWETTER**
- Base of tegmen dipper-shaped, apex absent (Figs. 124, 127). Phallus with deeply notched base and weakly broadened, obliquely truncate apex (Figs. 125, 128) **14. *Brodskyana* gen.n.**

1. *Hladilium* gen.n. (Figs. 1 - 63)

Type species. *Dasytes cambiensis* GORHAM, 1895: 323, by present designation. Gender: neutrum. Etymology: named in the memory of my friend, Jiří Hladil, a prominent Czech collector.

Description. Large, *Dasytes*-like (Figs. 19, 56); pubescence dual: erect and decumbent (Fig. 56); tormal processes modified, mostly divided in two, lateral tormal processes forked (Figs. 20, 31); lacinia and distigalea simple; pronotum without prelateral lines, perimeter distinctly bordered. (Figs. 1 - 3, etc.); hypomeral process reduced, sternopleural suture indistinct, prosternum modified; prosternal intercoxal process weakly dilated (Fig. 21); mesosternum and mesepisternum almost undivided (Figs. 23, 35), metathoracic intercoxal process absent; epipleuron strongly reduced; tarsomere 4 distinctly smaller (Figs. 37, 48).

♂. Meso- and metatarsomeres mostly modified. (Figs. 47, 58); sternite 7 mostly impressed and/or emarginate (Figs. 26, 49, 56); 8 simple, median projection of 8 present (Figs. 27, 39, 60), almost filiform; tegmen ventrally (Figs. 5, 11, 17, 29, 43, 46, 52, 62) with strongly modified base, constricted, dilated, etc., apex setose, neither semicircular nor emarginate or reduced, submedian dilation reduced; phallus lateral (Figs. 6, 13, 17, 30, 42, 44, 47, 53, 54, 63) not swollen distally, with apex folded over or sinuate, with base mostly larger than rest of phallus; spinules of internal sac small, numerous, transparent.

Distribution. Himalayas (Fig. 148).

Remarks. *Hladilium* seems the most derived taxon of all Chaetomalachiinae, even bearing modifications on the legs and prothorax. This genus strongly resembles the genus *Dasytes* PAYKULL in integument (which is rather weakly sclerotized), dimorph sexes, conical mostly elongate (viz. in males) antennomeres (6 and 8 are not different from adjoining), in long legs, and thickened femora (chiefly in males).

Key to species

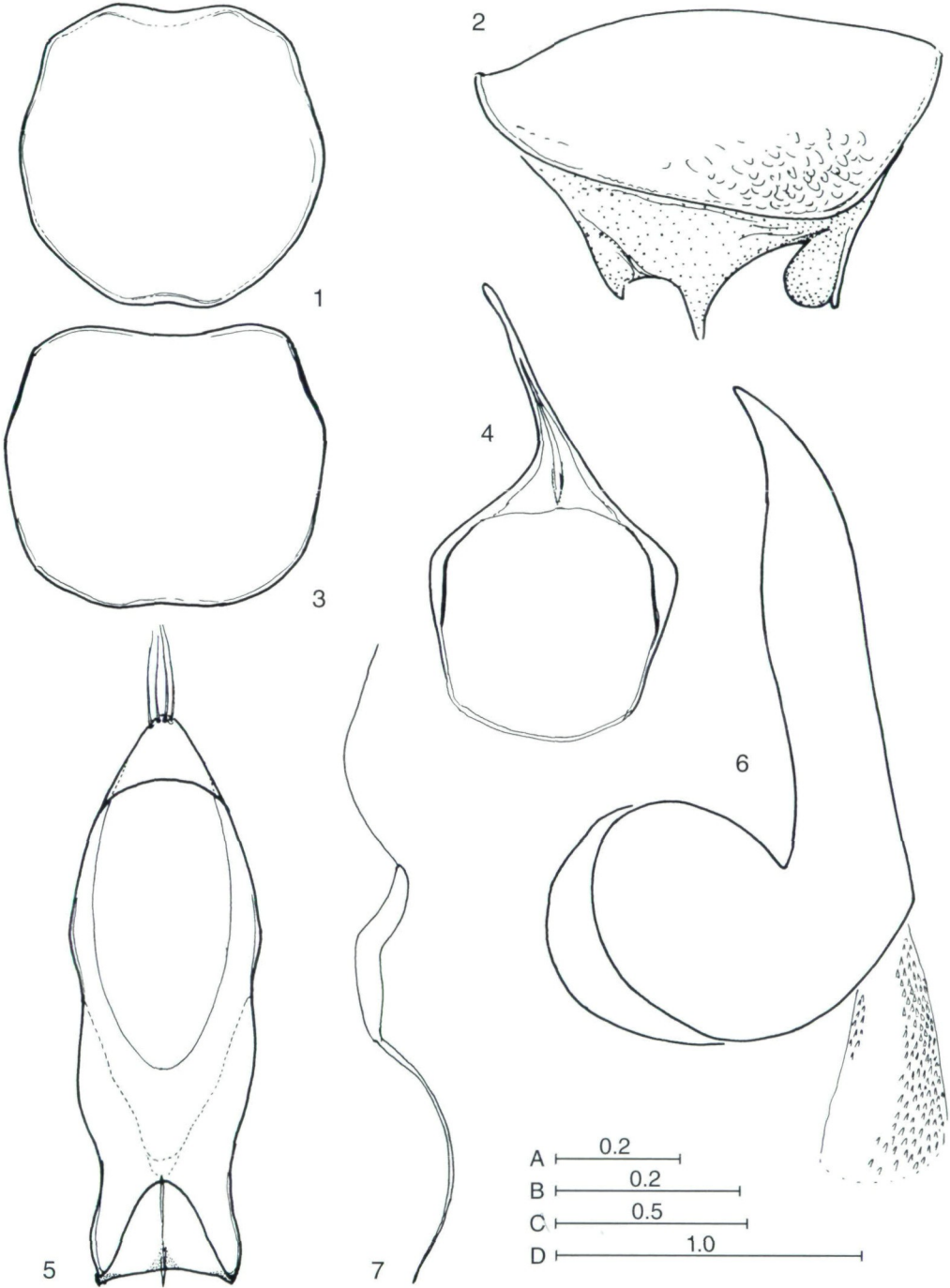
- 1 Body almost glabrous, without prominent dual pubescence. Prothorax coarsely punctured on sides, mostly modified in side view (Fig. 2). Legs always simple 2
- Body with very distinct dual pubescence. Prothorax neither coarsely punctured nor modified from side view. Legs often modified 5
- 2 Pronotal disc rugosely, irregularly punctured, at least in basal half with a median furrow **1. *H. himalayanum* (Pic)**
- Pronotal disc even, shiny, with very fine and sparse punctures 2
- 3 Antennal scape testaceous **3. *H. perpolitum* sp.n.**
- Antennal scape black 4
- 4 Lustre bluish, tarsi and tibiae always dark, pronotum more elongate (Figs. 19, 24) **4. *H. cambiensis* (GORHAM)**
- Lustre bluish-green, tarsi and tibiae often pale, pronotum less elongate (Figs. 9, 14) **2. *H. insulcatum* (Pic)**
- 5 Second tarsomere of mesotarsi strongly elongate and incurved in males (Figs. 48, 57), slightly incurved in females 6
- Second tarsomere shaped normally in both sexes 7
- 6 Extremities black. Basal pale pubescence seriatly arranged **8. *H. perplexum* sp.n.**
- Extremities testaceous. Basal pale pubescence arranged into spots alternated by glabrous areas **9. *H. amplexum* (CHAMPION)**
- 7 Male antennomeres as long as wide; 7 - 9 in female transverse **5. *H. speculiferum* (CHAMPION)**
- Male antennomeres elongate; those in females as long as wide 8
- 8 Pronotal sides subarcuate. Elytra weakly broadened posteriorly. Phallus long and slender (Fig. 46) **7. *H. obstinatum* sp.n.**
- Pronotal sides subangulate. Elytra strongly broadened across apical third. Phallus short and broad (Fig. 44) **6. *H. molestum* sp.n.**

1. *Hladilium himalayanum* (Pic) comb.n. (Figs. 1 - 7)

Dasytes himalayanus Pic, 1911: 133.

Types (2): lectotype, ♂ (present designation), (MNHN) "type" (handwritten); "Jalaori (ex Rost)" (handwritten); "D. himalayanus Pic" (Pic's MS). Paralectotype, ♀, (MNHN), "type"; "Dasytes spec. Himalaya".

Other material: Jalaori, Setledich (9 MNHN, 4 KMBC). Jalaori, Lahul (2 MNHN). Jalaori, Rost (1 MNHN). Rajoara (2 MNHN).



Figs. 1 - 7: *Hladilium himalayanum*, lectotype and paralectotype. (1, 2, 4 - 6: ♂, 3, 7: ♀). 1, 3, pronotum. 2, prothorax lateral. 4, spicular fork. 5, tegmen, dorsal. 6, phallus, lateral. 7, spermatheca. Scale bars: A = 1 - 3, B = 7, C = 4, D = 5, 6.

Diagnosis. Differs from all species by rugose structure of pronotum.

Description. Black, upper surface with light, plumbeous-green lustre; antennomeres 2 - 4 (-6) and bases of 1 - 11, tibiae and tarsi rufotestaceous, apex of pretarsi and claws blackish. Integument with sparse suberect pubescence. Head irregularly punctured at base, rest more glabrous, several thicker erect setae black, fine hairs decumbent and lighter; antennomeres rather elongate. Pronotum with median, more or less distinctive (at least at base) furrow; disc coarsely, deeply and irregularly punctured, punctures confluent into rugose texture at sides and base; basal fuscous pubescence very fine and sparse, not distinct, black long erect setae present at sides of pronotum. Elytra densely and regularly punctured; basal pubescence pale, fine and sparse, suberect, somewhat more erect and darker hairs present on humeri.

♂. More slender. Antenna longer and thicker. Pronotum (Fig. 1) more angulate at sides, prosternum swollen (Fig. 2). Length of antenna: length of pronotum = 1.5.

Pygidium transverse, spicular fork figured (Fig. 4); sternite 7 straight at apex; 8 as in other species; tegmen (Fig. 5) with folded base; phallus in side view (Fig. 6) with straight dorsal side and sinuate ventral one; internal sac with minute spinules. Length 3.6 - 3.9 mm, width 1.3 - 1.4 mm.

♀. Broader. Antenna more slender and shorter. Pronotum less angulate at sides (Fig. 2); length of antenna: length of pronotum = 1.4. Pronotum not swollen. Pygidium subtriangular, apex rounded; sternite 7 as in *H. cambiensis* (GORHAM); spermatheca figured (Fig. 7). Length 4.1 - 4.3 mm, width 1.5 - 1.7 mm.

Distribution. India: Kashmir.

2. *Hladilium insulcatum* (Pic) comb.n. (Figs. 9 - 14)

Dasytes insulcatus Pic, 1922: 156.

Types (3): lectotype, ♂ (present designation), (MNHN), 2 Paralectotypes, ♀ (MNHN): "Kulu Himalaya"; "Kulu 5000 F"; "type"; "insulcatus sp.n." (Pic's MS).

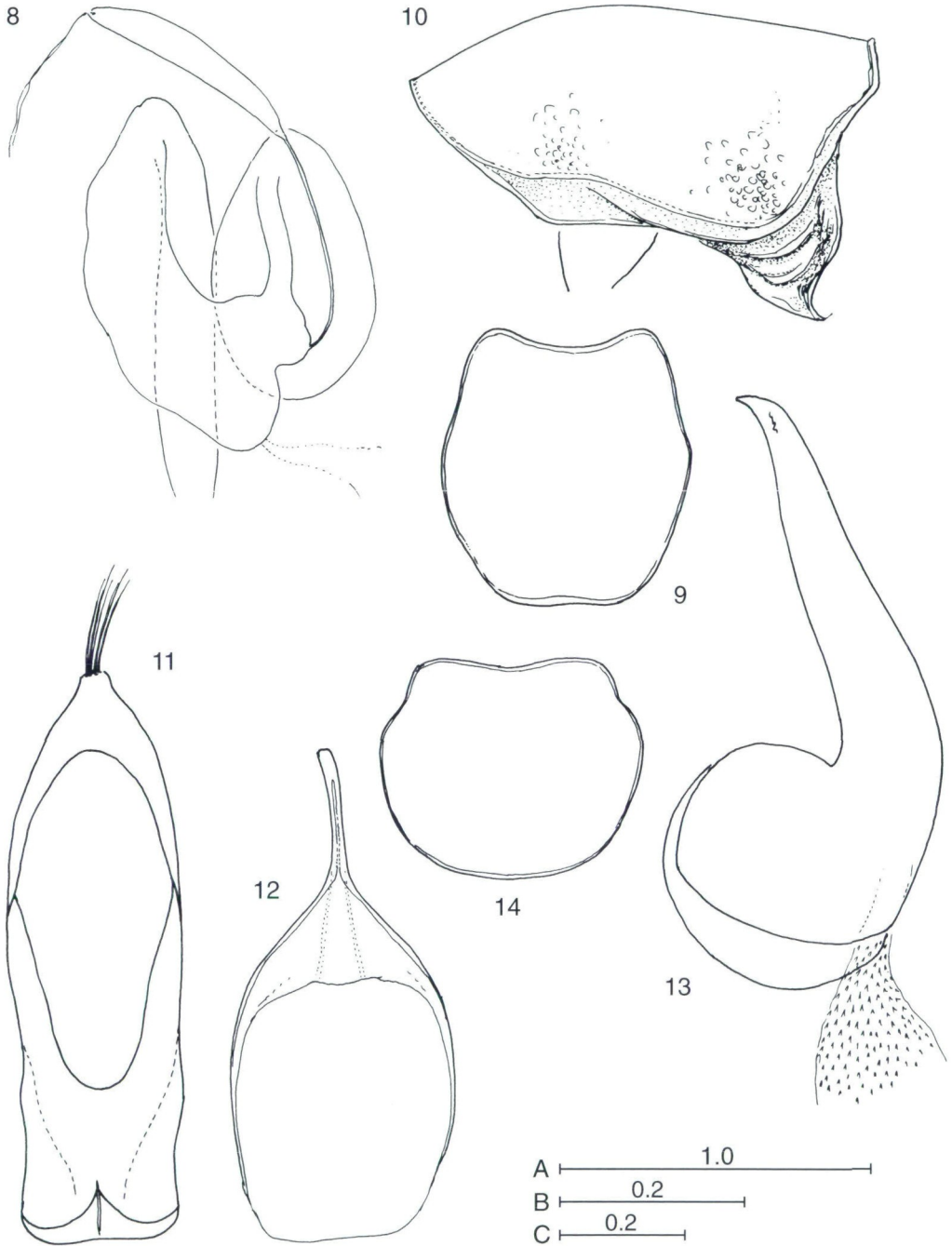
Other material: India, Him. Pradesh, Simla - Naldera, 2250 m, 3.v.1977, Brancucci & Wittmer (2 KMBC, 3 NHMB). idem, Manali, 2000 - 2300 m, 15.v.1977, Brancucci & Wittmer (1 KMBC, 1 NHMB). idem, Katrain, 1450 m, 11.v.1977, Brancucci & Wittmer (1 NHMB).

Diagnosis. Differs from species with dark extremities by greenish lustre.

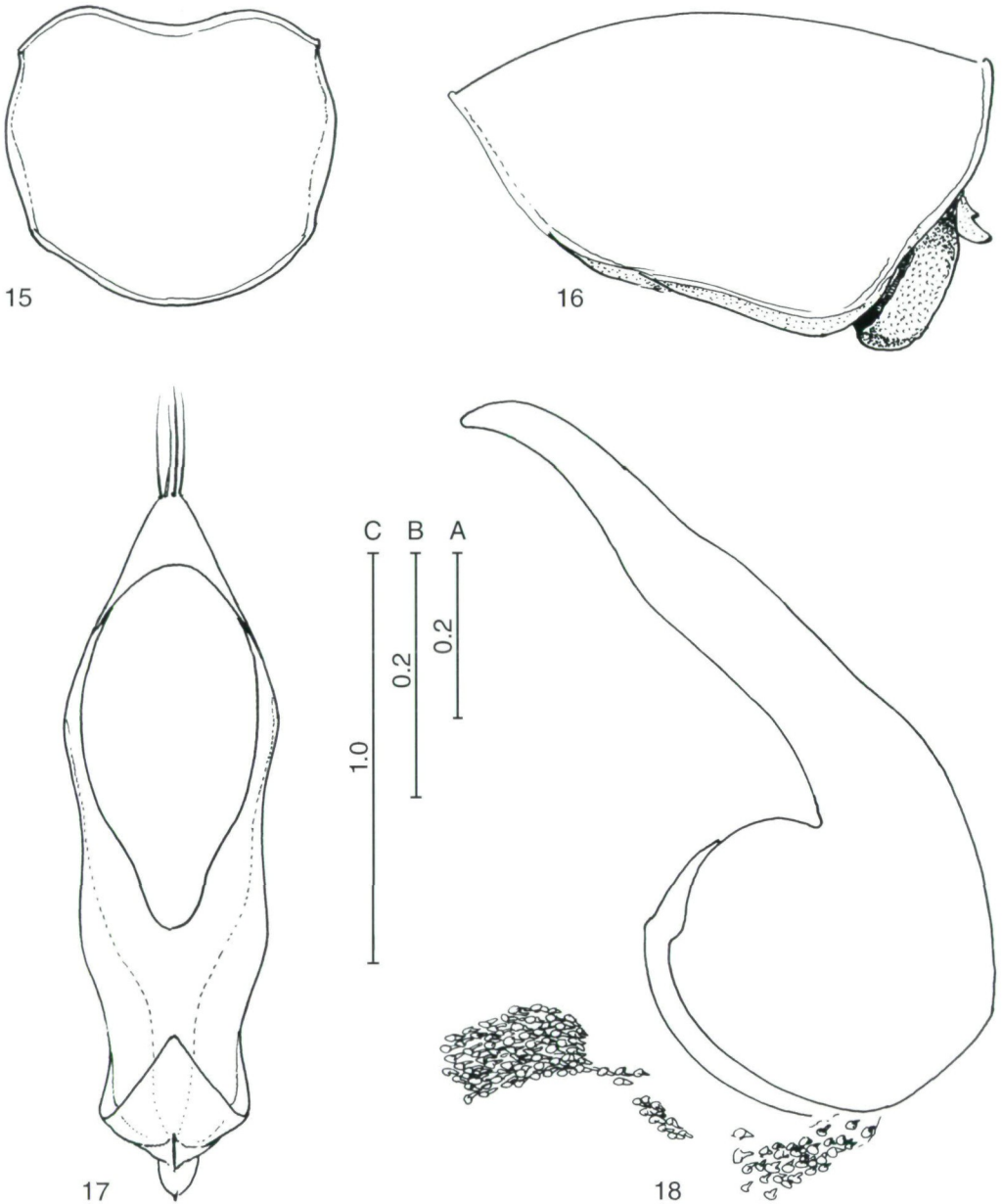
Description. Black, strongly lustrous, with greenish and bluish reflections, femora piceous or rufopiceous; tarsi, tibiae, and antenna rufotestaceous, but scape blackish and antenna somewhat infuscate towards apex, legs sometimes completely fuscous to piceous. Pubescence relatively short, erect, sparse, fuscous to piceous.

Head strongly shiny, very finely and sparsely punctured, base punctured more intensively. Pronotum with shiny disc, very finely and sparsely punctured, punctures coarse and dense sideways. Elytra shallowly and not distinctly punctured, intervals with irregular texture.

♂. Body more slender, head broad, antenna longer; length of antenna: length of pronotum = 1.7; all segments at the most slightly elongate. Pronotum (Fig. 9) not transverse; prosternum in side view (Fig. 10) strongly enlarged.



Figs. 8 - 14: (8) *Hladilium cambiense*, lectotype and paralectotype. (9 - 14) *H. insulcatum*, lectotype and paralectotype. (8) spermatheca, (9) pronotum, ♂, (10) prothorax, lateral, ♂, (11) tegmen, dorsal, (12) spicular fork, (13) phallus, lateral, (14) pronotum, ♀. Scale bars: A = 9, 10, 14, B = 8, C = 11 - 13.



Figs. 15 - 18: *Hladilium perpolitum* sp.n., holotype, ♂. 15, pronotum. 16, prothorax, lateral. 17, tegmen, dorsal. 18, phallus, lateral. Scale bars: A = 15, B = 16, C = 17, 18.

Pygidium transverse, weakly trapeziform, apex shallowly emarginate; sternite 7 indistinctly emarginate, 8 as in *H. cambiensis*; spicular fork figured (Fig. 12); tegmen (Fig. 11) with weakly folded base; phallus in side view (Fig. 13) with round base, phallus weakly sinuate; internal sac with very numerous spinules. Length 3.6 mm, width 1.3 mm.

♀. Body wider, head more slender, antenna shorter; length of antenna: length of pronotum 1.3; segments fine, indistinctly elongate. Pronotum transverse (Fig. 14); prosternum simple. Pygidium as in preceding species; internal copulatory organs without specific characters. Length 3.4 - 3.5 mm, width 1.4 mm.

Distribution. India: Himachal Pradesh.

3. *Hladilium perpolitum* sp.n. (Figs. 15 - 18)

Types (13): holotype, ♂ (NHMB), 4 paratypes, ♀♀ (2 KMBC, 2 NHMB), Yourdu, 16.7., 2150 - 2400 m; Jammu 1980, W. Wittmer." ♂ 8 paratypes, ♀♀, as holotype, but "Yourdu - Sarkandu, 2350 m, 17.7." (7 NHMB, 1 KMBC).

Diagnosis. Differs from all species by testaceous antennal scape.

Description. Black, upper surface strongly shiny, with blue-greenish lustre; tibiae, tarsi, antenna (incl. scape) and mouthparts yellow; pubescence moderately long, single (but very fine decumbent hairs present).

Head with prominent eyes; surface nearly impunctate, strongly shiny; antennomeres long, equal in size; each subtriangular. Pronotum with upper surface completely glabrous and shiny, impunctate; only with scattered fine decumbent hairs. Elytra with indistinct shallow punctures.

♂. Antenna longer, segments more robust, length of antenna: length of pronotum = 1.7. Pronotum (Fig. 15) less transverse, prosternum in side view (Fig. 16) with bulbous formation. Pygidium transverse, nearly semicircular; sternites 7, 8, and spicular fork as in *H. insulcatum*; tegmen (Fig. 17) with dilated median keel; phallus (Fig. 18) strongly resembling that in *H. insulcatum*. Length 3.5 mm, width 2.6 mm.

♀. Antenna shorter, segments fine, length of antenna: length of pronotum = 1.5 - 1.6. Pronotum more transverse, prosternum in side view not distinctly modified. Terminalia as in *H. insulcatum*. Length 3.4 - 3.8 mm, width 2.8 - 3.1 mm.

Distribution. N India: Jammu.

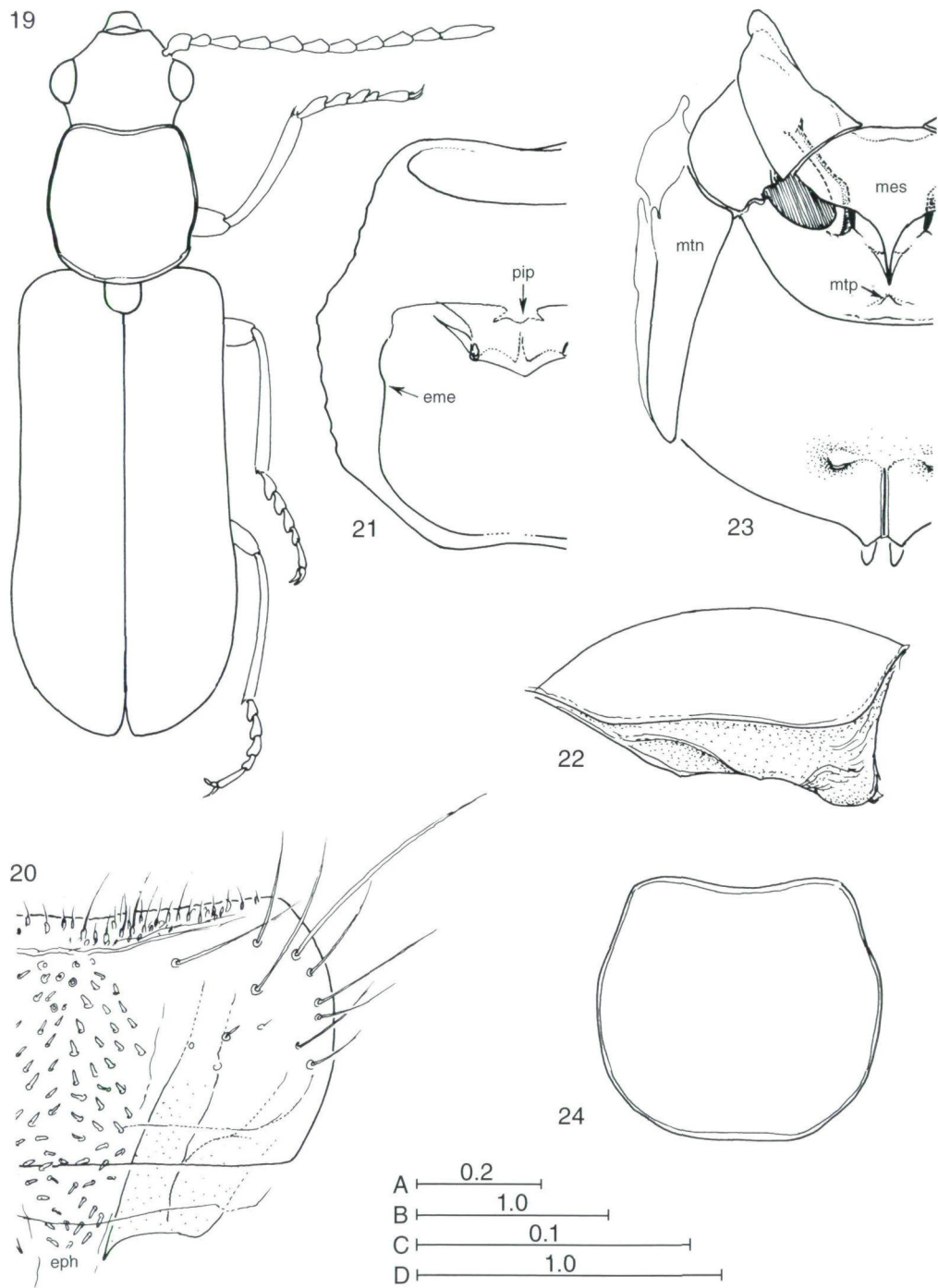
4. *Hladilium cambiense* (GORHAM) comb.n. (Figs. 8, 19 - 30)

Dasytes cambiensis GORHAM, 1895: 323. Types (2): lectotype, ♂ (present designation), and paralectotype, ♀ (BMNH): "cotype" (green circular); "Chamba" (Gorham's MS); "Dasytes cambiensis Gorh." (Gorham's MS). Another "cotype", ♂, with same data in MNHN.

