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A SYNOPSIS OF PERILAMPUS LATREILLE
WITH DESCRIPTIONS OF NEW GENERA
AND SPECIES (HYMENOPTERA,
PERILAMPIDAE), II*

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(Received 14 November 1989)

The previously published Part I. thereby completed with additional new generic diagnosis, descriptions of new species, and a checklist of the species names in alphabetic order indicating the actual generic names in brackets.

Genus *Pondoros* gen. n

Type-species: *Perilampus tristis* MAYR, 1905.

Size of both sexes small to moderate. Head thickset, transverse, usually bulky, with sharply protuberant scrobal ridge; occasionally, however, lenticular, with the front flat and almost in one plane with anterior margin of eye; accordingly, the scrobal cavity deep or shallow. Vertex narrow, acute, to moderately flat behind median ocellus, but always with a median longitudinal furrow extending from median ocellus down on the occipital declivity up to the foramen magnum, and bottom of which delicately transversally septate. Head without scrobal carina, scrobal ridge of vertexo-orbital type, strongly diverging and almost transversally reaching inner eye orbit just before of lateral ocellus, the ridge often hard in males of *batavus*-group. Ocellar triangle only moderately flattened. Adorbital sulcus of inner orbit shallow; of outer orbit deep and rather sharp, and frequently become distended as temples inflated and dilated at lower half of eye (Figs 147—148). Malar sulcus deep, as long as front margin of malar cavity. Scape of ♂ slightly dilated and flattened on its apical half. Clava of ♀ with straight sutures, without large sensorial groove, at most a flat, ovoidal area microsetulose on last claval segment. — Middle of pronotal disc narrow, its sides moderately wide; as broad or broader than prepectal triangle; its posterior margin blade-like, its antero-lateral margin not emarginate. Prepectus entirely consolidated to lateral pronotal panel, with a large impunctate stripe contiguous from middle of prepectal triangle to the panel (Fig. 111). Inner half of scapulae polished. Scuto-scutellar groove enlarged behind, longitudinally foveolate, base of scutellum narrow to acute. Axillula triangular in shape. Propodeum with plical carina well developed, strong and complete. Mesosternum keel-shaped and with no horizontal pad in front of mid coxae (in species-group *tristis*), although often (in species-group *batavus*) the second transverse crest also present but situated high on the mesosternal declivity and not in same plane with the precoxal keel; however, occasionally (in species-group *politifrons*), the pad distinctly horizontal, wide and bicarinulate. — A broad main petiole transverse and provided dorsally by a scale-like tubercle. Second tergite of abdomen practically glabrous, third tergite with no microsculpture. Colouration near exclusively melanistic, very rarely slightly metallic.

R e m a r k s — As resulted from the short diagnosis of above, the genus *Pondoros* contains some heterogeneous elements, but I find it undesirable to subdivide them into more genera. The genus is natural otherwise, and despite

* I. part in *Acta Zool. Hung.* 1990 36 (3—4): 189—263.

the shape of mesosternal pad, development of scrobal ridge, sculpture of vertex and peculiarities of outer adorbital sulcus, the species included here are strongly unified by the presence of three basic features, namely: the anteriorly open prepectal triangle, the median longitudinal furrow of the vertex, and the complete plical carina of propodeum. Alike to the genera *Bukbakas*, *Dekterek*, *Ecalibur*, *Lufarfar* and *Naspoyar*, the genus *Pondoros* contains young perlampids in stage of plentiful evolutionary processes, practically represented in all main zoogeographic regions, and whose species were less well understood till now as desired.

Pondoros kittenbergeri sp. n.

♀. Length 2.0 mm. — Head and thorax brilliant deep-black, with some slight metallic lustre on thoracic dorsum, abdomen dark castaneous. Funicle, clava, apical half of mandibles, femora, tibiae and fore tarsi yellowish-piceous; with weak bluish shine of femora and tibiae. Mid- and hind tarsi white. Venation of forewing whitish-yellow. Sides of abdomen with indefinite violaceous lustre. Pubescence of body, appendages and wings snow-white. Head transverse, in dorsal view about $2.5 \times$ as wide as long; front flat, not protuberant between inner orbits, and at mid-height of eye situated on same plane with eye. Vertex nowhere plane, the scrobal ridge strongly humped between median and lateral ocellus; median longitudinal furrow deep, cross-septate, contiguous between median ocellus and foramen magnum. Occipital declivity cross-sulcate. Facial aspect of head, genae and temples polished and shining, abundant pilose. Lateral ocelli separated by a distance as long as $2.1 \times$ ocello-ocular line; median ocellus separated from foremost crest of occipital declivity by a distance as long as $1.2 \times$ its own major diameter. Apical margin of clypeus semicircularly protruding, convex. Funicle strongly clavate first segment conical, a bit longer than thick, second quadrate, 3—7 transverse; clava collapsed, apparently with no sensorial groove. — Pronotal disc with two transverse rows of punctures, separated by a very sharp crest; lateral pronotal panel with two rows of large punctures opposite to prepectal triangle. Mesoscutum and scutellum everywhere with uniform-sized, shallowly lenticular, brilliantly umbilicate punctures; interpunctal spaces throughout about one third as wide as the punctures, and provided with small, individually convex papillae, of green-bluish lustre. Sides of scutellum diverging, its marginal rim entire, not emarginate apically. Lateral discal areas of propodeum polished and shining; propodeal spiracle margined outwardly by large punctures, contiguous in a row along plical carina up to supracoxal flange. Declivity of mesosternum separated from mesepimeron by one row of large punctures; tibial groove obliquely costulate on its anterior half, smooth on its posterior half. Marginalis, postmarginalis and stigmatis of forewing in a ratio of about 2.4 : 1.6 : 1.0; radial knob without uncus; marginal fringe complete. Posterior upper edge of hind tibia not metallic. Second and third tergite of abdomen polished and shining, second glabrous, third short pilose on sides.

♂ and biology unknown.

Material examined: 1 ♀ holotype, labelled "Uganda, KATONA" (= Dr. K. KITTENBERGER), and "Mujenje, 1913. VIII", deposited in the Hungarian Natural History Museum, Budapest; Hym. Typ. No. 6954.

Etymology — Dedicated to its collector — see also remarks under *Lufarfar nimrodus*, described below.

Pondoros moczari sp. n.

(Figs 148, 150)

♀. Length 2.2 mm. Entirely black; pronotal disc, mesoscutum and scutellum with both interpunctal spaces and bottom of large punctures deep gray-brassy. Scape light golden to green-brassy basally. Femora and tibiae with weak green bluish lustre, otherwise dark brown. Funicle and clava yellowish-testaceous, dorsally infuscated. Tarsi white basally and gradually darkened apically. Forewing with light brown veins and setulae on apical half, with snow-white setulae on basal half. Mandibles dark castaneous, their apical half piceous. Pubescence of body and appendages snow-white. Head thickset, with scrobal ridge bulging and projecting well

anterad than level of eyes (Fig. 150); in dorsal view, exactly twice as wide as long. Median ocellus separated from the lateral ones by a blunt ridge, V-shaped, apex of which reach to foremost crest of occipital declivity, a distance a little less than own diameter of median ocellus; lateral ocelli separated by a distance as long as $2.0 \times$ ocello-ocular line, which is equal to diameter of lateral ocellus. Inner orbit of eye without ridge or adorbital sulcus; outer orbit with deep adorbital sulcus, sharp-edged and perfectly parallel to eye margin; temples normal, not inflated at all. Facial aspect of head, temples and genae polished and shining, with only scattered, usual, small piliferous punctures, especially on upper front. Apex of clypeus semicircularly projecting, convex. Apex of scape, in rest, well separated from median ocellus, by more than the diameter of the ocellus. First segment of funicle a bit longer than thick, segments 2—3 quadrate, 4—7 transverse; clava with slightly oblique sutures on the last two segments, and with a long, ovoidal sensorial area also on the last two claval segments. — Middle of pronotum with two transverse rows of punctures, separated by a sharp crest; lateral pronotal panel with two rows of large punctures opposite to prepectal triangle, the third row situated on the anterior pronotal declivity, regular, and the punctures opened outwardly and not forwardly. Inner half of scapulae polished and shining, sharply separated from the outer half. Mesosentum and scutellum with uniform sized, mostly flat-bottomed, brilliant, polygonal and umbilicated punctures; interpunctual spaces about one-quarter as wide as the punctures; in the middle of disc they are polished, on sides papillate or cross-sulcate. Sides of scutellum parallel, its marginal rim not emarginate apically. Lateral discal areas of propodeum mirror-like polished and shining; plical carina with only one row of punctures outwardly. Declivity of mesosternum separated from mesepimeron by one regular row of large punctures; tibial groove mirror-like, with no trace of any sculpture on its bottom. Posterior outer edge of hind tibia metallic, except a narrow basal and a broader apical yellow ring. — *Marginalis*, *postmarginalis* and *stigmatis* of forewing in a ratio of about as 3.0 : 2.0 : 1.0; radial knob acutely triangular outwardly but without distinct uncus; marginal fringe complete. — A bdominal petiole transverse, with triangularly acute lamella dorsally. Second and third tergite polished and shining, with some short setulae on the sides.

♂ and biology unknown.

Material examined: 1 ♀ holotype, labelled "O-Afghanistan, Achmede Dewane, 2700 m, Bashgul-Tal, Nuristan, 23. VII. (19)52, J. KLAPPERICH", deposited in the Hungarian Natural History Museum, Budapest; Hym. Typ. No. 6955.

Etymology — Dedicated to my good friend and colleague, Dr. LÁSZLÓ MÓCZÁR (Budapest), excellent specialist of hymenopteran's taxonomy and ecology, a fine person with generous and warm heart, who kindly helped me during this study.

R e m a r k s — This interesting new species has no special outstanding features. It resembles both *kittenbergeri* sp. n. and *tristis* MAYR, but differs from *kittenbergeri* in having the scape short, as in *tristis*, and from the latter with its normal temples, which are conspicuously inflated in *tristis*. It is very closely related also to *cremastophagus* MANI et KAUL, 1973 from India, but in which the lateral ocellus separated by two ocellar diameters from eye margin, and only by one in *moczari*.

Genus *Lufarfār* gen. n.

Type-species: *Lufarfār rainerius* sp. n.

Size of female (male not seen) small to moderate. — Head thickset, with shallow scrobal cavity and low scrobal ridge, which is horseshoe-shaped, arcuately diverging just before of ocellar triangle and reach inner orbit of eye. Scrobal carina not developed at all. Vertex with median longitudinal furrow beyond median ocellus, traceable or not on occipital declivity up to foramen magnum. Ocellar triangle moderately flattened. Inner eye orbit without adorbital sulcus, outer orbit with a deep one and sharp-edged. Malar sulcus not developed, but substituted by a longitudinal suture, which is as long as, or twice as long as, front margin of malar cavity. Clava of ♀ with slightly to strongly oblique sutures but with no large sensorial groove — Middle of pronotal disc narrow, its sides wide, broader than, or as broad as, the prepectal triangle; posterior margin blade-like, antero-lateral margin not emarginate. Prepectus consolidated to lateral pronotal panel, with a smooth stripe contiguous from middle of

the triangle up to base of fore coxa. Inner half of scapulae polished. Scuto-scutellar groove enlarged behind, longitudinally foveolate, base of scutellum acute (Fig. 119). Axillula triangular in shape. Plical carina of propodeum not developed between supracoxal flange and propodeal spiracle, or at most traceable as a shallow, edgeless shining impression but which have no shape of a true carina, i.e. to have inner side sharp and vertical, as in all other genera. Mesosternum keel-shaped, with no horizontal pad in front of mid coxae. — A b d o m i n a l p e t i o l e transverse. Second tergite of abdomen glabrous; third tergite either polished and with no microsculpture, or else, provided with shallow transverse crisps, but only on a limited extent and quite indistinctly impressed, delicate. Colouration mostly melanistic, at most with weak metallic lustre.

Lufarfar rainerius sp. n.

(Figs 76—78, 119)

♀. Length 3.0 mm. Entirely brilliant deep-black, including whole scapulae. Pronotum, inclusive to the lateral pronotal panel, on the interpunctal spaces, the mesoscutum and scutellum intensively dark golden-bronzy. Apical quarter of scape, funicle, clava, apex of tibiae, tarsi and venation of forewing yellowish-testaceous. Basal three-fourths of scape, femora and tibiae dark bluish-green to violaceous. Mandibles dark brown, with pale yellowish-brown spot in the middle. Pubescence of body, appendage and forewing membrane snow-white. Facial aspect of head, temples and genae polished and shining, with few short and scattered setulae. Occipital declivity cross-sulcate, longitudinal furrow of vertex reaching median ocellus, but not descending to foramen magnum. Lateral ocelli separated by $3.2 \times$ the length of ocello-ocular line; distance between median ocellus and foremost crest of occipital declivity equal to major diameter of median ocellus. Malar suture as long as front margin of malar cavity. Segments 1—3 of funicle longer than thick, segments 4—5 quadrate, 6—7 transverse; last two segments of clava with oblique sutures; with a large, ovoidal sensorial area on the last segment of clava but not in a groove. Pronotal disc with narrow and cross-sulcate interpunctal spaces. Lateral pronotal panel with four rows of large punctures anterad of prepectal triangle. Apical margin of clypeus convex. Punctures and interpunctal spaces of mesoscutum conspicuously increase in size posterad; the interspaces polished and shining there, cross-sulcate on anterior third; punctures with smooth contours. Disc of scutellum with moderately large punctures and polished interpunctal spaces mesad, both of them decreasing in size on the sides, and there the interspaces cross-sulcate. Lateral discal areas of propodeum polished and shining. Declivity of mesosternum separated from mesepimeron by one row of large punctures; tibial groove smooth, shining. Marginalis, postmarginalis and stigmalis of forewing in a ratio of about 1.5 : 0.75 : 1.0; radial knob without uncus; forewing without marginal fringe. Posterior upper edge of hind tibia metallic from base almost to the apex saving a narrow apical ring yellowish. Second tergite of abdomen polished and glabrous, third tergite with some small setulae on the sides, and a triangle behind with quite indistinct, microscopically impressed, transversally alutaceous sculpture.

♂ and biology unknown.

Material examined: 1 ♀ holotype and 2 ♀♀ paratypes from Egypt, labelled "Egitto, Gebel Asfar, 7. VI. (19)36, Coll. A. Mochi", holotype and one paratype deposited in the collection of Museo Civico di Storia Naturale Genova; one paratype in Coll. ARGAMAN.

Etymology — I take the pleasure in naming this new species after Dr. VALTER RAINERI, excellent specialist and generous colleague, from Museo Civico di Storia Naturale 'Giacomo Doria', Genova, Italy, who enabled me to study this interesting material.

Lufarfar nimrodus sp. n.

♀. Length 2.0 mm. Entirely brilliant deep-black; apical onequarter of scape, funicle, clava, a narrow ring on apex of tibiae, tarsi and venation of forewing yellow. Middle of mandibles narrowly reddish. Femora bluish, tibiae brownish with violaceous lustre. Pubescence of body, of appendage and of forewing membrane snow-white. Head transverse, lenticular, front slightly bulging; facial aspect of head, temples and genae polished, sparsely pilose. Occipital declivity transversally striolate; median longitudinal furrow of vertex traceable from the median ocellus up to the foramen magnum. Lateral ocelli separated by a distance as long as $2.9 \times$ ocello-ocular line; smooth sector of vertex, between median ocellus and foremost crest of occipital declivity a bit shorter (5 : 6), than major diameter of median ocellus. Segments 1—3 of funicle quadrate, 4—7 transverse, clava as in *rainerius*. Malar suture twice as long as front margin of malar cavity. Pronotal disc with one transverse row of minute punctures an-

teriorly and one of large ones and a wide interspaces posteriorly, the rows separated by a sharp keel; lateral pronotal panel with three rows of large punctures opposite to prepectal triangle. Punctures and interpunctal spaces of mesoscutum and scutellum as described for *rainerius*. Lateral discal areas of propodeum mirror-like polished and shining. Marginalis, postmarginalis and stigmalis of forewing in a ratio of about 1.4 : 1.0 : 1.0. Third tergite of abdomen polished, not alutaceous. Otherwise as *rainerius*.

♂ and biology unknown.

Material examined: 1♀ holotype, labelled "Africa or. (ientale), KATONA" (= K. KITTENBERGER), and "Assab, (1)907. I—III"; holotype deposited in the collection of Hungarian Natural History Museum, Budapest; Hym. Typ. No. 6956.

Etymology and remarks — This new species, like many others above, was collected by my late old friend, KÁLMÁN KITTENBERGER (1881—1957), an excellent hunter, collector and natural history writer, who was the editor of the hunter's bulletin entitled 'Nimród' since 1919 hence the name of the species. It is worthwhile to mention that his name KITTENBERGER was changed, ex officio, by his contemporary director, to the name KATONA, (Dr. L. MÓCZÁR, pers. comm.); and many thousands of interesting specimens, of all kind of animal orders, collected by him during his six African expeditions, and now deposited in the collection of Hungarian Natural History Museum, Budapest, bear the name KATONA instead of KITTENBERGER, on the labels. But this is certainly the collector's own name, and not a misprint of locality name Katogna in Uganda, as erroneously stated by BETREM, 1971, Mon. Ned. Entom. Ver. 6 : 131.

The new species *nimrodus* readily differs from both *rostratus* KERRICH, 1956 — which very probably belongs also to the genus *Lufarfar*, and from *rainerius* described above, owing to its elongated cheek, which is twice as long as the front margin of the malar cavity, a character which does not occur in any other species of this subfamily, so far I am aware.

ANNOTATED CHECKLIST

Enumeration of the species once described as *Perilampus*, with their present generic status in round bracket, type depository, distribution, host, and material examined during this study. For rapid retrieval, they are arranged in alphabetical order.

aciculatus PROVANCHER, 1887. (*Taltonos*) — Add. et corr. Faun. Entom. Canada p. 199, ♀. Type: Publ. Mus. Quebec. Distr.: Canada. Host: probably *Neodiprion* sp. (Diprionidae). Remarks: considered synonym of *hyalinus* SAY by authors, but very probably it is a valid species to which refers the nice experimental results of TRIPP (1962).

aeneus ROSSI, 1790. (*Olarlar*) — Fauna Etrusca 2: 59. Type: ? Mus. Torino. Distr.: Whole Europe to Central Asia. Host: *Lixus junci* BOHEMAN (Curculionidae) (ERDŐS 1955). Exam.: 1♀ USSR "Caucasus, Farszaesaj, 1893, HORVÁTH"; 1♀ and 1♂? Poland "Wgth, 1914, Visoko"; 1♀ and 1♂ Greece "Creta, BIRÓ" (Mus. Budapest); 2♀♀ and 2♂♂ Italy "Rosignano, Piemonte, 10. IX. 1881, 15. IX. 1883, Coll. GRIBODO"; 1♀ Italy "Rivoli, Torino, 2. IV. 1880, Coll. GRIBODO"; 1♂ Italy "Valsavaranche, IX. 1922, A. DODERO" (Mus. Genova); 369♀♀ and 417♂♂ Romania, Agigea-Dobrudzha, VIII—IX. 1967—71, Q. A.; 1♀ Italy "Regio di Calabria"; 1♂ Italy "Appennino Etrusco" and "Museo Zoologia, Torino", and "Type" red label (probably cotype) (Coll. ARGAMAN).

albitarsis CAMERON, 1897. (*Taltonos*) — Invert. Pacif. 1: 60, ♀. Type: ? Mus. Comp. Zool. Cambridge, Mass. Distr.: Nicaragua. Exam.: 1♀ Nicaragua "Itajtuba, 1900, Coll. GRIBODO"; 1♂ Nicaragua "Managua, S. Ana, SOLARI" (Mus. Genova).

alexinus WALKER, 1846. (*Brachymeria*) — List Hym. Ins. Br. Mus. 1: 89. Type: BMNH, London. Remarks: it was described as *Perilampus* and transferred by BURKS, 1975, Bull. Brit. Mus. Nat. Hist., Entom. 32: 164 to *Brachymeria* WESTWOOD (Chalcididae).

alienus RIEK, 1966. (*Perilampus*) — Austral. J. Zool. 14: 1218, ♀♂. Type: Queensl. Mus. Distr.: Australia.

americanus GIRAULT, 1912. (*Taltonos*) — Arch. f. Naturg. 78: 166, ♀. Type: Mus. Berlin. Distr.: Paraguay, Brazil, Bolivia. Exam.: 1♀ Brazil "Obidos, 1904, P. LECOINTE"; 1♀ "Fontebea, Brasil" (Mus. Budapest); 1♀ "Villa-Rica, Paraguay" and "Type" red label; 1♂ "Totora, Boliv(ia), Cochamamba" (Coll. ARGAMAN).

ammonius ARGAMAN, sp. n. (*Bagdasar*) — Type: Coll. ARGAMAN. Distr.: S. Africa, Natal.

angustus NEES, 1834. (*Perilampus*) — Monogr. Hym. Ichn. Affin. 2: 51, ♂. Type: probably lost. Distr.: Germany.