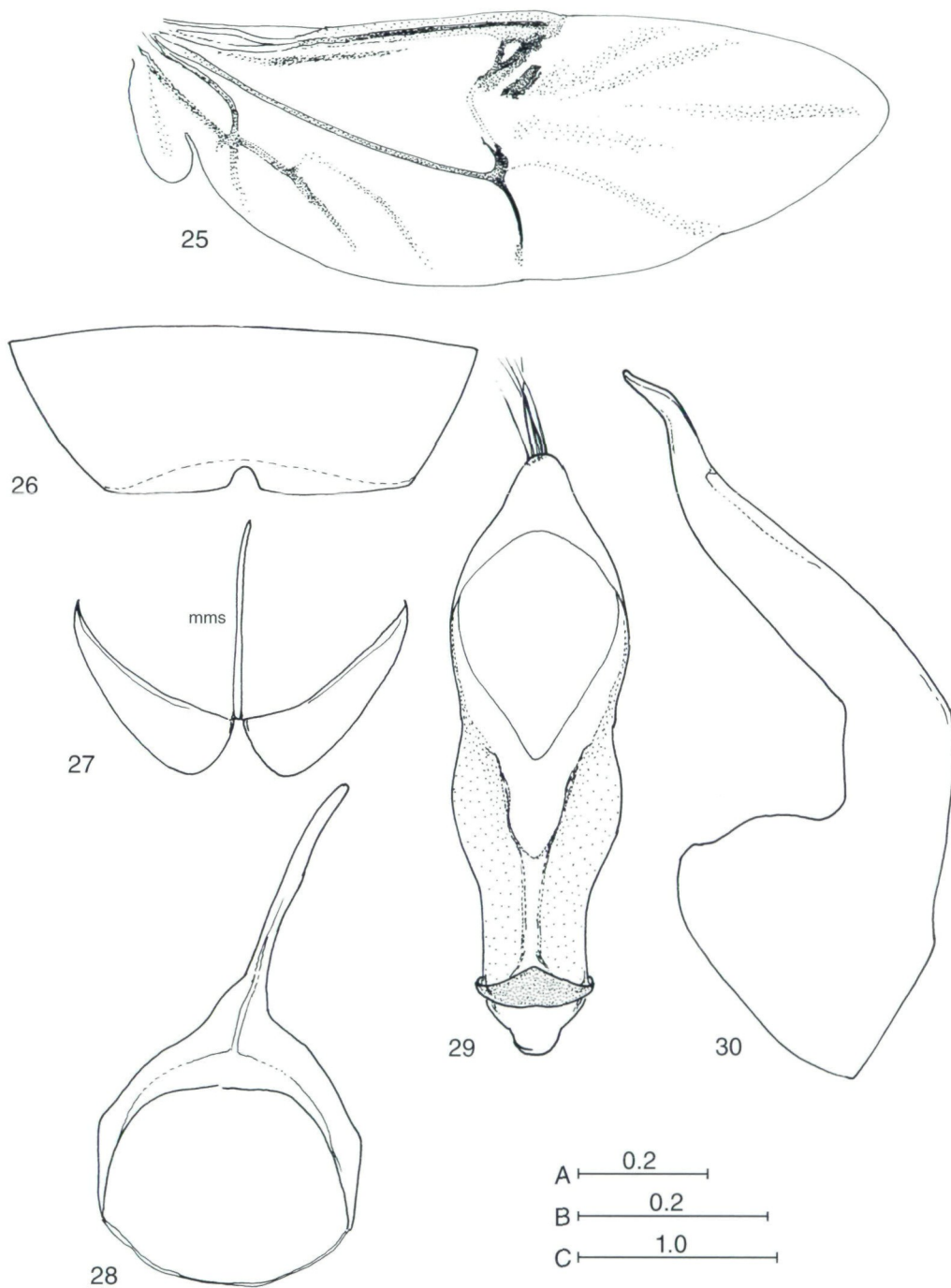
Dasytes kuluensis PIC, 1922: 155, **syn.n.** Types (2): lectotype, ♀, (present designation), paralectotype, ♀, (MNHN): "Kulu Rost" (Pic's MS); "Dasytes sp" (Pic's MS); "type" (Pic's MS); "Dasytes cambiensis Gorh. ou sp. prés." (Pic's MS).

Dasytes assamensis PIC, 1922: 155, **syn.n.** Type: Holotype, ♀, (MNHN), "Khasia Hills Assam"; "coll. Kraatz"; "type" (Pic's MS); "assamensis sp.n." (Pic's MS); "Bul T. 1922" (Pic's MS).

Other material (62): Him. Pradesh, Simla, (2 KMBC, 4 ZMHB). idem, Simla - Kufri, 4.v.1977, Brancucci & Wittmer (8 KMBC, 25 NHMB). Utt. Pradesh, Chaurengi, 2200 - 2500 m, 23.v.1978, W. Wittmer (3 KMBC, 12 NHMB). idem, Manali, 2000 - 2300m, Brancucci & Wittmer (3 NHMB). idem, Chopal, 2400 - 2500 m, 7.v.1977, Brancucci & Wittmer (3 NHMB). idem, Mussorie, 2000 m, 30.5 - 4.6. 1981, M. Brancucci (1 NHMB). Spiti, Pulga, V. 1914, Babault (1 MNHN).



Figs. 19 - 24: *Hladilium cambiense*, lectotype and paralectotype. (19) habitus, ♂, (20) labrum, ♂, (21) prothorax, ventral, ♂, (22) same, lateral, ♂, (23) meso - and metathorax, ventral, ♂, (24) pronotum, ♀. Scale bars: A = 20, B = 19, C = 21 - 23, D = 24.



Figs. 25 - 30: *Hladilium cambiense*, lectotype, ♂. (25) wing, (26) sternite 7, (27) sternite 8, (28) spicular fork, (29) tegmen, dorsal, (30) phallus, lateral. Scale bars: A = 28 - 30, B = 26, 27, C = 25.

Diagnosis. Differs from all species by blue lustre, shiny pronotum and dark extremities.

Description. Black with deep blue lustre, tibiae and tarsi rufopiceous to piceous; antennomeres 2 - 4 reddish, 5 - 11 gradually darkened towards apex. Pubescence single, erect and long, sparse, black.

Head strongly shiny, nearly impunctate, inner margins of eyes and sides of frons bordered; only the very base of head punctured. Pronotum with strongly shiny disc, nearly impunctate; sides somewhat densely punctured. Elytral surface shallowly, irregularly punctured, punctures partly confluent into transverse wrinkles.

♂ (Fig. 19). Slender. Legs long, antenna very long; length of antenna: length of pronotum = 2.1; all segments elongate and subserrate, 5 is the largest; antennal sockets prominent. Prosternum (Fig. 22) bulged in side view, metasternum (Fig. 23) caudally with two tubercles. Pygidium strongly trapeziform; sternite 7 (Fig. 26) briefly notched in middle, 8 figured (Fig. 27); spicular fork figured (Fig. 28) tegmen (Fig. 29) with tuberculate base; phallus in side view (Fig. 30) bent twice, apex sinuate; internal sac without visible spinules. Length 4.1 - 4.3 mm, width 1.3 - 1.5 mm.

♀. Broader. Extremities shorter; length of antenna: length of pronotum = 1.4; segments 5 - 11 each as wide as long; antennal sockets normal. Pronotum wider (Fig. 24); prosternum and metasternum simple. Pygidium nearly semicircular, apex weakly emarginate; sternite 7 subarcuate; internal copulatory organs membranous (Fig. 8). Length 3.9 - 4.3 mm, width 1.3 - 1.7 mm.

Distribution. Himalayas.

5. *Hladilium speculiferum* (CHAMPION) comb.n. (Figs. 31 - 42)

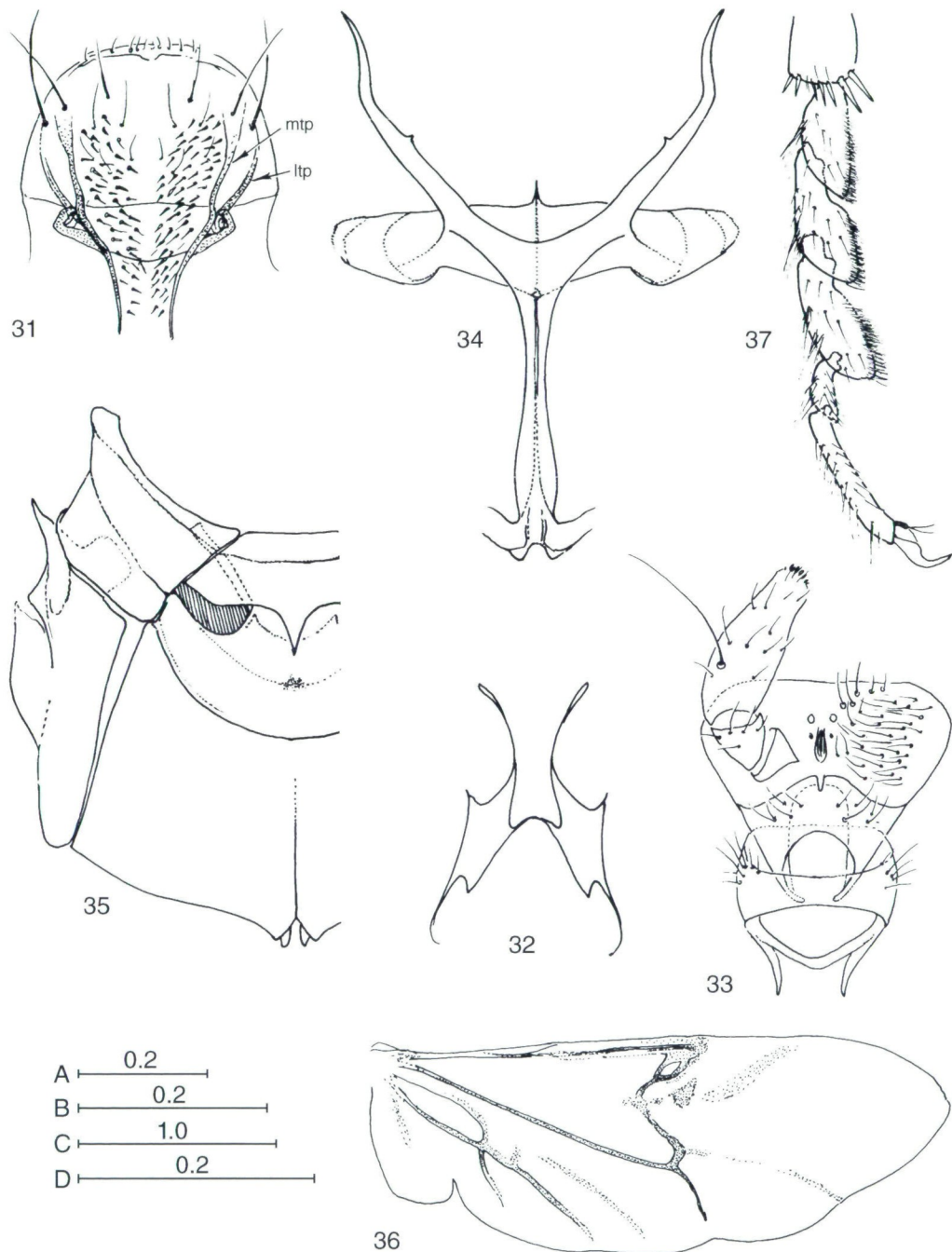
Dasytes speculifer CHAMPION, 1922: 149. Types (6): holotype, ♂, (BMNH): "Holotype" (red circular); "Ranikhet Kumaon, India, H. G. C."; "*Dasytes speculifer* Ch." (Champion's MS); "*Dasytes speculifer* Ch." (printed) "E. M. M. 1922 det. G. C. C."; "Brit. Mus. 1922 - 71". 5 paratypes (BMNH), "W Almora, Kumaon, U. P. India H. G. C."

Other material (75): Uttar Pradesh: Barkot, 1100 - 1200m, 5 - 12. vi. 1981, M. Brancucci (32 NHMB, 8 KMBC). Nainital, 2000 m, 25. v. 1981, M. Brancucci (14 NHMB, 4 KMBC). Chaubattia, 1900 - 2100 m, 25. v. 1981, M. Brancucci (1 NHMB). Bhowali, 1500 - 1600 m, 12. v. 1978, W. Wittmer (9 NHMB). Chaurengi, 2200 - 2500 m, 23. v. 1978, W. Wittmer (1 NHMB). Kumaon, Pauri Garhwal Sinnti 1200 m, 15. vii 1958, F. Schimdt (4 NHMB, 1 NHMB). idem, Hanuman Chatti, 30. vi. 1958 (1 NHMB).

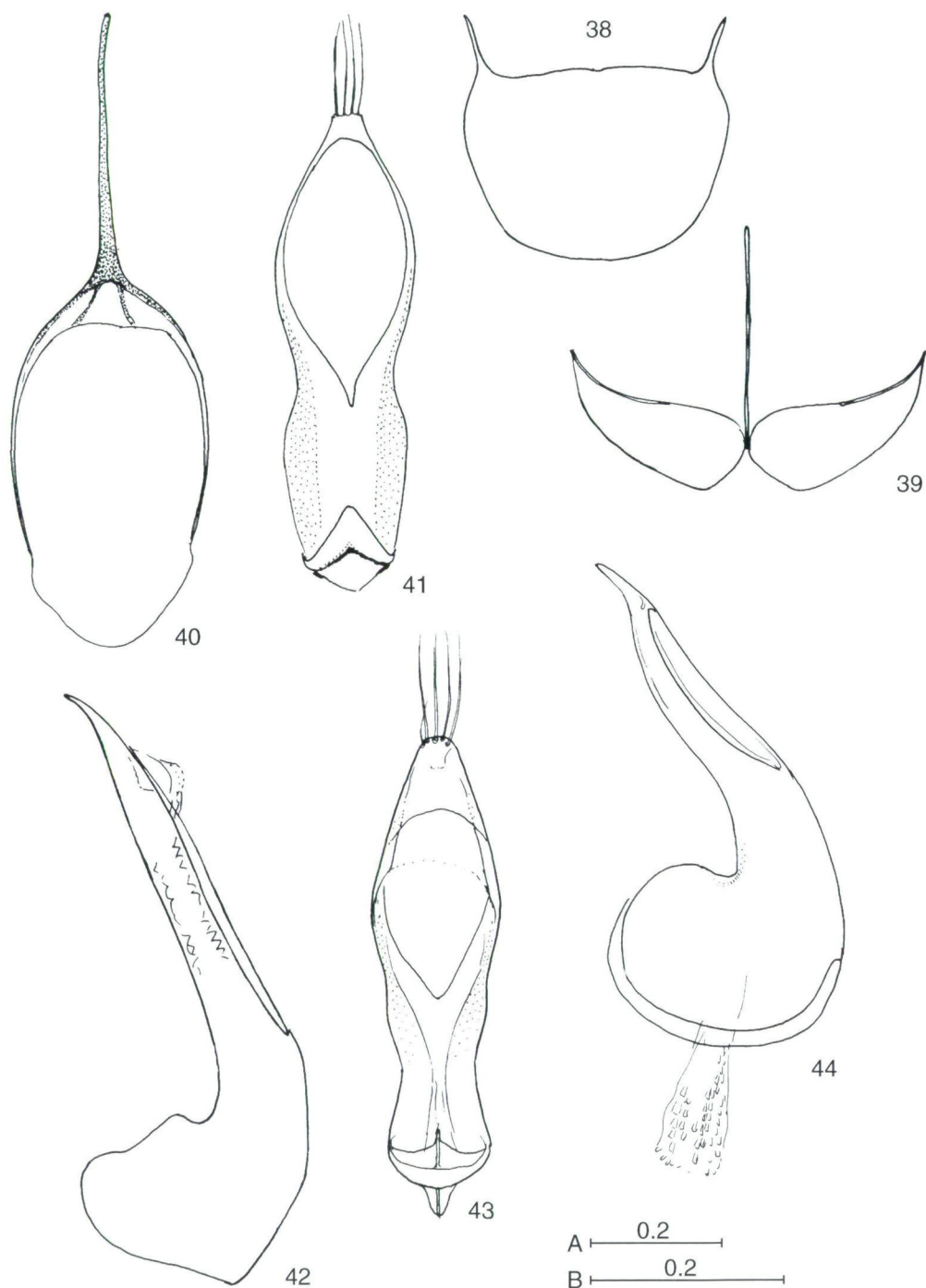
Diagnosis. Differs from all species by simple tarsi, not elongate antennomeres and testaceous extremities.

Description. Black, upper surface with greenish to brassy lustre, extremities mostly completely testaceous; mouthparts, scape and distal portion of antenna more or less darkened; integument very finely punctured, pubescence long, dual, bicolorous.

Eyes not prominent, surface of head with indistinct puncturation and flat rugosity, but shiny, sometimes even glabrous. Pronotum weakly transverse, broadest across basal third, base subarcuate, sides nearly subangulate, apex straight, disc nearly impunctate, puncturation very fine and irregular, intervals wider than punctures, shiny; side surface densely punctured to granular and densely rugose, side margins (as well as base) finely bordered, nearly glabrous, denticulation sometimes indicated; reclinate pale (whitish)



Figs. 31 - 37: *Hladilium speculiferum*, ♂. (31) labrum, (32) tentorium, (33) labium, (34) metenodosternite, (35) meso- and metathorax, ventral, (36) wing, (37) left mesotarsus. Scale bars: A = 31, 32, B = 34, C = 33, 35, D = 36, 37.



Figs. 38 - 44: (38 - 42) *Hladilium speculiferum*, lectotype, ♂, (43, 44) *H. molestum* sp.n., holotype, ♂. (38) pygidium, (39) sternite 8, (40) spicular fork, (41, 43) tegmen, dorsal, (42, 44) phallus lateral. Scale bars: A = 38, 39, B = 40 - 44.

pubescence rather dense, arranged towards centre of pronotum; reclinate black bristles long and rich in number. Elytra not distinctly bordered along side margins and suture; surface with fine indistinct puncturation; intervals mostly wider than punctures, nearly flat, shiny; glabrous flat elevations subseriately arranged; decumbent pubescence not covering all of upper surface, elevations glabrous (likewise in *D. subaeneus*); erect long, bristles abundant, fuscous, or bicolorous, lighter and darker; elytral apices individually rounded.

♂. Body parallel-sided, slender. Antennomeres 6 - 10 as long as wide, weakly elongate, nearly triangular. Pygidium (Fig. 38) nearly semicircular; sternite 7 subarcuate, 8 (Fig. 39) with slender median process; spicular fork figured (Fig. 40); tegmen (Fig. 41) with peculiarly formed phallobase; phallus in side view (Fig. 42) nearly parallel-sided, slender; internal sac with numerous, arrow-shaped spinules. Length 2.9 - 3.2 mm, width 1.0 - 1.1 mm.

♀. Body somewhat more broadened. Antennomeres 6 - 10 weakly transverse, inner angles rounded. Pygidium nearly semicircular; internal copulatory organs figured (Fig. 141). Length 3.3 - 3.5, width 1.1 - 1.3 mm.

Distribution. N India: Kumaon, Uttar Pradesh.

6. *Hladilium molestum* sp.n. (Figs. 43, 44)

Types (3): holotype, ♂ (NHMW), 2 ♀♀ paratypes (KMBC): "11 - V - 1983, T. Shimomura leg., nr. Dolangsa, 2000 - 2500 m, Sindhu Dist. Bagmati Zone, C. NEPAL".

Diagnosis. Very similar to *H. speculiferum*, from which it differs mainly in the broad shape of terminalia, which is correlated with the shape of pronotum and elytra.

Description. Coloration and pubescence like in *H. speculiferum*. Antennomeres rather more slender and finer. Pronotum strongly convex, with subangulate sides. Elytra with erect pale pubescence.

♂. Antennomeres more slender. Extremities in general longer and more slender. Pygidium about twice as wide as long, subtrapeziform. Sternite 8 and spicular fork as in *H. speculiferum*. Tegmen (Fig. 43) with swollen median keel. Phallus in side view (Fig. 44) short, with extensive base. Length 3.15 mm, width 1.1 mm.

♀. Antennomeres more transverse. Extremities shorter. Pygidium weakly transverse, trapeziform, apex shallowly emarginate. Length 3.5 - 3.7 mm, width 1.4 mm.

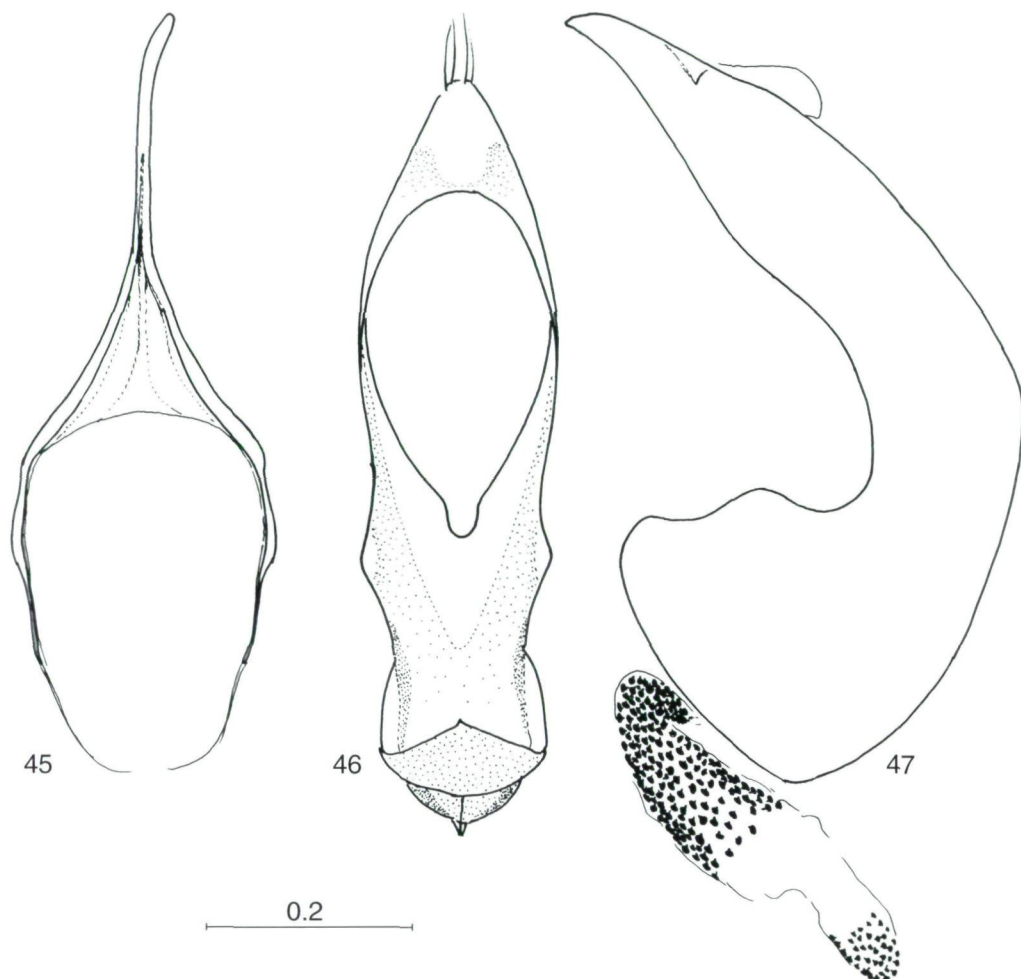
Distribution. Nepal.

7. *Hladilium obstinatum* sp.n. (Figs. 45 - 47)

Types (34): holotype, ♂ (NHMB), 5 paratypes (NHMB): "Padmara - Khari Lagna, 3400 m - Bumra 2750 m"; "Nepal 1977, 28. 5. W. Wittmer". 28 paratypes (19 NHMB, 2 NHMW, 5 KMBC): Bumra Chhurchi Lagna, 3350 m, Pina 2370 m"; "Nepal, 1977 W. Wittmer 29. 5."