- anomocerus** CRAWFORD, 1914. (*Ihrambek*) — Proc. Entom. Soc. Wash. 16: 72, ♀ ♂. Type: USNM, Washington. Distr.: USA, ? Mideast. Exam.: 1 ♀ “Palestine, 1930, F. BODENHEIMER” (? introduction or intercepted) (Coll. ARGAMAN).
- (*antennatus* CAMERON, 1897) preocc., see *dobnos* ARGAMAN. (*Goyurfis*) — Ann. Mag. Nat. Hist. 19: 266, sex ?. Type: Coll. CAMERON, Melbourne. Distr.: Mexico. Exam.: 1 ♂ “Mexico, Vera Cruz” and “Type” red label (Coll. ARGAMAN).
- antennatus** WALKER, 1834. (*Perilampus*) — Entom. Mag. 2: 163, ♂. Type: BMNH, London. Distr.: France, Yugoslavia. Exam.: 1 ♀ “Troglav, Dinarische-Alp(en)”; 1 ♂ “Cormeilles en Parisis” and “Type” red label (Coll. ARGAMAN).
- aquilonaris** GIRAULT, 1915. (*Perilampus*) — Mem. Queensl. Mus. 3: 302, ♂. Type: Queensl. Mus. Distr.: Australia. Host: Reared from a ‘leaf-binder’ caterpillar (?Tortricidae) on *Dodonaea* and from a caterpillar feeding on a Eucalypt stem-gall (RIEK 1966, BOUČEK, 1988).
- aquilus** NIKOLSKAYA, 1952. (*Bukbakas*) — Chalcid. Faun. USSR, p. 195, ♀ ♂. Type: Zool. Inst. Leningrad. Distr.: North of European USSR, Mideast. Host: *Cydia pomonella* LINNÉ (Tortricidae) on *Malus* sp., reared together with *Ascogaster quadridentata* WESMAEL (Braconidae) (identification verified by Dr. J. PAPP); the braconid may be the true host as well. Exam.: 1 ♀ “Crefeld DR. ULBRICHT, 7” (Mus. Budapest); 3 ♀♀ “Israel, Ein Kabu, 16—17. X. 1983, Ex. *Cydia pomonella* L. Ed. DR. S. STEINBERG” (Fac. Agr. Rehovot); 1 ♀ USSR “Gshatsk, Gouv. Smolensk” and “Type” red label (Coll. ARGAMAN).
- auratus** PANZER, 1798. (*Vaktaris*) — Faun. Ins. Germ. 5: 51, ♀ ♂. Type: ? Mus. Berlin. Distr.: Southern Europe but up to Sweden, Caucasus, Mideast, Pakistan. Host: Tachinidae in *Pyrausta nubilalis* HÜBNER (Pyralidae) (NIKOLSKAYA 1934). Exam.: 1 ♀ Hungary “Rákócs, BIRÓ, 20. VI. 1908”; 1 ♂ Italy “Calabria, Aspromonte, PAGANETTI”; 1 ♀♀ Bulgaria, Madara, 20. VII. 1928, BIRÓ”; 1 ♀ Greece “Creta, Canea, 1906, BIRÓ” (Mus. Budapest); 4 ♀♀ and 1 ♂ Italy “Voltaggio, App. Genovesa, 20. VII. 1930, F. SOLARI”, “Modane, 27. VIII. 1932, A. DODERO”, “Valpelline, Aosta, VII. 1935, A. DODERO”, “N. S. della Vittoria, Appennino di Genova, VI. 1936, G. MANTERO” (Mus. Genova); 1 ♂ Israel “Palestine, 1858, H. B. TRISTRAM; 1 ♀ “Andalusien, Span(ien)” and “Ex. Mus. PANZER” and “Forstlichen Hochschule in Eberswalde” and “Type” red label (Coll. ARGAMAN).
- aureoviridis** STEPHENS, 1833. (*Mivarhis*) — Entom. Mag. 1: 142. Type: BMNH, London. Distr.: Britain. Exam.: 1 ♀ “Langholm, Schottl(and); 1 ♂ “Putney, London” and “Type” red label (Coll. ARGAMAN).
- auriceps** WALKER, 1833. (*Itonayis*) — Entom. Mag. 1: 142, ♀. Type: BMNH, London. Ditr., Britain. Remarks: considered synonym of *micans* DALMAN.
- australiensis** GIRAULT, 1913. (*Perilampus*) — Mem. Queensl. Mus. 1: 298, ♀. Type: S. Austral. Mus. Distr.: Australia. Remarks: considered synonym of *capensis* GIRAULT.
- australis** GIRAULT, 1915. (*Perilampus*) — Mem. Queensl. Mus. 3: 300, ♂. Type: Queensl. Mus. Distr.: Australia.
- azureus** ARGAMAN, sp. n. (*Taltonos*) — Type: Mus. Budapest. Distr.: S. America.
- bakeri** CRAWFORD, 1914. (*Goyurfis*) — Proc. Entom. Soc. Wash. 16: 72, ♀ ♂. Type: USNM Washington. Distr.: USA. Remarks: considered synonym of *subcarinatus* CRAWFORD.
- batavus** SMITS VAN BURGST, 1918. (*Pondoros*) — Ber. Nod. Entom. Ver. 5: 64. Type: Mus. Wageningen (according by PECK, 1963). Distr.: Holland, Germany. Host: primary parasite of *Rhyacionia bouliana* DENIS et SCHIFF. (Tortricidae) SMITS VAN BURGST 1919, HARMAN & KULMAN 1973). Exam.: 1 ♀ Germany “Dresden-Bad, Weisser-Hirsch”; 1 ♂ “Leiden, Niederde” and “Type” red label (Coll. ARGAMAN).
- bellus** NIKOLSKAYA, 1952. (*Mivarhis*) — Chalcid. Faun. USSR, p. 193, ♀. Type: Zool. Inst. Leningrad. Distr.: European part of USSR, West Siberia. Host: reared from *Semiothisa* sp. (Geometridae) (NIKOLSKAYA, 1952). Remarks: transferred in synonymy to *ruschkai* HELLÉN by TRJAPITZIN (1978). Exam.: 1 ♀ USSR “Kap-Irkaipi, Ost-Sibirien” and “Type” red label (Coll. ARGAMAN).
- birmanus** MANI et KAUL, 1973. (*Perilampus*) — Mem. School. Entom. 2: 40, ♀. Type: Agra College. Distr.: Burma. Host: hyperparasitic on *H. machaeralis* (MANI et KAUL, 1973).
- birous** ARGAMAN, sp. n. (*Taltonos*) — Type: Mus. Budapest. Distr.: S. America.
- bouceki** ARGAMAN, sp. n. (*Kekender*) — Type: Coll. ARGAMAN Distr.: E. Africa.
- braconiphaga** RISBEC, 1951. (*Perilampus*) — Mém. Inst. Franc. Afr. Noire 13: 371. Type: Mus. Paris. Distr.: Africa.

- brasiliensis** ASHMEAD, 1904. (*Euperilampus*) — Classif. Chalcid. Fl. p. 467, ♀. Type: USNM, Washington. Distr.: S. America. Remarks: it was described as *Perilampus* and transferred to *Euperilampus* WALKER by DARLING (1983).
- brevicornis** GISBECK, 1951. (*Aperilampus*). Mém. Inst. Franc. Afr. Noire 13:371. Type: Mus. Paris. Distr.: Africa. Remarks: it was described as *Perilampus* and transferred to *Aperilampus* WALKER (Eucharitidae) by KERRICH (1956).
- brisbanensis** GIRAULT, 1915. (*Perilampus*) — Mem. Queensl. Mus. 3: 301, ♀. Type: Queensl. Mus. Distr.: Australia.
- caeruleiventris** CAMERON, 1913. (*Perilampus*) — J. R. Agric. Comm. Soc. Brit. Guina 3: 116, sexá. Type: ÁMus. Melbourne. Distr.: Guyana.
- cairnsensis** GIRAULT, 1913. (*Tondolos*) — Arch. f. Naturg. 79: 51, ♀. Type: Queensl. Mus. Distr.: Australia. Host: reared from larva of *Leucania unipuncta* HAWORTH (nec *unipunctata*! see BOUČEK, 1988) (Noctuidae); and from tachinid *Myoithiria fergusoni* DODD n the mormbine grasshopper (RIEK 1966). Exam.: 1 ♀ “Woodstock, Queensl.”; 1 ♂ “Ayton, Queensl., Australia” (Coll. ARGAMAN).
- canadensis** CRAWFORD, 1914. (*Perilampus*) — Proc. Entom. Soc. Wash. 16: 74, ♀ ♂. Type: USNM, Washington. Distr.: USA, Canada. Host: *Zenillia* sp. (Tachinidae), *Macremphytus* sp. (Tenthredinidae) (SMULYAN, 1936); different species of Crabroninae (Sphecidae) (BURKS 1979).
- capensis** GIRAULT, 1913. (*Perilampus*) — Archiv. f. Naturg. 79: 50, ♀. Type: Queensl. Mus. Distr.: Australia.
- capitatus** SMULYAN, 1936. (*Pondoros*) — Proc. US Natl. Mus. 83: 397, ♀ ♂. Type: USNM, Washington. Distr.: USA. Host: *Cydia pomonella* L. (Tortricidae), *Cremastus* sp. (Ichneumonidae) (SMULYAN, 1936). Exam.: 1 ♂ USA “Sandy Hook, Kentucky” (Coll. ARG.).
- carinifrons** CRAWFORD, 1914. (*Goyurpis*) — Proc. Entom. Soc. Wash. 16: 71, ♀ ♂. Type: USNM; Washington. Distr.: USA, S. America. Exam.: 1 ♀ Argentina “Chaco de Santiago del Estero, Boros du Rio Salado, Env. D’Icaño, E. R. WAGNER, 1904”; 1 ♀ “Argentina; Tucuman, XI. 1905, VEZÉNYI” (Mus. Budapest); 1 ♀ and 1 ♂ “Tanque, USA, Ariz.” (Coll. ARGAMAN).
- (*carinifrons* MANI et KAUL, 1973). (*Perilampus*) — preocc., see *uris* ARGAMAN, nom. n. Mem. School. Entom. 2: 41, ♀. Distr.: India. Host: parasite of *Lygropia* sp. (MANI & KAUL 1973).
- carolinensis** SMULYAN, 1936. (*Taltonos*) — Proc. US Natl. Mus. 83: 376, ♀ ♂. Type: USNM, Washington. Distr.: USA, C. America. Host: *Anisota senatoria* ABBOT et SMITH (Lep. Lacosomidae), *Datana integerrima* GROTE et ROBINSON (Lep. Notodontidae) (SMULYAN, 1936). Exam.: 1 ♂ “Managua, SOLARI” (Mus. Genova).
- casevitzi** ARGAMAN, sp. n. (*Bukbakas*) — Type: Coll. ARGAMAN. Distr.: S. Africa.
- catilius** ARGAMAN, sp. n. (*Sicatang*) — Type: Coll. ARGAMAN. Distr.: Asia Minor.
- cephalotes** BOUČEK, 1956. (*Vadramas*) — Acta Faun. Entom. Mus. Natl. Pragae 1: 89, ♀. Type: Natl. Mus. Praga. Distr.: Czechoslovakia, Romania. Host: *Nemeritis* sp. (Ichneumonidae) on *Raphidia* sp. (Neuropteroidea) (BOUČEK 1983); and the black *Perilampus* reared by BODENHEIMER & NEUMARK (1955: 79, Fig. 3) together with *Gelis* sp. (Ichneumonidae) from *Chrysopa carnea* st. (Chrysopidae), may be also this species, judging from the figure. Exam.: 1 ♂ Romania “Mamaia, Ru, M. CHVÁLA” (Coll. ARGAMAN).
- chlorinus** FÖRSTER, 1859. (*Perilampus*) — Verh. Naturh. Ver. Preuss. Rheinl. 16: 117, ♀. Type: ?Mus. Wien. Distr.: France, Spain. Exam.: 1 ♂ France “Ille-de-la-Camargue”; 1 ♀ “Malaga, Span(ien)” and “Ex. Coll. FÖRSTER” and “Type” red label (Coll. ARGAMAN).
- chrysis** FABRICIUS, 1787. (Described as *Ichneumon*, transferred to *Perilampus* by DALLA TORRE 1898: 354) — Mant. Ins. 1: 269 No. 129. Type: lectotype not selected, Copenhagen 1 specimen, Kiel 2 specimens. Distr.: “Barbaria” = coastal North Africa.
- chrysonotus** FÖRSTER, 1859. (*Ihrambek*) — Verh. Naturh. Ver. Preuss. Rheinl. 16: 120, ♀. Type: ?Mus. Wien. Distr.: Germany, France, Czechoslovakia, Hungary, Yugoslavia. Exam.: 1 ♂ “Dalmatiens, Imolki”; 1 ♀ “Aachen, Spreewald” and “Type” red label (Coll. ARGAMAN).
- chrysopae** CRAWFORD, 1914. (*Mivarhis*) — Proc. Entom. Soc. Wash. 16: 73. Type: USNM, Washington. Distr.: USA, Canada, ?Mideast. Host: *Chrysopa* spp. (Chrysopidae) (CRAWFORD 1914; PARKER 1924, SMULYAN, 1936); *Symppherobius* sp. (Chrysopidae), ?Olethreut-

- tidae, ? Ichneumonidae (PECK 1963). Exam.: 1 ♂ "Syria, 1896, SAHLBERG" (Coll. ARGAMAN).
- cocegus** ARGAMAN, sp. n. (*Olarlar*) — Type: Coll. ARGAMAN Distr.: S. Africa.
- coorgensis** MANI et KAUL, 1973. (*Perilampus*) — Mem. School Entom. 2: 43, ♀. Type: Agra College. Distr.: India. Host: parasitic on Pyralidae larvae (MANI & KAUL 1973).
- crawfordi** SMULYAN, 1936. (*Goyurfis*) — Proc. US Natl. Mus. 83: 384, ♀♂. Type: USNM, Washington. Distr.: USA, Mexico, Brazil. Exam.: 1 ♀ "Mexique, Etat de Jalisco, 1900, L. DIGUET"; 3 ♀♀ Brazil "Para, Rio Acara, 25. VII. 1930, E. HORVÁTH" ♀ Brazil "Para, Belem, 15. VIII. 130, E. HORVÁTH" (Mus. Budapest); 1 ♀ USA "Jackson, Mississippi" (Coll. ARGAMAN).
- cremastophagus** MANI et KAUL, 1973. (*Perilampus*) — Mem. School Entom. 2: 44, ♂. Type: Agra College. Distr.: India. Host: cocoon of *Cremastophagus hapaliae* (MANI & KAUL 1973).
- crematusae** RISBEC, 1952. (*Perilampus*) — Mém. Ins. Sci. Madag. 2: 1. Type: Mus. Paris. Distr.: Madagascar. Remarks: it was described as *Euperilamoides* GIRAULT and transferred to *Perilampus* by BOUČEK (1972).
- cristatus** FÖRSTER, 1859. (*Perilampus*) — Verh. Naturh. Ver. Preuss. Rheinl. 16: 118. Type: ?Mus. Wien. Distr.: Germany, Polen. Exam.: 1 ♀ "Spas, Polen, Woiw. Tarnopol"; 1 ♂ Germany "Falkenhagen, Göttingen" and "Ex. Coll. FÖRSTER" and "Type" red label (Coll. ARGAMAN).
- cupreovarius** GIRAULT, 1927. (*Tondolos*) — Rec. S. Austral. Mus. 3: 318, ♀. Type: S. Austral. Mus. Distr.: Australia. Remarks: considered synonym of *cairnsensis* GIRAULT.
- cuprinus** FÖRSTER, 1859. (*Mivarhis*) — Verh. Naturh. Ver. Preuss. Rheinl. 16: 121, ♀. Type: ?Mus. Wien. Distr.: Germany. Exam.: 1 ♀ Germany "Drachenfels, Siebengebirge" and "Type" red label (Coll. ARGAMAN).
- cyanus** BRULLÉ, 1846) (*Taltonos*), preocc., see *sirsiris* ARGAMAN, nom. n. — Hist. Nat. Ins. Hym. 4: 573. Type: Mus. Paris. Distr.: USA, Mexico. Host: Acrididae, Arctiidae, Geometridae, Olethreutidae, Sarcophagidae (PECK, 1963). Exam.: 1 ♀ and 1 ♂ "Mexique, État de Jalisco, L. DIGUET, 1900" (Mus. Budapest); 1 ♂ "Klamath-River, Blue-Creek, USA, Or."; 1 ♀ labelled "Amerikan South-Carolina" and "Type" red label (Coll. ARGAMAN).
- cyanus** FABRICIUS, 1798. (*Perilampus*) — Suppl. Entom. System. p. 231. Type: Mus. Copenhagen. Distr.: France, Italy, Portugal. Exam.: 1 ♀ "Traz-os-Montes, Portugal"; 1 ♂ France "Sauveterne, Gave d'Oloron" and "Ex. Coll. CUVIER, 1823" and "Type" red label (Coll. ARGAMAN).
- dalawanensis** HEDQVIST, 1968. (*Perilampus*) — Entom. Medd. 36: 161, ♀. Type: Zool. Mus. Copenhagen. Distr.: Philippines, Balabac, Dalawan Bay.
- delbotor** ARGAMAN, sp. n. (*Afroperilampus*) — Type: Mus. Budapest. Distr.: E. Africa.
- dentatinotum** GIRAULT, 1928. (*Perilampus*) — Some New Hexapods — Privately Publ. p. 4. Type: ?Queensl. Mus. Distr.: Australia: Lord Howe Island. RIEK (1966) states that this species resembles *brisbanensis* GIRAULT, and thus it may be member of the genus *Vaktaris*.
- desaii** MANI et KAUL, 1973. (*Perilampus*) — Mem. School Entom. 2: 46, ♀. Type: Agra College. Distr.: India. Host: Lymantriidae (MANI & KAUL 1973).
- dipterophagus** RIEK, 1966. (*Perilampus*) — Austral. J. Zool. 14: 1222, ♀. Type: Austral. Coll., Natl. Ins. Canberra. Distr.: Australia. Host: a tachinid parasite of lepidopterous larva (RIEK 1966).
- discolor** WALKER, 1862. (*Aperilampus*) — Trans. Entom. Soc. London 1(4): 375, ♂. Type: BMNH, London. Distr.: S. Africa. Remarks: it was described as *Perilampus* and transferred to *Aperilampus* WALKER by WALKER (1871). Exam.: 1 ♀ and 1 ♂ "Port-Natal, Süd-Afrika" and male with "Type" red label (Coll. ARGAMAN).
- dobnos** ARGAMAN, n. n. (*Goyurfis*) — Proposed as a new name for *P. antennatus* CAMERON, 1897 nec WALKER, 1839.
- dumeas** ARGAMAN, sp. n. (*Taltonos*) — Type: Mus. Budapest. Distr.: S. America.
- emarginatus** THOMSON, 1875. (*Mivarhis*) — Hymen. Scand. 4: 1, ♀♂. Type: Mus. Lund. Distr.: Sweden, Britain, Italy. Exam.: 1 ♂ Italy "Borzoli, Villa Doria, G. DORIA" (Mus. Genova); 1 ♀ "Rostherne, Engl. Cheshire"; 1 ♂ "Hassel, Schweden" and "Type" red label (Coll. ARGAMAN).

- emersoni** GIRAULT, 1930. (*Yertatop*) — New Pests Austral. — Privately Publ. 9: 1, ♂. Type: Queensl. Mus. Distr.: Australia. Exam.: 1 ♀ “Australia, 1900, Biró, N. S. Wales, Mt. Victoria” (Mus. Budapest); 1 ♀ “Croydon, Queensl. Australien” (Coll. ARGAMAN).
- entellus** WALKER, 1843. (*Taltonos*) — Ann. Mag. Nat. Hist. 12: 103. Type: BMNH, London. Distr.: USA. Remarks: considered synonym of *hyalinus* SAY.
- eximius** MASI, 1932. (*Afroperilampus*) — Boll. Soc. Entom. Ital. 64: 132, ♀. Type: Mus. Genova. Distr.: Italy, it was recorded also from France, Czechoslovakia, Hungary, Yugoslavia and Central Asia (Tajikistan). Host: probably Specidae (Hym.) (STEFFAN, 1952). Exam.: 1 ♀ holotype, labelled “Tenda, 7. IX. 1931, A. DODERO” and “*Perilampus eximius* Ms. Typus! det. L. MASI” and “Typus” red label, and “Museo Civico di Genova”.
- femoralis** WALKER, 1833. (*Itonayis*) — Entom. Mag. 1: 142. Type: BMNH, London. Distr.: Britain. Remarks: considered synonym of *micans* DALMAN.
- franzmanni** GALLOWAY, 1983. (*Perilampus*) — J. Austral. Entom. Soc. 22: 109, ♀♂. Type: Queensl. Mus. Distr.: Australia. Host: hyperparasite of *Orgilus lepidus* MUESEBECK (Braconidae) in *Phthorimaea operculella* ZELLER (Gelechiidae) (GALLOWAY & FRANZMANN 1983).
- frater** GIRAULT, 1922. (*Tondolos*) — True Rem. Head Lice — Privately Publ. p. 1. Type: Queensl. Mus. Distr.: Australia. Remarks: Considered synonym of *cairnsensis* GIRAULT.
- fulvicornis** ASHMEAD, 1886. (*Naspoyer*) — Trans. Amer. Entom. Soc. 13: 126, ♂. Type: USNM Washington. Distr.: USA, Canada. Host: *Phthorimaea operculella* ZELLER (Gelechiidae) (POOS & PETERS 1927); Tachinidae, Braconidae, Bethylidae (NICKELS & al. 1950); Pyralidae, Olethreutidae, Tortricidae, Gelechiidae, Braconidae, Ichneumonidae, Bethylidae, Tachinidae (PECK, 1963). Exam.: 1 ♂ USA “Waynesboro, Penns. 1799” and “Ex. Mus. AGASSIZ” (Coll. ARGAMAN).
- gahani** SMULYAN, 1936. (*Perilampus*) — Proc. US Natl. Mus. 83: 401, ♀ and not ♂ as stated by BURKS (1979). Type: USNM, Washington. Distr.: USA.
- ganuz** ARGAMAN, sp. n. (*Vaktaris*) — Type: TAU, Tel Aviv. Distr.: Mideast.
- glabrifrons** RIEK, 1966. (*Fifirtiz*) — Austral. J. Zool. 14: 1215, ♀. Type: Queensl. Mus. Distr.: Australia. Exam.: 1 ♀ Australia “Mackay, 12. (18)99, No. 0111” (Mus. Budapest).
- gloriosus** WALKER, 1862. (*Euperilampus*) — Trans. Entom. Soc. London 1: 375, ♂. Type: BMNH, London. Distr.: Mexico. Remarks: it was described as *Perilampus* and transferred to *Euperilampus* WALKER by WALKER (1871).
- granulosus** CRAWFORD, 1914. (*Dekterek*) — Proc. Entom. Soc. Wash. 16: 73, ♀♂. Type: USNM, Washington. Distr.: USA. Host: *Ancylis comptana* FROELICH (Tortricidae), *Phthorimaea operculella* ZELLER (Gelechiidae) (POOS & PETERS 1927, SMULYAN 1936). Exam.: 1 ♀ “Garland, USA, Ala.” (Coll. ARGAMAN).
- hedychroides** WALKER, 1871. (*Taltonos*) — Notes on Chalcid. p. 67. Type: BMNH, London. Distr.: Ceylon. Exam.: 1 ♀ “Trincomali, Ceylon” and “Ex. Coll. WALKER” and “Type” red label (Coll. ARGAMAN).
- horocos** ARGAMAN, sp. n. (*Afroperilampus*) — Type: Mus. Budapest. Distr.: E. Africa.
- hurap** ARGAMAN, sp. n. (*Afroperilampus*) — Type: Mus. Genova. Distr.: E. Africa.
- hyalinus** SAY, 1829. (*Taltonos*) — Contrib. Maclurian Lyc. Arts and Sci. Philad. 1: 79. Type: lost. Distr.: USA, Canada. Host: primary or secondary parasite of *Hyphantria cunea* DRURY (Arctiidae), by present, restricted record. Exam.: 1 ♀ USA “West Branch of Susquehanna River, X. 1797” and 1 ♂ “Pennsylv.” in SAY’s handwriting, and “Ex. Coll. SAY” printed, and “Type” red label (Coll. ARGAMAN).
- igniceps** CAMERON, 1909. (*Vaktaris*) — Trans. Amer. Entom. Soc. 35: 431, ♀. Type: ?Mus. Melbourne. Distr.: S. America. Exam.: 1 ♀ “Tunuyán, Totoral, Argent. Mendoza” (Coll. ARGAMAN).
- Ivauber** ARGAMAN, sp. n. (*Vaktaris*) — Type: Coll. ÅRGAMAN. Distr.: C. America.
- inaequalis** FÖRSTER, 1859. (*Mivarhis*) — Verh. Naturh. Ver. Preuss. Rheinl. 16: 122, ♀. Type: ?Mus. Wien. Distr.: Germany, Yugoslavia. Exam.: 1 ♂ Yugoslavia “Plješevica, Velebit-Geb(irge)”; 1 ♀ “Ger(mania), Thür(ingen), FÖRST(er), 1851” and “Type” red label (Coll. ARGAMAN).
- inimicus** CRAWFORD, 1910. (*Perilampus*) — US Dept. Agric. Tech. Bull. 19: 20, ♀♂. Type: USNM, Washington. Distr.: Japan, Taiwan. Exam.: 1 ♀ “Formosa, SAUTER, Kosempo, VI. 1909”; 2 ♀♀ “Formosa, SAUTER, Taihorinsho, XI. 1909” (Mus. Budapest); 1 ♀ Japan “Jokohama, Tokio-Bai” (Coll. ARGAMAN).

- injactans** BRUES, 1915. (*Perilampus*) — Psyche 22: 4, ♀. Type: ?Mus. Comp. Zool. Harvard Univ., Cambridge, Mass. Distr.: Brazil, Rio Grande do Norte, Ceará-Mirim.
- intermedius** BOUČEK, 1956. (*Pondoros*) — Acta Faun. Entom. Mus. Natl. Pragae 1: 90, ♀. Type: Natl. Mus. Praga. Distr.: Finland, Germany, Czechoslovakia, Yugoslavia, Romania. Exam.: 1 ♀ “Dalmatien, Imolki”; 1 ♂ “Neutra, Slowakei” (Coll. ARGAMAN).
- italicus** FABRICIUS, 1793. (*Olarlar*) — Entom. System. 2: 103, ♀ ♂. Type: syntypes in Kiel and Paris, Bosc Coll. Distr.: Europe, probably widely distributed but surely known only from Italy. Host: *Athalia rosae* LINNÉ (Tenthredinidae) (NIKOLSKAYA, 1934; RIGGERT, 1939; and probably also the record of SÄRINGER, 1957 refers to this species). Exam.: 1 ♀ Italy “Rosignano, Piemonte, IX. 1880, Coll. GRIBODO”; 2 ♂♂ “Lazio, 10.VII. M. CIMINI” 1 ♂ “N. S. della Vittoria, Apennino di Genova, VI. 1936, G. MANTERO” (Mus. Genova); 1 ♂ “Ronco-Scrivia, Genova”; 1. “Monte-Alto, Toscana” and “CARLO ALLIONI” and “italicus” probably FABRICIUS’ writing, and “Type” red label (Coll. ARGAMAN).
- ivondroi** RISBEC, 1952. (*Perilampus*) — Mém. Inst. Sci. Madag. 2: 1. Type: ?Mus. Paris. Distr.: Africa: Madagascar. Remarks: it was described as *Euperilampoides* GIRAUT and transferred to *Perilampus* by BOUČEK (1972).
- japonicus** ASHMEAD, 1904. (*Perilampus*) — J. New York Entom. Soc. 12: 151, ♀ ♂. Type: USNM, Washington. Distr.: Japan. Exam.: 1 ♂ Japan “Jokosaka, Tokio-Bai” (Coll. ARGAMAN).
- jolaus** ARGAMAN, sp. n. (*Taltonos*) — Type: Mus. Budapest. Distr.: S. America.
- kaszabi** BOUČEK, 1983. (*Dekterek*) — Acta Zool. Acad. Sci. Hungar. 29(1–3): 118, ♀ ♂. Type: Mus. Budapest. Distr.: Mongolia. Exam.: 1 ♀ paratype “Mongolia: Südgobi aimak, Zöölön ul, 58 km WSW von Somon Bajandalaj, 1500 m. EXP. Dr. Z. KASZAB, 1967” and “Nr. 808, 16. VI. 1967”, and “paratype” with yellow frame, and “*Perilampus kaszabi* sp. n. P-type ♀, BOUČEK det. 1982”; 1 ♂ paratype “Mongolia: Bajanchongor aimak, Oase Echin gol, 90 km NO von Grenzposten Caganbulag, 950 m. EXP. Dr. Z. KASZAB, 1967” and “Nr. 855, 27–28. VI. 1967”, and “paratype” with yellow frame, and “*Perilampus kaszabi* sp. n. ♂, BOUČEK det. 1982” (Mus. Budapest).
- keralensis** MANI et KAUL, 1974. (*Perilampus*) — Mem. School Entom. 3: 59, ♀. Type: Agra College. Distr.: India.
- kim** NIKOLSKAYA, 1952. (*Fifirtiz*) — Chalcid. Faun. USSR, p. 194. Type: Zool. Inst. Leningrad. Distr.: Transcaucasia, Asia Minor, Central Asia, Mideast. Exam.: 2 ♂♂ “Turcia, Stambul, 1925, E. HORVÁTH”; 1 ♂ “Turcia, Stambul, 20. VI. 1925, BIRÓ” (Mus. Budapest); 1 ♂ USSR “Gnadenberg, Abchasien”; 1 ♀ USSR “Nagor-Naja, Samarkand” and “Type” red label (Coll. ARGAMAN).
- kittenbergeri** ARGAMAN, sp. n. (*Pondoros*) — Type: Mus. Budapest. Distr.: E. Africa.
- lacunosus** NIKOLSKAYA, 1952. (*Mivarhis*) — Chalcid. Faun. USSR, p. 195, ♀ ♂. Type: Zool. Inst. Leningrad. Distr.: South- and Central Europe, Central Asia, Siberia, Mongolia. Exam.: 1 ♂ “Transasp. Ashabad”; 1 ♀ “Ussuri, Kasakevitsch, 1907, KORB” (Mus. Budapest); 1 ♂ Italy “Rivoli, Torino, 26. IV. 1880, Coll. GRIBODO”; 1 ♀ Italy “Lazio, 2. VIII. M. CIMINO” (Mus. Genova); 1 ♀ and 1 ♂ “Mongolei, Edsin-Gol” (Coll. ARGAMAN).
- laevicephalus** CRAWFORD, 1916. (*Mivarhis*) — Insec. Inscit. Menstruus 4: 144, ♀ ♂. Type: Calif. State Insectary, Sacramento. Distr.: USA. Remarks: considered synonym of *chrysopae* CRAWFORD.
- laeviceps** CAMERON, 1905. (*Taltonos*) — Invertebr. Pacif. 1: 59, ♀. Type: Mus. Comp. Zool. Cambridge, Mass. Distr.: C. America: Nicaragua. Exam.: 1 ♀ “Costa Rica, Surrubres”; 3 ♀♀ “Columbia, UJHELYI, Aracataca, II. 1912” (Mus. Budapest); 1 ♀ “Managua-See, Nicaragua” and “Type” red label (Coll. ARGAMAN).
- laevifrons** DALMAN, 1822. (*Mivarhis*) — Svensk. Vet. Akad. Handl. 43: 400, ♀ ♂. Type: ?Lund. Distr.: Europe, Transcaucasia, Siberia, Mongolia. Host: *Cydia pomonella* LINNÉ (Tortricidae) (FEYTAUD 1918); *Chrysopa* sp. (Chrysopidae); primary parasite of *Chrysopa formosa* BRAUER (Chrysopidae) (STEFFAN 1952); in pupae of *Cydia pomonella* LINNÉ, *Nygma phaeorrhoea* LINNÉ and *Rhyacionia bouliana* DENIS et SCHIFF. (NIKOLSKAYA, 1952). Exam.: 1 ♀ “Yugoslavia, Dubrovnik, 10–11. VIII. 1967, ZOMBORI” (Mus. Budapest); 1 ♀ and 1 ♂ Sweden, labelled “Län, Öster-Götland”, and “Type” red label on female, and “*Perilampus laevifrons* DALM.” in THOMSON’s writing (Coll. ARGAMAN).
- laevis** PROVANCHER, 1887. (*Peckianus*) — Add. et Corr. Faun. Entom. Canada, p. 199, ♀. Type: Harrington Coll., Ottawa. Distr.: Canada: Ontario, but probably not North American.

- Remarks: it was described as *Perilampus* and transferred to *Peckianus* BOUČEK, 1974 (Pteromalidae: Eutrichosomatinae) by BOUČEK (1974).
- laticeps** MASI, 1940. (*Pondoros*) — Boll. Lab. Entom. Agr. Portici, 3: 277, “♂” recte ♀. Type. Mus. Genova. Distr.: E. Africa: Somalia. Exam.: 1 ♀ holotype, labelled “Vill. Duca Abr. (Somalia) 1930, G. Russo”, and “insieme con *Neobr. inornata* sul suf. gin”, and “holotype” red frame with “BOUČEK, 1972” on the verso, and “holotypus” red label, and “*Perilampus laticeps* Ms. det. G. VIGGIANI, 1967” (Mus. Genova).
- lepreos** WALKER, 1846. (*Euperilampus*) — List Spec. Hym. Ins. Coll. Brit. Mus. Chalcid. 1: 89. Type: BMNH, London. Dist.: USA. Exam.: 1 ♂ labelled “Macon, Georgia” and “JOHN FRASER”, and “Type” red label (Coll. ARGAMAN). Remarks: the type of WALKER was from the ABBOT's collection, and WALKER himself stated that it was in fairly bad condition; it may be that he received another specimen from FRASER, and identified it as *lepreos*, whose type not yet been discovered in the collection of British Museum (Natural History), but must be there. This species was described as *Perilampus* and transferred to *Euperilampus* WALKER by PECK (1951) and removed again to *Perilampus* by BURKS (1979), but they have not examined any type material. The specimen before me is true *Euperilampus*, (Fig. 11) very close to *E. enigma* DARLING, 1983, from Bolivia, except: gold-green; vertex, pronotum, inner half of scapulae and middle of scutellar disc black; second tergite of abdomen indigo; ventral aspect of scape on apical half sparsely punctate, the punctures separated by 5–6 diameters and provided with short setulae. Spine of the scutellum of intermediary form between *E. gloriensis* (WALKER and *E. triangularis* (SAY) (see Figs 9, 10 in BOUČEK, 1978); not quite so long as in *gloriensis* but much longer than in *triangularis*, and the marginal carina of scutellum produced in a lanceolate structure, as in *gloriensis*, which is one-third as long as the spine. This species was not recollected since its description; it seems to be very rare, or the specimen was mislabelled and actually it is a Central American faunal element; or else, it is from Georgia, but it was endangered together with its host species, during the our century, and now is yet extinct in the Lower Sonoran zone.
- levifacies** GIRAULT et DODD, 1915. (*Vadramas*) — Mem. Queensl. Mus. 3: 301, ♂. Type: Queensl. Mus. Distr.: Australia. Exam.: 1 ♀ Australia “Mackay, 4. (19)00” (Mus. Budapest); 1 ♀ “Mansfield, Australien, Victoria” (Coll. ARGAMAN).
- liliae** ARGAMAN, sp. n. (*Afroperilampus*) — Type: Mus. Genova, Distr.: N. Africa.
- luzonensis** CRAWFORD, 1914. (*Perilampus*) — Philip. J. Sci. 9: 459, ♀. Type: USNM, Washington. Distr.: Philippines.
- maceki** BOUČEK, 1956. (*Vadramas*) — Acta Faun. Entom. Mus. Natl. Pragae, 1: 88, ♂. Type: Natl. Mus. Praga. Distr.: Czechoslovakia. Exam.: 1 ♂ Czechoslovakia “Neukirchen, Böh. b. Eger” (Coll. ARGAMAN).
- masculinus** BOUČEK, 1956. (*Mivarhis*) — Acta Faun. Entom. Mus. Natl. Pragae, 1: 91 ♀ ♂. Type: Natl. Mus. Praga. Distr.: Czechoslovakia, Asia Minor. Exam.: 1 ♀ “Sûr, Tschechoslow.”; 1 ♂ Transsylvania “Rosenau, Kronstadt, Siebenbürgen” (Coll. ARGAMAN).
- maurus** WALKER, 1852. (*Tiboras*) — Ann. Mag. Nat. Hist. 10: 45, ♂. Type: BMNH, London. Distr.: S. Africa. Host: reared from *Zenillia evolans* WIED (Tachinidae) on *Buseola fusca* FULLER (? perhaps: HAMPSHIRE) (Noctuidae) on maize (CUTHBERTSON 1936), Exam.: 1 ♀ labelled “Port-Natal, Süd-Africa”, and “Ex. Mus. Walker” blue label, and “Type” red label (Coll. ARGAMAN).
- mavricius** ARGAMAN, sp. n. (*Fifirtiz*) — Type: Coll. ARGAMAN. Distr.: Mideast.
- megalaspis** CAMERON, 1912. (*Krombeinius*) — Societas Entom. 27: 63, ♀. Type: BMNH, London. Distr.: Borneo. Remarks: it was described as *Perilampus* and transferred to *Krombeinius* BOUČEK by BOUČEK (1978).
- meloui** RISBEC, 1956. (*Afroperilampus*) — Bull. Soc. Entom. France 61: 185, ♂. Type: Mus. Paris. Distr.: W. Africa (Ivory Coast).
- mexicanus** CAMERON, 1897. (*Goyurjis*) — Ann. Mag. Nat. Hist. 6: 265, ♀. Type: ? Coll. CAMERON, Melbourne. Distr.: N. America. Exam.: 1 ♂ “Acatlan, Mexico, Vera Cruz”; 1 ♀ “Mexico, Vera Cruz” and “type” red label, and “Sidney Mus. Australia” (Coll. ARGAMAN).
- micans** DALMAN, 1820. (*Itonayis*) — Svensk. Vet. Akad. Handl. 41: 73, ♀ ♂. Type: ? Lund. Distr.: Europe to Transcaucasia. Host: *Lycus linearis* GOEZE (Lytidae), *Hister picipes* FABRICIUS (Histeridae) (NIKOLSKAYA 1952). Exam.: 1 ♀ Hungary “Simontornya, Hung. Oc. 12. VI. 1911, K.”; 1 ♀ same data but “18. VI. 1912” (Mus. Budapest); 1 ♀ Sweden,

labelled "Hammarby, Stockh." and "Coll. DALMAN", and "Forstliche Hochschule in Eberswalde", and "Type" red label (Coll. ARGAMAN).

microgastris FERRIÈRE, 1930. (*Bukbakas*) — Bull. Entom. Res. 21: 353. Type: BMNH, London. Distr.: India, Malay Peninsula, Java, Korea. Host: *Microgaster indicus* WILKINSON, *Apanteles machaeralis* WILKINSON and other braconids on *Nephantis serinops* MEYRICK, *Lamprosema diemenalis* GUENÉE and *Tirathaba* sp. (Lepidoptera) (FERRIÈRE 1930); from *Apanteles machaeralis* WILKINSON and *Cremastus hapaliae* on *Hapalia machaeralis* WAK. (MANI & KAUL 1973). Exam.: 1 ♀ labelled "Korea, Prov. South Pyongan, Nampo, Wauto" and "22. IX. 1979, leg. DR. H. STEINMANN et DR. T. VÁSÁRHELYI, No. 563" (Mus. Budapest). This is the first record of the species from Korea.

miltoni GIRAULT, 1922. (*Tondolos*) — True Rem. Head Lice — Privately Publ. p. 1. Type: Queensl. Mus. Distr.: Australia. Remarks: Considered synonym of *cairnsensis* GIRAULT.

minutalis STEFFAN, 1952. (*Fifirtiz*) — Bull. Soc. Entom. France 57: 74, ♀ ♂. Type: Mus. Paris. Distr.: France, Italy, Spain, Yugoslavia, Bulgaria. Exam.: 1 ♀ France, labelled "Mar-selle, VIII. 1959, J. R. STEFFAN" and "Sur fleurs de Lierre" and "*Perilampus minutalis* m.", J. R. STEFFAN det. " (Mus. Paris); 1 ♂ "Nevrokop, Bulgar." (Coll. ARGAMAN).

minutus GIRAULT, 1912. (*Naspoyer*) — Archiv. f. Naturg. 78: 167, ♀. Type: Mus. Berlin, cotype in USNM, Washington. Distr.: S. America. Exam.: 2 ♀♂ "Argentina, Tucuman, I. 1906. VEZÉNYI;" (Mus. Budapest); ♀ "Paraguay, Santa Rosa"; 1 ♂ "Argentina, Mendoza" (Coll. ARGAMAN).

mirabeaui GIRAULT, 1930. (*Nilgator*) — New Pests Austral. — Privately Publ. 9: 1, ♀. Type: Queensl. Mus. Distr.: Australia, Papua-New Guinea. Host: reared by BIRÓ (see below), from a host, unknown to me. Exam.: 1 ♀ labelled "N. Guinea, BIRÓ, (18)96, Erima, Astrolabe B(ay)" and "Parasite of *Pel. laetus*" (Mus. Budapest); a ♂ "Inglewood, Austr(a-lia)" (Coll. ARGAMAN).

mittagogensis GIRAULT, 1913. (*Tondolos*) — Mem. Queensl. Mus. 2: 298, ♂. Type: S. Austral. Museum. Distr.: Australia. Remarks: considered synonym of *cairnsensis* GIRAULT.

moczari ARGAMAN, sp. n. (*Pondoros*) — Type: Mus. Budapest. Distr.: Asia (Afghanistan).

montanus RIEK, 1966. (*Perilampus*) — Austral. J. Zool. 14: 1216, ♀ ♂. Type: Austral. Natl. Ins. Coll., Canberra. Distr.: Australia.

muesebecki SMULYAN, 1936. (*Naspoyer*) — Proc. US Natl. Mus. 83: 407, ♀ ♂. Type: USNM, Washington. Distr.: USA. Exam.: 1 ♂ "Wallowa-Mountains, USA, Or." (Coll. ARGAMAN).

neglectus BOUČEK, 1956. (*Fifirtiz*) — Acta Faun. Entom. Mus. Natl. Pragae 1: 92, ♀. Type: Natl. Mus. Praga. Distr.: Czechoslovakia, Yugoslavia, Italy, Moldavian SSR. Host: Braconidae and Ichneumonidae in *Acrobasis* sp. (Pyralidae), *Semasia profundana* FABRICIUS and *Cacoecia* sp. (Tortricidae), *Tachyptilia disquei* MEES (Gelechiidae) (BOUČEK 1977). Exam.: 1 ♀ "Párkány, Tschechosl." (Coll. ARGAMAN).

nesiotes CRAWFORD, 1911. (*Afroperilampus*) — Proc. US Natl. Mus. 41: 275, ♀. Type: USNM, Washington. Distr.: Sumatra to Philippines. Host: larva of *Prodenia* sp. (Noctuidae) (CRAWFORD 1911). Exam.: 1 ♀ Indonesia "Lombok, Sapit 2000", Mai—juni 1896, H. FRUHSTORFER" (Mus. Budapest).

nigellus NIKOLSKAYA, 1952. (*Ihrambek*) — Chalcid. Faun. USSR, p. 194. Type: Zool. Inst. Leningrad. Distr.: European USSR, Mongolia. Exam.: 1 ♀ "Kom, Mongolei" (Coll. ARGAMAN).

nigricornis WALKER, 1833. (*Perilampus*) — Entom. Magaz. 1: 141, ♀ ♂. Type: BMNH, London. Distr.: E. Asia. Exam.: 1 ♂ USSR "Markovo a. Amur"; 1 ♀ USSR "Masar, Prov. Amur", and "Type" red label (Coll. ARGAMAN).

nigriventris FÖRSTER, 1859. (*Mivarhis*) — Verh. Naturh. Ver. Preuss. Rheinl. 16: 119, ♀ ♂. Type: ?Mus. Wien. Distr.: Germany, Mideast. Exam.: 1 ♂ "Libanon, 1959. IX, 24, Tomagheh-Bekaa, J. KLAPPERICH" (Mus. Budapest); 1 ♂ Germany "Aachen, Spreewald"; 1 ♀ Germany "Fürstenwalde, Prov. Brandenb." and "Type" red label (Coll. ARGAMAN).

nigriviridis GIRAULT, 1912. (*Vadramas*) — Archiv. f. Naturg. 78: 168, ♀. Type: Mus. Berlin. Distr.: S. America. Exam.: 1 ♀ "Argentina, Tucuman, XI. 1905, VEZÉNYI"; 1 ♂ and 2 ♀♂ Brazil "São Paolo, 1928, BURY J. GYÖRGY"; 2 ♀♂ "Costa Rica, Surrubres" (Mus. Budapest); 1 ♂ "Castor, Jujuy, Argentina"; 1 ♀ "Paraguay, San Rafael" (Coll. ARGAMAN).