Diagnosis. Very similar to *H. speculiferum* but extremities partly blackish, terminalia quite different.

Description. Apex of pretarsi, claws, apex of terminal segment of maxillary palps and that of antenna (rarely also scape) blackish. Texture of upper surface as in *H. speculi-*



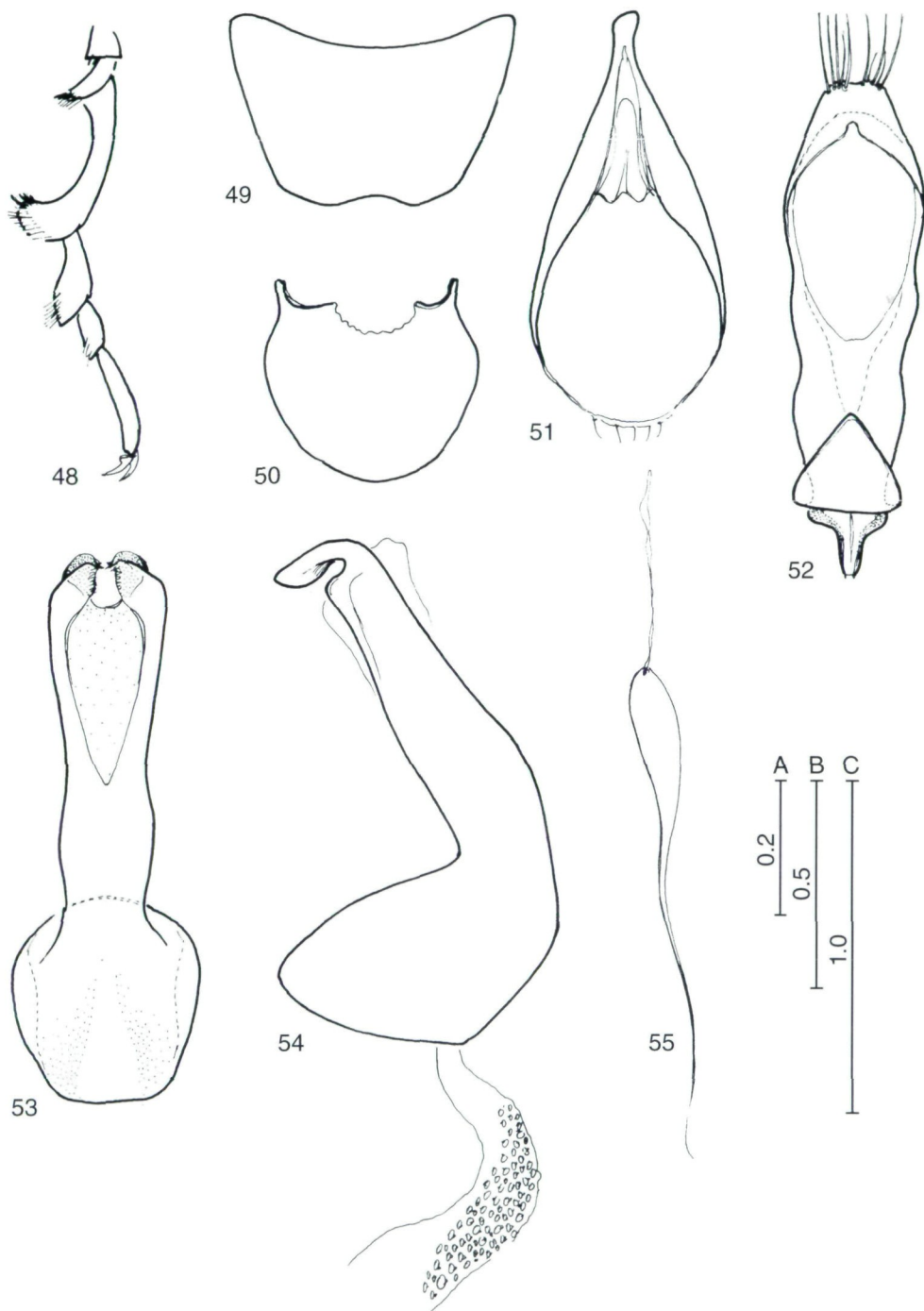
Figs. 45 - 47: *Hladilium obstinatum* sp.n., holotype, ♂ (45) spicular fork, (46) tegmen, dorsal, (47) phallus, lateral.

ferum, but erect black hairs sparse, bristles on elytra pale to blackish, shorter and sparser. Antennomeres elongate, conical. Pronotum weakly transverse, sides subangulate.

♂. Antennomeres very elongate, body and extremities longer and more slender. Pygidium nearly semicircular, sides strongly convergent, apex truncate and weakly emarginate; sternite 7 with minute emargination; 8 robust, median process short and slender; spicular fork (Fig. 45) parallel-sided; tegmen (Fig. 46) almost as in *H. speculiferum*; phallus robust, in side view strongly incurved (Fig. 47); internal sac with minute short spinules. Length 3.8 - 4.1 mm, width 1.2 - 1.4 mm.

♀. Antennomeres elongate. Body and extremities less slender, shorter. Terminalia as in *H. speculiferum*. Length 3.6 - 4.4 mm, width 1.4 - 1.7 mm.

Distribution. Nepal.



Figs. 48 - 55: *Hladilium perplexum* sp.n., holotype and paratype. (48) right mesotarsus, ♂, (49) sternite 7, ♂, (50) pygidium, ♀, (51) spicular fork, (52) tegmen, dorsal, (53) phallus, dorsal, (54) same, lateral, (55), spermatheca. Scale bars: A = 55, B = 49 - 54, C = 48.

8. *Hladilium perplexum* sp.n. (Figs. 48 - 55)

Types (49): holotype, ♂ (NHMB): "Nepal, W. Wittmer, C. Baroni Urbani; Chisapani 3.6.76". Paratypes: "Nepal, Bhakta B; Ramche 18. VI., 1800 - 3350 m" (15 NHMB, 6 KMBC). "Langtang, 14. VI., 3350 - 3400m, Nepal 78 Bhakta B." (2 NHMB) "Nepal 1978 Bhakta R. CH; Manigow 10. VI., 1200 - 1900 m" (1 NHMB). "Kalopani 2400m, 17 - 19. V. 84, W Nepal, Kali Gandaki, C. Holzschuh" (4 NHMB, 2 KMBC). "O Nepal, 1973, Bhakta B. Ch., Solo, 22. VI., 2800 m" (1 NHMB). "Neentale 79, 2160 m, 30. 5; O. Nepal 1979, Bhakta B. Ch." (2 NHMB) "Mt. Phulchoki, 1800 - 2000 m, Kathmandu Valley, C. Nepal; 28 - IV - 1983, T. Shimomura leg." (8 KMBC, 5 NHMW) "nr. Dolamgsa, 2000 - 2500m, Sindhu Dist., Bagmati Zone, C. NEPAL 11 - V - 1983, T. Shimomura" (2 KMBC). "Rain Forest 2300 - 2800 m, Nepal, 5. 6. 1990, Langtang, S. Bílý leg." (1 KMBC).

Diagnosis. Differs by modified tarsi, blackish extremities, and body shape which is wider than *H. amplexum*.

Description. Black, with weak plumbeous reflections, only antennal scape and rarely segments 3 - 4 reddish. Basal pubescence whitish and decumbent, longer black setae present chiefly on pronotum; integument with inconspicuous fine puncturation.

Head nearly glabrous, only finely wrinkled at base; antennomeres never transverse. Pronotum weakly transverse, broadest across basal third, perimeter finely but distinctly bordered, upper surface with very fine and sparse punctures; basal cinereous, sparse pubescence arranged towards centre of pronotum, long black and stout setae present at sides. Elytra densely, finely and shallowly punctured, cinereous basal pubescence arranged into five longitudinal stripes on each elytron, this arrangement may be seen only in very well preserved specimens. Second tarsomere in meso- and metatarsi more or less elongate and incurved.

♂. Slender, slightly broadened distally. Extremities long and stout. Antennomeres 4 - 10 subtriangular. Second tarsomere in meso and metatarsi distinctly elongate and incurved (Fig. 48). Pygidium figured (Fig. 50); sternite 7 (Fig. 49) longer than preceding sternites; 8 as in other species; spicular fork (Fig. 51) short and extremely robust; tegmen (Fig. 52) with polysetose apex; phallus in dorsal view (Fig. 53) forked at apex, in side view (Fig. 54) apex hook-shaped. Length 3.6 - 3.9 mm, width 1.2 - 1.3 mm.

♀. Wider, strongly broadened at distal third, extremities shorter and more slender. Antennomeres 4 - 10 rounded on innersides. Second tarsomeres only slightly elongate and incurved. Pygidium nearly semicircular, base peculiarly shaped; spermatheca figured (Fig. 55). Length 3.9 - 4.1 mm, width 1.4 - 1.6 mm.

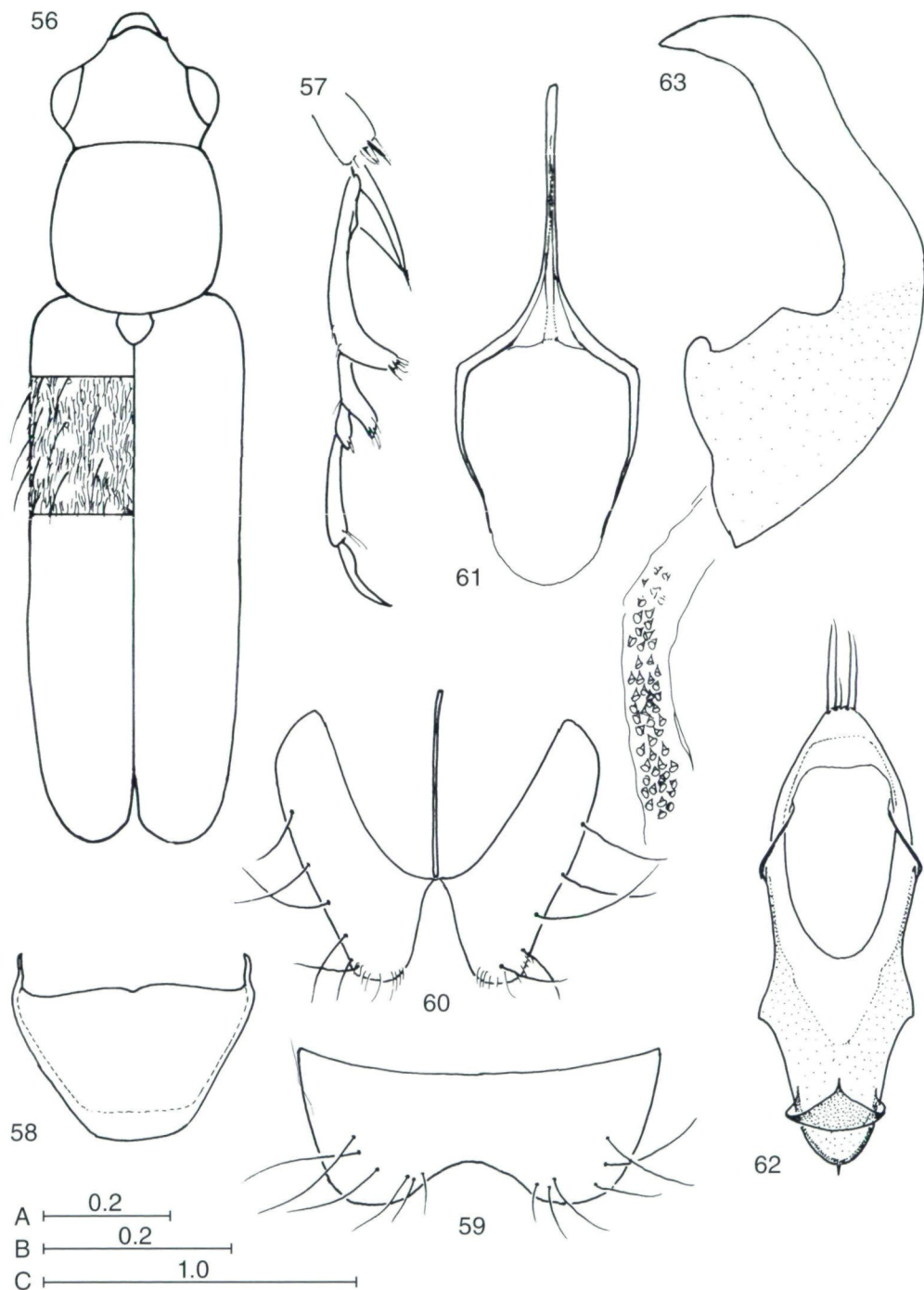
Distribution. Nepal.

9. *Hladilium amplexum* (CHAMPION, 1925) comb.n. (Figs. 56 - 62)

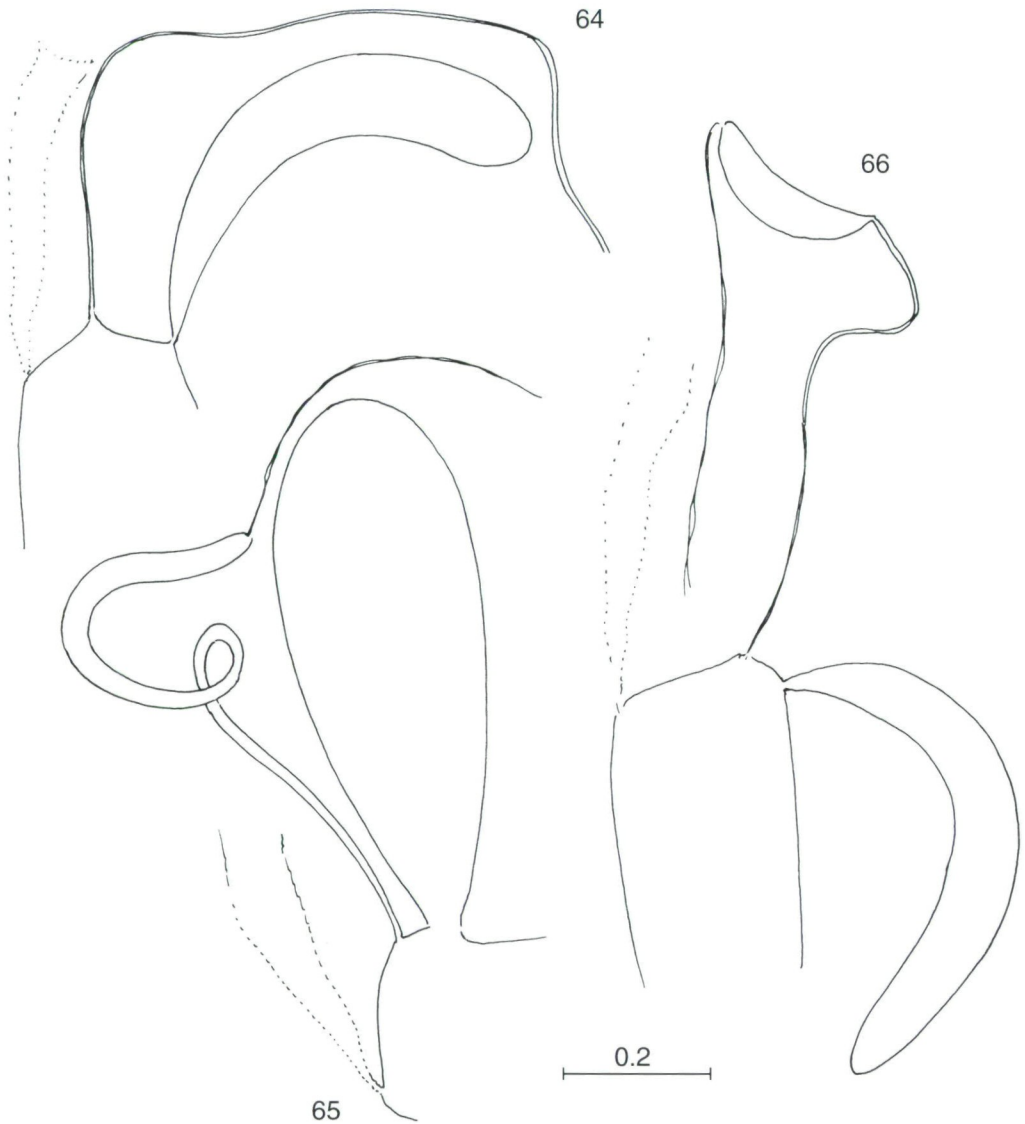
Dasytes amplexus CHAMPION, 1925: 179. Type: holotype, ♂ (BMNH): "Sikkim, H. Stevens"; "Nonbong"; "type" (red circular); "*Dasytes amplexus* type Ch." (Champion's MS); "*Dasytes amplexus*, Ch. det G. C. C." (printed); "E. M. M. 1925 det. G. C. C." (printed).

Diagnosis. Differs from all species by modified tarsi and testaceous extremities.

♂ (Fig. 56). Very slender, extremities long and relatively robust. Black, with light greenish lustre, extremities completely pale testaceous, only terminal segment of maxillary palps piceous to a greater extent. Integument as in the two preceding species but erect pubescence even sparser, glabrous spots on elytra larger; suberect elytral hairs short, sparse and mostly pale.



Figs. 56 - 63: *Hladilium amplexum*, lectotype, ♂, (56) habitus, (57) left mesotarsus, (58) pygidium, (59) sternite 7, (60) sternite 8. 61, spicular fork. 62, tegmen, dorsal. 63, phallus, lateral. Scale bars: A = 58 - 62, B = 57, C = 56.



Figs. 64 - 66: Female genitalia. (64) *Chaetomalachius dasytoides*, (65) *Chaetomalachius largus*, (66) *Chaetomalachius staudingeri*.

Head and pronotum strongly shiny, nearly impunctate; perimeter of slender pronotum finely bordered. Mesotarsi (Fig. 57) peculiarly formed.

Pygidium (Fig. 58) strikingly trapeziform; sternite 7 (Fig. 59) with semicircular emargination; 8 (Fig. 60) very broad; spicular fork figured (Fig. 61); tegmen (Fig. 62) and phallus (Fig. 63) peculiarly formed. Length 2.8 mm, width 0.8 mm.

♀. Unknown.

Distribution. India: Sikkim.

2. *Chaetomalachius* KRAATZ, 1882

Chaetomalachius KRAATZ, 1882: 96. Type species *Chaetomalachius dasytoides* KRAATZ, 1882, by monotypy.

Dasytiscus subg. *Trithrix* SCHILSKY, 1896: 34 H. Type species *Dasytiscus longipilis* REITTER, 1889: 111 [now *Chaetomalachius*], by subsequent designation (MAJER 1988a: 420). Synonymized by MAJER 1988a: 420.

Chaetomalachius subg. *Setomalachius* MAJER, 1989a: 349. Type species *Chaetomalachius staudingeri* SCHILSKY, 1900, by original designation, **syn.n.**

Description. Large, *Dasytes*-like, pubescence dual: erect and decumbent (MAJER 1989a: fig. 1); tormal process simple, lateral tormal processes connected (MAJER 1986: fig. 13); lacinia and distigalea with coalescent setae (MAJER 1989a: fig. 295); pronotum with pre-lateral lines, perimeter not completely bordered (MAJER 1989a: fig. 1); hypomeral process distinct, sternopleural suture mostly distinct, prosternal intercoxal process narrow, mesosternum and mesepisternum bipartite (MAJER 1989a: fig. 13), metathoracic intercoxal process present; epipleuron complete (MAJER 1989a: fig. 18); tarsomere 4 distinctly smaller than adjoining (MAJER 1989a: figs. 15 - 17).

♂. Meso- and metatarsomeres mostly simple; sternite 7 tends to be impressed and/or emarginate (MAJER 1989a: figs. 31, 240, etc.); sternite 8 more or less modified, its median projection present, long, base swollen (MAJER 1989a: figs. 26, 49, etc.); tegmen ventrally constricted and dilated, base turned up and keeled, subbasal dilation reduced, submedian dilation reduced, apex setose, never reduced, projecting, semicircular or slightly emarginate (MAJER 1989a: figs. 29, 54, etc.); phallus in side view not swollen distally, base not incised, mostly not larger than rest of phallus, spinules of internal sac small, numerous and transparent (MAJER 1989a: figs. 25, 28, etc.).

♀. Spermatheca simple, sclerites of seminal canal absent, seminal canal membranous (Figs. 64 - 66).

Distribution. Central Asian subregion, westwards reaching eastern parts of Syria and Turkey (Fig. 148).

Remarks. *Setomalachius* is of subgeneric rank and I am following here the principle of not naming subgeneric taxa. I am now giving here illustrations of the female genitalia which were not studied in my revision of this genus (MAJER 1989a). They do not show distinctive specific characters as they do in other members of the Chaetomalachiinae which have membranous female genitalia (Figs. 64 - 66).

3. *Parathrix* MAJER, 1989

Parathrix MAJER, 1989c: 746, 749. Type species *Dasytiscus plumbeus* KIESENWETTER, 1878, by original designation.

Description. Small, cylindrical; pubescence almost single (only decumbent), that on pronotum directed towards median longitudinal line; tormal processes simple, lateral tormal processes connected; lacinia and distigalea with coalescent setae; pronotum without pre-lateral lines, perimeter not completely bordered; hypomeral process distinct, sternopleural suture almost distinct, prosternal intercoxal process narrow; mesosternum and mesepisternum divided in two, metathoracic intercoxal process present; epipleuron more or less reduced; tarsomere 4 distinctly smaller.

♂. Tarsomeres simple; sternites 7 and 8 simple, median projection of 8 present but strongly reduced; tegmen ventrally with weakly folded-over base; apex setose, submedian dilation reduced; phallus in side view not swollen distally, base not incised, phallus slender, mostly evenly arched; spinules of internal sac less numerous, rather heavily sclerotized.

♀. Spermatheca simple; sclerites of seminal canal absent, the latter membranous.

Distribution. Central Asian subregion, westwards reaching Syria and Turkey (Fig. 148).

Remarks. This genus is, due to its armed lacinia, an adelphotaxon to *Chaetomalachius*. Most of the species resemble *Chaetomalachius* at first sight.

Parathrix tristis sp.n. (Figs. 78 - 81)

Types: holotype, (NMPC), 7 paratypes (5 NMPC, 1 KMBC, 1 NHMW): "S. Iran, Sísakht Dena, 2500 - 3000 m, 13 - 14. 6. 1973"; "Loc. no. 241, Exp. Nat. Mus. Praha". 7 paratypes (3 NHMB, 2 KMBC, 1 NHMW, 1 RCSL): "Chalus - Polzoghal, 29. 4., Iran 1970, Wittmer, v. Bothmer".

Diagnosis. Relatively short, robust and strongly convex; sexes alike in body outline.

Description. Coloration black, upper body surface weakly lustrous, with plumbeous tinge; femora mostly piceous, knees, tibiae, and tarsi (the latter seldom orange), rufopiceous to reddish, tibiae rather darker than tarsi; mouthparts (clypeus fuscous) and antennal scape black, segments 2 - 4 (- 5) rufescent to brightly orange, 6 - 11 gradually darkened towards apex. Pubescence unicolorous (flavescent), on elytra at first sight single, more erect, no subseriate hairs; integument with dense texture, scarcely lustrous. Head broad with prominent eyes, surface with dense granular to scabrous texture; antennomeres 6 - 10 at least slightly transverse. Pronotum with texture as on head. Elytra with dense puncturation, intervals as broad as punctures, strongly convex with fine microsculpture,.

♂ (Fig. 78). Not broadened posteriorly. Penultimate antennomeres more transverse. Pygidium semicircular to trapeziform, apex weakly truncate; sternite 7 briefly extended, 8 (Fig. 79) with bifurcate median process; spicular fork oblong; median keel on tegmen indicated only (Fig. 80); phallus in side view (Fig. 81) arched, apex slightly sinuate; internal sac composed of larger spines and two rows of small dense spinules. Length 3.1 - 3.2 mm, width 1.2 - 1.3 mm.