- nigronitidus** RIEK, 1966. (*Perilampus*) — Austral. J. Zool. 14: 1220, ♂. Type: Austral. Natl. Ins. Coll., Canberra, Distr.: Australia.
- nilamburensis** MANI et KAUL, 1973. (*Perilampus*) — Me. School Entom. 2: 48, ♀. Type: Agra College. Distr.: India. Host: hyperparasite of *Lygropia quaternalis*, parasitic on *Euterocca fasciata* defoliating *Helicteres isora* (MANI et KAUL 1973).
- nimrodus** ARGAMAN, sp. n. (*Lufarfar*) — Type: Mus. Budapest. Distr.: E. Africa.
- nitens** WALKER, 1834. (*Perilampus*) — Entom. Magaz. 2: 163, ♀. Type: BMNH, London. Distr.: Entire Palaearctic Region. Host: Tachinidae in lepidopterous pupae; *Larvaevora noctuarum* RONDANI from *Loxostege sticticalis* LINNÉ (Pyralidae) (NIKOLSKAYA 1934). Exam.: 1 ♂ “Sierra-de-Altamira, Spanien”; 1 ♀ France “Fontainebleau, CASTELNAU”, and “Ex. Coll. WALKER”, and “Type” red label, abdomen heavily damaged by dermestids, and “nitens” in ? MARSHALL’s writing (Coll. ARGAMAN).
- nitidus** SMULYAN, 1936. (*Perilampus*) — Proc. US NATL. Mus. 83: 393, ♀ ♂. Type: USNM, Washington. Distr.: USA.
- noemi** NIKOLSKAYA, 1952. (*Fifirtiz*) — Chalcid. Faun. USSR, p. 194, ♀ ♂. Type: Zool. Inst. Leningrad. Distr.: Central Asia, Mongolia, Asia Minor, Mideast, N. Africa, E. Asia. Exam.: 1 ♀ “Asia Minor, Angora, 13. VI. 1925, BIRÓ”; 1 ♂ “O. Jordan, Wadi Schaub, 200 m, 9. XI. 1957, J. KLAPPERICH”; 1 ♂ “O. Jordan, Amman, 800 m, 18. IV. 1958, J. KLAPPERICH”; 1 ♂ “Asia Minor”; 1 ♀ “Suleyman, H. YAYLA, 16. VII. 1901”; 1 ♀ USSR “Jerdovka, gb. Irkutsk, 3. VIII. 1913, Sibiria, SCHULTZ”; 1 ♂ “Aegyptus, Cairo” (Mus. Budapest); 1 ♀ “Egypt, Gabal Elba, Cansirob, 26. I. 1933, L. trap, PRIESNER” (Mus. Genova); 1 ♂ “Israel, En Gedi, 9. V. 1974, D. FURTH” (TAU, Tel Aviv); 1 ♀ USSR “Dzungarischer Ala-Tau”; 1 ♂ “Kapa, O. Turkest.” (Coll. ARGAMAN).
- nola** NIKOLSKAYA, 1952. (*Perilampus*) — Chalcid. Faun. USSR, p. 193. Type: Zool. Inst. Leningrad. Distr.: Bashkiria, Kazakhstan, West Siberia, Afghanistan, Mongolia. Host: *Loxostege sticticalis* LINNÉ (Pyralidae) (NIKOLSKAYA 1952).
- obscurus** WALKER, 1874. (*Chrysolampus*) — Cistula Entom. 11: 314, “♂” recte ♀. Type: BMNH, London. Distr.: Asia (Amurland). Remarks: it was described as *Perilampus* and transferred to *Chrysolampus* SPINOLA by KERRICH (1958).
- obsoletus** MASI, 1927. (*Perilampus*) — Konowia 5: 375, ♀. Type: ?Mus. Berlin. Distr.: Taiwan, Taihorin, Taihorinsho, Suisharyo, Kosempo, Kankau (lectotype designation needed).
- ocellatus** SMULYAN, 1936. (*Goyurpis*) — Proc. US Natl. Mus. 83: 390, ♀ ♂. Type: USNM, Washington. Distr.: USA, S. America. Exam.: 1 ♀ Brazil “Para, Belem, 15. VIII. 1930, E. HORVÁTH”; 1 ♀ and 1 ♂ Brazil “Para, Rio Acara, 25. VII. 1930, E. HORVÁTH” (Mus. Budapest); 1 ♀ “Canastota, USA, S. D.” (Coll. ARGAMAN).
- oreula** NIKOLSKAYA, 1952. (*Pondoros*) — Chalcid. Faun. USSR, p. 196, ♀. Type: Zool. Inst. Leningrad. Distr.: Mongolia. Exam.: 1 ♀ “Nganpien, Mongolei” and “Type” red label (Coll. ARGAMAN).
- orientalis** ROHWER, 1923. (*Perilampus*) — Philip. J. Sci. 22: 351, ♀. Type: USNM, Washington. Distr.: Singapore.
- pallipes** CURTIS, 1827. (*Perilampus*) — My unknown; it was cited by KLOET & HINKS 1972: A Check List of British Insects, Part 4: Hymenoptera, p. 72 as junior secondary synonym of *ruficornis* FABRICIUS.
- pappi** ARGAMAN, sp. n. (*Durgadas*) — Type: Mus. Budapest. Distr.: S. America.
- paraguayensis** GIRALDT, 1911. (*Taltonos*) — Zool. Jahrb. Syst. p. 389, ♀. Type: Mus. Berlin. Distr.: S. America. Exam.: 1 ♀ “Paraguay, Rio Negro” and “Type” red label (Coll. ARGAMAN).
- parvus** HOWARD, 1896. (*Balintos*) — J. Linn. Soc. London, Zool. 26: 134, ♀. Type: ?USNM, Washington or BMNH, London. Distr.: West Indies. Exam.: 1 ♀ labelled “Tiburon, I. Haiti” (Coll. ARGAMAN).
- peterseni** HEDQVIST, 1968. (*Perilampus*) — Entom. Medd. 36: 160, ♀. Type: Zool. Mus. Copenhagen. Distr. Philippines, Balabac, Dalawan Bay.
- philembia** BURKS, 1969. (*Naspoyer*) — Proc. Entom. Soc. Wash. 71: 77, ♀ ♂. Type: USNM, Washington. Distr.: S. America. Host: *Probethylus* sp. (Sclerogibbidae) on *Embria batesi* MACLACHLAN (Embiidae) (BURKS 1969). Exam.: 1 ♀ “Padilla, Bolivia” (Coll. ARGAMAN).
- picpus** ARGAMAN, sp. n. (*Sicatang*) — Type: Mus. Budapest. Distr.: E. Asia.
- platigaster** SAY, 1836. (*Goyurpis*) — Boston J. Nat. Hist. 1: 274, ♀ ♂. Type: probably lost. Distr.: N. and C. America. Host: pupa of *Melittia* sp. (Sesiidae) SMULYAN 1936); Zygaenidae,

Pyralidae, Olethreutidae, Aegeriidae, Braconidae (PECK 1963); *Meterorus dimidiatus* CRESSON (Braconidae) (BURKS 1979). Exam.: 1 ♀ and 1 ♂ "Costa Rica, 1914, SCHILD, Higuito-S. Mateo"; 3 ♂♂ "Costa Rica, Surrubres" (Mus. Budapest); 1 ♂ USA "Log-Cabin, Colorado" 1 ♀ labelled "Anoka, USA, Ind." and "Ex. Mus. CRESSON", and "Type" red label, probably cotype (Coll. ARGAMAN).

platygaster RILEY, 1870. (*Perilampus*) — Ann. Rpt. Mo. State Bd. Agr. 5: 87. Erroneous subsequent spelling for *platigaster* SAY.

politifrons HOWARD, 1894. (*Pondoros*) — J. Linn. Soc. London, Zool. 25: 85, ♂. Type: ?USNM, Washington or BMNH, London. Distr.: West Indies. Exam.: 1 ♂ "Hampstead, I. Dominicana" (Coll. ARGAMAN).

polypori BOUČEK, 1971. (*Vadramas*) — Entomologist 104: 52, ♀ ♂. Type: Coll. BOUČEK. Distr.: Czechoslovakia, England, Yugoslavia. Host: hyperparasite of Raphidiidae (Neuroptera) via Ichneumonidae (BOUČEK, 1983). Exam.: 1 ♀ Czechoslovakia "Pardubitz, Böh."; 1 ♂ USSR "Kersel, Estland, Dorpat" (Coll. ARGAMAN).

prasinus NIKOLSKAYA, 1952. (*Perilampus*) — Chalcid. Faun. USSR, p. 193. Type: Zool. Inst. Leningrad. Distr.: Northern China. Exam.: 1 ♂ USSR "Sichota-Alin, Russl."; 1 ♀ "Méi, China, Schen-si" and "Type" red label (Coll. ARGAMAN).

prothoracicus SMULYAN, 1936. (*Zuglavas*) — Proc. US Natl. Mus. 83: 403, ♀. Type: USNM, Washington. Distr.: USA, Canada. Host: *Cydia pomonella* LINNÉ (Tortricidae) (SMULYAN 1936); different Tortricids, Pyralids and Oecophoridae (PECK 1963). Exam.: 1 ♀ "Pend-d'Oreille, Canada, Alberta" (Coll. ARGAMAN).

punctiventris CRAWFORD, 1914. (*Perilampus*) — Philip. J. Sci. 9: 460, ♂. Type: USNM, Washington. Distr.: Philippines.

pupulus NIKOLSKAYA, 1952. (*Bukbakas*) — Chalcid. Faun. USSR, p. 196, ♀. Type: Zool. Inst. Leningrad. Distr.: South of European USSR, Asia Minor, Mideast. Host: *Lithocolletis quercus* AMSEL (Gracillariidae) (present record). Exam.: 1 ♀ Turkey "Smyrna, KRÜPER"; 1 ♀ "Turcia, Stambul, 1925, E. HORVÁTH" (Mus. Budapest); 1 ♀ Israel "Ma'as, 21. V. 1975, ex *Lithocolletis quercus* AMSEL on *Quercus calliprinos*, emerged et 15. VI. 1975, educavit DR. Z. MENDEL"; 1 ♀ "Israel, Tel Dan, 20. VI. 1978, ex leaf pupae on *Populus alba*, emerged at 25. VII. 1978, ed. DR. Z. MENDEL"; 1 ♀ "Israel, Bet She'an, 21. V. 1981, leg. Q. ARGAMAN"; 1 ♀ USSR "Aktasch, Tataren-Rep." and "Type" red label (Coll. ARGAMAN).

queenslandensis GIRAUT, 1913. (*Vadramas*) — Mem. Queensl. Mus. 2: 299, ♀. Type: Queensl. Mus. Distr.: Australia. Remarks: considered synonym of *saleius* WALKER.

rainerius ARGAMAN, sp. n. (*Lufarfari*) — Type: Mus. Genova. Distr.: N. Africa.

regalis SMULYAN, 1936. (*Taltonos*) — Proc. US Natl. Mus. 83: 378, ♀. Type: USNM, Washington. Distr.: USA. Exam.: 1 ♀ "Somerton, USA, Ariz." (Coll. ARGAMAN).

reliquus (GIRAUT, 1915. (*Vadramas*) — Mem. Queensl. Mus. 3: 302, ♀. Type: Queensl. Mus. Distr.: Australia. Remarks: considered synonym of *saleius* WALKER.

reticulatus CAMERON, 1904. (*Taltonos*) — Invertebr. Pacif. 1: 59, ♀. Type: ?Mus. Comp. Zool. Cambridge, Mass. Distr.: C. America. Exam.: 2 ♀♀ "Costa Rica, Surrubres" (Mus. Budapest); 1 ♀ and 1 ♂ "Managua-See, Nikaragua" (Coll. ARGAMAN).

robertsoni CRAWFORD, 1914. (*Ecalibur*) — Proc. Entom. Soc. Wash. 16: 71, ♀ ♂. Type: USNM, Washington. Distr.: USA, Canada. Exam.: 1 ♂ "Findlay, USA, Ill." (Coll. ARGAMAN).

rohweri SMULYAN, 1936. (*Perilampus*) — Proc. US Natl. Mus. 83: 396, ♀ ♂. Type: USNM, Washington. Distr.: USA, Canada.

rostratus KERRICH, 1956. (*Perilampus*) — J. Entom. Soc. S. Africa 19: 118, ♀ ♂. Type: BMNH, London. Distr.: S. Africa (Cape Province). Host: the karoo caterpillar, *Loxostege frustalis* ZELLER (Pyralidae), or via *Macrocentrus* sp. (Braconidae) in the same host (KERRICH 1956).

ruficornis FABRICIUS, 1793. (*Perilampus*) — Entom. Syst. 2: 103, ♀ ♂. Type: 1 specimen in Mus. Paris, Coll. BOSC, and 1 specimen in Kiel (ZIMSEN 1964). Distr.: Entire Palaearctic Region. Host: *Lymantria dispar* LINNÉ (Lymantriidae) (JAHN & SINREICH 1957); Tachinidae in lepidopterous pupae. *Carceli excisa* FALLÉN, *Zenilia libatrix* PANZER and *Phorocera agilis* ROBINÉAU — DESVOIDI (Tachinidae) on *Lymantria dispar* LINNÉ (Lymantriidae) and other lepidopterans: Geomyidae, Tortricidae, Noctuidae (BOUČEK 1977). Exam.: 1 ♀ USSR "Naryn, Turkestan, 1906, ALMÁSY" (Mus. Budapest); 1 ♂ Spain "La-Alberta; Sa-

- lamanca"; 1 ♀ France, labelled "Castries, Montpellier" and "RENÉ DESFONTAINES", and "Type" red label (Coll. ARGAMAN).
- ruschkai** HELLÉN, 1924. (*Burksilampus*) — Notul Entom. 4: 13. Type: ?Mus. Helsinki. Distr.: Europe, from Finland to France. Remarks: tentatively considered here as member of the genus *Burksilampus* BOUČEK. Exam.: 1 ♂ from Finland (?), labelled "Pyhä-Järvi, Kärsämäki" (Coll. (ARGAMAN).
- saintjusti** GIRault, 1930. (*Perilampus*) — New Pests Austral. — Privately Publ. 9: 1, ♂. Type: Queensl. Mus. Distr.: Australia. Remarks: considered synonym of *aquilonaris* GIRault.
- saleius** WALKER, 1839. (*Vadramas*) — Monogr. Chalcid. 2: 16, ♂. Type: BMNH, London. Distr.: Australia. Host: a lepidopterous predator on *Eriococcus* sp. and larval parasite of light brown apple moth, *Cydia* sp. (Tortricidae) (RIEK 1966, BOUČEK 1988). Exam.: 1 ♀ Australia "Mackay, IV. 1900, Ni. 836" (Mus. Budapest).
- salicetum** STEFFAN, 1952. (*Steffanolampus*) — Bull. Soc. Entom. France 57: 70, ♀ ♂. Type: Mus. Paris. Distr.: N. America: USA, Europe: Austria. Remarks: it was described as *Perilampus* and transferred to *Steffanolampus* PECK by PECK (1974).
- seaber** NIKOLSKAYA, 1952. (*Perilampus*) — Chalcid. Faun. USSR, p. 194, ♀ ♂. Type: Zool. Inst. Leningrad. Distr.: Northern China, Mongolia. Remarks: considered synonym of *ruficornis* FABRICIUS.
- selectus** WALKER, 1874. (*Perilampus*) — Cistula Entom. 11: 313, ♀ ♂. Type: BMNH, London. Distr.: E. Asia. Exam.: 1 ♂ "Korea, Prov. Ryang-gang: River Karim, 10 km NEE from Bochonbo, 1100 m" and "No. 296, 27 July 1975, leg. J. PAPP et A. VOJNITS"; 1 ♀ "Korea, Prov. Gang-von, District On-dzong, Kum-gang, near Hotel Go-song, 250 m" and "No. 320, 4—6. August 1975, leg. J. PAPP et A. VOJNITS" (Mus. Budapest); 1 ♀ and 1 ♂ USSR "Simonova, Amur" and on female "Type" red label (Coll. ARGAMAN).
- seyrigi** RISBEC, 1952. (*Perilampus*) — Mém. Inst. Sci. Madag. 2: 425, ♀. Type: Mus. Paris. Distr.: Africa (Madagascar).
- shencottus** MANI et KAUL, 1974. (*Perilampus*) — Mem. School Entom. 3: 62, ♀. Type: Agra College. Distr.: India.
- similis** CRAWFORD, 1914. (*Naspoyer*) — Proc. Entom. Soc. Wash. 16: 73, ♀. Type: USNM, Washington. Distr.: USA. Host: *Acrobasis* sp. (Pyralidae) (SMULYAN 1936); *Meteorus loxostegei* VIERECK and *Cremonps vulgaris* CRESSION (Braconidae) in *Loxostege sticticalis* LINNÉ (Pyralidae) SIMMONDS 1947; Pyralidae, Braconidae, Eulophidae (PECK 1963). Exam.: 1 ♀ and 1 ♂ "Florissant, USA. Col." (Coll. ARGAMAN).
- singaporense** ROHWER, 1923. (*Fulaytar*) — Philip. J. Sci. 22: 350, ♀. Type: USNM, Washington. Distr.: Singapore. Exam.: 1 ♀ "Sumatra, Pangherang-Pisang, X. 1890 e III. 1891, E. MODIGLIANI" (Mus. Genova).
- sirsiris** ARGAMAN, nom. n. (*Taltonos*) — Proposed as a new name for *cyaneus* BRULLÉ, 1846 nec FABRICIUS, 1798.
- spinosus** GIRault et DODD, 1915. (*Monacon*) — Mem. Queensl. Mus. 3: 300, ♀. Type: Queensl. Mus. Distr.: Australia. Remarks: it was described as *Perilampus* and transferred to *Monacon* WATERSTON by BOUČEK (1988).
- splendidus** DALMAN, 1822. (*Olarlar*) — Svensk. Vet. Akad. Handl. 43: 396. Type ?Mus. Stockholm. Distr.: North and Central Europe. Host: parasites of *Exorista mitis* MEIGEN (Tachinidae) in larvae of *Lophyrus pini* LINNÉ (Tenthredinidae) on *Pinus nigra* GYÖRFI, 1942a). Exam.: 1 ♂ Hungary "Sz. Sz. Miklós, 24. VII. 1911, BIRÓ"; 1 ♂ Hungar "Tabdi égeres, 29. V. 1962, Soós"; 1 ♂ Hungary "Hortobágy, Újszentmargita, Bödön-hátpuszta, 21—23. VI. 1974, J. PAPP"; 1 ♀ Yugoslavia "Kosovo, Pe. Raduvac, 700 m, J. PAPP & HORVATOVICH"; 1 ♂ Transsylvania "Pareng Havas, 1900 m, 27. VIII. 1909"; 1 ♂ Switzerland "Vallis, KABA" (Mus. Budapest); 1 ♂ Italy "Rosignano, Piemonte, VI. 1879, Coll. GIBODO" and 1 ♀ same data but "IX. 1880"; 2 ♀ Italy "Acqui, 16. VIII. 1948, su Angelica, E. BERIO" (Mus. Genova); 1 ♂ Germany "Neu-Mittelwalde, Oschles. Oppeln"; 1 ♀ "Öfvertoraeå, Schweden", and "Type" red label (Coll. ARGAMAN).
- stygius** PROVANCHER, 1888. (*Zuglavas*) — Add. et Corr. Faun. Entom. Canada p. 406, ♀. Type: Publ. Mus. Quebec. Distr.: Canada, USA. Host: *Macrocentrus* sp. (Braconidae), *Epiblema strenuana* WALKER (Tortricidae) on *Ambrosia* (SMULYAN 1936). Exam.: 1 ♀ "Amer(ica) Sept(entrionalis), 1907, HORV(ÁTH), Adirondack, Long Lake"; 1 ♀ "Amer(ica) Sept(entrionalis), 1907, HORV(ÁTH), Adirondack, Huckleberry Mt." (Mus. Budapest); 1 ♀ "Kanada, Quebec" (Coll. ARGAMAN).