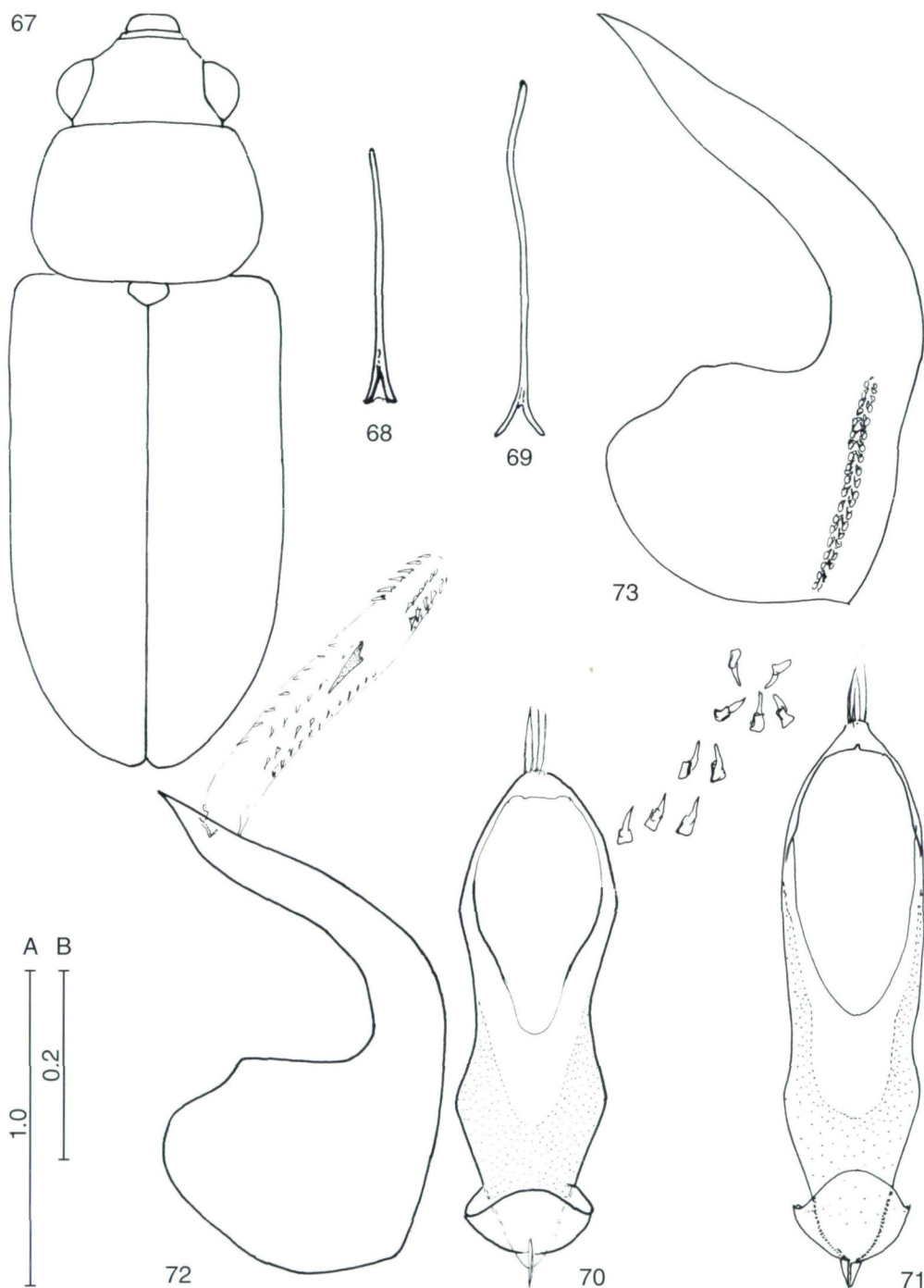
♀. More broadened posteriorly. Penultimate antennomeres less transverse. Pygidium semicircular, deeply incised; internal copulatory organs without specific characters. Length 3.0 - 3.3 mm, width 1.2 - 1.4 mm.

Distribution. Iran.

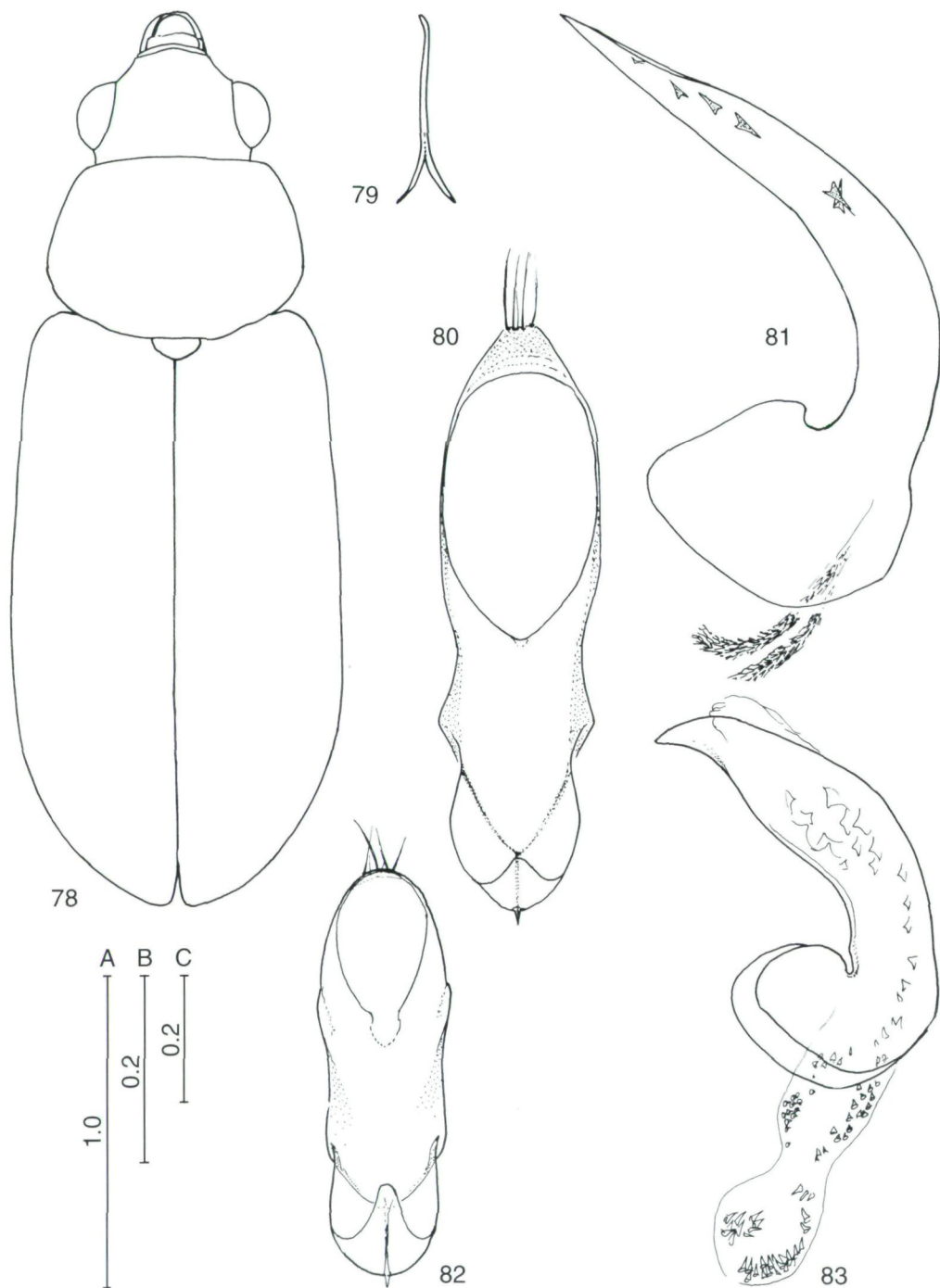
4. *Dasythrix* gen.n.

Type species *Dasytidius flavoniger* MAJER, 1991b [now *Dasythrix flavoniger* (MAJER), **n. comb.**], by present designation. Gender: feminine. Etymology: combination of *Dasytes* and *-thrix* (seta in Greek).

Description. Rather small, resembling *Dasytidius*; pubescence dual; mouthparts unknown; pronotum without prelateral lines, pronotal perimeter incompletely bordered;



Figs. 67 - 73: (67, 68, 70, 72) *Dasytidius nigripes*, lectotype, ♂, (69, 71, 73) *Dasytidius latissimus*, ♂, (67) body outline, ♂, (68, 69) median projection of sternite 8, (70, 71) tegmen dorsal, (72, 73) phallus, lateral. Scale bars: A = 67, B = 68 - 73.



Figs. 78 - 83: (78 - 81) *Parathrix tristis* sp.n., holotype, ♂, (82, 83) *Danaceothrix glaberrima* sp.n., holotype, ♂, (78) body outline, (79) median projection of male sternite 8, (80, 82) tegmen, dorsal, (81, 83) phallus lateral. Scale bars: A = 78, B = 79 - 81, C = 82, 83.

hypomerall process well developed, sternopleural suture distinct, prosternal intercoxal process narrow; mesosternum and mesepisternum divided, metathoracic intercoxal process developed; epipleuron weakly reduced; tarsomere 4 distinctly smaller.

♂. Sterna 7 and 8 simple, median projection of 8 weakly dilated at base; tegmen ventrally with unfolded base, apex setose, submedian dilation absent; phallus in side view not swollen distally, with base not incised, phallus almost parallel, phallotreme with sclerite; spinules of internal sac indistinct.

Distribution. Iran (Fig. 148).

Remarks. Not very striking genus resembling both *Parathrix* and *Dasytidius*. The mouthparts could not be examined as there are only very few specimens at disposal, but an armed lacinia is supposed. For detailed figures and description of the only species see MAJER (1991b).

5. *Dasytidius* SCHILSKY, 1896

Dasytiscus subg. *Dasytidius* SCHILSKY, 1896: No. 34 H. Type species *Dasytiscus indutus* KIESENWETTER, 1859: 747, by subsequent designation (MAJER 1989c: 747)

Description. Small cylindrical; pubescence erect and decumbent; tormal processes simple, lateral tormal processes connected; lacinia and distigalea simple; pronotum without prelateral lines, perimeter incompletely bordered; hypomerall process distinct, sternopleural suture mostly distinct, prosternal intercoxal process narrow; mesosternum bipartite, metathoracic intercoxal process present, mesepisternum bipartite; epipleuron more or less reduced; tarsomere 4 often slightly smaller only.

♂. Meso- and metatarsomeres simple; sternite 7 sometimes impressed and/or emarginate; 8 simple, median projection of 8 present; tegmen ventrally constricted and dilated or not, prebasal dilation reduced, base more or less turned up, sometimes with indistinct keel which is sometimes swollen, apex setose, sometimes remarkably reduced (thin), not projecting, arched or emarginate, submedian dilation reduced; phallus lateral not swollen distally, base not incised; spinules of internal sac often less numerous and heavily sclerotized.

♀. Spermatheca simple; sclerites of seminal canal absent, but the latter very often heavily sclerotized as a whole.

Distribution. From the eastern part of the Afrotropical region (excluding the South-African subregion proper) over Somalian and Mediterranean subregions to the Central-Asian and Eastern Palearctic regions. It does not occur in the Himalayas (Fig. 148).

Remarks. This very numerous taxon should not be broken up into more genera, but its division in species groups is badly needed.

Dasytidius vestitus (KIESENWETTER, 1863)

Dasytiscus (*Dasytidius*) *vestitus* var. *Hennoni* PIC, 1900: 88, **syn.n.** Type: holotype, ♂ (MNHN): "Bognari" (Henon's MS); "type" (yellow label); "v. Henoni" (Pic's MS).

This infrasubspecific taxon was rather tentatively synonymized by MAJER (1990b). Subsequently, I had the opportunity to study type material of this form, which does not differ essentially from the typical form.

Dasytidius sparsepubens (PIC, 1925)

Additional material: 1 ♂ (MNHN): "Gharib Cyrenaique; indutus Kiesw; v. sparsepubens Pic" bears a label "type", but according to the original description it does not belong to the type material, likewise another ♂ (MNHN) with data "Bengasi Cirenaica p. v. Zanon".

Dasytidius latissimus MAJER, 1989

Dasytidius latissimus MAJER, 1989d: 147, figs. 21, 22, 52, 82.

Dasytiscus nigripes: SCHILSKY, 1896: 34 K, No. 68.

Dasytidius avius MAJER, 1989d: 149, figs. 23 - 25, 67 - 69, 83. **syn.n.**

Dasytidius nigripes: MAJER, 1991a: 1; figs. 1, 6, 31, 47, 63, 82.

Only one species with a transverse pronotum exists in the Near East. Whereas the structure of the phallus is quite stable, the humeri and hind pronotal angles may be either toothed or unarmed. Terminalia of one specimen from the type series of *Dasytidius nigripes* PIC (but in reality *D. latissimus*) are figured (Figs. 69, 71, 73).

Dasytidius nigripes (PIC, 1894)

Dasytiscus nigripes PIC, 1894: 112. Types (6): lectotype, ♂ (MNHN), (present designation): "Syrie" (handwritten); "3" (handwritten); "nigripes Pic" (handwritten). paralectotypes, 2 ♂♂, 3 ♀♀ (MNHN): Syrie Akbes, C. D. 1891".

Dasytiscus indutus var. *obscuripes* PIC, 1896: 48.

Dasytiscus impressicollis var. *obscuripes*: PIC 1937: 53.

Dasytiscus obscuripes LIBERTI, 1986: 188; figs. 9 - 12. [Elevated Pic's variety]. **syn.n.**

Dasytidius attenuatus MAJER, 1991a: 7; figs. 22, 39, 66, 90. **syn.n.**

Dasytidius svihlai MAJER, 1991b: 6, 17; figs. 8, 25, 36, 54, 87. **syn.n.**

Dasytidius obscuripes: MAJER, 1991b: 17.

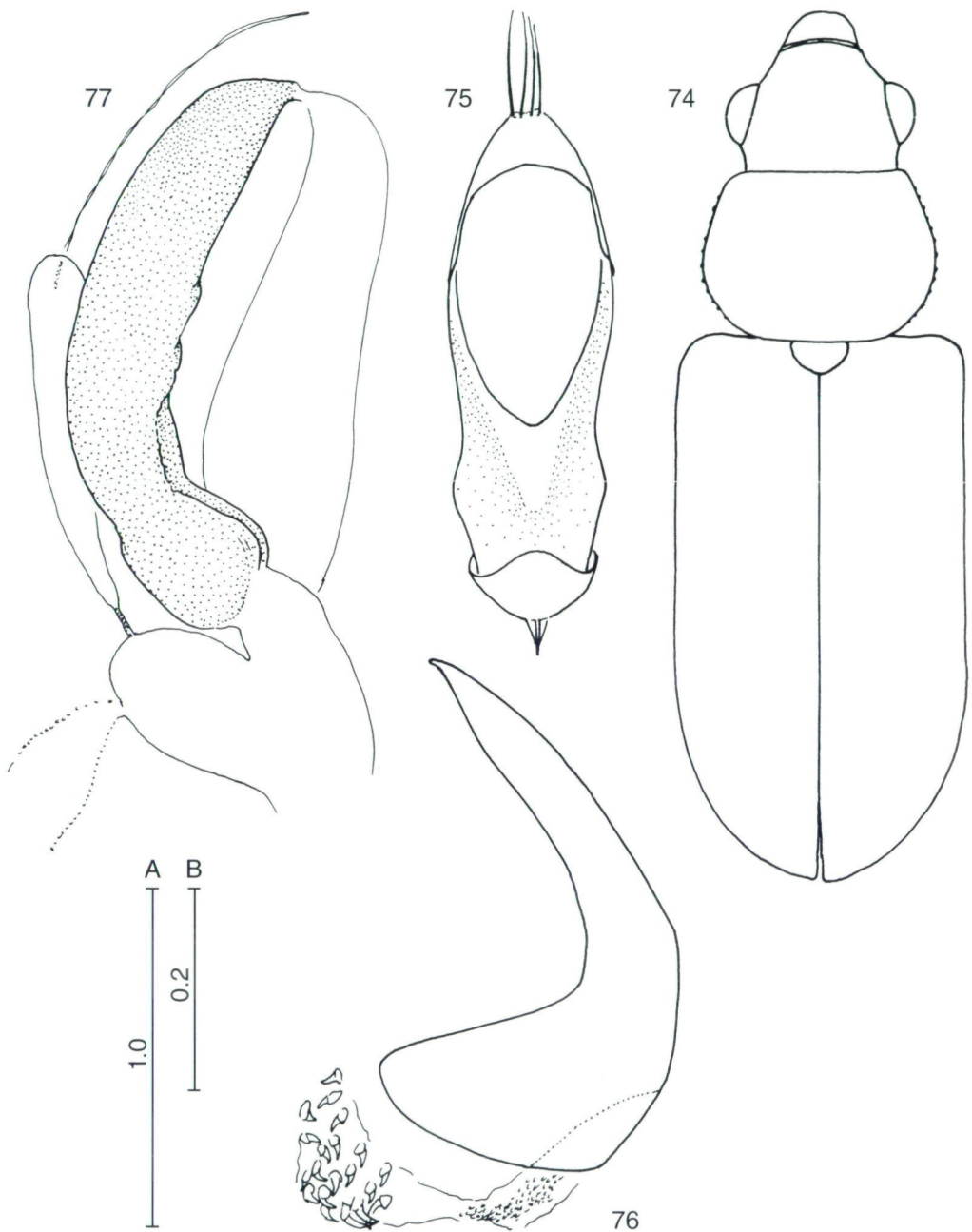
The type series of *D. nigripes* (MNHN) was originally composed of 8 specimens, of which 6 represent the same species as the lectotype, two remaining belong in *D. latissimus* MAJER. Unfortunately, Pic donated several specimens from the end of the type series to Schilsky which belong to *D. latissimus*. Figures 67, 68, 70, 72 show the lectotype. Phallus lateral (Fig. 72) has the internal sac extruded, with several spines missing. This species is variable in body outline but quite stable in the structure of the phallus.

Dasytidius alfierii (WITTMER, 1935) **comb.n.** (Figs. 74 - 76)

Dasytiscus (Haplothrix) Alfierii WITTMER, 1935: 188. Types (2, MSNM): holotype, ♂, and paratype, ♀: "Wadi Luotaie, 5. 3. 35, Sinai, W. Wittmer".

Dasytidius atratus MAJER, 1991b: 2; figs. 2, 23, 32, 69, **syn.n.**

I had no idea about the identity of *D. alfierii* before having it at my disposal. The bodyshape and terminalia of the holotype are figured (Figs. 74 - 77).



Figs. 74 - 77: *Dasytidius alfierii*, holotype, ♂, paratype, ♀. (74) body outline, (75) tegmen, dorsal, (76) phallus lateral, (77) female genitalia. Scale bars: A = 74, B = 75 - 77.

***Dasytidius wartmanni* (REITTER, 1897) comb.n.**

Dasytiscus Wartmanni REITTER, 1897: 219 [appeared before the end of 1897].

Dasytiscus vestitus var. *c nigrofemoralis* PIC, 1894: 112 [Inapplicable infrasubspecific name].

Dasytiscus (Dasytidius) nigrofemoratus SCHILSKY, 1897: No. 76. **syn.n.** [Elevated Pic's (1894) variety, misspelled; appeared at the end of 1897].

Dasytiscus nigrofemoralis: PIC 1937: 53 [listed].

D. Wartmanni is the first applicable name, it was erroneously synonymized with Schilsky's *Dasytiscus nigrofemoralis* by me (MAJER 1990b: 52), but the name "*Wartmanni*" appeared before "*nigrofemoralis*".

6. *Neothrix* MAJER, 1989

Neothrix MAJER, 1989c: 747, 754. Type species *Dasytes aspericollis* CHAMPION, 1925, by original designation.

Description. Medium-sized, as *Achaetomalachius* or *Mimothrix*; pubescence single, long, suberect; mouthparts unknown; pronotum without prelateral lines; hypomeral process developed, sternopleural suture weakly reduced, prosternal intercoxal process narrow, mesosternum and mesepisternum divided, metathoracic intercoxal process present; epipleuron weakly reduced; tarsomere 4 distinctly smaller.

♂. Tarsi and sternites 7 and 8 simple; median projection of 8 absent; tegmen ventrally with seemingly dual base which is strongly swollen, apex setose, weakly emarginate, with two groups of setae; phallus in side view not swollen distally, base not incised; spinules of internal sac indistinct.

♀. Spermatheca vermicular, seminal canal membranous, with a special formation, bursa copulatrix strongly modified (Fig. 102).

Distribution. Himalayas (Fig. 148).

Remarks. This genus is not distinguishable externally from either *Achaetomalachius* or *Mimothrix* but its tegmen is very different. The unusual structure of the bursa copulatrix might be a terratological deformity.

I am giving supplementary illustrations of both male and female terminalia of *N. aspericollis* (CHAMPION) (Figs. 100 - 102), as those published in MAJER (1898c: figs. 122, 123, 130) needed some corrections.

7. *Mimothrix* MAJER, 1989

Mimothrix MAJER, 1989c: 746, 752. Type species *Mimothrix olivacea* MAJER, 1989: 753, by original designation.

Description. Rather large, resembling *Chaetomalachius*; pubescence more or less dual, i.e. suberect and decumbent; tormal processes simple, lateral tormal processes unconnected; lacinia and distigalea simple; pronotum without prelateral lines, perimeter not completely bordered; hypomeral process developed, sternopleural suture not reduced, prosternal intercoxal process narrow; mesosternum and mesepisternum divided,

metathoracic intercoxal process present; epipleuron more or less reduced; tarsomere 4 distinctly smaller.

♂. Tarsomeres normal; sternite 7 sometimes emarginate; 8 simple, median projection of 8 absent; tegmen ventrally with folded-over base and more or less distinct median keel, apex setose, narrowed, submedian dilation reduced; phallus lateral not swollen distally, base not incised, more or less elevated on dorsal side; spinules of internal sac more or less distinct.

♀. Spermatheca vermicular, spiral, etc.; sclerites of seminal canal absent, the latter membranous.

Distribution. Central Asia, Eastern Palaearctis and northern part of Indochinese region (Fig. 148).

Remarks. *Mimothrix* is recognizable by a different state of the tegmen, but there is an implicated correlation in a more diversified shape of the phallus with the internal sac possessing mostly distinct spinules. This genus comprises 23 species which have already been revised (MAJER 1995).

8. *Achaetomalachius* MAJER, 1989

Achaetomalachius MAJER, 1989c: 746, 751. Type species *Chaetomalachius tibialis* Khnzorian, 1966, by original designation.

Description. Large, *Dasytes*-like; pubescence dual: i. e. erect and decumbent; tormal processes normal; lateral tormal processes forked; lacinia and distigalea simple; pronotum without prelateral lines, perimeter mostly not completely bordered; hypomeral process distinct, sternopleural suture mostly distinct, prosternal intercoxal process narrow; mesosternum and mesepisternum bipartite, metathoracic intercoxal process present; epipleuron mostly reduced; tarsomere 4 distinctly smaller.

♂. Tarsomeres simple; sternites 7 and 8 simple, median projection of 8 absent; tegmen ventrally with base more or less turned up, without keel, not semicircular, prebasal dilation strong; submedian dilation reduced; apex setose, reduced, truncate, not projecting; base of phallus not incised, more or less elevated dorsally, phallus in side view not swollen distally; spinules of internal sac mostly small, numerous, transparent.

♀. Spermatheca rather complex (spiral, sinuous, etc.); sclerites of seminal canal absent, the latter membranous.

Distribution. Central-Asia and N part of Indochinese region (Fig. 148).

Remarks. This genus contains about 20 species which will be the subject of a separate revision.

9. *Danaceothrix* MAJER, 1989

Danaceothrix MAJER, 1989c: 747, 755. Type species *Danaceothrix murina* MAJER, 1989, by original designation.

Description. Rather of *Danacea*-like appearance; pubescence single, with a few more erect hairs; tormal processes simple, lateral tormal processes connected; lacinia and distigalea simple; pronotum without prelateral lines; perimeter not completely bordered; hypomeral process developed, sternopleural suture distinct, prosternal intercoxal process narrow; mesosternum and mesepisternum divided, metathoracic intercoxal process distinct; epipleuron almost complete; tarsomere 4 distinctly smaller.

♂. Tarsi and sternites 7 and 8 simple, median projection of 8 absent; tegmen ventrally with folded-over base bearing a keel, differentiated parallel basal portion with median line, submedian dilation rounded, distinct, sides roundly dilated at anterior third, apex evenly arched, setose; phallus in side view not swollen distally, with not incised base which is sometimes elevated on dorsal side; spinules of internal sac mostly distinct.

♀. Internal copulatory organs unknown.

Distribution. Himalayas, Indochinese and Central Asian subregions (Fig. 148).

Key to species

- 1 Body with rather scale-shaped pubescence. Apex of elytra rufescent **3. *D. murina* MAJER, 1989**
- Body almost bare, with scattered short hairs. Elytra unicolorous **2**
- 2 Some of antennomeres almost transverse (especially 4 and 6 in males and 8 and 9 in females) **2. *D. monilicornis* (CHAMPION)**
- All antennomeres at least weakly elongate **1. *D. glaberrima* sp.n.**

1. *Danaceothrix glaberrima* n. sp. (Figs. 82, 83)

Type: holotype, ♂ (NHMW): "China - NW Sichuan, 103. 50;31. 30, Maowen 1000m, 10. - 18. 07. 1990, Jiří Kolibáč leg."