- subcarinatus** CRAWFORD, 1914. (*Goyurfis*) — Proc. Entom. Soc. Wash. 16: 70, ♀. Type: USNM, Washington. Distr.: USA, S. America. Exam.: 1 ♀ “Columbia, Aracataca, II. 1912, UJHELYI” (Mus. Budapest); 1 ♀ “Fort-Assinniboike, USA, Mon.” (Coll. ARGAMAN).
- tapiæ** RISBEC, 1956. (?*Aperilampus*) — Bull. Soc. Entom. France 61: 184, ♂. Type: Mus. Paris. Distr.: Africa (Madagascar). Host: gall on *Tapia* (RISBEC 1956). Remarks: it was described as infrasubspecific category, as *Perilampus brevicornis* var. *tapiæ*; the nominal species *brevicornis* was transferred by KERRICH (1956) to *Aperilampus* WALKER in Eucharitidae; if the variety *tapiæ* is gall-inhabiting, it may eventually belong to Pteromalidae, Brachyscelidiphaginæ.
- tasmanicus** CAMERON, 1911. (*Tondolos*) — Proc. Linn. Soc. N. S. Wales p. 646, ♀. Type: BMNH, London. Distr.: Australia. Host: bred cocoons of a braconid parasitizing larvae of the chrysomelid beetle *Paropsis atomaria* (RIEK, 1966). Exam.: 1 ♀ Australia, “Mackay, 4. (19)00” (Mus. Budapest); 1 ♀ “Ben-Lomond, Tasmanien”; 1 ♂ “Macquarie, Tasmania” (Coll. ARGAMAN).
- tasmaniensis** GIRAULT, 1913. (*Tondolos*) — Mem. Queensl. Mus. 2: 298, ♀. Type: S. Austral. Mus. Distr.: Australia. Remarks: considered synonym of *cairnsensis* GIRAULT.
- tassoni** GIRAULT, 1922. (*Afroperilampus*) — Insecutor Inscit. Menstr. 10: 39, ♀. Type: Queensl. Mus. Distr.: Australia; recorded once from USA, Conn. by BRITTON (1938); Bull. Conn. State Geol. Nat. Hist. Survey 60: 139. Exam.: 1 ♂ Australia “Mackay, 4. (19)00” (Mus. Budapest); 1 ♂ “Port-Jackson, N. S. Wales” (Coll. ARGAMAN).
- testaceitarsis** CAMERON, 1911. (*Tiboras*) — Ann. Transv. Mus. 5: 214, ♀. Type: BMNH, London. Distr.: S. Africa. Remarks: considered synonym of *maurus* WALKER.
- tetar** ARGAMAN, sp. n. (*Vadramas*) — Type: Mus. Genova. Distr.: C. America.
- triangularis** SAY, 1828. (*Euperilampus*) — Contrib. Maclurian Lyc. Philad. 2: 79. Type: lost. Distr.: N. America (USA, Canada). Remarks: it was described as *Perilampus* and transferred to *Euperilampus* WALKER by CRAWFORD (1914).
- tristis** MAYR, 1905. (*Pondoros*) — Verh. Zool. Bot. Ges. Wien 55: 566, ♀ ♂. Type: Mus. Wien. Distr.: Europe. Host: *Cydia pomonella* LINNÉ and *Rhyacionia bouliana* DENIS et SCHIFF. (Tortricidae) (HARMAN et KULMAN 1973, BOUČEK 1977); *Ascogaster quadridentata* WESMAEL (Braconidae) and *Cremastus* sp. (Ichneumonidae) in lepidopterous pupae (BURKS 1979). Exam.: 1 ♀ Germany (?), labelled “Mödling, SCHMIDT, ex ramulis flores *Pinus austriac.*” (Mus. Budapest); 1 ♀ and 1 ♂ Austria, labelled “Tirol, Steinfeld”, female also “Type” red label, herewith accepted as lectotype due to the confusion existing around this species (Coll. ARGAMAN).
- turpiculus** ARGAMAN, sp. n. (*Fifirtiz*) — Type: Coll. ARGAMAN. Distr.: Mideast. Host: bark beetle *Scolytus multistriatus* MARSHAM (Scolytidae) in loge of *Populus euphratica* (present record).
- tutubas** ARGAMAN, sp. n. (*Taltonos*) — Type: Mus. Budapest. Distr.: S. America.
- umbo** NIKOLSKAYA, 1952. (*Mivarhis*) — Chalcid. Faun. USSR, p. 192, ♀ ♂. Type: Zool. Inst. Leningrad. Distr.: Turkmenia, South Kazakhstan, Iran. Exam.: 1 ♀ USSR, labelled “Ak-kul’ Aulië-ata” and “Type red label (Coll. ARGAMAN”
- uris** ARGAMAN, nom. n. (*Perilampus*) — Proposed as a new name for *carinifrons* MANI & KAUL, 1973 nec CRAWFORD, 1914.
- vexator** NIKOLSKAYA, 1952. (*Fifirtiz*) — Chalcid. Faun. USSR, p. 192, ♀. Type: Zool. Inst. Leningrád. Distr.: USSR, Northern shore of the Caspian Sea. Exam.: 1 ♀ USSR, labelled “Stawropol, Gouv. Stawropol” and “Type” red label (Coll. ARGAMAN).
- violaceus** PANZER, 1804. (*Perilampus*) — Fauna Insect. Germ. 8: 88. Type: ?. Distr.: South- and West-Europe, Asia Minor. Host: tachinid puparia (NIKOLSKAYA, 1934); secondary parasite in pupae of *Rhyacionia bouliana* DENIS & SCHIFF. (Tortricidae) (NIKOLSKAYA 1952). Exam.: 1 ♂ “Asia Minor, DR. LENDL”; 1 ♀ Turkey “Malatya, 1. V. 1932, leg. V. AJTAI” (Mus. Budapest); 16 ♀♂ and 12 ♂♂ Italy, as follows: “S. Margherita Ligure, VIII. 1908, A. GHERSI”; “N. S. della Vittoria, Appennino Lig. VII. 1931, su fiori di ombellifera, G. MANTERO”; “S. Lorenzo di Casanova, Genova, VII. 1940, VIII—IX. 1941, F. SOLARI”; “Cengio Langhe, 8. VIII. 1948, E. BERIO”; 1 ♀ France “Royan, Charente inf. Dr. F. LOTTE” (Mus. Genova); 1 ♀ and 1 ♂ Italy, labelled “Trapani, Palermo” and on the male also “JEAN BAPTISTE LAMARCK”, and “Type” red label, herewith accepted as lectotype, because this species not found in ZIMSEN (1964) (Coll. ARGAMAN).

- xirgus** ARGAMAN, sp. n. (*Taltonos*) — Type: Mus. Budapest. Distr.: S. America.
yercaudensis MANI et KAUL, 1974. (*Perilampus*) — Mem. School Entom. 3: 60, ♀. Type: Agra College. Distr.: India.

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NEUE ENCHYTRAEIDEN-ART AUS TIEFEREN
BODENSCHICHTEN EINES HAINBUCHEN-
EICHENWALDES IN UNGARN
(OLIGOCHAETA, ENCHYTRAEIDAE)

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(Eingegangen am 17. März 1990)

Investigations on the vertical distribution of the Enchytraeid fauna in a horn-beam-oak forest stand in Hungary were carried out in autumn aspects (November 1972 and November 1981) and in a spring aspect (April 1987). Samples were taken from the litter layer, and from 11 soil layers of a soil-profile digged out in a depth of 145 cm from the soil surface. Enchytraeids were represented with 21 species and were found till the depth of 125 cm. Most interesting was a species new for science: *Fridericia profundicola* sp. n., occurring only from 40 cm downwards till 125 cm. With 1 table and 8 original figures.

Im November des Jahres 1972 und 1981 sowie im April 1987 wurde die qualitative und quantitative vertikale Verteilung der Enchytraeiden in einem Hainbuchen-Eichenwald (Cserhát-Gebirge, bei Szendehely-Katalinpuszta 50 km nördlich von Budapest) in verschiedenen Bodentiefen bis 145 cm tief verfolgt.

Im Rahmen dieser Untersuchung, deren ausführliche Ergebnisse an einer anderen Stelle bekannt gegeben werden sollen, wurde auch eine für die Wissenschaft neue Art entdeckt, deren Beschreibung im nachstehenden angeführt wird. Der Beschreibung vorausgehend fasse ich die in verschiedenen Tiefen angetroffenen Arten in Tabelle 1. zusammen. Wie aus der Tabelle ersichtlich, wurde *Fridericia profundicola* sp. n. nur von 40 cm Tiefe, oder tiefer im Boden angetroffen.

***Fridericia profundicola* sp. n.**

(Abb. 1—8)

Kleine Art. Holotypus Länge lebend 6,4 mm, Breite 0,16 mm. Segmentzahl 38. Bei den Paratypen Länge lebend 3,5—6,1 mm, Breite 0,15—0,16 mm, am Gürtel: 0,17—0,19 mm, Segmentzahl (27) — 33 — 38 — (40). Kopfporus 0/I., Dorsalporen im VII. Segment beginnend. Farbe weisslich. Borsten gerade mit einem schwach entwickelten entalen Haken: 2,3,(4) — 2 : 2,3,4, — 2. Borsten im XII. Segment fehlen. Vom XIII. Segment beginnend nur 2 Borsten so in den dorsolateralen wie in den ventrolateralen Bündeln vorhanden.

Tabelle 1. Vorkommen der Arten in verschiedenen Schichten

Arten	Laubstreu	Vertikale Schichten: Tiefe in cm									
		0—5	5—10	10—15	20—25	40—45	60—65	60—65*	80—85	100—105	120—125
1. Achaeta sp.	a	—	+	+	—	—	—	—	—	—	—
	b	—	+	+	+	—	+	—	—	—	—
2. Buchholzia appendiculata (BUCHH., 1862)	a	—	+	+	—	—	—	—	—	—	—
	b	+	+	+	—	—	—	—	—	—	—
3. Cernosvitoviella sp.	a	—	—	+	—	—	—	+	—	—	—
	b	—	—	+	—	—	—	—	—	—	—
4. Enchytraeus buchholzi VEJD., 1879	a	+	+	+	—	—	—	—	—	—	+
	b	—	+	—	—	+	—	—	+	—	—
5. E. lacteus NIELS. et CHRIST., 1961	a	—	—	—	—	—	—	—	—	—	—
	b	—	—	+	—	—	—	—	—	—	—
6. E. bulbosus NIELS. et CHRIST., 1963 Enchytraeus juv.	a	—	—	—	—	—	—	—	—	—	—
	b	+	+	+	—	+	+	+	+	—	—
7. Enchytronia parva NIELS. et CHRIST., 1959	a	—	+	+	+	+	—	—	—	—	—
	b	—	+	+	+	+	—	—	+	—	—
8. Fridericia bisetosa (LEVINSEN, 1884)	a	—	+	—	—	—	—	—	—	—	—
	b	—	+	+	—	—	—	—	—	—	—
9. F. bulbosa (Rosa, 1887)	a	—	+	—	—	—	—	—	—	—	—
	b	—	+	—	—	—	—	—	—	—	—
10. F. connata BRETSCHER, 1902	a	—	+	+	+	—	—	—	—	—	—
	b	—	+	+	+	—	—	—	—	—	—
11. F. galba 8 Divert. (HOFFMEISTER, 1843)	a	+	+	+	—	—	—	—	—	—	—
	b	+	+	—	—	—	—	—	—	—	—
12. F. leydigi (VEJD., 1877)	a	—	—	—	—	—	—	—	—	—	—
	b	+	+	—	—	—	—	—	—	—	—
13. F. maculata ISSEL, 1905	a	—	+	—	—	—	—	—	—	—	—
	b	+	+	—	—	—	—	—	—	—	—
14. F. nemoralis NURMINEN, 1970	a	—	+	+	+	—	—	—	—	—	—
	b	+	+	+	—	—	—	—	—	—	—
15. F. paranemoralis DÓZSA-FARKAS, 1982	a	—	—	—	—	—	—	—	—	—	—
	b	—	+	—	—	—	—	—	—	—	—
16. F. paroniana ISSEL, 1904	a	—	—	—	—	—	—	—	—	—	—
	b	—	+	—	—	—	—	+	—	—	—
17. F. ratzeli (EISEN, 1872)	a	—	+	—	—	—	—	—	—	—	—
	b	—	+	+	—	—	—	—	—	—	—
18. F. profundicola sp. n.	a	—	—	—	—	—	+	+	+	+	+
	b	—	—	—	—	—	+	+	+	+	+
19. Henlea perpusilla FRIEND, 1911	a	—	+	—	—	—	—	—	—	—	—
	b	—	—	—	—	—	—	—	—	—	—
20. Marionina argentea (MICH., 1889)	a	—	—	—	—	—	—	—	—	—	—
	b	—	—	—	+	—	—	—	—	—	—
21. Stercutus niveus MICH., 1888	a	+	+	+	—	—	—	—	—	—	—
	b	+	+	+	+	+	—	—	—	—	—

a: Proben im Herbst 1972, 1981 b: Proben im Frühjahr 1987

+: vorhanden —: fehlen *: Proben aus einem Regenwurmgang

Länge der äusseren längeren Borsten 30—39 μ . Hautdrüsen in 4—5 Reihen, schwach entwickelt. Clitellum vom XII—1/2 XIII. Segment, Drüsen in Querreihen geordnet, schwach entwickelt. Gehirn 2—2 1/2-mal grösser als breit, beim Holotypus 133 μ lang und 53 μ breit. Abweichend von den anderen Arten

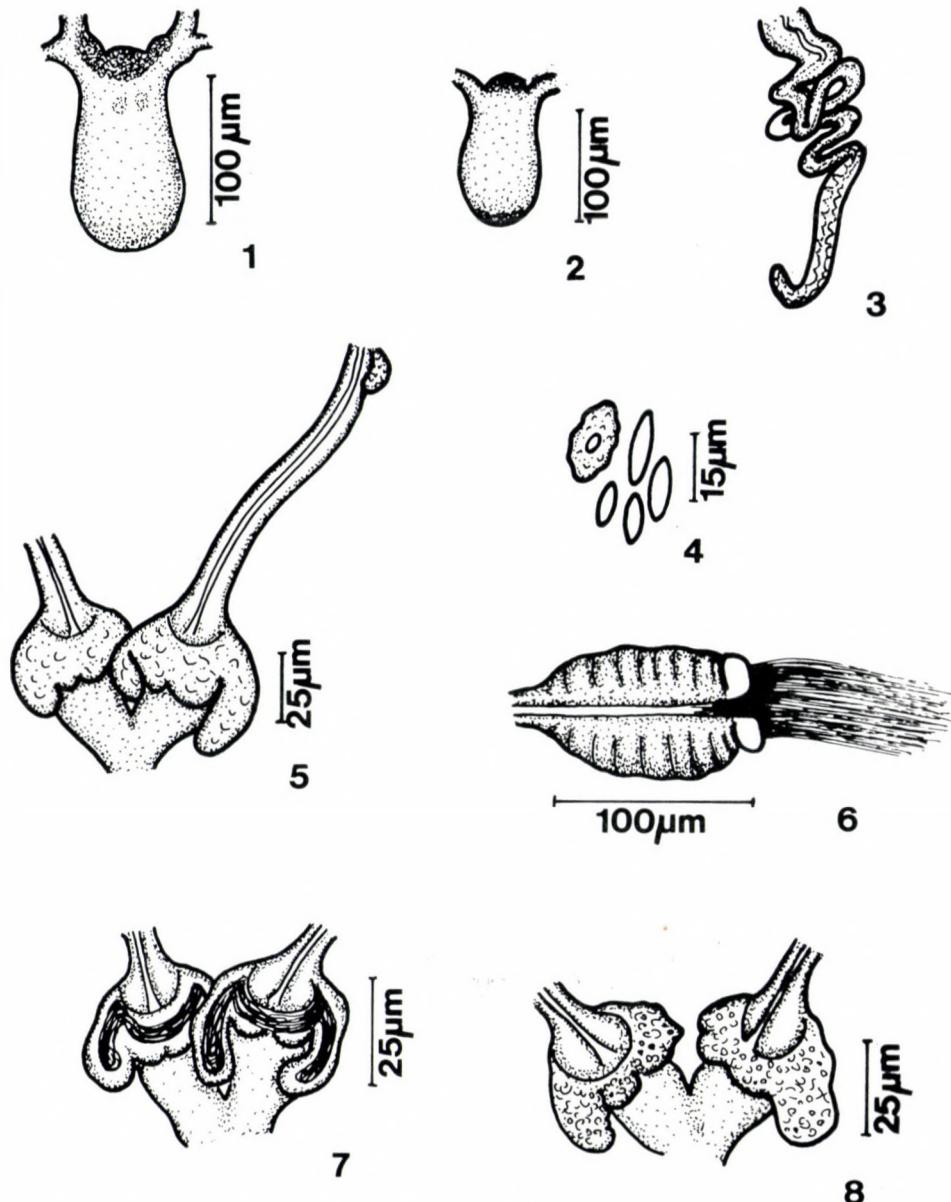


Abb. 1—8. *Fridericia profundicola* sp. n.: 1—2 = Gehirn, 3 = Peptonephridium, 4 = Lymphocyten, 5, 7, 8 = Spermatheken, 6 = Samenträger

zeigt die Spitze des Gehirnes (manchmal auch am hinteren Ende) gelblich-braune zellenartige Struktur (Abb. 1, 2.). Peptonephridium (Abb. 3.) b-Typ nach NIELSEN & CHRISTENSEN (1959) aufgewickeltes Rohr, welches bis zum V. Segment hinunterreicht. Lymphozyten (Abb. 4) entsprechend der Gattung zweiartig, aber die Zahl der grossen Zellen mit Kernen sehr spärlich, im Coeloma des Körpers liessen sich höchstens nur 4—10 Stück nachweisen. Diese unregelmässig umrandeten, länglichen durchsichtigen, spärlich granulierten Zellen stehen dem a-Typ von MÖLLER (1971) am nächsten. Länge 12—16 μ . Die sogenannten kleinen hyalin, kernlosen Lymphozyten-Körpern sind dagegen zahlreich, füllen das Coeloma vollkommen aus und weichen von den bei den übrigen Arten der Gattung gemessener maximalen Grösse ab (5—10 μ), sind sehr gross (9—17 μ). Eventuell hängt dies mit der besonderen Lebensweise dieser Art zusammen. Die Septaldrüsen (3 primäre und 3 sekundäre) sowie der posteroverentral ausführende Ductus der Nephridien sind kennzeichnend für die Gattung *Fridericia*. Die Coelomflüssigkeit enthält keine abgestossenen Borsten. Rückengefäß entspringt in XV. Segment. Blut farblos. Chloragogenzellen sind vom V. Segment beginnend vorhanden, vom VII. Segment beginnend sind sie auffälliger.

Samensäcke vorhanden, im XI. Segment, ziemlich gross braunlich gefärbt, Samentrichter (Abb. 6) 2—2,5-mal länger als breit, beträgt 1/2 oder 2/3 des Körperdurchmessers, kann sich stark zusammenziehen. Kragen gut zu erkennen, so breit wie der Körper des Trichters. Samenleiter mittelmässig lang, etwas gewunden. Penial bulbus klein, Drüsenteil schwach entwickelt.

Spermatheken bestehen aus einer runden Ampulle und 2 grösseren Divertikeln, die nach unten gerichtet sind, und noch aus weiteren mehr oder weniger entwickelten taschenförmig ausgestülpten Divertikeln bestehen. Der sehr kurze entale Ductus der beiden Spermatheken ist miteinander verbunden und mündet so in den Oesophagus. Ektaler Ausführungsgang mittelmässig lang, ziemlich dick (10—13 μ), bei der Öffnung mit einer Drüse (ungefähr 16 μ lang) (Abb. 5, 7, 8.). Zahl der untersuchten Individuen: 28

Fundort — F.8. Holotypus; Szendehely-Katalinpuszta, Hainbuchen-Eichenwald, in einer von 60 cm. 27. 4. 1987. leg. DÓZSA-FARKAS. — Paratypen: Fundort wie beim Holotypus. P.12.1. 1 Ex. Tiefe 40 cm, 24. 11. 1972; P.12.2. 1 Ex. Tiefe 80 cm, 24. 11. 1972; P.12.3. 2 Ex. Tiefe 1 m, 11. 11. 1981; P.14.1. 4 Ex. Tiefe 60 cm, 27. 4. 1987; P.14.2. 5 Ex. Tiefe 60—80 cm, 27. 4. 1987. leg. DÓZSA-FARKAS.

Das Typenmaterial ist in 70% Alkohol fixiert und wird in der Sammlung des Lehrstuhles für Tiersystematik und Ökologie der Universität, Budapest aufbewahrt.

Die neue Art steht den mit 2 Divertikeln versehenen Arten der Gattung *Fridericia* und innerhalb dieser der *Fridericia conculata* DÓZSA-FARKAS 1986 am nächsten. Wegen den kleinen, aber unauffälligen Divertikeln kann sie jedoch nicht zu dieser Gruppe gezählt werden. Weiter wird die neue Art durch die verbundenen Spermatheken gekennzeichnet, und dadurch, dass sie über Peptonephridien vom "b"-Typ verfügt. Von allen bisher beschriebenen *Fridericia*-

Arten unterscheidet sie sich durch die zahlreichen kernlosen Lymphozyten und deren Grösse sowie durch das beinahe Fehlen der mit Kernen versehenen, grossen Lymphozyten.

SCHRIFTTUM

- DÓZSA-FARKAS, K. (1986): Eine neue Enchytraeiden Art (Oligochaeta: Enchytraeidae) aus dem Pilis-Gebirge, Ungarn. — *Acta Zool. Hung.* **32** (3—4): 281—283.
MÖLLER, F. (1971): Systematische Untersuchungen an terricolen Enchytraeiden einiger Grünlandstandorte im Bezirk Potsdam. — *Mitteil. Zool. Mus. Berlin*, **47**: 131—167.
NIELSEN, C. O. & CHRISTENSEN, B. (1959): The Enchytraeidae. Critical revision and taxonomy of European species. — *Nat. Jutl.* **8—9**: 1—160.

NOTES, ADDITIONS AND REDESCRIPTIONS OF THE ORIBATID SPECIES OF BERLESE (ACARI)

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Examinations of Oribatid types preserved in the "Berlese Collection" in Florence. Supplementary remarks and complementary figures to Oribatid species mostly from Africa and the Far East. With 48 original figures.

I n t r o d u c t i o n — For a long time the recognition and identification of some classical taxa but more especially quite a number of species of Berlese cause a great deal of consternation to Oribatidologists tackling various problems connected with taxonomy, systematics, zoogeography and faunagenetics. A list of such problematic taxa has recently been published on the "Berlese types" preserved in the Istituto per la Zoologia Agraria in Florence (CASTAGNOLI & PEGAZZANO 1985).