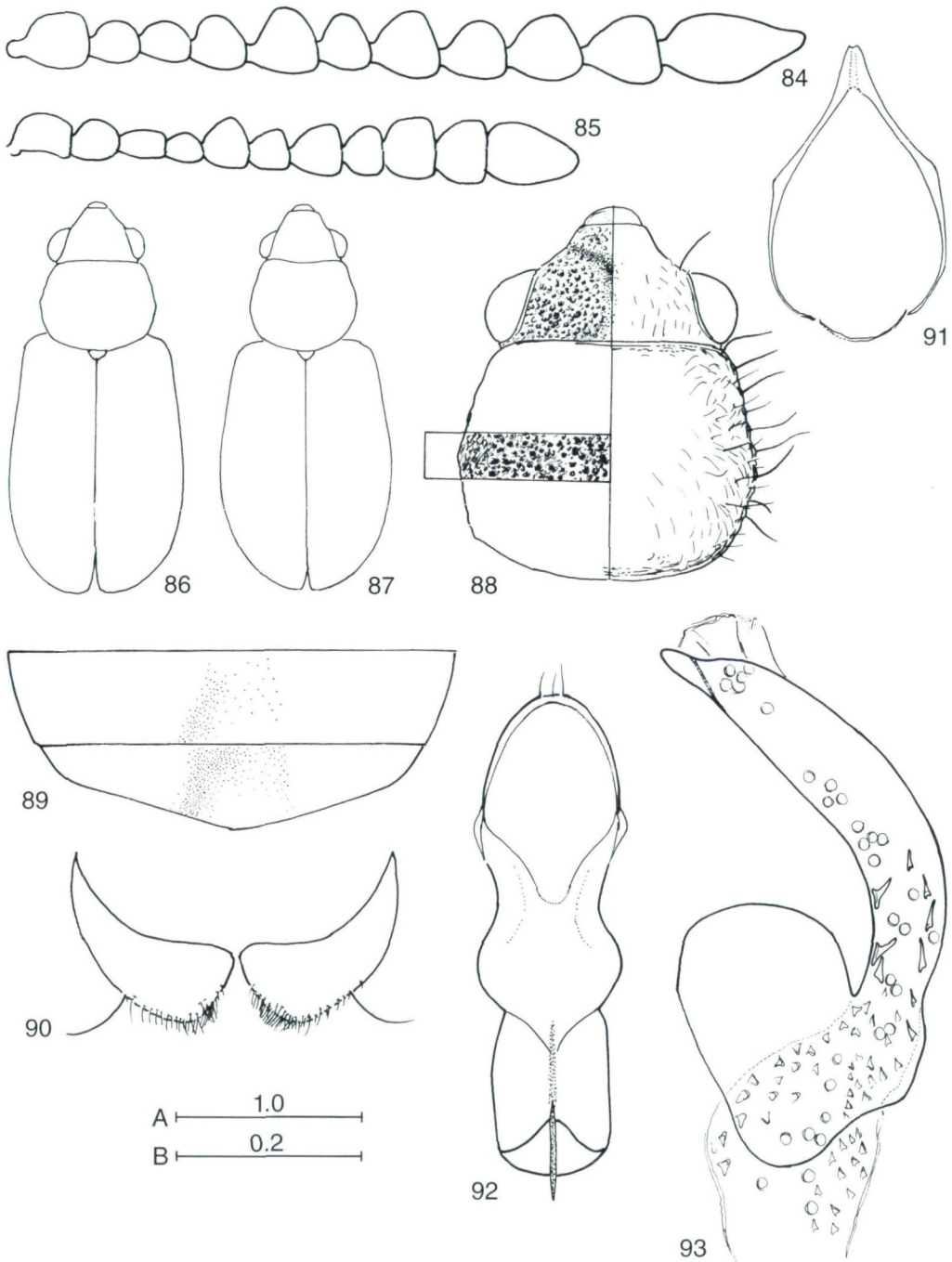
Diagnosis. Differs from *D. monilicornis* by elongate antennomeres and shape of terminalia.

Description. Dark brown to piceous, tibiae, tarsi and antennal pedicel lighter. Integument almost bare, only pronotum with short bristles.

♂. Head with deep, almost umbilicate punctures. Antennomeres 3 - 11 at least weakly elongate, slightly serrate to moniliate. Pronotum weakly transverse, sides subangulate, upper surface almost as that of head. Elytra strongly shiny, with flat, and moderately dense punctures, reduced bristles occur on humeri. Pygidium about three-times as wide as long, subtrapeziform. Sternites 7 and 8 as well as spicular fork nearly as in *D. monilicornis*. Tegmen ventrally (Fig. 82) with more folded-over base. Phallus in side view with claw-like apex (Fig. 83). Length 3.2 mm, width 1.1 mm.

♀. Unknown.

Distribution. China (Sichuan).



Figs. 84 - 93: *Danaceothrix monilicornis*. (84, 86, 88 - 93) lectotype, ♂, (85, 87) paralectotype, ♀, (84, 85) antenna, (86, 87) body outline, (88) head and pronotum, (89) sternite 7, (90) sternite 8, (91) spicular fork, (92) tegmen, dorsal, (93) phallus, lateral. Scale bars: A = 86, 87, B = 84, 85, 88 - 93.

2. *Danaceothrix monilicornis* (CHAMPION, 1922) **comb.n.** (Figs. 84 - 93)

Dasytes monilicornis CHAMPION, 1922: 150 (♂). Type: holotype, ♂ (BMNH) "Type H. T." (red circular); "Ranikhet, Kumaon, India H. G. C."; "Dasytes monilicornis, Ch." (Champion's MS); "E. M. M. 1922. det. G. C. C."; "Dasytes monilicornis, Champion"; "Brit. Mus. 1922-71".

Dasytes brevisculus CHAMPION, 1922: 150, (♀), **syn.n.** Type: holotype, ♀ (BMNH) "Type H. T." (red circular); "W. Almora, Kumaon, U. P., India H. G. C."; "Dasytes brevisculus Ch." (Champion's MS); "E. M. M. 1922. det. G. C. C."; "Dasytes brevisculus, Champion"; "Dasytes brevis, Ch. (brevisculus)"; "Brit. Mus. 1922-71",

Dasytes brevis CHAMPION, 1925: 169 [replacement name for *D. brevisculus* CHAMPION, 1922, nec MOTSCHULSKY, 1859].

Description. Coloration piceous to black, extremities piceous but antennal base (except scape) lightened, apices of femora, tibiae and tarsi more or less rusty. Texture of upper surface dense and irregular, more or less scabrous, basal decumbent pubescence very fine, short, pale; more erect coarse black setae present on pronotum and head only.

Head more finely sculptured than pronotum. Pronotum with disc more scabrous than head, side margins with indistinct crenation. Elytra with fine and dense, nearly regular puncturation, intervals about as broad as punctures, with fine network texture, weakly lustrous; sparse dark brown suberect setae present chiefly on sides.

♂ (Figs. 86, 88). Body more parallel-sided. Antennomeres (Fig. 84) less transverse, 3 not elongate, 4 transverse. Pygidium strongly transverse, slightly conical, apex broadly and shallowly truncate, nearly straight; sternite 7 (Fig. 243) weakly tapered and shallowly impressed; 8 (Fig. 244) figured; spicular fork (Fig. 245) short and broad; tegmen (Fig. 246) figured; phallus lateral (Fig. 247) strongly arched, tip constricted. Length 2.1 mm, width 0.9 mm.

♀ (Fig. 87). Body more broadened. Antennomeres more transverse (Fig. 85). Pygidium semicircular; internal copulatory organs unknown. Length 2.2 mm, width 1.0 mm.

Distribution. India (Kumaon).

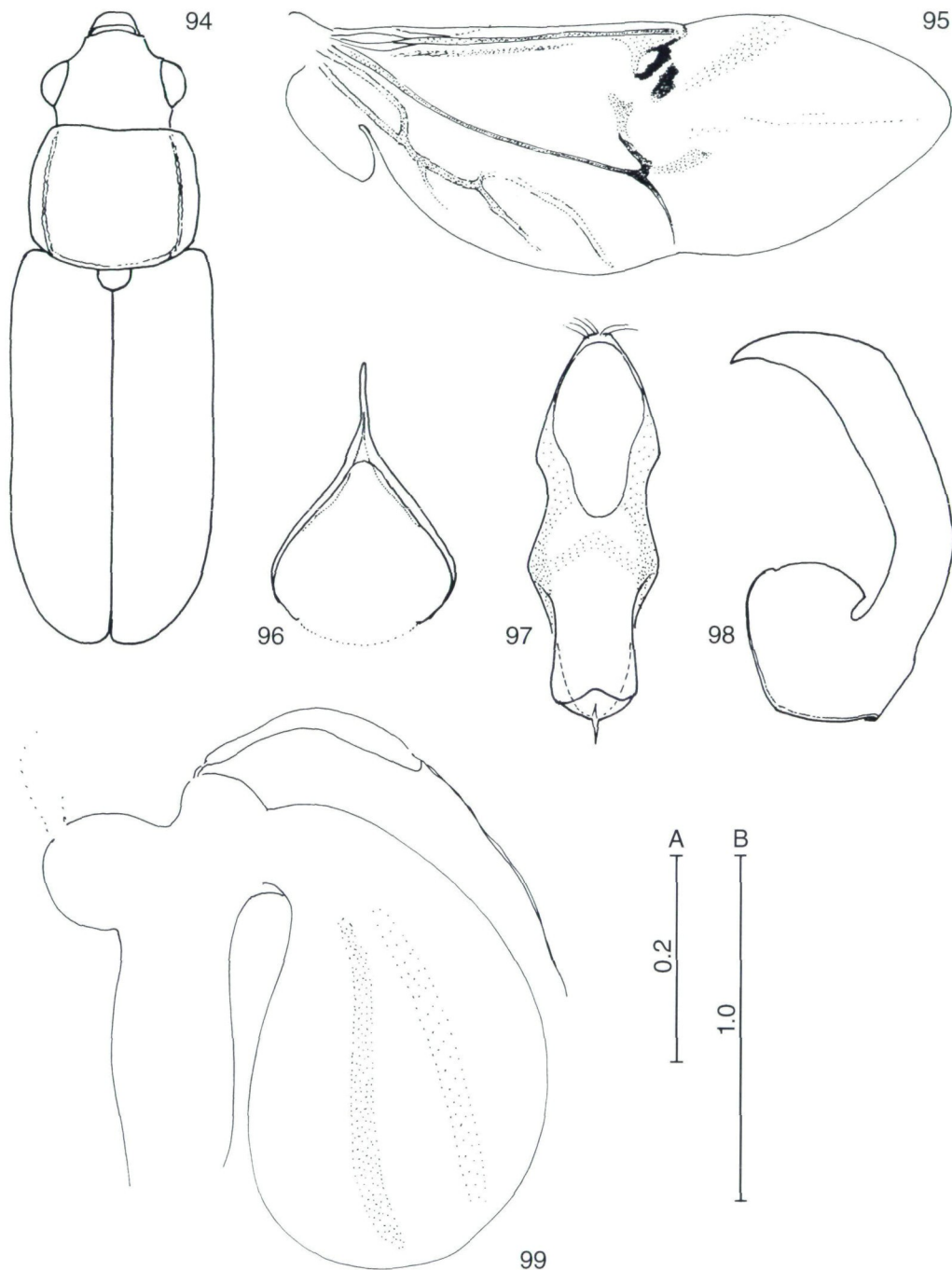
10. *Asiothrix* **gen.n.**

Type species *Dasytiscus minutus* WITTMER, 1954b, by present designation. Gender: feminine. Etymology: Combination of the region of occurrence and *thrix* (seta in Greek).

Description. Small-sized, *Dasytiscus*-like; pubescence simple, decumbent; mouthparts unknown; pronotum with perimeter very finely bordered; hypomerall process complete, sternopleural suture distinct, prosternal intercoxal process narrow; mesosternum and mesepisternum divided, metathoracic intercoxal process narrow; epipleuron moderately reduced; tarsomere 4 distinctly smaller.

♂. Tarsomeres, sternites 7 and 8 simple, median projection of 8 absent; tegmen ventrally with turned-up base, submedian dilation present, sides angulate at anterior third, apex rounded, setose; phallus in side view strongly dilated and incurved distally, base not incised, spinules of internal sac indistinct.

♀. Spermatheca normal; sclerites of seminal canal absent, the latter membranous.



Figs. 94 - 99: *Asiothrix minuta*. (94, 96 - 98) holotype, ♂, (95, 99) paratype, ♀, (94) body outline, (95) wing, (96) spicular fork, (97) tegmen, dorsal, (98) phallus, lateral, (99) female genitalia. Scale bars: A = 96 - 99, B = 94, 95.

Distribution. Somalian subregion (Fig. 148).

Remarks. According to the tegmen, the taxon might be placed either in *Mimothrix* or *Achaetomalachius*, but the structure of the pronotum, phallus and the distribution are quite different, also side bordering of pronotum is visible only distally, membranous wings have partly reduced radial cell (Fig. 95).

1. *Asiothrix minuta* (WITTMER, 1954), comb.n. (Figs. 94 - 99)

Dasytiscus minutus WITTMER, 1954b: 322. Types (16): holotype, ♂ (BMNH): "type" (red circular); "top of steep valley facing" (printed); "W. ADEN PROT. Jebel Jihaf ca. 7, 700 ft 4. x. 1937" (printed); "B. M. Exp. to S. W. Arabia H. Scott & E. B. Britton, B. M. 1938 - 246" (printed); "Holotypus" (white label, Wittmer's MS); "*Dasytiscus minutus* Wittm." (Wittmer's MS); "det. W. Wittmer" (printed). 15 paratypes [all ♀♀] (BMNH) bear same labels, sometimes differing as "at edge of cultivation" or "ca 7. 000 ft 7. x. 1937".

Description. Sexes extremely alike externally. Coloration piceous to black, antennal scape dark, following segments testaceous, gradually infusate, or antenna completely black; legs testaceous to rufotestaceous, femora strongly darkened; if antenna completely black, then tibiae rufescent and distal portion of tarsi darkened. Integument with moderately fine texture, vestiture whitish, nearly decumbent, short and very fine, not dense, lateral fringe distinct on pronotum only.

Head finely and sparsely punctured, almost glabrous, intervals with fine microsculpture; antenna long and slender, segments relatively variable in shape, 6 and 8 smaller than adjoining, 9 - 11 more or less enlarged. Pronotum with texture as on head, only somewhat more granular sideways; lateral areas below prelateral lines finely scabrous; pronotal perimeter finely bordered; side margins with strongly reduced crenation, lateral fringe therefore sparse and not distinctive. Elytra slightly broadened at distal third in both sexes, suture finely bordered along distal half; upper surface with shallow dense punctures, intervals with microsculpture; apex somewhat explanate and subtruncate, sutural angles broadly rounded.

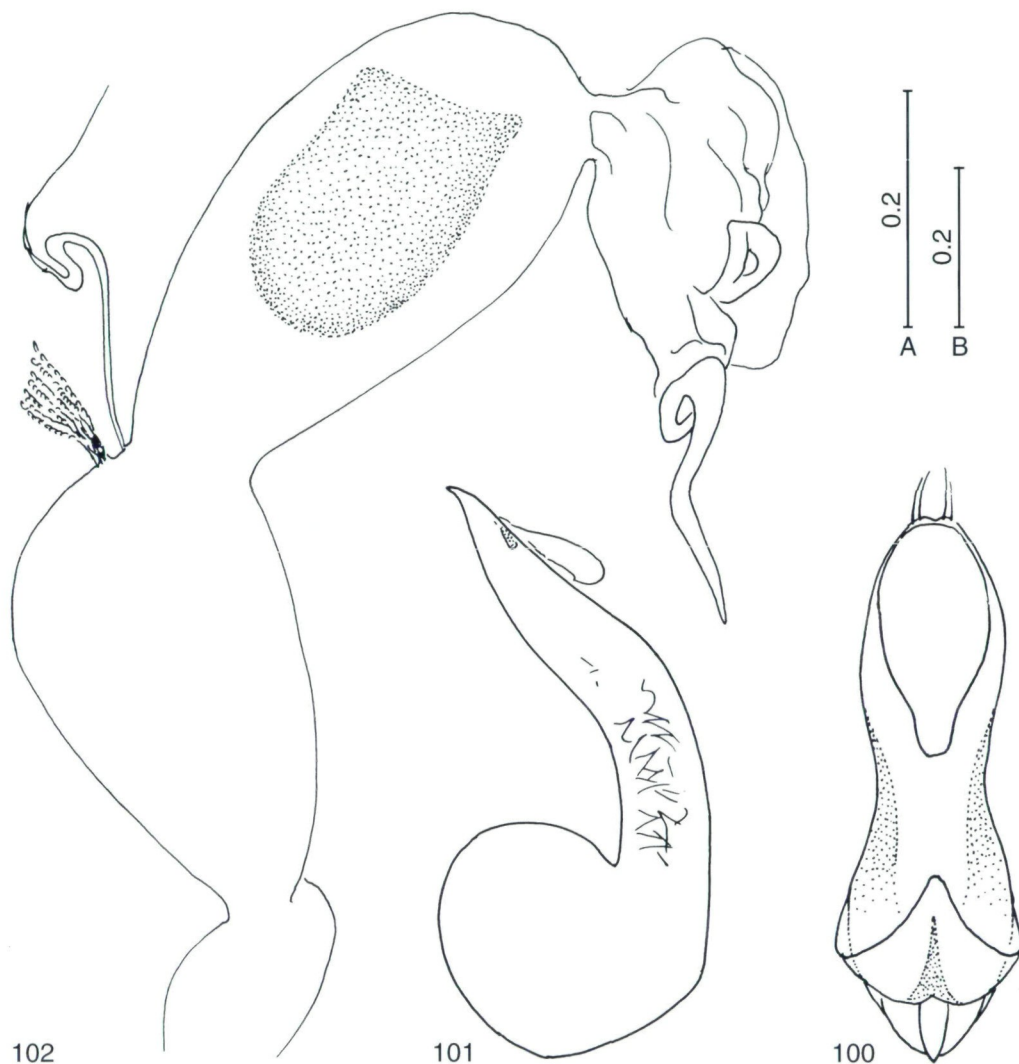
♂ (Fig. 94). Elytral apex more truncate. Antennomeres 9 - 11 more enlarged. Pygidium semicircular to trapeziform, apex weakly emarginate; sternite 7 briefly extended; spicular fork (Fig. 96) subtriangular, fork proper strongly abbreviate; tegmen (Fig. 97) strongly resembling that in *Achaetomalachius*; phallus in side view (Fig. 98) as in *Haplothrix*; internal sac without distinct spinules. Length 1.9 mm, width 0.7 mm.

♀. Elytral apex less truncate. Antennomeres 9 - 11 scarcely enlarged. Pygidium semicircular; sternite 7 distinctly extended; internal copulatory organs membranous (Fig. 99). Length 2.0 - 2.2 mm, width 0.7 - 0.8 mm.

Distribution. Aden.

11. *Haplothrix* SCHILSKY, 1896

Dasytiscus subg. *Haplothrix* SCHILSKY, 1896: 34 H [New subgenus: partim]. Type species *Dasytiscus aequalis* REITTER, 1885, by subsequent designation (MAJER 1989c: 757). *Haplothrix*: MAJER 1989c: 757.



Figs. 100 - 102: *Neothrix aspericollis*. (100, 101) lectotype, ♂, (102) paralectotype, ♀, (100) tegmen, dorsal, (101) phallus, lateral, (102) female genitalia. Scale bars: A = 102, B = 100, 101.

Description. Mostly of very small size; pubescence usually single, only decumbent; toral process normal, lateral toral processes diverging; lacinia and distigalea normal; pronotum with or without prelateral lines; hypomerall process distinct, sternopleural suture weakly reduced, prosternal intercoxal process narrow; mesosternum and mesepisternum divided, metathoracic intercoxal process developed; epipleuron more or less reduced; tarsomere 4 more or less distinctly smaller;

♂. Tarsomeres, sternites 7 and 8 simple; median projection of 8 absent; tegmen ventrally with folded-over keeled base, basal portion differentiated, with median line, submedian dilation rather distinct; sides at anterior third angularly dilated, apex tapered and

ciliated; phallus in side view at best weakly swollen distally but not truncate as in *Dasytiscus*; spinules of internal sac sometimes distinct.

♀. Spermatheca normal; sclerites of seminal canal absent, the latter sometimes weakly sclerotized.

Distribution. Eastern Mediterranean, through the Caucasus to the Central Asian subregion, including the Himalayas.

Haplothrix vana MAJER, 1989b

Additional material: India, Kashmir, Srinagar, Zabarwon Hill, 26. v. 1967, beaten material, G. Topál leg. (1 HHNM).

12. *Euthrix* gen.n.

Type species. *Euthrix sulcicollis* sp.n., by present designation. Gender: feminine. Etymology: combined with *Eu* (perfect) and *thrix* (seta in Greek).

Description. Small, *Dasytiscus*-like; pubescence nearly dual; mouthparts unknown; pronotum with distinctive prelateral lines; perimeter very finely bordered; hypomeral process complete, sternopleural suture developed, prosternal intercoxal process narrow; mesosternum and mesepisternum divided, metathoracic intercoxal process distinct; epipleuron weakly reduced; tarsomere 4 distinctly smaller.

♂. Tarsomeres, sternites 7 and 8 simple, median projection of sternite 8 absent; tegmen ventrally with weakly folded base and fine median keel, submedian dilation absent but tegmen simply constricted in middle, apex narrowed and setose; phallus very short and robust, base not incised, apex in side view not swollen; spinules of internal sac prominent.

♀. Spermatheca normal, with spermathecal gland attached at middle of capsule; sclerites of seminal canal prominent, the latter membranous.

Remarks. This genus resembles most closely *Dasytiscus* or *Haplothrix*, but *Euthrix* differs strikingly in terminalia from all genera of the Chaetomalachiinae. Pubescence dual and bicolorous, black bristles present on pronotum (likewise in most of *Dasytiscus* species). Antennomeres 6 and 8 distinctively smaller than adjoining (Fig. 248). Membranous wings with well defined anal area (Fig. 253). Epipleura well defined, broadest on humeri, then gradually narrowing, becoming obsolete along distal fifth.

Distribution. Northern Pakistan and Afghanistan (Fig. 148).

This is a very striking genus with several autapomorphies, especially the curious structure of the seminal canal in females.

Key to species

- 1 Antenna and legs completely pale testaceous. Suberect hairs not clearly different from basal pubescence 1. *E. sulcicollis* sp.n.
- Antennal scape blackish, femora infusate. Suberect hairs clearly different from basal pubescence 2. *E. lata* sp.n.

1. *Euthrix sulcicollis* sp.n. (Figs. 103 - 107)

Types (2): holotype, ♂ (NHMB), "Sari b. Shoghran, 2750 - 2900 m, 28. IV; Pakistan 1979 W. Wittmer". 1 paratype (KMBC) "Miandan 4. VI. 1800 - 2300 m; Swat, Pak. 1978, W. Wittmer"

Diagnosis. Differs from *E. lata* by testaceous extremities and structure of terminalia.

Description. Piceous to black, upper surface lustrous, with bluish reflections; extremities completely pale testaceous, distal portion of antenna sometimes darkened, maxillary palps completely or partly darkened. Integument with dual and bicolorous pubescence. Head with moderately prominent eyes, upper surface with sparse indistinct puncturation, intervals lustrous, distinctly wider than punctures. Pronotum with very finely, regularly and sparsely punctured disc, intervals shiny, two or three times wider than punctures; areas below prelateral lines not rugose but punctured, basal pubescence pale, extraordinarily fine, hairs pointing towards a point at basal pronotal third; lateral black bristles (15 - 20) at each side not very long. Elytra finely but distinctly bordered along side margins, suture bordered from anterior third to apex, sutural angles distinct, puncturation dense and relatively coarse (much coarser than on pronotum); basal pale pubescence somewhat coarser than on pronotum, erect hairs not very different from basal pubescence, lateral fringe not developed.

♂ (Fig. 103). Body cylindrical. Antennomeres larger. Elytral apex subtruncate, sutural angles distinct, rectangular. Pygidium with converging sides, apex weakly emarginate; sternite 7 very briefly extended and lightened; 8 divided in two; spicular fork nearly guttiform; tegmen (Fig. 104) somewhat more broadened at base than in *E. lata*; phallus in side view (Fig. 105) somewhat less robust. Length 2.3 mm, width 0.8 mm.

♀. Body broadened. Antennomeres finer. Elytral apex broadly rounded, sutural angles individually rounded. Pygidium semicircular, seminal canal with paired sclerites bearing long spines internally (Figs. 106, 107). Length 2.5 mm, width 1.1 mm.

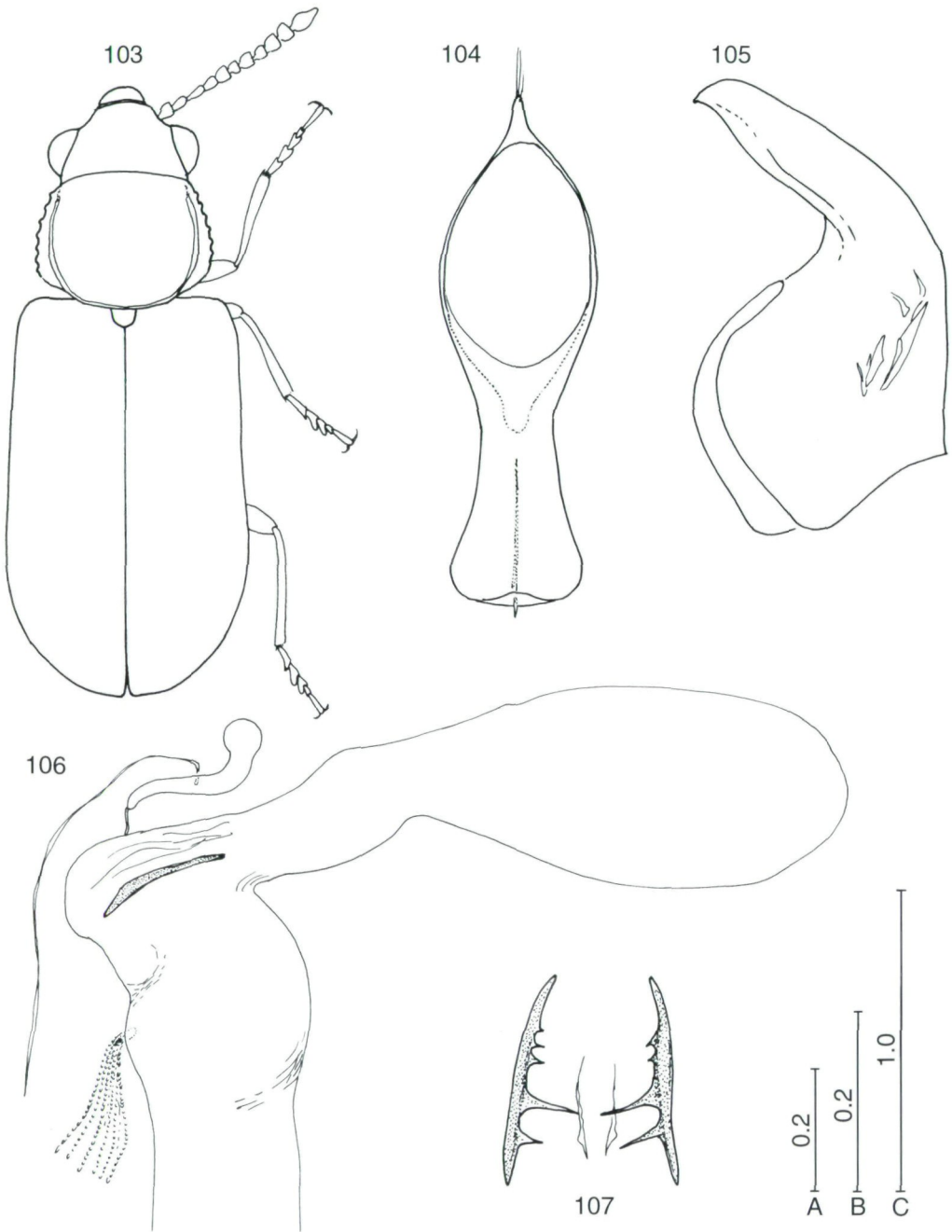
Distribution. N Pakistan.