Several authors (e. g. FORSSLUND 1958, HAMMER 1961) gave redescriptions of such taxa, but it was VAN DER HAMMEN (1959) who recognized the necessity of a comprehensive work discussing and evaluating these taxa. Unfortunately, this work is incomplete, since it was limited only to the "primitive" taxa, but more especially, because it lacked illustrations. Recently, BERNINI (e. g. 1976, 1978) published highly valuable redescriptions of some taxa, like those of *Carabodidae* and *Oribatellidae*.

My own unsolved taxonomic problems forced me to carry out such research work (MAHUNKA 1980a, 1980b) on especially the species belonging to *Tarsonemid* mites. At the same time I made comparative research concerning some Oribatids too, by publishing complementary data and amply illustrating the text. For quite some I am engaged in solving certain problems of area geography of the fauna region of Ethiopian and the Oriental Regions. Now I reached a point, when a comprehensive survey is unavoidable so revisions have to be completed.

On the basis of a bilateral agreement signed by the Hungarian Academy of Sciences and the Consiglio Nationale delle Ricerche, recently I continued my research in the Berlese Collection, Florence.

I am convinced that it is not only I who finds it difficult to recognize some Berlese types, so I decided to publish my recent findings well before

I launch upon my comprehensive study of the Oribatids of these two large geographic regions. My results are obviously partial, which may be explained away by the shortage of time available, so I had to give up full redescriptions, and I did not even have the opportunity to open up the ancient preparations to study the specimens. Furthermore, without any profound comparative work I was not able to establish the degree of relationship of certain taxa, nor was I competent in deciding finally the synonymy or validity of many a species. Consequently, I concluded to simply give short notes, some additions and some sketchy illustrations.

* * *

Acknowledgements — Once again I should like to thank the Hungarian Academy of Sciences and the Consiglio Nazionale delle Ricerche (C.N.R.) on the Italian part for making available my study tour. Further, it is my pleasant duty to whole-heartedly thank Dr. M. CASTAGNOLI and Dr. F. PEGAZZANO (Firenze) who directly helped me with their advice and by giving out the research material.

LOHMANNIIDAE BERLESE, 1916

***Annectacarus parallelus* (BERLESE, 1916) comb. n. (Figs 1—2)**

Lohmannia parallela BERLESE, 1916: 177. — *Lohmannia parallela*: VAN DER HAMMEN 1959: 58. — *Lohmannia parallela*: CASTAGNOLI & PEGAZZANO 1985: 304.

According to VAN DER HAMMEN the type of this species is “no more present” in the Collection. However, it is included in the catalogue of CASTAGNOLI & PEGAZZANO and I also found slides bearing the numbers 160/25—31 and all labelled “tipico” under this name in the Collection. The specimens embedded in these seven preparations belong to more than one species and what is worse, to several genera. However, by the help of the description, although it is very short and insufficient, the problem is solvable.

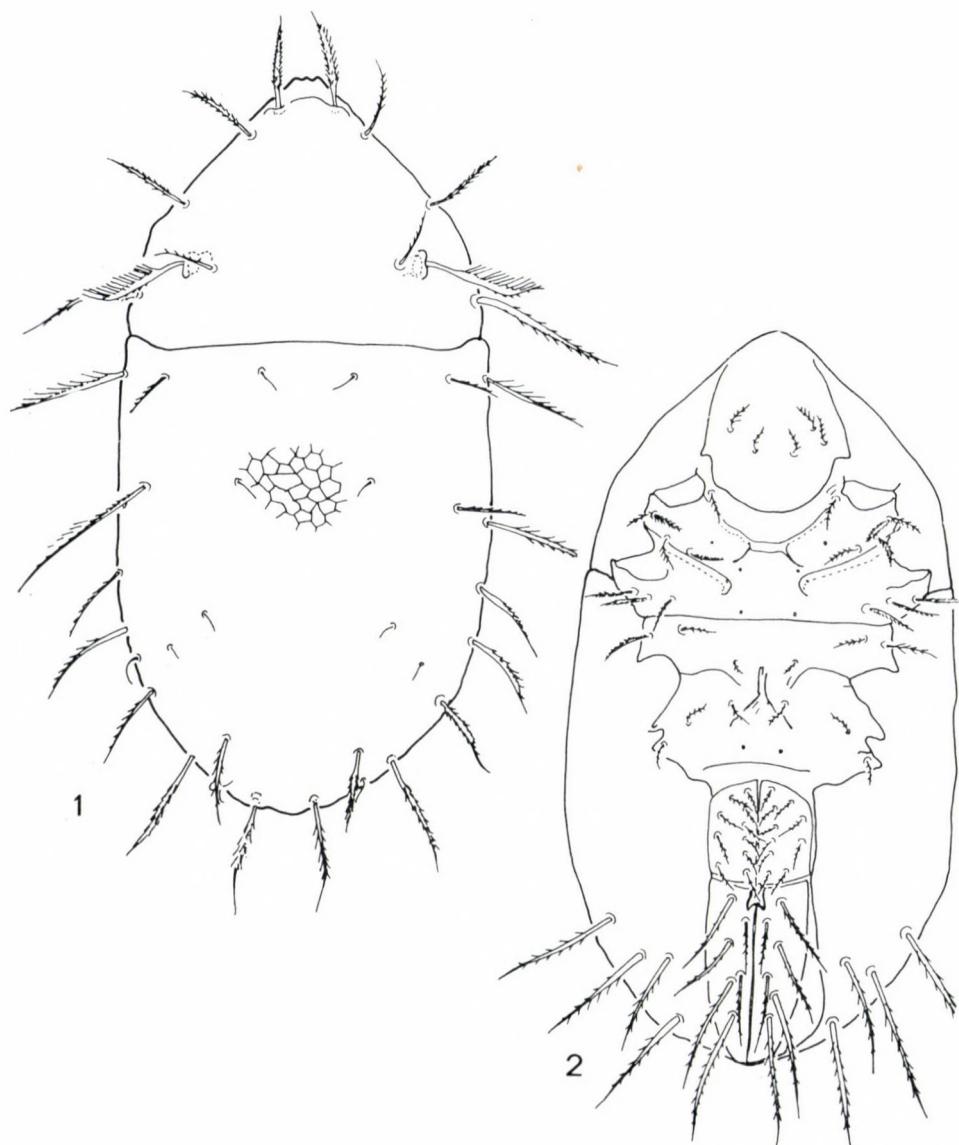
The original description is: “Testacea, M. murciodi Berl. valde similis, sed multo minor, pallidior, lateribus corporis intersese perfecte parallelis; setis omnibus longioribus; organis pseudostigmaticis densius barbulatoramosis (ramulis numero circiter 17). Ad 450 μm . long.: 210 μm . lat.”

I studied all the slides; all, with the exception of no. 160/26, which was destroyed, are well observable and identifiable. In slide no. 160/25 I have found two specimens, both are elliptic, outer margin of their notogaster convex and the body is widest medially; probably the specimens of slides nos. 160/27 and 160/31 are identical with them. In slide no. 160/28, there is a smaller, nearly parallel-sided species (perhaps *Vepracarus* or *Cryptacarus* sp.); but its notogastral setae not long! Slides nos. 160/29 and 160/30 enclosed the specimens from which I made drawings (Figs 1—2). I believe, these were the specimens which were studied and described by Berlese. I designate slide no. 160/29 to carry the lectotype.

J. BALOGH and P. BALOGH (1987) completely overlooked this species in their revision.

Complementary redescription:

Dorsal regions (Fig. 1): Rostrum tripartite, divided by two deep incisions. The insertions of the rostral setae connected with each other by a transversal lath. All prodorsal setae more or less lanceolate, well pilose; setae *ro* longer than *le* or *in*, setae *exp* the longest of all. Sensillus pectinate, with 14—17 (?) branches, its distal part slightly dilated. Notogastral surface orna-



Figs 1—2. *Annectacarus parallelus* (BERLESE, 1916): 1 = dorsal side, 2 = ventral side

mented by well-observable polygonal reticulation. 19—20 pairs of notogastral setae present, among them setae c_1 , d_1 , e_1 , f_1 and 1—3 pairs of setae b very small, fine and smooth. All the other setae similar to prodorsal ones. Setae exp longer than setae c_3 or h_1 .

V e n t r a l r e g i o n s (Fig. 2): Mentum with 2 (3) pairs of setae. Epimeral setal formula: 7—4—3—4. All epimeral setae short and pilose, but they are varying in pilosity (number and length of the pile). Anogenital region typical for the genus *Annectacarus* GRANDJEAN, 1950; genital plates without transverse suture, preanal plate narrow, anal and adanal plates fused. Genital setae simple, nearly equal in length, anal and adanal setae long and strong, similar to notogastral ones.

R e m a r k s: This species is well distinguishable from the other related species. On the basis of the short and smooth setae b it comes close to *A. africanus* BALOGH, 1961 and *A. sejugatus* WALLWORK, 1962. However, in these latter two species, the setae f_1 much longer and more pilose than setae c_1 , d_1 or e_1 (identical in the new species).

PHTHIRACARIDAE PERTY, 1841

Calyptophthiracarus rapax (BERLESE, 1916) comb. n. (Figs 3—4)

Hoploderma rapax BERLESE, 1916: 338. *Steganacarus rapax*: VAN DER HAMMEN 1959: 44. — *Hoploderma rapax*: CASTAGNOLI & PEGAZZANO 1985: 351.

Slides nos. 183/48 and 183/49 are present in the Collection. The specimen in the former preparation is in perfect condition, the latter one is damaged, but observable. However, without any remounting, the features of this species are not clear. The type was not designated, therefore I select the slide no. 183/48 to carry the lectotype. NIEDBALA (1986) forgot to include this species in his catalogue.

Complementary redescription:

A s p i s: Its outline convex in lateral aspect (Fig. 3), but it is broken at the insertion of the interlamellar setae by a transversal furrow. Median crista absent, lateral carina observable but not fused with the lateral rim. All prodorsal setae short, setae *ro* spiniform, setae *in* and *le* setiform. Exobothridial setae were not visible. Sensillus small, fusiform, its head sparsely pilose. Body surface with weak sculpture, apparently pustulate. Fifteen (?) pairs of short, acicular slightly curved notogastral setae present, their surface only finely roughened. Lyrifissures *ia* and *im* present, insertions of setae f_1 and f_2 visible.

Anogenital setae are arranged in two rows, four pairs (g_6 — g_9) longer, placed along the inner border of the plates, all (!) the other five pairs are on the anterior margin. The ano-adanal plates (Fig. 4) bear five pairs of setae, their

length well characterise this species: setae ad_1 shorter than an_2 , ad_2 approximately twice as long as ad_1 . All these setae smooth.

L e g s: Seta d on tibia IV small and coupled with the solenidium φ .

R e m a r k s: The genus *Calyptophthiracarus* AOKI, 1980 (sensu NIEDBALA) does not seem to be homogenous. Both the number of the ano-adanal setae and the position of the genital setae g_1-g_5 are highly variable. The taxon should be further divided. This species belongs to a species group which may be characterised by the five pairs of ano-adanal setae and by the antero-marginal position of setae g_4 and g_5 .



Figs 3—4. *Calyptophthiracarus rapax* (BERLESE, 1916): 3 = lateral aspect, 4 = anogenital region

Hoplophorella obsoletior (BERLESE, 1923) (Fig. 5)

Phthiracarus (Hoploph.) cucullatus (Ew.) var. *obsoletior* BERLESE, 1923: 260. — *Hoplophorella obsoletior*: VAN DER HAMMEN 1959: 46. — *Phthiracarus (Hoplophorella) cucullatus* var. *obsoletior*: CASTAGNOLI et PEGAZZANO 1985: 283. — *Phthiracarus (Hoplophorella) cucullatus* var. *obsolator*: NIEDBALA 1986: 330.

Two slides (nos. 48/42, 48/43), in good condition, are present in the Collection. VAN DER HAMMEN's opinion is correct: this "variety" is certainly an independent species and does not belong to the nearest relationship of *H. cucullata* (Ewing, 1909).

Complementary redescription:

A s p i s: Crista low, scarcely discernible. Rostral setae small, thin, bending forward. Lamellar and interlamellar setae broken (or not observable). Sensillus slightly dilated, its outer margin with conspicuously strong spines.

N o t o g a s t e r: Fifteen pairs of dilated, spatulate notogastral setae present, their surface smooth (Fig. 5).

A n o g e n i t a l r e g i o n: The position of the genital setae was not observable. Setae of ano-adanal plates typical for the genus.

R e m a r k s: This species belongs to the alliance of *H. floridæ* JACOT, 1933 (see MAHUNKA 1987a: 113). The further investigation of this group is necessary.

Hoplophorella remigera (BERLESE, 1923) comb. n. (Fig. 6)

Phthiracarus (Trachychoplophora) remigerus BERLESE, 1923: 258. — *Steganacarus remigerus*: VAN DER HAMMEN 1959: 45. — *Atropacarus remigerus*: KAMILL & BAKER 1980: 201. — *Phthiracarus (Trachychoplophora) remigerus*: CASTAGNOLI & PEGAZZANO 1985: 335. — *Phthiracarus (Trachychoplophora) remigerus*: NIEDBALA 1986: 334.

Among the examined four slides (nos. 208/15—18) only two are well observable, the other two are in a very bad condition. The type (no. 208/15) was originally designated by BERLESE.

Complementary redescription:

A s p i s: Crista scarcely observable, very low. Lateral carina absent, lateral rim narrow, but present. The sinus-line was not visible. All setae short, seta *ro* curved, setae *in* and *le* straight, the former one much stronger than the latter, similarly to the notogastral setae. Sensillus long, curved backwards, its end blunt, outer margin serrate or spiculate. Prodorsal surface ornamented by weak alveoli, but some longitudinal rugae are also present basally.

N o t o g a s t e r: Sculpture weak, hardly observable. Fifteen pairs of lanceolate notogastral setae present (Fig. 6), their distal, broadened part serrate.

A n o g e n i t a l r e g i o n: The position of the genital setae is not clearly visible, but setae *g₆*—*g₉* thicker than the other ones. All setae of the

anoadanal plates smooth. Setae ad_2 much longer and stronger than the other ones, setae ad_1 , an_1 and an_2 equally long and the distances among them are the same.

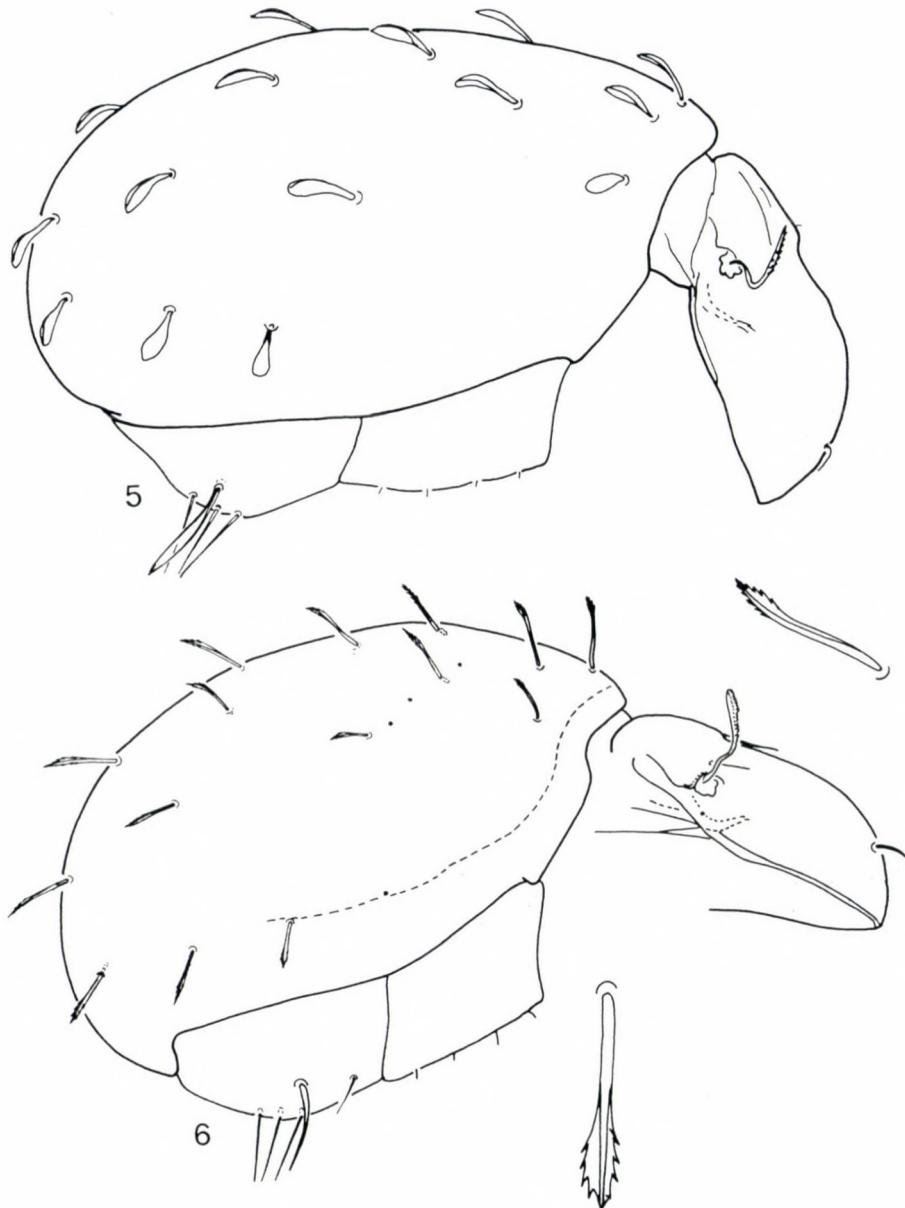


Fig. 5. *Hoplophorella obsoletior* (BERLESE, 1923): lateral aspect. —

Fig. 6. *Hoplophorella remigera* (BERLESE, 1923): lateral aspect

L e g s: Setae *d* on tibia IV minute, it is coupled with the solenidium.

R e m a r k s: Owing to the lack of the exact position of the genital setae the ranging of this species is problematic. Its relationship with the species of *Calyptophthiracarus* is also possible.

HoplothHIRACARUS somalicus (BERLESE, 1923) comb. n. (Figs 7—10)

Phthiracarus (Trachyhoplophora) echidninus BERLESE var. *somalicus* BERLESE, 1923: 258. — *Steganacarus somalicus* VAN DER HAMMEN: 1959: 45. — *Atropacarus somalicus*: KAMILL & BAKER 1980: 201. — *Phthiracarus (Trachyhoplophora) somalicus*: CASTAGNOLI & PEGAZZANO 1985: 387. — *Phthiracarus (Trachyhoplophora) somalicus*: NIEDBALA 1986: 335. (BERLESE, 1924: [sic])

The type series was studied by VAN DER HAMMEN. He mentioned erroneously that the types were not designated by BERLESE. In fact the handwriting of BERLESE "bellotipico" is clearly visible on slide no. 208/9. I was also able to examine slides nos. 208/9—12. In slides nos. 208/9—11 I found the same species, while slide no. 208/12 definitely carries another, presumably undescribed species.

Complementary redescription:

A s p i s (Fig. 10): Crista absent, the outline from lateral aspect is gradually convex from the interlamellar setae, behind the insertion of these setae the outline is concave. Lateral carina weak, not reaching to the lateral rim. Surface ornamented mostly by alveoli, but behind the lamellar and interlamellar setae some rugae also present. Among the prodorsal setae only the interlamellar ones long, erect and spinose or spiculate, the others smooth or finely roughened, and much shorter than the preceding ones. Setae *ro* curved anteriorly, setae *le* very small. Sensillus comparatively short, with a clavate head, its anterior margin serrate.

N o t o g a s t e r: Fifteen pairs of erect, mostly rigid notogastral setae present (Fig. 7), without noteworthy difference in their lengths. Their distal third well spiculate. Setae *p*₄ originating much nearer to body margin than setae *p*₃.

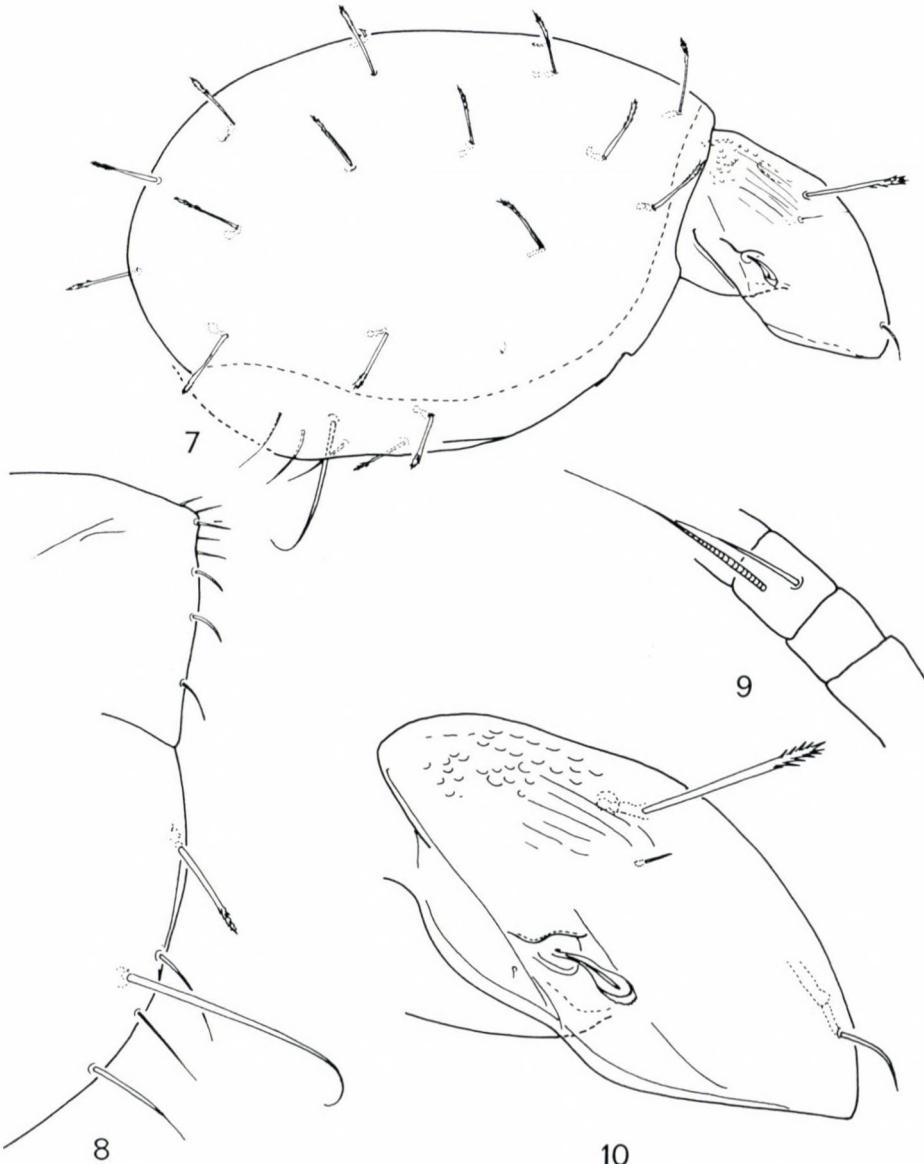
A n o g e n i t a l r e g i o n (Fig. 8): Genital setae arranged in two longitudinal rows, but the exact distance between the alveoli of setae *g*₆—*g*₉ and the inner margin of the anogenital plates could not be measured. Setae *g*₁—*g*₅ much thinner and shorter than setae *g*₆—*g*₉. Among the setae of the ano-adanal plates only seta *ad*₃ spiculate, similar to the notegastral ones, setae *ad*₁ slightly, setae *ad*₂ much longer than anal setae. The latter are smooth or finely roughened. Seta *ad*₂ hooked.