2. *Euthrix lata* sp.n. (Figs. 108 - 112)

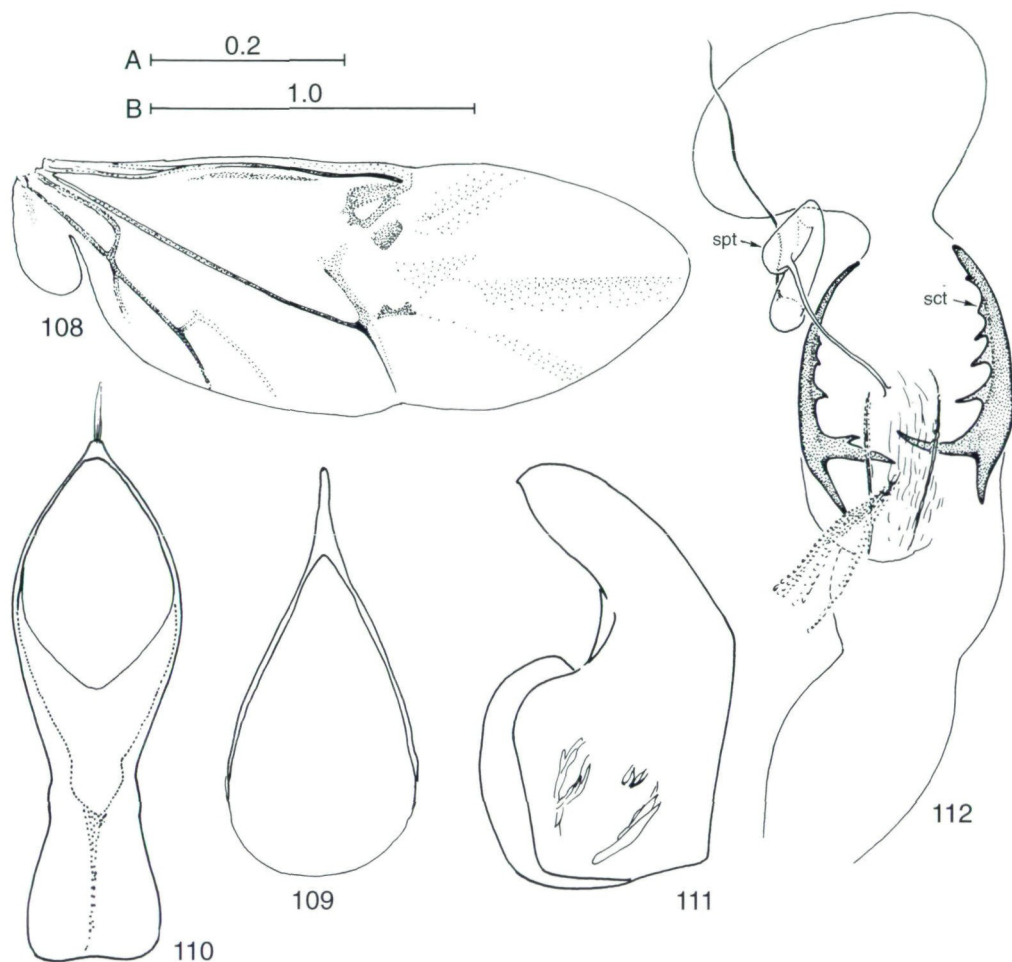
Types (5): holotype, ♂ (NHMB), 4 paratypes (2 KMBC, 2 NHMB): "J. Klapperich, Kamdesch, 2200 m, Nuristan 17. 7. 52, Afghanistan".

Diagnosis. Differs from *E. sulcicollis* by darker extremities and structure of terminalia.

Description. Small species, more or less broadened in both sexes. Coloration black to fuscous, upper surface lustrous, with inconspicuous aeneous tinge; femora and apex of metatarsi more or less infusate, but knees, tibiae and tarsi rufotestaceous; scape and mouthparts black, segments 2 - 4 (- 6) rufotestaceous, 7 - 11 gradually darkened; often segments 4, 6, 8 lighter than adjoining. Integument with distinct dual pubescence, pronotal pubescence bicolorous. Head with irregular shallow punctures; penultimate antennomeres more or less transverse, 6 and 8 distinctively smaller than adjoining. Pronotum distinctly transverse, base subarcuate, sides strongly rounded, apex straight, disc with irregular, fine pubescence, intervals glabrous, much wider than punctures; prelateral lines distinct, surface below lines uneven, rather more glabrous than scabrous, marginal denticles coarse, not acuminate; fundamental pale pubescence very fine, pointing



Figs. 103 - 107: *Euthrix sulcicollis* sp.n., holotype, ♂ and paratype, ♀. (103) habitus, (104) tegmen, dorsal, (105) phallus, lateral, (106) female genitalia, (107) sclerites in seminal canal. A = 104, 105, 107, B = 106, C = 103.



Figs. 108 - 112: *Euthrix lata* sp.n., holotype, ♂ and paratype, ♀. (108) wing, ♂, (109) spicular fork, (110) tegmen, ventral, (111) phallus, lateral, (112) female genitalia. Scale bars: A = 109 - 112, B = 108.

towards middle; erect black bristles relatively rich and long. Elytra weakly broadened in both sexes, puncturation distinctive, punctures deep and as wide as strongly convex, lustrous intervals; side margins finely bordered, sutural angles not rounded; pubescence unicolorous, intermixed with pale longer setae.

♂. Penultimate antennomeres less transverse, elytra less broadened. Pygidium transversely oblong; sternite 7 subarcuate; 8 divided in two; spicular fork (Fig. 109) nearly guttiform; tegmen (Fig. 110) figured; phallus very short and robust (Fig. 111); internal sac with incurved long formations. Length 2.3 mm, width 0.8 mm.

♀. Penultimate antennomeres more transverse, elytra more broadened. Pygidium subtrapeziform; seminal canal with paired antler-shaped sclerites (Fig. 112). Length 2.2 - 2.6 mm, width 0.9 - 1.0 mm.

Distribution. Afghanistan (Nuristan).

13. *Dasytiscus* KIESENWETTER, 1859

Dasytiscus KIESENWETTER, 1859: Type species *Dasytes rufitarsis* LUCAS, 1853 [now *graminis* **nom. n.**, see the name replacement below], by subsequent designation (MAJER 1989: 758).

Description. Cylindrical, of very small size; pubescence more or less dual; tormal processes normal, lateral tormal processes connected; lacinia and distigalea simple; pronotum with or without prelateral lines; hypomerall process developed; sternopleural suture complete, prosternal intercoxal process narrow; mesosternum and mesepisternum divided, metathoracic intercoxal process developed; epipleuron weakly reduced; tarsomere 4 more or less distinctly smaller.

♂. Tarsomeres, sternites 7 and 8 simple, median projection of 8 absent; tegmen ventrally with base strongly folded-over, without medial keel, apex membranous, without setae, submedian dilation absent, tegmen simply constricted in middle; phallus in side view strongly swollen and truncate distally, with base not incised; spinules of internal sac more or less visible.

♀. Spermatheca normal; sclerites of seminal canal absent, the latter sometimes weakly sclerotized or provided with setae internally.

Distribution. The most part of the Palaearctis but it is lacking in the whole Western Mediterranean (Fig. 148).

Dasytiscus graminis **nom.n.**

Dasytes rufitarsis LUCAS, 1853: 571 [now *Dasytiscus*] is a primary homonym to *Dasytes rufitarsis* C.R. SAHLBERG, 1822: 113 [syn. of *Aplocnemus tarsalis* (C. R. SAHLBERG, 1822.)].

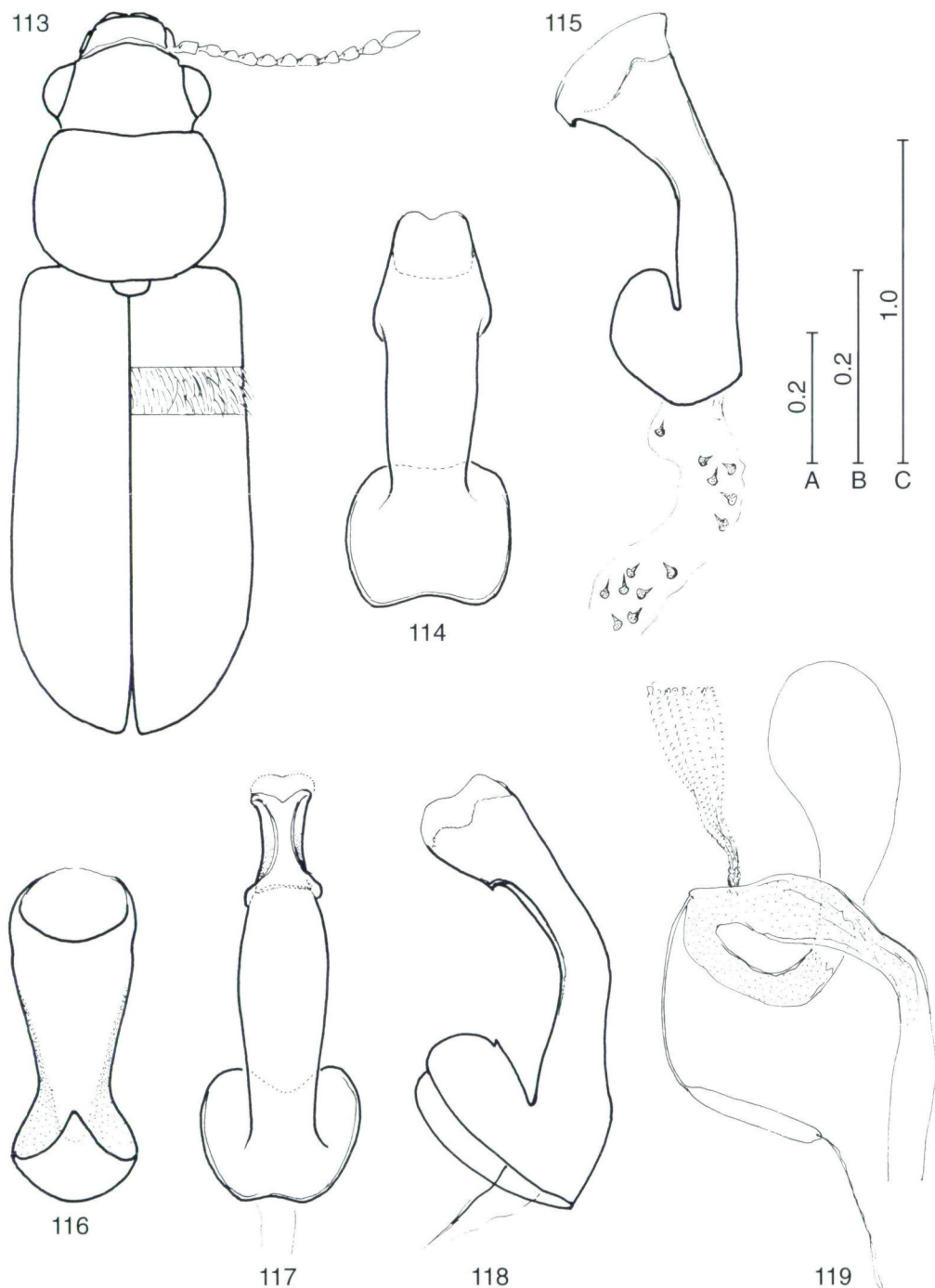
Dasytiscus rufipennis **n. sp.** (Figs. 113 - 115)

Types (2): holotype, ♂ (NMPC), 1 paratype, ♂ (KMBC): "Turkey, C. Anat., Orgüp, 15. 6. 70; Loc. no. 6, Exp. Nat. Mus. Praha".

Diagnosis. With its testaceous elytral apex it resembles *Dasytiscus flavoapicalis* WITTMER, 1954, but is easily distinguished from all species by its semi-villous pubescence (Fig. 113) as in *Dasytidius*.

Description. Coloration of upper surface fuscous to piceous, apical margin of elytra and legs testaceous; femora and tarsi partly darkened, antenna completely piceous, clypeus and labrum black in middle, testaceous on sides or even at base, palps completely piceous. Integument densely and finely punctured, almost mat; pubescence decumbent, semi-villous, dual on elytra.

♂ (Fig. 113). Head with dense shallow punctures, antenna long. Pronotum more distinctly punctured than head, marginal denticles reduced, sometimes indistinct, with thicker marginal hairs. Elytra narrowly bordered along side margins, puncturation much coarser than that on pronotum, pubescence more or less distinctly dual.



Figs. 113 - 119: (113 - 115) *Dasytiscus rufipennis* sp.n., holotype, ♂, (116 - 119) *Dasytiscus amasyanus* sp.n., holotype, ♂ and paratype, ♀. (113) habitus, (114, 117) phallus, dorsal, (115, 118) same, lateral, (116) tegmen, dorsal, (119) female genitalia. A = 119, B = 114 - 118, C = 113.

Pygidium nearly semicircular, apex shallowly emarginate; sternite 7 nearly straight; spicular fork with incurved spiculae; tegmen without specific characters; phallus (Figs. 114 - 115) in side view with a claw on ventral side of apex; internal sac with several small spinules. Length 1.9 - 2.3 mm, width 0.7 mm.

♀. Unknown.

Distribution. Turkey.

Dasytiscus amasyanus sp.n. (Figs. 116 - 119)

Types (15): holotype, ♂ and 9 paratypes (NHMB): "Uludag 1500 m, 22. 5. 1966 Türkei, J & S Klapperich". "Jordan, 30. 2. 1965, Wadi el Kelt S & J. Klapperich" (3 KMBC). "Amasya 24. - 26. 5. 420/900 m Türkei 1970 Wittmer" (1 KMBC, 2 NHMW).

Diagnosis. Strongly resembling *D. abeillei* BOURGEOIS, but terminalia are strikingly different.

Description. Brown to black, weakly shiny, legs lighter; femora infusate, scape and distal half of antenna darker than other antennomeres. Integument densely and shallowly punctured, pubescence decumbent, pale, more or less decumbent on elytra. Head shiny, with very fine punctures; antennomeres 5 and 7 larger than adjoining, 9 - 11 form an indistinct club. Pronotum almost transverse, as finely punctured as head, base and sides subarcuate, side margins with several reduced marginal denticles, pubescence arranged as in *D. abeillei*. Elytral margins very finely bordered side, upper surface with fine transverse wrinkles, sutural angles slightly rounded.

♂. Shorter and wider, generally darker, extremities do not differ from those of female. Pygidium strongly transverse, subtrapeziform, apex weakly emarginate, sternite 7 weakly extended medioapically; tegmen figured (Fig. 116); phallus (Figs. 117 - 118) in side view slender and sinuate, apex of characteristic shape; internal sac free of spinules. Length 1.6 mm, width 0.6 mm.

♀. Longer, broadened distally, mostly paler. Pygidium nearly semicircular; seminal canal semi-membranous, bursa copulatrix unarmed, without setae internally (Fig. 119). Length 1.8 - 2.2 mm, width 0.8 - 0.9 mm.

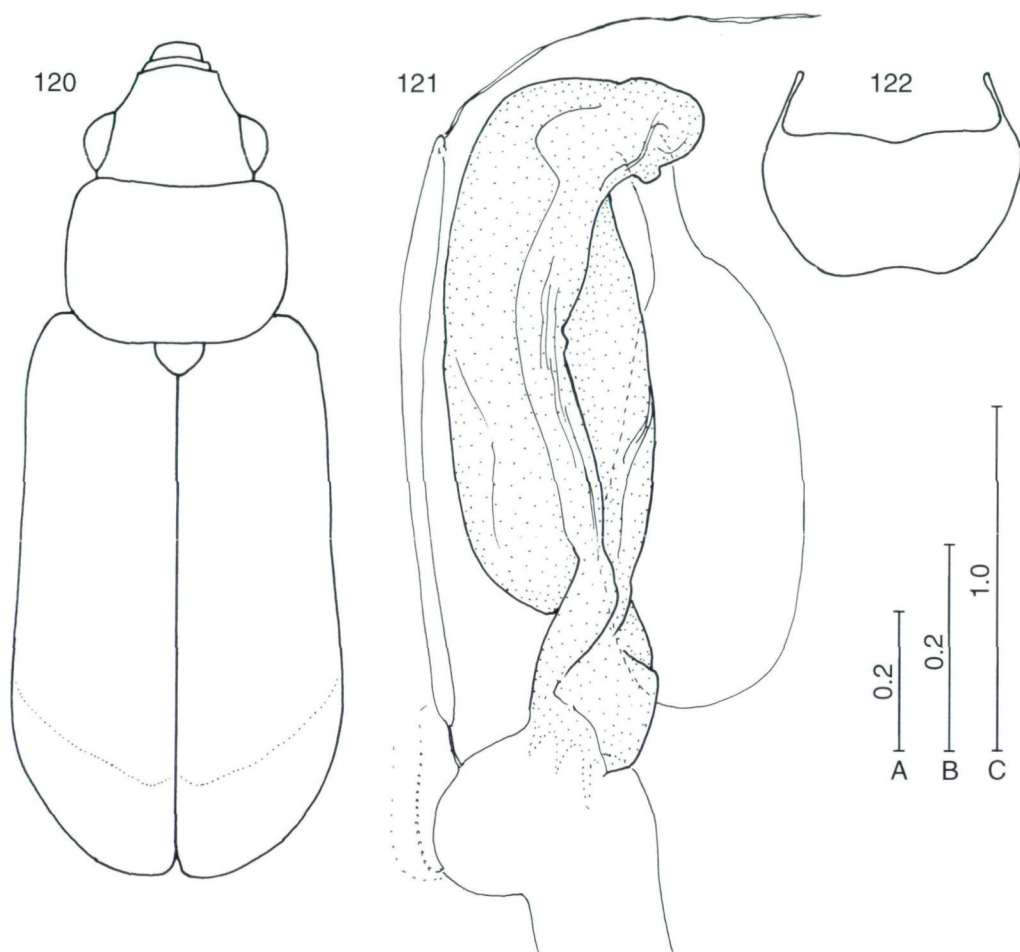
Distribution. Turkey.

Dasytiscus minimus (J. SAHLBERG, 1903)

Dasytiscus ruficollis var. *bicoloriceps* PIC, 1926: 1, **syn.n.** Type: holotype, ♂ (MNHN): "Transkaspia Saramsakli" (printed); "*D. ruficollis* v. *bicoloriceps* Pic". It does not differ significantly from the types of *Dasytiscus minimus* (J.SAHLBERG).

Dasytiscus flavoapicalis WITTMER, 1954 (Figs. 271 - 273)

Dasytiscus flavoapicalis WITTMER, 1954a: 137. Type: holotype, ♀ (BMNH): "Abyssinia: Mulu, above Muger Valley, circa 8,000 ft. 18 - 23. xii. 1926. Dr. H. Scott." (printed); "Type" (red circular); "Holotypus" (white label, Wittmer's MS); "*Dasytiscus flavoapicalis* Wittm." (Wittmer's MS); "det. W. Wittmer" (printed).



Figs. 120 - 122: *Dasytiscus flavoapicalis*, holotype, ♀. (120) body outline, (121) female genitalia, (122) pygidium. Scale bars: A = 122, B = 121, C = 120.

Diagnosis. Its appurtenance to *Dasytiscus* is tentative only as no male specimen is at my disposal; it resembles *D. rufipennis* in the rufescent elytra, but the sclerotized female seminal canal do not correspond well with *Dasytiscus*.

Description. Coloration black with aeneous lustre, legs and elytral apex testaceous, antennal scape and mouthparts black; antennomeres 2 - 4 testaceous, then contrastingly darkened. Integument with fine texture; pubescence whitish, very fine and rather short, nearly completely decumbent, erect hairs present on sides of elytra; lateral fringe distinct on pronotum only.

♂. Unknown.

♀. Head with relatively large eyes; surface nearly impunctate, with fine granular texture; antenna short and stout, segments 6 and 8 not distinctly smaller than adjoining, 5 distinctly, 6 - 10 strongly transverse, 11 scarcely elongate. Pronotum transverse, sub-

quadrate, disc very finely unevenly punctured, puncturation denser sideways; perimeter not distinctly bordered, pubescence arranged towards longitudinal median line; side margins with reduced denticles. Elytral suture finely bordered along posterior third, surface indistinctly punctured, with transverse fine wrinkles; side margins neither bordered nor explanate.

Pygidium (Fig. 273) nearly semicircular, apex broadly and shallowly emarginate; sternite 7 scarcely extended; seminal canal sclerotized, with prominent structure (Fig. 272). Length 2.6 mm, width 0.9 mm.

Distribution. Ethiopia.

14. *Brodskyana* gen.n.

Type species *Dasytiscus semipallidus* REITTER, 1899, by present designation. Gender: feminine. Etymology: named in memory of my friend, the prominent collector and specialist in the Cleridae, Otakar Brodský of Prague.

Description. Small, resembling *Dasytiscus*; pubescence more or less distinctly dual; tormal processes normal, lateral tormal processes connected; lacinia and distigalea simple; pronotum with or without prelateral pronotal lines; hypomeral process complete, sternopleural suture developed, prosternal intercoxal process narrow; mesosternum and mesepisternum divided, metathoracic intercoxal process developed; epipleuron weakly reduced; tarsomere 4 distinctly smaller.

♂. Tarsomeres, sternites 7 and 8 simple, median projection of 8 absent; tegmen ventrally with dipper-shaped base, without submedian dilation but strongly constricted, apex deeply emarginate; phallus with deeply incised base, moderately swollen and obliquely truncate distally; spinules of internal sac dual, prominent.

♀. Spermatheca normal, sclerites of seminal canal absent, the latter more or less sclerotized.

Distribution. Caucasus, East Mediterranean (Fig. 148).

Remarks. Its relationships as adelphotaxon of *Dasytiscus* is obvious in the extremely modified tegmen, it also differs from *Dasytiscus* in distinctly more slender terminal segments of the labial palps (Fig. 132). The labrum (Fig. 131) has different tormal processes.

Key to species

- | | | |
|---|---|------------------------------------|
| 1 | Upper body surface bicolorous | 2 |
| - | Upper body surface unicolorous | 3 |
| 2 | Elytra and extremities completely flavous. Pubescence distinctively dual (Fig. 139) | 4. <i>B. semipallida</i> (REITTER) |
| - | Elytra black, their posterior third to half lightened (rufotestaceous), greater part of antenna blackish. Pubescence single | 2. <i>B. juncta</i> sp.n. |
| 3 | Large species (2 - 3 mm). Pronotum strongly transverse, sides subangulate (Fig. 130) | 3. <i>B. furcilla</i> sp.n. |
| - | Small species (1.9 - 2.6 mm). Pronotum less transverse, sides rather subarcuate (Fig. 123) | 1. <i>B. lubrica</i> sp.n. |

1. *Brodskyana lubrica* sp.n. (Figs. 123 - 125)

Types (10): holotype, ♂ (NMPC), 9 paratypes (3 KMBC, 6 NMPC): "W Iran, Zagros, Marg - e Malek, 3200 m, 1. 7. 70; Loc. no. 39 Exp. Nat. Mus. Praha".

Diagnosis. Recognizable in unicolorous body surface and subarcuate pronotal sides.

Description. Rufopiceous to piceous surface is contrasting with pale testaceous legs (femora and tarsi often more or less infuscate); antenna piceous but segments 2 - 4 (-6) testaceous to rufopiceous. Integument finely and densely punctured; pubescence whitish, single, decumbent, but more prominent, subseriatly admixed hairs present on elytra. Head with subserrate antenna, relatively long (length of antenna: length of pronotum 1.7 in males, 1.4 in females); head texture with very fine microsculpture and well-spaced dots. Pronotal disc with dense, moderately fine punctures and (mostly) additional network texture which is more distinct sideways, intervals between punctures mostly glabrous on disc; prelateral lines rudimentary, only indicated along basal pronotal half; areas between lines and side pronotal margins finely coriaceous; side margins with rudimentary blunt denticles, lateral fringe more or less regular, relatively long. Elytra much more strongly punctured than pronotum, punctures dense (nearly as wide as intervals), neither coarse nor deep, partly confluent into wrinkles; apex broadly rounded, apices slightly obtuse individually; lateral fringe sparse, indistinct.