L e g s: The chaetotaxy of legs was not observable, but I was able to see seta *d* and solenidium *δ* on the tibia IV (Fig. 9).

***Steganacarus pardinus* (BERLESE, 1916) (Fig. 11)**

Hoploderma pardinum BERLESE, 1916: 337. — *Steganacarus pardinus*: VAN DER HAMMEN 1959: 44. — *Hoploderma pardinum*: CASTAGNOLI & PEGAZZANO 1985: 304. — *Hoploderma pardinum*: NIEDBALA 1986: 333.

The single (Type) specimen (no. 183/47) is “closed”, therefore, without remounting an exact redescription is impossible.



Figs 7—10. *Hoplophthiracarus somalicus* (BERLESE, 1923): 7 = lateral aspect, 8 = anogenital region, 9 = tibia of leg IV, 10 = aspis

Some additional features:

Very large and dark species. Crista of aspis very high. Anterior notogastral tectum protruding anteriorly with a convex median outline. All setae fine, short and flagellate, as a rule hardly visible (Fig. 11). I was able to recognise only three pairs of ano-adanal and four pairs (g_6-g_9) of genital setae.

Steganacarus vitrinum (BERLESE, 1913)

Hoploderma vitrinum BERLESE, 1913: 103. — *Steganacarus vitrinum*: VAN DER HAMMEN: 1959: 44. — *Atropacarus vitrinum*: KAMILL & BAKER 1980: 201. — *Hoploderma vitrinum*: CASTAGNOLI & PEGAZZANO 1985: 44. — *Hoploderma vitrinum*: NIEDBALA 1986: 335.

The slides (nos. 141/22 and 141/23) of this species are present in the Collection but I was not able to find the specimen(s) in them, consequently, the type of this species is absent.

In connection with the ranging of this species, it is interesting that in the figure (Tav. VIII, fig. 100), published by BERLESE, the setation of leg IV (tibia IV with 3 setae) is well visible. If it is correct, the opinion of VAN DER HAMMEN is also acceptable.

ORIBOTRITIIDAE GRANDJEAN, 1954

Oribotritia breviseta (BERLESE, 1923) (Figs 13—14)

Tritia berlesei (MICH.) var. *breviseta* BERLESE, 1923: 261. — *Oribotritia breviseta*: VAN DER HAMMEN 1959: 35. — *Tritia berlesei* var. *breviseta*: CASTAGNOLI & PEGAZZANO 1985: 52.

The type-slide (no. 216/27) is in good condition, the specimen is well observable. VAN DER HAMMEN's opinion is correct: this form represents an independent species.

Complementary redescription:

A s p i s: Rostral part of aspis striate. Lateral carina bifurcate near the bothridium (Fig. 14). Rostral and interlamellar setae thick, acicular. Lamellar setae very thin, short and fine. Sensillus broken.

N o t o g a s t e r: All notogastral setae — excepting the fine and thin seta c_3 — acicular and curved forwards. Four pairs of lyrifissures (*ia*, *im*, *ih* and *ips*) and the insertion of the vestigial f_1 and f_2 setae well observable (Fig. 13).

A n o g e n i t a l r e g i o n: The shape of the plates is typical for the genus *Oribotritia* JACOT, 1924. Nine pairs of genital, 2 pairs of aggenital, 2 pairs of anal and 3 pairs of adanal setae present; all short.

L e g s: All legs tri- and heterodactylous. Solenidium δ present on genua III and IV.

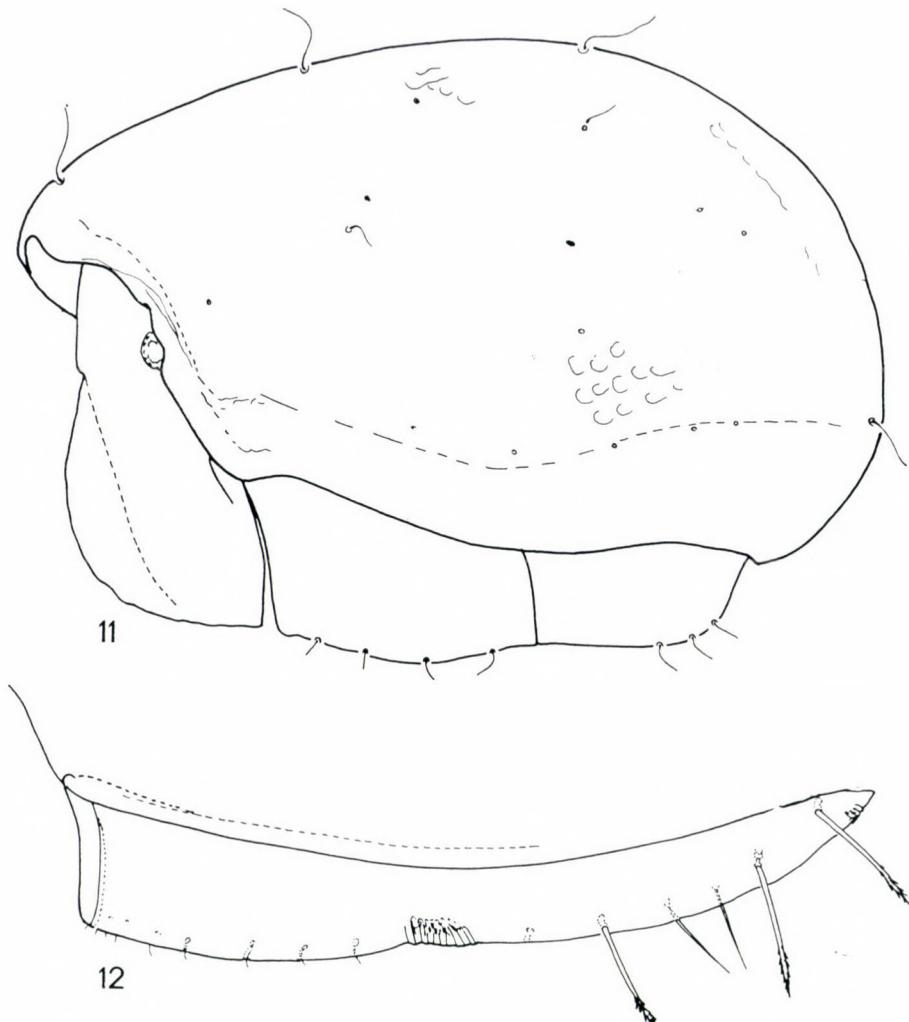


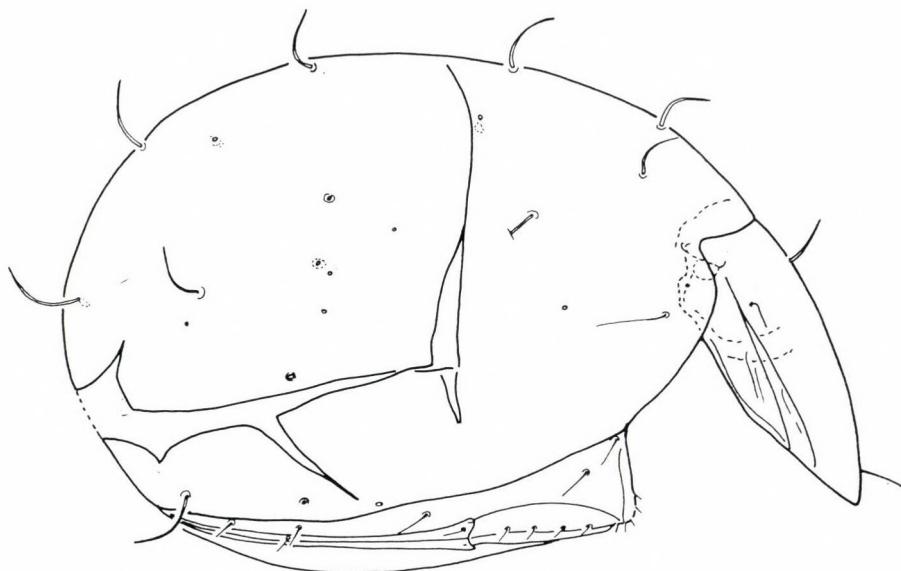
Fig. 11. *Steganacarus pardinus* (BERLESE, 1916): lateral aspect; — Fig. 12. *Euphthiracarus vestitus* (BERLESE, 1913): anogenital region

EUPHTHIRACARIDAE JACOT, 1930

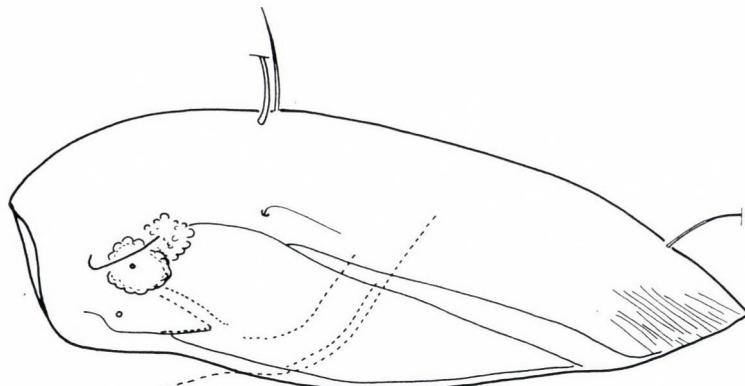
Euphthiracarus vestitus (BERLESE, 1913) (Fig. 12)

Hoploderma vestitum BERLESE, 1913: 103. — *Pseudotritia vestita*: VAN DER HAMMEN 1959: 38.
— *Hoploderma vestitum*: CASTAGNOLI & PEGAZZANO 1985: 438.

I have seen the slide (no. 141/18) labelled "tipico" but several slides are in the Collection. BERLESE's drawing (tav. VIII, fig. 113) gives a good habitus.



13



14

Figs 13—14. *Oribotritia breviseta* (BERLESE, 1923): 13 = lateral aspect, 14 = aspis

Some additional features:

Lateral carina bifurcate anteriorly. Nine pairs of genital setae present. Anal setae (an_2 , an_3) simple, smooth; adanal setae much stronger than the preceding ones and spiculate on their distal end (Fig. 12).

L e g s: All legs tridactylous, a strong heterodactily present. No solenidium on genu IV, seta d and solenidium φ coupled on tibia IV.

R e m a r k s: The generic relation of this species is rather uncertain, because I have definitely seen a posterior triangle on the ano-adanal plates, but on the basis of the habitus and the position and ratio of the ano-adanal setae (Fig. 12), this species belongs to the genus *Rhysotritia* MÄRKEL et MEYER, 1959.

Rhysotritia ardua hyeroglyphica (BERLESE, 1916) (Fig. 15)

Tritia lentula (K.) var. *hyeroglyphica* BERLESE, 1916: 337. — *Pseudotritia hyeroglyphica*: VAN DER HAMMEN 1959: 38. — *Tritia lentula* var. *hyeroglyphica* CASTAGNOLI & PEGAZZANO 1985: 189.

The type-series of this species (nos. 184/44 [typus], 184/45, 184/45b) is present in the Collection. All specimens in the preparations are well observable.

Complementary redescription:

A s p i s: Lateral outline concave in front of the rostral setae. Lateral carina well developed, fused with the lateral rim anteriorly. Interlamellar setae nearly twice as long as the lamellar ones. Sensillus characteristically dilated distally, its head well spinose.

N o t o g a s t e r: Notogastral setae slightly curved, their distal end spiculate (Fig. 15).

A n o g e n i t a l r e g i o n: Nine pairs of genital setae present. The ratio of the ano-adanal setae typical for the genus *Rhysotritia* MÄRKEL et MEYER, 1959.

All legs tridactylous.

R e m a r k s: Quite clearly this form stands very near to *R. ardua* (C. L. KOCH, 1841). Neither is it doubtful that this design below the surface is negligible. My opinion is that it is identical with *R. ardua penicillata* PÉREZ-INIGO, 1969, but I had not the opportunity to examine the two side by side.

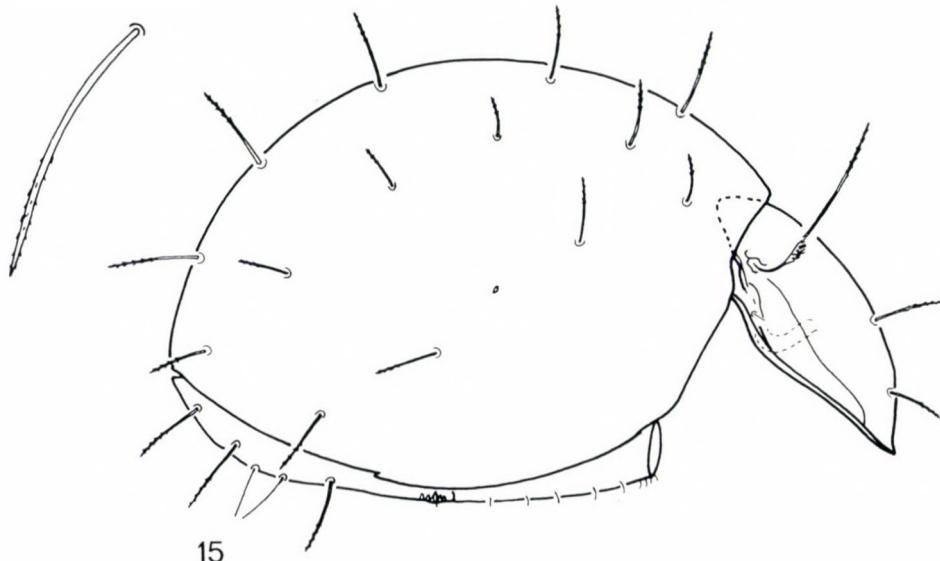


Fig. 15. *Rhysotritia ardua hyeroglyphica* (BERLESE, 1916): lateral aspect

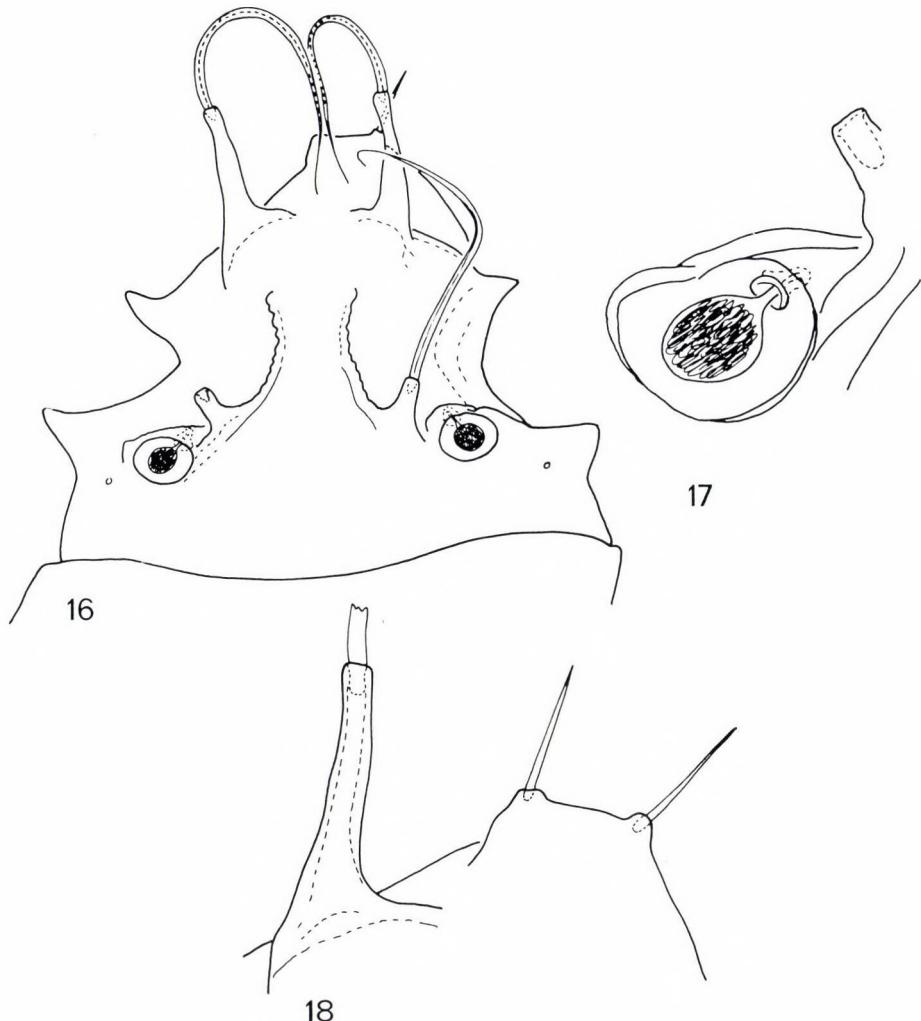
CROTONIIDAE THORELL, 1876

Crotonia allaudi (BERLESE, 1916) comb. n. (Figs 16—20)

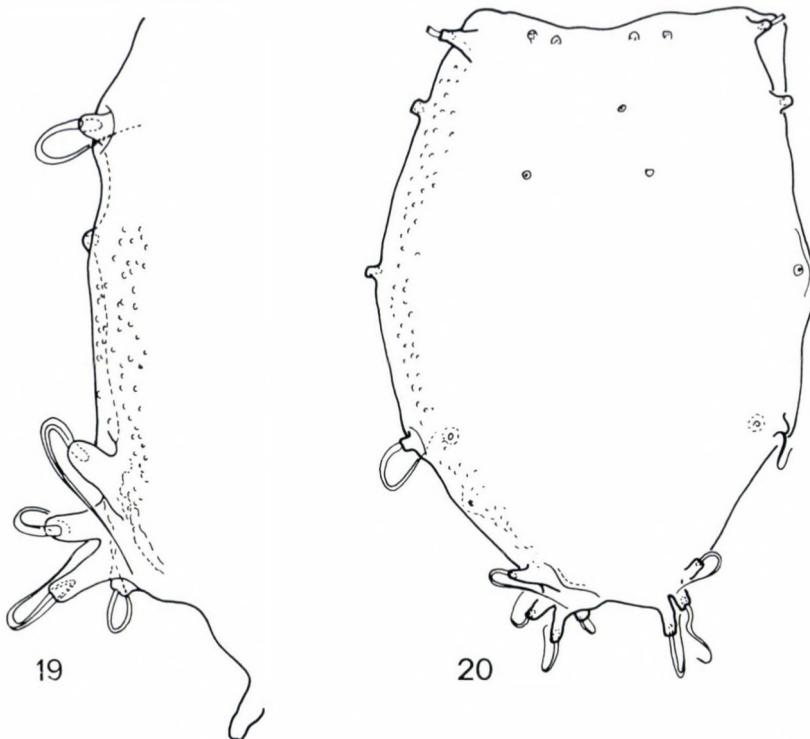
Nothrus (Acronothrus) allaudi BERLESE, 1916: 174. — *Acronothrus allaudi*: VAN DER HAMMEN 1959: 69. — *Nothrus (Acronothrus) allaudi*: CASTAGNOLI & PEGAZZANO 1985: 10.

The type-specimen (slide no. 165/48) is in good condition and is well observable. This species belongs to the “comphinaria-group” (see WALLWORK 1977) and it may well be characterised by the following features:

Lamellar apophyses very long, but not connected with each other basally. Lamellar setae curved backwards. Interlamellar setae not shorter than the



Figs 16—18. *Crotonia allaudi* (BERLESE, 1916): 16 = prodorsum, 17 = sensillus, 18 = rostrum



Figs 19—20. *Crotonia allaudi* (BERLESE, 1916): 19 = lateral part of notogaster, 20 = notogaster

lamellar one (Fig. 16). Sensillus very small, directed posteriorly (Fig. 17). The two groups of the caudal apophyses originating far from each other, display no essential difference between them. The setae, arising on them, are setiform, approximately of equal length (Figs 19—20), seta f_2 only scarcely shorter than the preceding ones.

***Crotonia rothschildi* (BERLESE, 1916) comb. n. (Figs 21—23)**

Nothrus (Acronothrus) rothschildi BERLESE, 1916: 175. — *Acronothrus rothschildi*: VAN DER HAMMEN 1959: 69. — *Nothrus (Acronothrus) rothschildi* CASTAGNOLI & PEGAZZANO 1985: 362.