♂ (Fig. 123). Antenna longer, segments thicker. Pronotum less transverse. Elytra nearly parallel-sided. Pygidium suboblong to semicircular; sternite 7 nearly straight, 8 as in other species; spicular fork relatively long and stout (nearly as in *B. semipallida*); tegmen (Fig. 124) with relatively slender basal portion, apex forked; phallus in side view (Fig. 125) strongly emarginate ventrally, dorsal side nearly straight; internal sac with several small spines having round bases, a serrate formation situated dorsally. Length 1.9 - 2.1 mm, width 0.7 - 0.9 mm.

♀. Antenna shorter, segments finer, eyes less prominent. Pronotum more transverse. Elytra broadened. Pygidium nearly trapeziform; sternite 7 briefly extended; internal copulatory organs as in *B. juncta* sp.n. Length 2.2 - 2.7 mm, width 1.0 - 1.1 mm.

Distribution. W Iran.

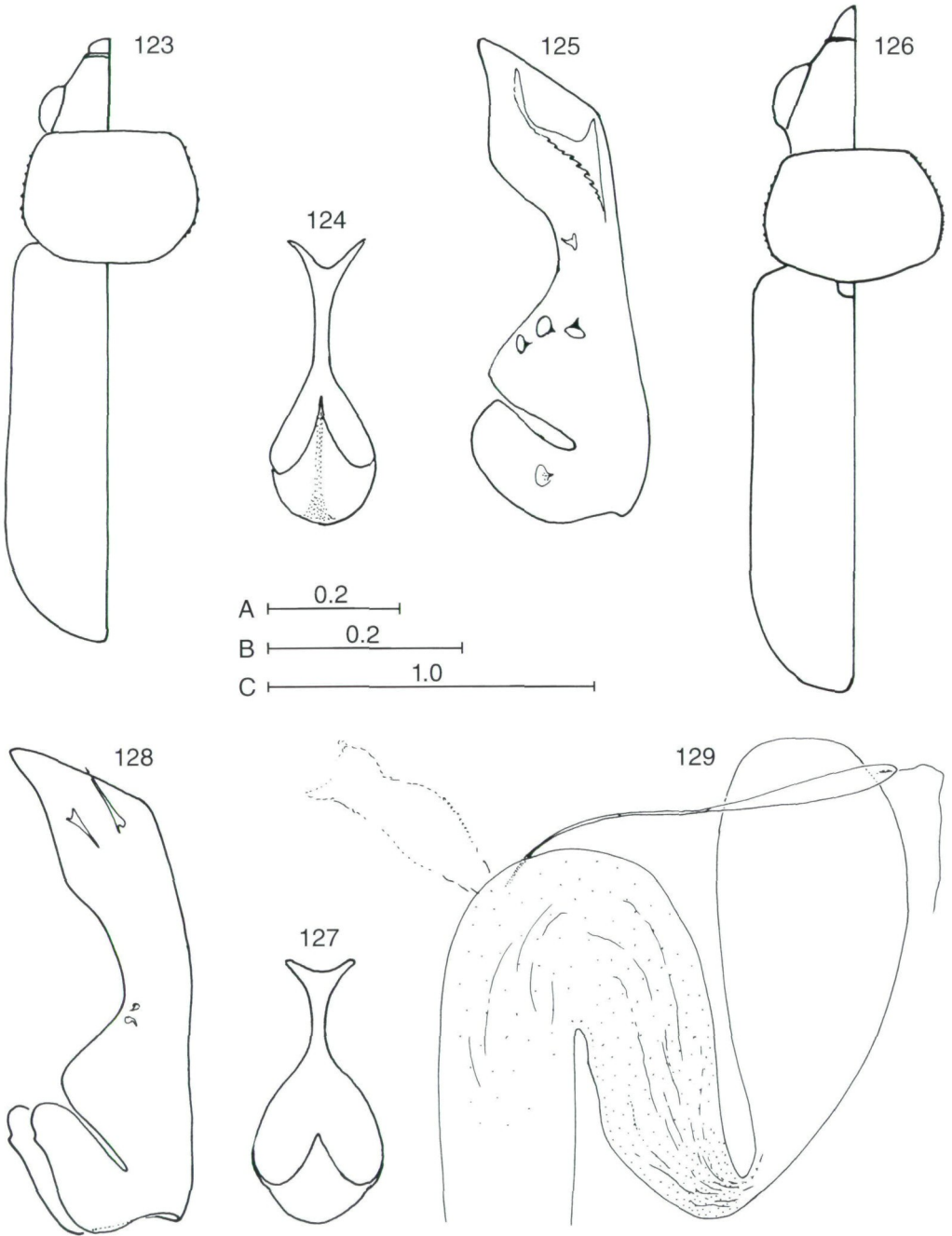
2. *Brodskyana juncta* sp.n. (Figs. 126 - 129)

Types (19): holotype, ♂ (NMPC), 18 paratypes (1 NHMW, 3 KMBC, 14 NMPC): "S Iran, 29 km E Yasuj, 2300 m, 16 - 17. 6. 1973; Loc. no. 245, Exp. Nat. Mus. Praha".

Diagnosis. Extremely similar to *B. lubrica* but elytra strongly lightened and antenna partly blackish.

Description. Elytra fair (at least distal half rufotestaceous), at the most elytra pale testaceous and scutellar area infuscate (then also pronotum fuscous, lighter than head). Pronotum more transverse than in *B. lubrica* sp.n.; habitually otherwise identical with *B. lubrica*.

♂ (Fig. 126). Tegmen (Fig. 127) broadened at basal third; phallus in side view (Fig. 128) less emarginate on ventral side than in *B. lubrica*; internal sac with very small spinules, distally with two long spines. Length 2.2 - 2.4 mm, width 0.7 - 0.9 mm.



Figs. 123 - 129: (123 - 125) *Brodskyana lubrica* sp.n., holotype, ♂, (126 - 129) *B. juncta* sp.n., holotype, ♂ and paratype, ♀. (123, 126) body outline, (124, 127) tegmen, dorsal, (125, 128) phallus, lateral, (129) female genitalia. Scale bars: A = 124, 127, B = 125, 128, 129, C = 123, 126.

♀. Hardly distinguished from *B. lubrica* sp.n., internal copulatory organs figured (Fig. 129). Length 2.3 - 2.8 mm, width 0.9 - 1.1 mm.

Distribution. S Iran.

3. *Brodskyana furcilla* sp.n. (Figs. 130 - 138)

Types (66): holotype, ♂ (NHMB), 64 paratypes (3 NHMW, 15 KMBC, 46 NHMB): "Wadi, Sir, Amman, Jordan, S & J. Klapperich, 600 m, 1. 6. 56". 1 paratype, (NHMB): "Zerkatal b. Romana, O. Jordan, 30. 4. 57, S & J. Klapperich".

Diagnosis. Recognizable by large size, unicolorous upper surface and subangulate pronotal sides.

Description. Upper body surface with aeneous, light greenish reflections, legs brightly yellow-orange, mouthparts and antenna rufopiceous, antennomeres 2 - 4 (- 8) orange yellow to rufopiceous. Integument finely and densely punctured, almost lustrous, pubescence single, decumbent and flavescent, subseriatly admixed hairs distinguishable. Head with slightly prominent eyes, surface with indistinct microsculpture and regular, fine and sparse punctures, antenna moderately long (length of antenna: length of pronotum 0.7 in males, 1.1 in females); segments subseriate, 4 - 10 transverse. Pronotum with finely and moderately densely punctured disc, intervals glabrous, about twice as broad as punctures; prelateral lines very fine, only indicated, areas between lines and side margins with irregular fine texture, lateral fringe very fine, moderately long. Elytra with moderately dense shallow punctures; intervals scarcely wider than punctures, these partly confluent into transverse wrinkles, lateral fringe long but not regular, elytral apex broadly rounded, tips almost individually obtuse.

♂ (Fig. 130). Antenna longer, thicker, segments more transverse, eyes more prominent. Pronotal sides more angulate. Elytra nearly parallel-sided. Pygidium transverse, subtrapeziform; sternite 7 straight, 8 and spicular fork (Fig. 135) as in other species; tegmen in dorsal view (Fig. 136) strongly broadened proximally, strongly constricted across middle, apex deeply forked; phallus in side view (Fig. 137) with rhomboidal apex; internal sac with paired spines. Length 2.0 - 2.6 mm, width 0.7 - 1.0 mm.

♀. Antenna shorter, finer, segments less transverse, eyes less prominent. Pronotal sides less angulate. Elytra broadened. Pygidium semicircular; sternite 7 weakly extended; internal copulatory organs, viz. seminal canal, of a very distinctive structure (Fig. 138). Length 2.4 - 3.1 mm, width 1.0 - 1.2 mm.

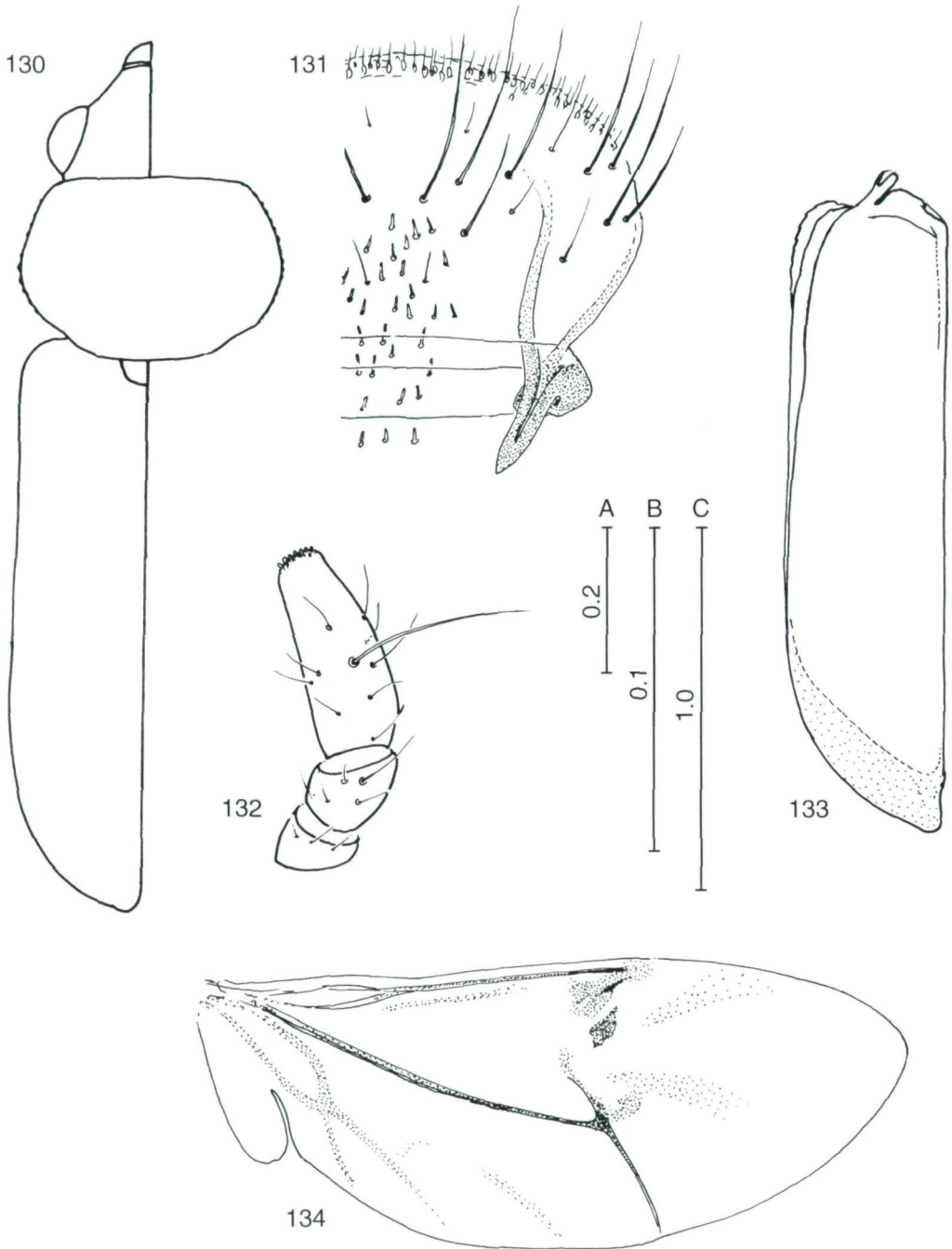
Distribution. Jordan.

4. *Brodskyana semipallida* (REITTER) comb.n. (Figs. 139 - 147)

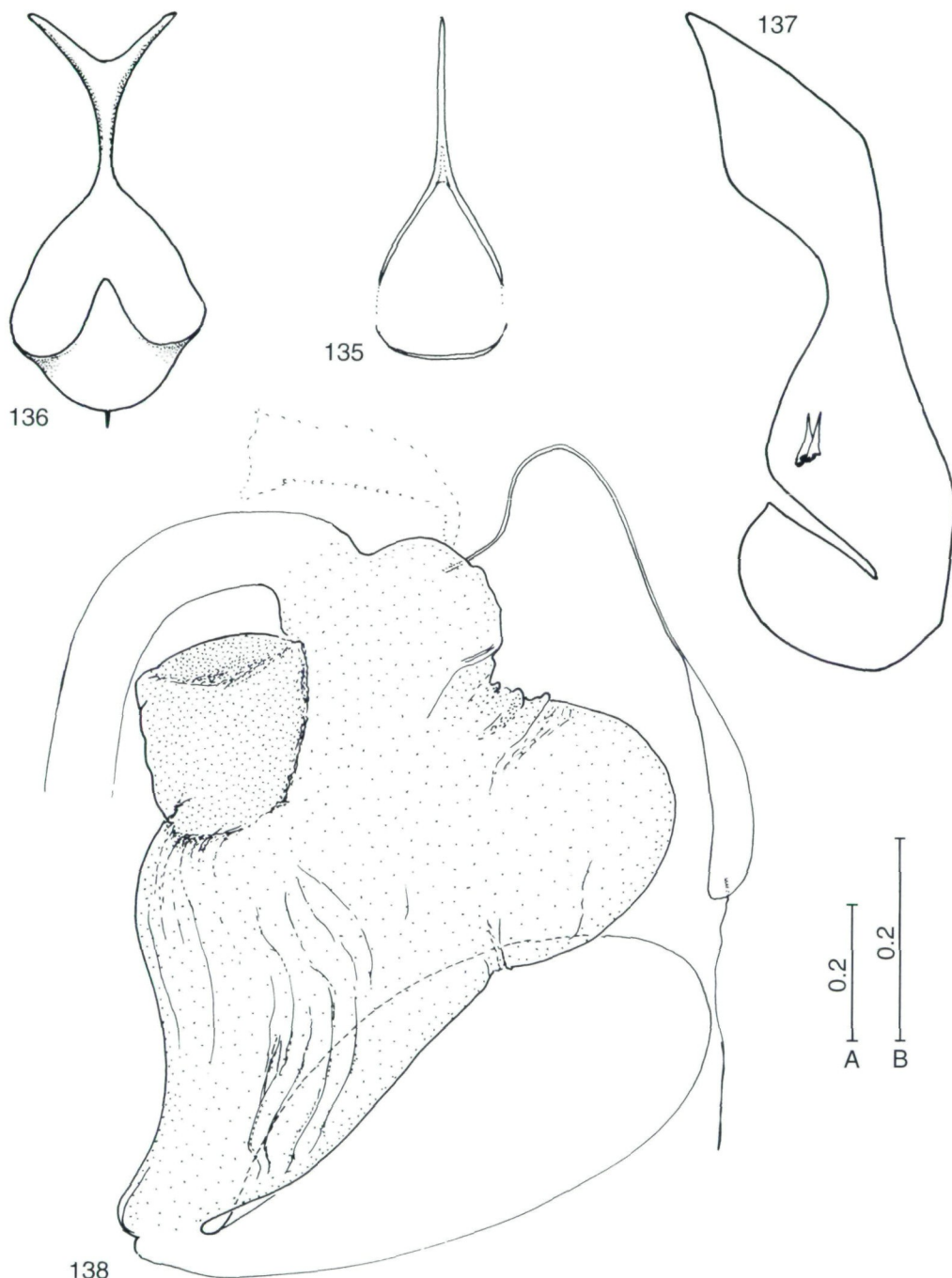
Dasytiscus semipallidus REITTER, 1899: 275. Types (2): lectotype, ♂ (present designation) (HNHM), 1 paralectotype, ♀ (HNHM): "Caucasus Araxesthal, Leder Reitter" (with black margin, printed); "D. semipallidus m. 1899" (Reitter's MS).

Dasytiscus (*Dasytidius*) *semipallens*: SCHILSKY, 1901: 7 [misspelled].

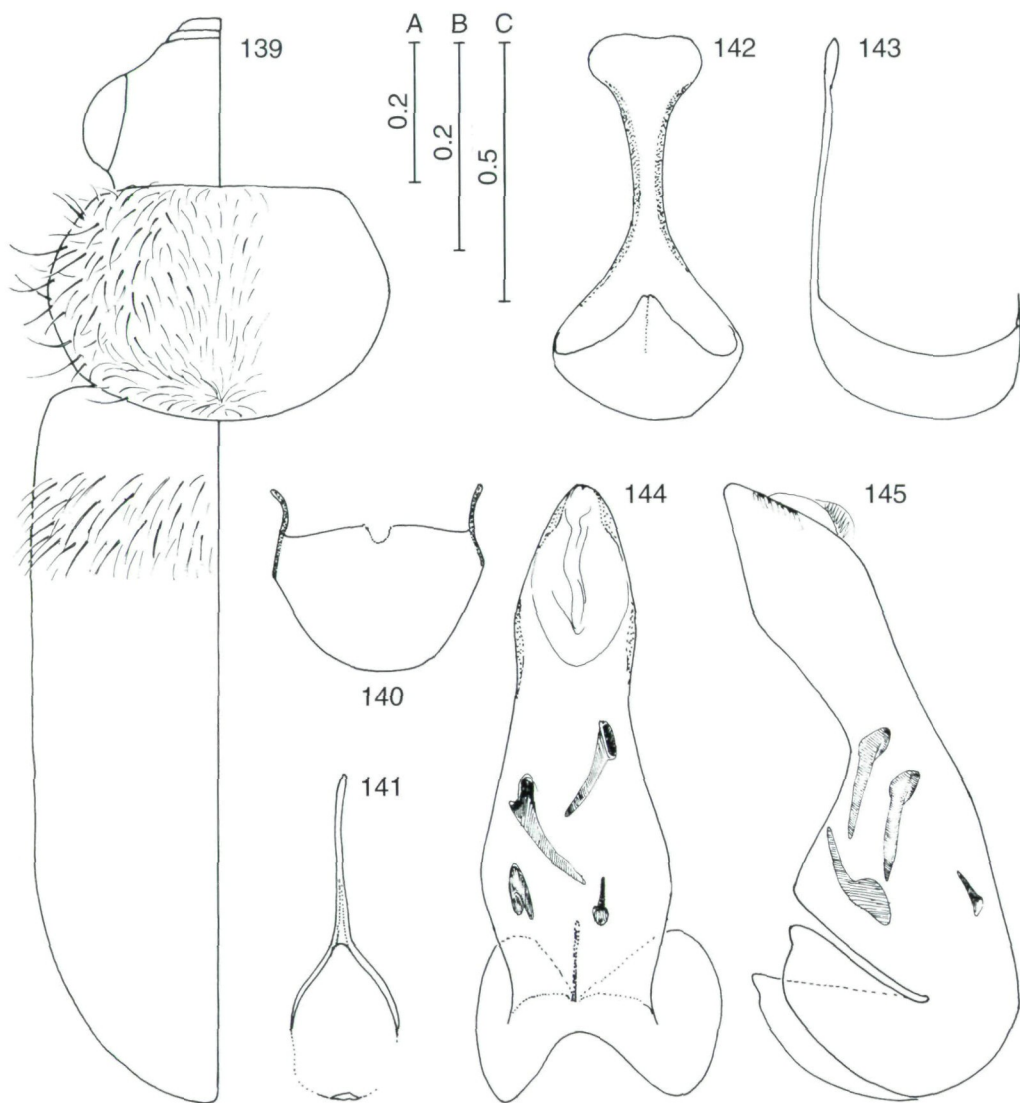
Diagnosis. Easily recognized by bicolorous body and flavous extremities.



Figs. 130 - 134: *Brodskyana furcilla* sp.n. (130) body outline, holotype, ♂, (131) labrum, ♀, (132) labial palp, ♀, (133) elytron ventral, ♀, (134) wing, ♀. Scale bars: A = 132, B = 131, C = 130, 133 - 134.

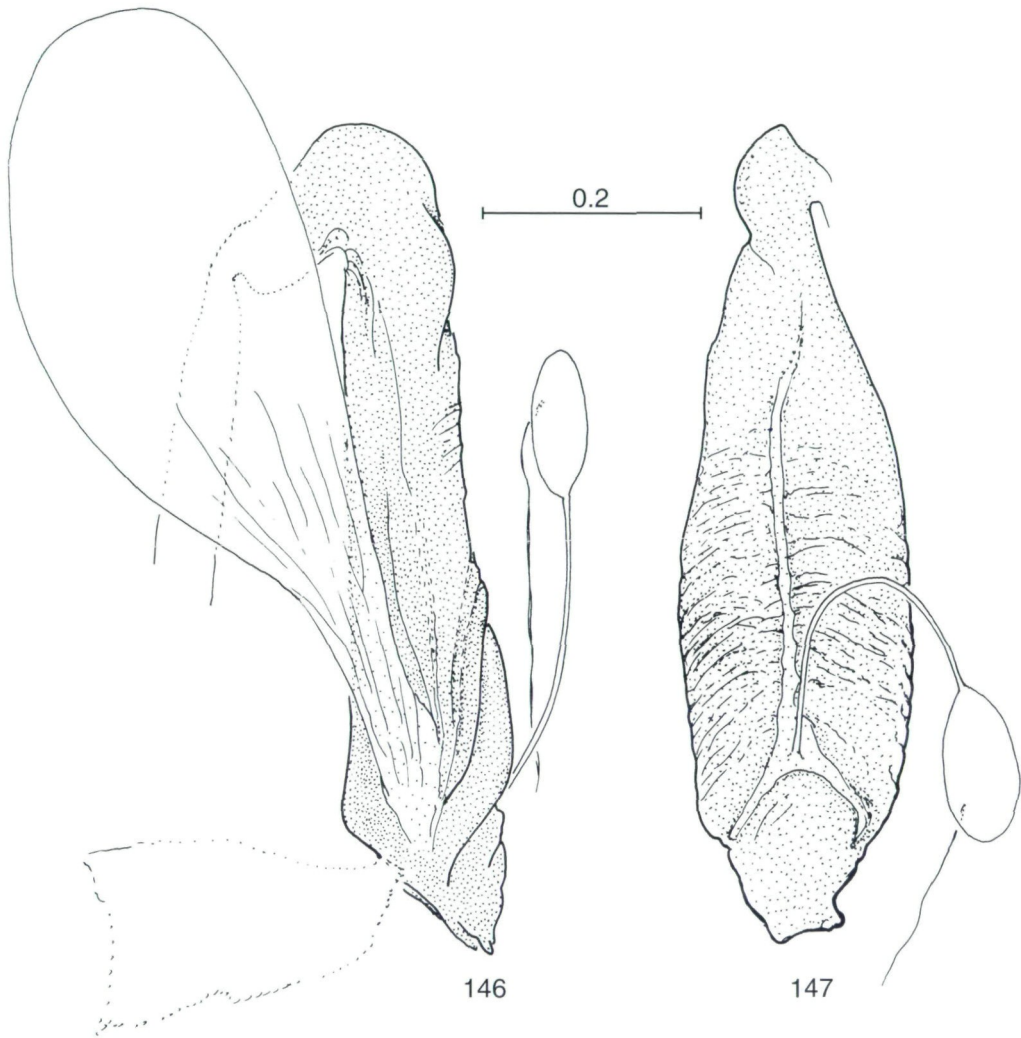


Figs. 135 - 138: *Brodskyana furcilla* sp.n., holotype, ♂, paratype, ♀. (135) spicular fork, (136) tegmen, ventral, (137) phallus, lateral, (138) female genitalia. Scale bars: A = 135 - 137, B = 138.



Figs. 139 - 145: *Brodskyana semipallida*, lectotype, ♂. (139) body outline, (140) pygidium, (141) spicular fork, (142) tegmen dorsal, (143) same, lateral, (144) phallus, dorsal, (145) same, lateral. Scale bars: A = 142 - 145, B = 140, 141, C = 139.

Description. Head, prothorax, scutellum and whole lower bodyside piceous to fuscous, rest pale, brightly orange yellow, apex of pretarsi and claws scarcely infusate; integument finely and densely punctured; pale pubescence clearly dual consisting of decumbent and reclinate (subseriately arranged) hairs. Head with dense network of microsculpture and well-spaced punctures, intervals wider than punctures; antenna relatively short, length of antenna: length of pronotum 0.9 in males, 0.8 in females; antennomeres 5 - 9 weakly transverse, subserrate. Pronotum with finely bordered perimeter, disc with-



Figs. 146, 147: *Brodskyana semipallida*, paralectotype, ♀, female genitalia.

out microsculpture, intervals more or less glabrous, wider than punctures which are fine and rasp-like, prelateral lines very fine and rather indicated only, becoming obsolete at apical fourth, surface not coriaceous on sides; side margins nearly glabrous, lateral fringe less marked but erect long hairs present, these distributed also on sides of upper surface. Elytra with moderately dense, not very deep punctures, intervals subconvex, glabrous, scarcely wider than punctures; vestiture composed of decumbent and erect hairs, lateral fringe not defined but long erect hairs present over all upper surface.

♂ (Fig. 139). Antenna somewhat longer, segments more transverse, eyes larger. Elytra parallel-sided. Pygidium strongly trapeziform (Fig. 140), apex subarcuate; sternite 7 nearly straight, 8 as in other species; spicular fork (Fig. 141) long, slender, walls broad;

tegmen not distinctly forked at apex (Figs. 142, 143); phallus (Figs. 144, 145) with three large spines in internal sac. Length 2.0 mm, width 0.9 mm.

♀. Antenna shorter, segments less transverse, eyes smaller. Elytra broadened. Pygidium strongly trapeziform, rather conical, apex subarcuate; sternite 7 briefly extended; seminal canal of a very distinctive shape (Figs. 146 - 147). Length 2.6 mm, width 1.0 mm.

Distribution. Armenia.

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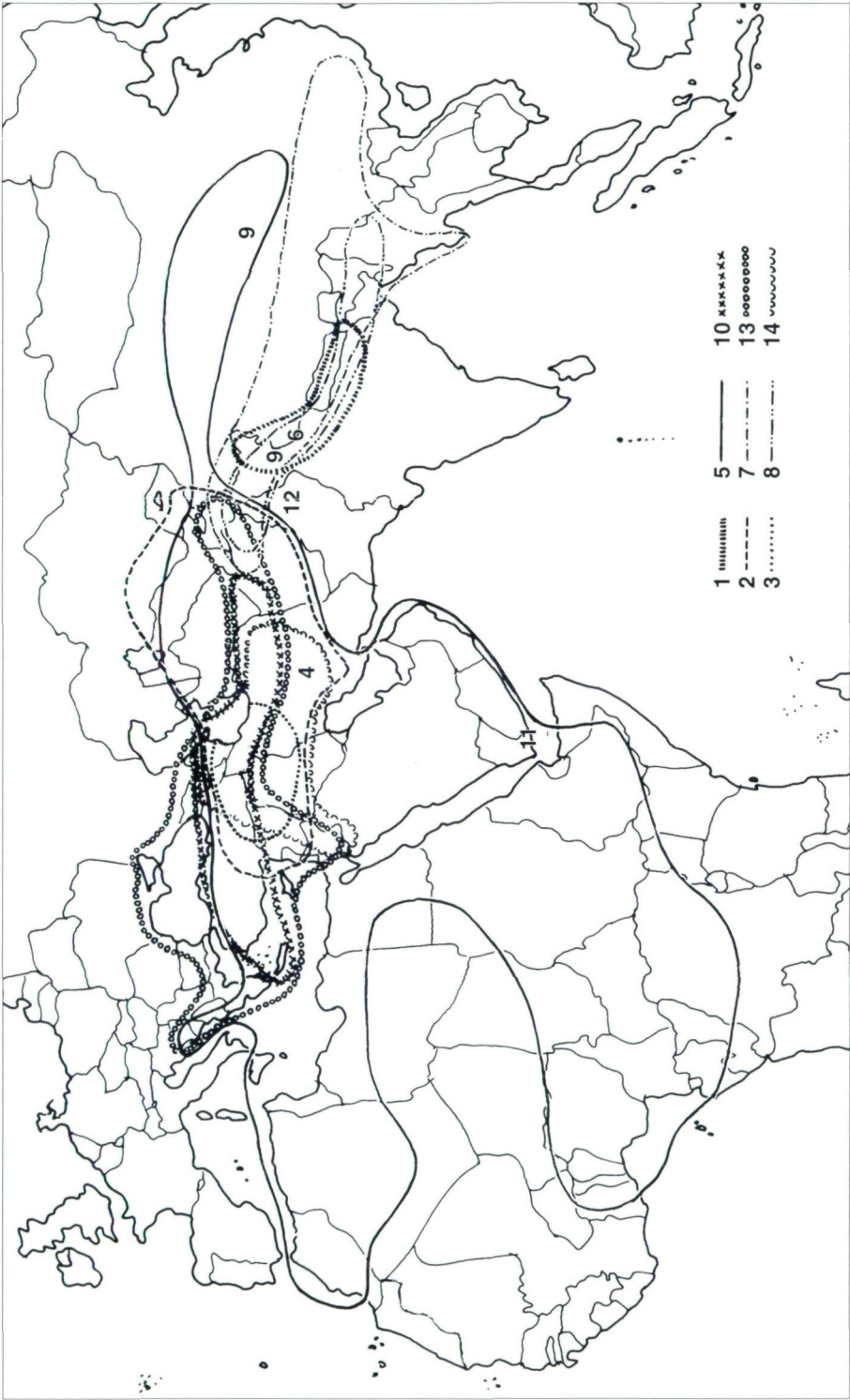


Fig. 148: Distribution map of the subfamily Chaetomalachiinae. (1) *Hladilium* gen.n., (2) *Chaetomalachius*, (3) *Parathrix*, (4) *Dasythrix* gen.n., (5) *Dasytidius*, (6) *Neothrix*, (7) *Mimothrix*, (8) *Achaetomalachius*, (9) *Danaceothrix*, (10) *Haplothrix*, (11) *Asiothrix* gen.n., (12) *Euthrix* gen.n., (13) *Dasytiscus*, (14) *Brodskyana* gen.n.

Genera	Characters																	
Ingroup	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
<i>Hladilium</i>	2>*	0	0	1	0	1	1	1	1	1	1	3	1	1>	0	1*	0	0
<i>Chaetomalachius</i>	0	1	0	1>	1*	0	0	0	1	1	0	5	5	0	0	0	0	0
<i>Parathrix</i>	3>*	1	1	0	0	0	0	0	1	1	0	6	6	2	1*	0	0	0
<i>Dasythrix</i>	?	0	0	0	0	0	0	0	1	1	0	4	7	3	0	0	0	0
<i>Dasytidius</i>	3*	0	0	0	0	0	0	0	1	1	0	4	8	0	2>*	1*	0	0
<i>Neothrix</i>	?	0	0	0	0	0	0	0	1	1	0	2	9	0	0	1*	1	0
<i>Mimothrix</i>	0	0	0	0	0	0	0	0	1	1	0	2	13	4	1*	0	0	1*
<i>Achaetomalachius</i>	0	0	0	0	0	0	0	0	1	1	0	2	14	4	0	0	0	1*
<i>Danaceothrix</i>	3*	0	0	0	0	0	0	0	1	1	0	2	15	4	1*	?	0	1*
<i>Asiothrix</i>	?	0	0	0	1*	0	0	0	1	1	0	2	3*	4	0	0	0	0
<i>Haplothrix</i>	0	0	0	0	1>*	0	0	0	1	1	0	2	15	6>	1>*	1>*	0	0
<i>Euthrix</i>	?	0	0	0	1*	0	0	0	1	1	0	2	17	7	1*	2	0	0
<i>Dasytiscus</i>	1*	0	0	0	1>*	0	0	0	1	1	0	2	19	9	1>*	1>*	0	0
<i>Brodskyana</i>	2*	0	0	0	0	0	0	0	1	1	0	2	20	10	2*	1*	0	0
Outgroup	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
<i>Amauronia</i>	0	0	0	1*	1*	0	0	0	-	0	0	0	0	0	0	0	0	0
<i>Mauroania</i>	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Fig. 149: Data matrix used for cladistic analysis of the genera of the Chaetomalachiinae.

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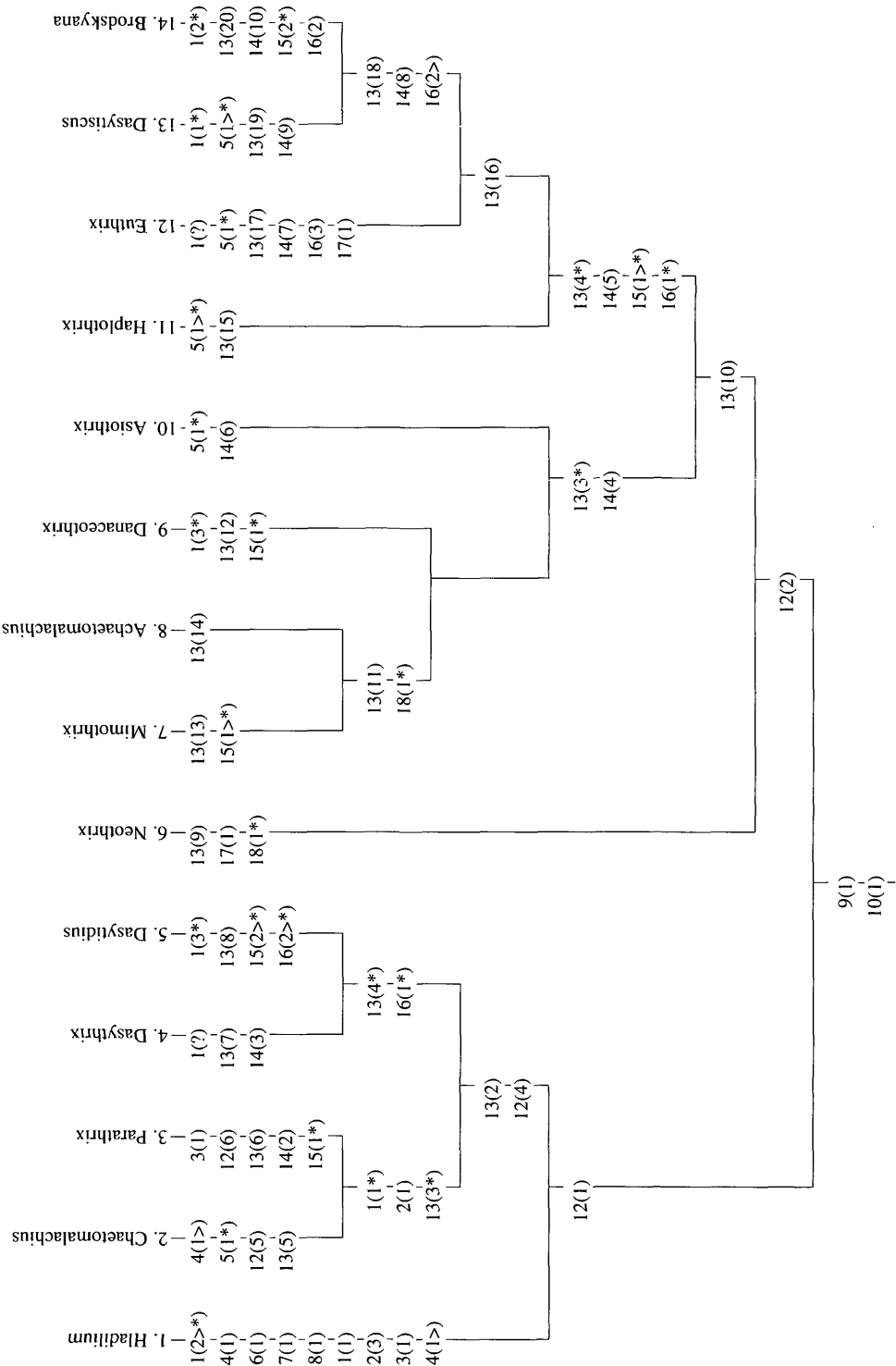


Fig. 150: Cladogram showing the relationships among genera of Chaetomalachiinae.

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Appendix:

Systematic checklist of the Chaetomalachiinae

Hladilium **gen.n.**

himalayanum (PIC, 1911) **comb.n.**
insulcatum (PIC, 1922) **comb.n.**
perpolitum **sp.n.**
cambiense (GORHAM, 1895) **comb.n.**
speculiferum (CHAMPION, 1922) **comb.n.**
molestum **sp.n.**
obstinatum **sp.n.**
perplexum **sp.n.**
amplexum (CHAMPION, 1925) **comb.n.**

N India: Kashmir
 N India: Himachal Pradesh
 N India: Kashmir, Jammu
 N India
 N India: Kumaon, Uttar Pradesh
 Nepal
 Nepal
 Nepal
 India: Sikkim

Chaetomalachius KRAATZ, 1882

cyaneus (KIESENWETTER, 1863)
marginicollis (REITTER, 1891)
reitteri MAJER, 1988
punctatus SCHILSKY, 1896
kotschyi SCHILSKY, 1896
jelineki MAJER, 1989
dispar dispar SCHILSKY, 1896
dispar bodemeyeri MAJER, 1898
dasytoides KRAATZ, 1882

Turkey, Syria, Lebanon
 Azerbaijan, Turkmenistan: Kopet - Dagh.
 Caucasus
 Egypt, Greece (???)
 Iran
 Iran
 Iran
 E Iran, Syria
 Kazakhstan, Kyrgyzstan, Tajikistan,
 Turkmenistan, Uzbekistan.
 Iran, Kyrgyzstan, Turkmenistan.
 Afghanistan, Iran, Tajikistan, Turkmenistan
 Afghanistan
 Afghanistan
 Afghanistan
 Tajikistan, Uzbekistan.
 Kazakhstan, Tajikistan, Uzbekistan.
 Kazakhstan, Kyrgyzstan, Uzbekistan.
 Tajikistan
 Afghanistan
 Turkmenistan
 Kyrgyzstan, Tajikistan, Turkmenistan.
 Afghanistan
 Tajikistan
 Kyrgyzstan, Tajikistan, Uzbekistan.

wittmeri MAJER, 1989
aeneolus MAJER, 1989
klapperichi IABLOKOFF - KHNZORIAN, 1966
australis MAJER, 1988
insidiosus IABLOKOFF - KHNZORIAN, 1966
staudingeri SCHILSKY, 1900
hauseri (SCHILSKY, 1894)
forticornis SCHILSKY, 1986
acutipennis MAJER, 1989
pulcher MAJER, 1988
longipilis (REITTER, 1889)
aeneus SCHILSKY, 1900
largus MAJER, 1988
bilyi MAJER, 1989
bactrianus IABLOKOFF - KHNZORIAN, 1966

Parathrix MAJER, 1989

aeneola (REITTER, 1889)
gravida MAJER, 1990
anatolica (REITTER, 1902)
tristis **sp.n.** Iran
attonita MAJER, 1990
plumbea (KIESENWETTER, 1878)
facunda MAJER, 1990
bimetallica (ABEILLE, 1894)

Azerbaijan
 Azerbaijan
 Turkey

Iran
 Azerbaijan
 Syria
 Iraq

Dasythrix **gen.n.**

flavoniger (MAJER, 1991)

Iran

Dasytidius SCHILSKY, 1896

fulvipes (REITTER, 1885)
prosperus MAJER, 1989
insularis MAJER, in press
sparsepubens MAJER, 1990
ethologus MAJER, 1989
subsyriacus MAJER, 1991
syriacus (REITTER, 1885)
kalalovae MAJER, 1991

Syria, Turkey
 Turkey
 Greece: Lesvos
 Libya
 Greece: Crete
 Jordan, Syria
 Cyprus, Israel, Jordan, Lebanon, Syria, Turkey
 E Iran, Iraq, Turkey

- alfierii* (WITTMER, 1935) **comb.n.**
nigripes (PIC, 1894)
inchoatus MAJER, 1991
aurescens MAJER, 1991
latissimus MAJER, 1989
maceki MAJER, 1991
laticollis (BOURGEOIS, 1885)
optimus MAJER, 1989
crassicornis MAJER,
recticollis MAJER, in press
congruens MAJER, 1989
brevicornis MAJER, in press
emgei (REITTER, 1884)
petrowi (PIC, 1923)
melitensis (BOURGEOIS, 1885)
medius (ROTTENBERGER, 1871)
normandi MAJER, 1990
crenulatus (PIC, 1925)
diversimembris (PIC, 1937)
constantini MAJER, 1990
deportatus (PEYERIMHOFF, 1929)
vestitus (KIESENWETTER, 1863)
bourgeoisii (SCHILSKY, 1896)
pardoi MAJER, 1990
mantici MAJER, in press
gracilis (ESCALERA, 1914)
syrcticus (BOURGEOIS, 1885)
wartmanni (REITTER, 1897)
ragusai (PROCHÁZKA, 1895)
ugamicus MAJER, 1991
sequensi (REITTER, 1902)
kubani MAJER, 1991
rufimanus (BOURGEOIS, 1885)
margelanus MAJER, 1991
hauseri (REITTER, 1890)
candidus MAJER, 1991
marsaleki MAJER, in press
tajikistanus MAJER, 1991
turnai MAJER, in press
transversus MAJER, 1991
quaesitus MAJER, 1991
subnudus MAJER, 1991
infinitus MAJER, 1991
longiventris MAJER, 1991
persicus (PIC, 1926)
robustus MAJER, 1991
opertus MAJER, 1991
princeps MAJER, 1991
virescens (BAUDI, 1873)
quadricollis (SCHILSKY, 1896)
funebri MAJER, 1989
indutus indutus (KIESENWETTER, 1859)
indutus dalmatinus MAJER, 1989
indutus aegaeicus (LIBERTI, 1886)
indutus similis (SCHILSKY, 1896)
malkini MAJER, in press
impar MAJER, in press
muehleii MAJER, in press
- Egypt: Sinai; Iraq, Israel, Jordan, Syria,
 Azerbaijan, Iran, Syria, Turkey
 Cyprus
 Syria
 Turkey
 Iraq
 Iraq
 Turkey
 Syria
 Syria
 Turkey, Greece: Sporades, Rhodes.
 Turkey
 Greece
 Egypt, Libya
 Italia: Sicilia; Malta
 Algeria, Morocco, Tunisia
 Tunisia
 Libya
 Algeria, Morocco
 Morocco
 Algeria: Central Sahara
 Algeria, Morocco, Tunisia
 Morocco, Spain (??)
 Morocco
 Turkey
 S. Algeria, Morocco
 Italy: Sicilia; Tunisia
 Algeria
 Algeria, Italy: Sicilia; Libya, Tunisia
 Uzbekistan
 Armenia, Kazakhstan
 Armenia
 Uzbekistan, Tajikistan
 Tajikistan
 Uzbekistan
 Afghanistan
 Kyrgyzstan
 Tajikistan
 China: Yunnan
 Iran
 Iran
 Iraq, Israel, Jordan, Syria
 Syria, Turkey
 Iran
 Iran
 Iran
 Iran
 Iran, Iraq
 Cyprus
 Iran
 Turkey
 Greece: continental
 Croatia
 Greece: Crete, Aegean Islands
 Cyprus, Turkey
 Turkey
 Turkey
 Yemen

<i>sudanicus</i> (PIC, 1929)	Sudan
<i>endroedyi</i> MAJER, in press	Ghana
<i>wittmeri</i> MAJER, 1991	Saudi Arabia
<i>addillaensis</i> (WITTMER, 1979)	Saudi Arabia
<i>clarkei</i> MAJER, in press	Ethiopia
<i>desaegeri</i> (PIC, 1954)	Zaire
<i>congoensis</i> (PIC, 1933)	Zaire
<i>atrimembris</i> (PIC, 1925)	Ethiopia
<i>licenti</i> (PIC, 1936)	China
<i>Neothrix</i> MAJER, 1989	
<i>aspericollis</i> (CHAMPION, 1925)	N India: Kumaon
<i>Mimothrix</i> MAJER, 1989	
<i>cybaea</i> MAJER, 1995	Afghanistan: Badakshan
<i>roshtkalensis</i> MAJER, 1995	Tajikistan: Pamir
<i>pamirensis</i> MAJER, in press	Tajikistan: Pamir
<i>helferi</i> MAJER, 1995	Burma: Tenasserim (S Taninthayi)
<i>cinis</i> MAJER, 1995	Afghanistan: Pamir
<i>trapezicollis</i> MAJER, 1995	N India: Ladakh
<i>cyanea</i> MAJER, 1995	Nepal
<i>scortea</i> MAJER, 1995	N India: Kashmir
<i>fraterna</i> MAJER, 1995	Afghanistan
<i>matsumurai</i> MAJER, 1995	Nepal
<i>jendeki</i> MAJER, 1995	China: Yunnan
<i>baishuiensis</i> MAJER, 1995	China: Yunnan
<i>kubani</i> MAJER, 1995	China: Yunnan
<i>rhododendri</i> MAJER, in press	China: Yunnan
<i>agnoscenda</i> (PIC, 1907)	China: Yunnan
<i>maowensis</i> MAJER, 1995	China: Sichuan
<i>sparsehirsuta</i> (PIC, 1907)	China: Yunnan
<i>donjuan</i> MAJER, in press	China: Sichuan
<i>menieri</i> MAJER, 1995	China: Yunnan
<i>bella</i> MAJER, 1995	Afghanistan: Nuristan
<i>histrion</i> MAJER, 1995	N India: Sikkim
<i>crassifemur</i> MAJER, 1995	Bhutan
<i>extranea</i> MAJER, 1995	Afghanistan
<i>atrotibialis</i> (PIC, 1917)	China: Yunnan
<i>olivacea</i> MAJER, 1989	N India: Sikkim
<i>montivaga</i> MAJER, 1995	China: Yunnan
<i>Achaetomalachius</i> MAJER, 1989	
<i>tibetensis</i> (CHAMPION, 1925)	Tibet
<i>gorhami</i> (PIC, 1911)	Burma: Pegu
<i>cinereus</i> MAJER, in press	N India: Jammu
<i>kashmirensis</i> (CHAMPION, 1922)	N India: Kashmir
<i>vagus</i> MAJER, in press	N Pakistan
<i>scabricollis</i> (CHAMPION, 1922)	N India
<i>discretus</i> (GORHAM, 1895)	N India
<i>kangraensis</i> (CHAMPION, 1925)	N India
<i>bengalensis</i> (PIC, 1907)	NW Pakistan
<i>rostri</i> MAJER, in press	N India
<i>tibialis</i> (LABLOKOFF - KHNZORIAN, 1966)	NE Afghanistan: Nuristan
<i>confusus</i> MAJER, in press	Afghanistan
<i>pretinctus</i> MAJER, in press	Afghanistan
<i>kumaonensis</i> (CHAMPION, 1922)	N India
<i>danacaeoides</i> (CHAMPION, 1922)	N India
<i>aeneonitens</i> (CHAMPION, 1922)	N India
<i>tenuicornis</i> MAJER, in press	N India, Nepal
<i>cupreatus</i> MAJER, in press	Afghanistan
<i>nepalensis</i> MAJER, in press	Nepal

- mutabilis* (CHAMPION, 1922)
clarus MAJER, in press
coloratus MAJER, in press
Danaceothrix MAJER, 1989
murina MAJER, 1989
monilicornis (CHAMPION, 1922) **comb.n.**
glaberrima **sp.n.**
Asiothrix **gen.n.**
minuta (WITTMER, 1954) **comb.n.**
Haplohris SCHILSKY, 1896
sanguinicollis MAJER, 1989
vana MAJER, 1989
soluta MAJER, 1989
ruficollis (REITTER, 1889)
prudeki MAJER, in press
effusa MAJER, 1989
pospisili MAJER, 1989
leucosa MAJER, 1989
pusilla (SCHILSKY, 1896)
captiosa MAJER, 1989
subtilis (REITTER, 1885)
mera MAJER, 1989
armeniaca (KIESENWETTER, 1878)
aequalis (REITTER, 1885)
chalif MAJER, 1989
Euthrix **gen.n.**
lata **sp.n.**
sulcicollis **sp.n.**
Dasytiscus KIESENWETTER, 1859
klapperichi MAJER, 1988
affinis MORAWITZ, 1861

impressicollis REITTER, 1885
graminis **nom.n.** (= *rufitarsis* LUCAS, 1853)
minotaurus MAJER, 1988
hissarus MAJER, 1988
heydeni REITTER, 1891
minimus (J. SAHLBERG, 1903)
flaveolus REITTER, 1889
pallens MAJER, 1988
hladili MAJER, 1988
strejcekorum MAJER, in press
praecox (KÜSTER, 1851)
scheneri MAJER, 1988
abeillei (BOURGEOIS, 1885)
fallax MAJER, 1988
simulator MAJER, 1988
hebraicus BOURGEOIS, 1883
jordanicus MAJER, 1988
amasyanus **sp.n.**
rufipennis **sp.n.**
flavoapicalis WITTMER, 1954
Brodskyana **gen.n.**
furcilla **sp.n.**
juncta **sp.n.**
lubrica **sp.n.**
semipallida (REITTER, 1899) **comb.n.**
- N India: Uttar Pradesh
Afghanistan
N India: Himachal Pradesh

Afghanistan
N India
China: Yunnan

Saudi Arabia

Afghanistan
NW India
Iran
Armenia, Georgia
Turkey
Iran
Greece: Rhodes
Afghanistan
Turkey
Turkey
Cyprus, Greece: Aegean Islands
Turkey
Armenia
Greece
Iran, Iraq

Afghanistan
N Pakistan

Afghanistan
Albania, Bulgaria, Croatia, Greece,
Macedonia, SW Russia, Ukraine,
Yugoslavia
Albania, Croatia, Greece
Croatia, Greece
Greece: Crete
Tajikistan
Kazakhstan, Tajikistan, Uzbekistan
Iran: Alborz Mts.
Greece: Sporades, Rhodes; Turkey
Iran
Turkey
Armenia
Greece, Turkey
Israel, Jordan
Israel, Jordan
Israel, Jordan
Israel
Israel
Jordan
Turkey
Turkey
Ethiopia

Jordan
Iran
Iran
Armenia

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