The type specimen (slide no. 165/47) is in poorer condition than the preceding species, but still well identifiable. The main problem is that the lamellar cuspis is branching, both parts bearing one seta each. This character is absolutely unique in this group, not quite clearly visible on both sides, therefore it might only be a teratological formation (Fig. 23).

Other features: interlamellar setae very long, over twice longer than the lamellar one. All setae — excepting c_1 — arising on well-developed apophyses. No essential difference existing among the caudal apophyses (Figs 21—22) and the setae, but seta h_1 slightly longer than the rest.



Figs 21—23. *Crotonia rothschildi* (BERLESE, 1916): 21 = lateral part of notogaster, 22 = notogaster, 23 = prodorsum

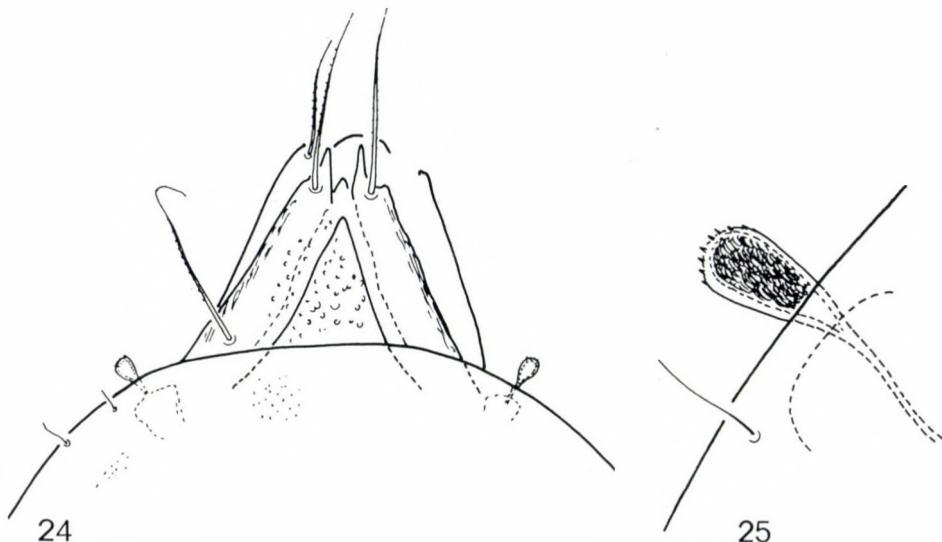
R e m a r k s: These two *Crotonia* species from the Ethiopian Region have not been mentioned since their original description. Neither did WALLWORK (1977) discuss them in his very thorough survey. Both species belong to the "comphinaria"-group, *C. rothschildi* is distinguished from all known species by the form of its lamellar apophysis; *C. allaudi* stands near to *comphinaria* (MICHAEL, 1908), but the distance between the caudal apophyses is great (small in *comphinaria*), and the ratio of setae f is different.

LIACARIDAE SELLNICK, 1928

Procyonetes nigerrimus (BERLESE, 1916) (Figs 24—25)

Liacarus nigerrimus BERLESE, 1916: 60. — *Procyonetes nigerrimus*: WOOLLEY 1969: 190. — *Liacarus nigerrimus*: CASTAGNOLI & PEGAZZANO 1985: 274.

The type (slide no. 165/13) is present and it is in a good condition. This specimen is dark, but it is clearly visible, that the outer margin (Fig. 24) of lamellae is well wrinkled, interlamellar region foveolate, and the notogastral surface punctate. Two pairs of setae in humeral position visible, both pairs very short and fine (Fig. 25).



Figs 24—25 *Procyonetes nigerrimus* (BERLESE, 1916): 24 = prodorsum, 25 = sensillus

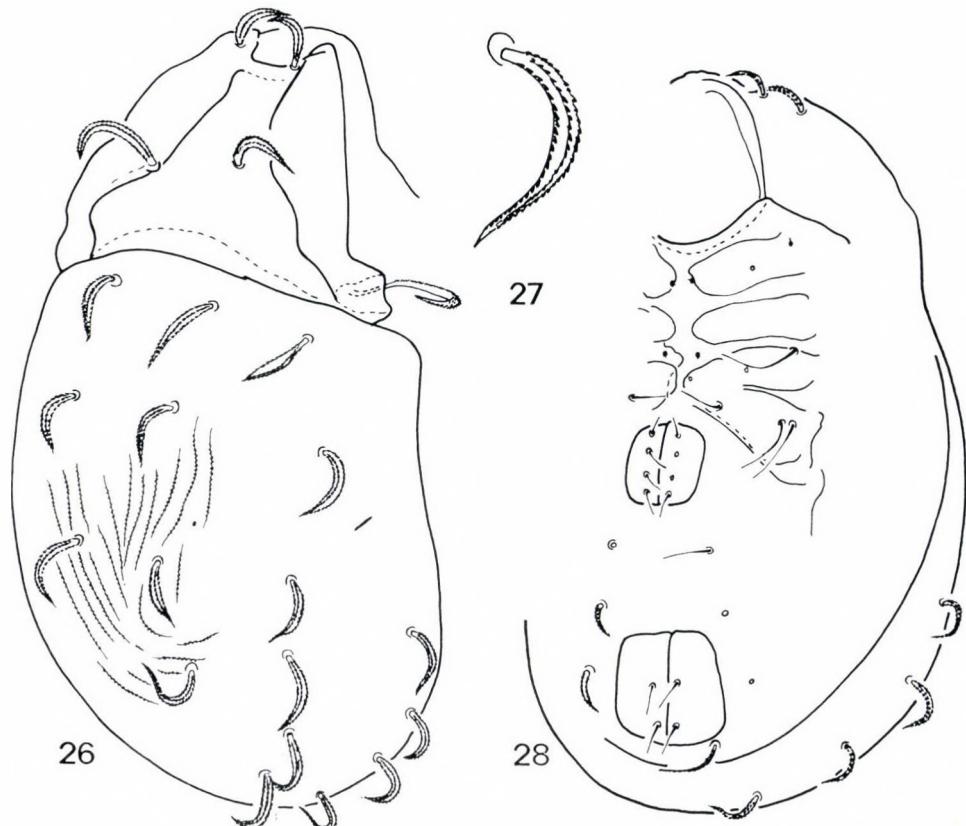
CARABODIDAE C. L. KOCH, 1837

Austrocarabödes obsoletus (BERLESE, 1916) comb. n. (Figs 26—28)

Carabödes obsoletus BERLESE, 1916: 329. — *Carabödes obsoletus*: CASTAGNOLI & PEGAZZANO 1985: 284. — *Carabödes obsoletus*: MAHUNKA 1987: 404.

There are three slides in the Collection (nos. 172/4, 172/5 and 172/5b), of which the author designated no. 172/4 as the type. The other two slides unambiguously contain the same species. All three specimens are more or less damaged, but the main features are well observable on all three. The trivial features are recognisable only in one or in another of the specimens.

The original description by BERLESE is comparatively long and in parts quite good.



Figs 26—28. *Austrocarabödes obsoletus* (BERLESE, 1916): 26 = dorsal side, 27 = notogastral seta, 28 = ventral side

***Carabodes penicillatus* (BERLESE, 1916) (Figs 29—30)**

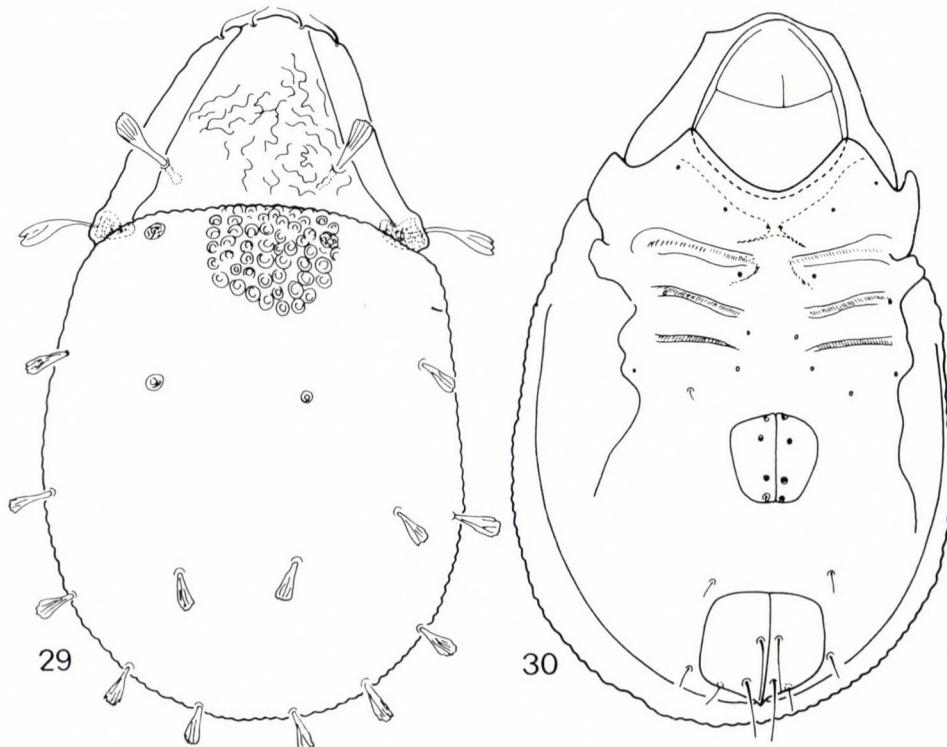
Carabodes penicillatus BERLESE, 1916: 328. — *Carabodes penicillatus*: CASTAGNOLI & PEGAZ-ZANO 1985: 312. — *Carabodes penicillatus*: MAHUNKA 1987: 405.

The slides of this species are present in the Collection (no. 131/37 was designated by BERLESE as the type, 131/38 with 2 specimens and 131/39). The latter one is in bad, the previous two are in very good, condition. The figures were made from the specimens of slide 131/38.

Complementary redescription:

Dorsal regions (Fig. 29): Lamellae narrow. Rostral and lamellar setae very thin, setiform, flagellate. Interlamellar setae arising on the interlamellar surface, dilate, their distal margin serrate, surface with longitudinal veins. Sensillus short, directed outwards, asymmetrically calyctiform. Interlamellar region ornamented by irregular wrinkles, notogaster by tubercles. The latter compose a characteristic ocellate sculpture. Ten pairs of notogastral setae present, all setae dark, dilated similar to the interlamellar ones.

Ventral regions (Fig. 30): The observation of this region was problematic. I was not able to find the insertion points of some epimeral setae.



Figs 29—30. *Carabodes penicillatus* BERLESE, 1916: 29 = dorsal side, 30 = ventral side

Four pairs of genital setae present, but only the alveoli are observable. Agenital setae absent (?). Three pairs of a short adanal and two pairs of conspicuously long anal setae visible.

R e m a r k s: The species belongs to a species-group characterised by the dark notogastral setae and the calyciform sensillus. To this group also belong for example: *Carabodes samoensis* J. BALOGH et P. BALOGH, 1986 and *Carabodes strinovichi* BALOGH et MAHUNKA, 1978.

Carabodes penicillatus is distinguished from all the related species by the very thin lamellar and rostral setae, the ocellate notogastral sculpture and by the great (1 : 0.5) difference between the anal and adanal setae.

OPPIIDAE GRANDJEAN, 1951

Arcoppia arcualis (BERLESE, 1913)

Damaeosoma arcuale BERLESE, 1913: 89. — *Arcoppia arcualis*: HAMMER 1977: 33. — *Damaeosoma arcuale*: CASTAGNOLI & PEGAZZANO 1985: 22. — *Arcoppia arcualis*: SUBIAS & P. BALOGH 1990: 373.

Three slides (nos. 143/25, 26 and 143/28) of this species are present in the Collection. Unfortunately, all three are in very bad condition, therefore the species is invariably uncertain. See the next species.

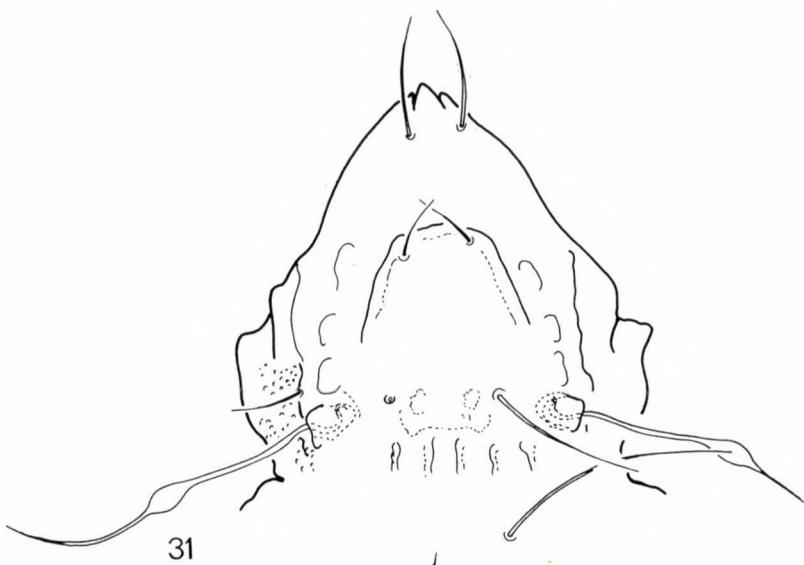
Arcoppia robustia (BERLESE, 1913) (Fig. 31)

Damaeosoma arcuale var. *robustius* BERLESE, 1913: 90.* — *Damaeosoma arcuale* var. *robustius*: CASTAGNOLI & PEGAZZANO 1985: 360. — *Arcoppia arcualis* var. *robustius* P. BALOGH & SUBIAS 1990: 373.

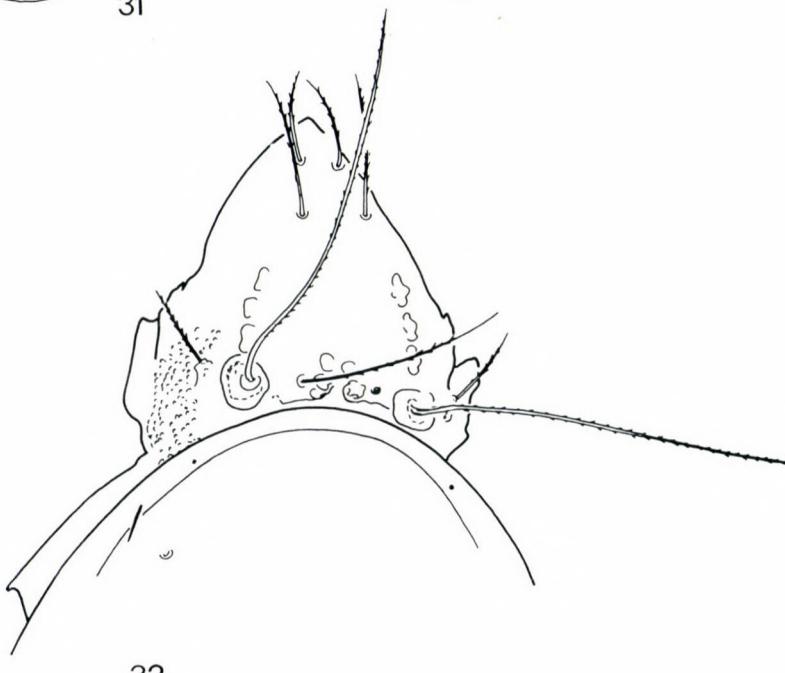
The type of this taxon (slide no. 143/27, labelled "Damaeosoma arcuale Berl. var. *robustius*, tipico, Giava 1536"), is present in the Collection. Although the specimen is comparatively in good condition and well observable in dorsal view, some significant features (e. g. the ciliation of setae) were not visible. Its ventral regions were likewise not observable.

On the basis of some important characters (e. g. the number of the branches of the sensillus, the shape of the costula and the presence of the interbothridial tubercles) it is clear that this "varietas" is an independent species and is not identical with the species *Arcoppia arcualis* (BERLESE, 1913). It can be verified that the genital setae do not arise in a longitudinal row, surface of epimeres well polygonate, setae *ad*₁ originating in post-, setae *ad*₂ and *ad*₃ in adanal position.

* „An varietas nomine robustius distinguenda?“



31



32

Fig. 31. *Arcoppia robustia* (BERLESE, 1913): prodorsum. — Fig. 32. *Lasiobelba capilligera* (BERLESE, 1916): prodorsum

SUBIAS & BALOGH, P. (1990) synonymised my species (*A. robusta*) from Sabah with this species. However, I believe that all taxonomists taking on the task of a nomenclatorial revision should have a good working knowledge of at least the bases of the rules of nomenclature, for obviously *robusta* MAHUNKA is not a homonym of *robustia* (BERLESE).

Lasiobelba capilligera (BERLESE, 1916) (Figs 32—35)

Damaeosoma capilligerum BERLESE, 1916: 327. — *Damaeosoma capilligerum*: CASTAGNOLI & PEGAZZANO 1985: 62. — *Lasiobelba capilligera* P. BALOGH & SUBIAS 1990: 380.

The type of *L. capilligera* is present in the Collection. The specimen is damaged, but observable and later it will perhaps be identifiable.

Some additional features:

Dorsal aspect: Ratio of the prodorsal setae *in* > *le* > *ro* > *ex*. Setae *ex* distinctly pilose and straight, arising on a tubercle. Sensillus very long, much longer than the interlamellar setae. The latter more rarely pilose than the sensillus (Fig. 32). Exobothridial surface granulate. Setae *c*₂ represented only by their alveoli. Setae of notogaster of various lengths (Fig. 33).

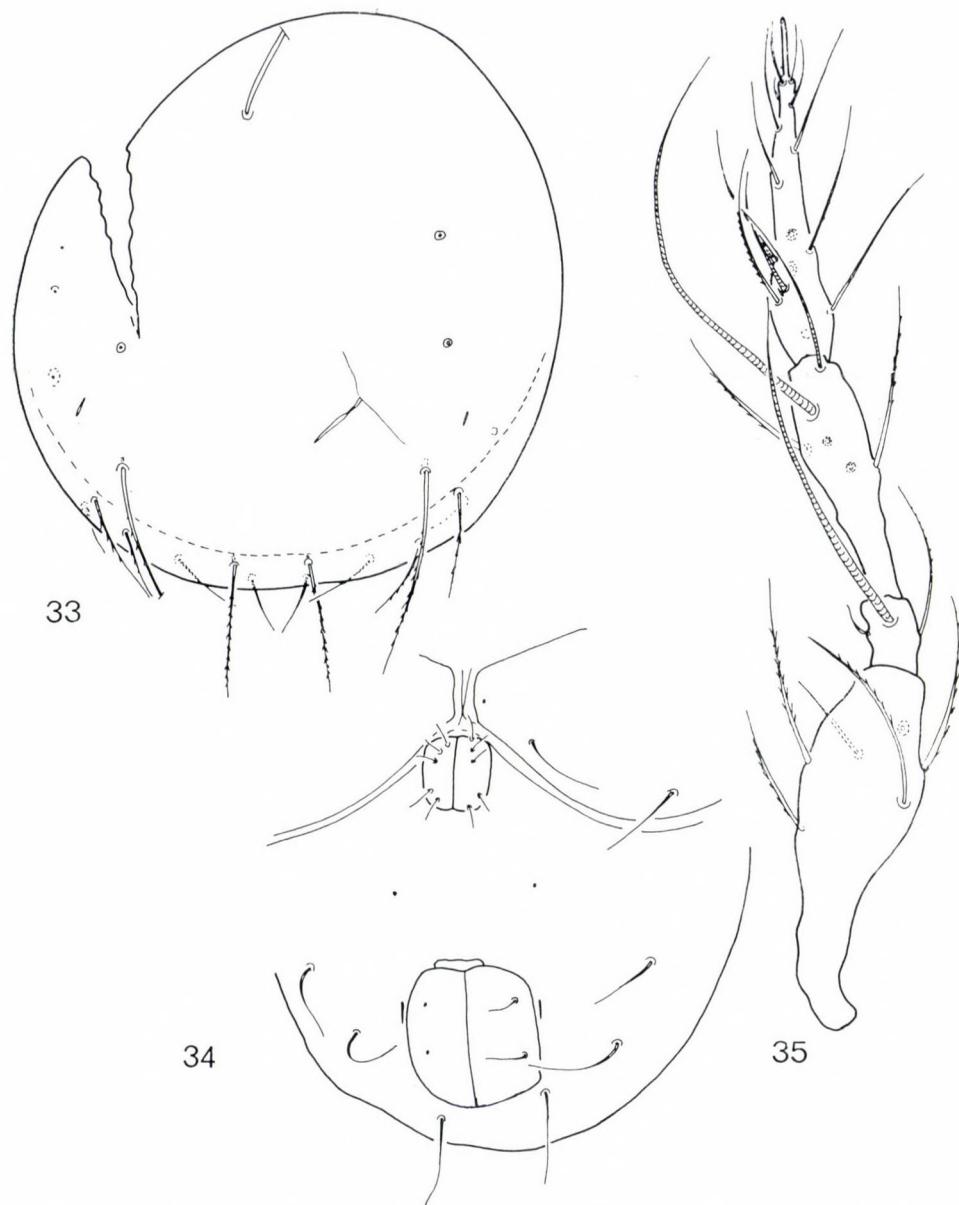
Ventral aspect: Typical for the genus. There is a great difference between the genital and anal apertures. Five pairs of genital setae present, lyrifissures *iad* in adanal position (Fig. 34).

Legs: All legs very long and thin, legs IV is longer than the body. Especially long are the tibia and tarsus of legs III and IV and the femora of legs I (Fig. 35) and II.

Remarks: It seems to me that this species is not synonymous with the heretofore described *Lasiobelba* species.

CHAUNOPROCTIDAE BALOGH, 1961

The family was established without any redescription or study of the type-genus, but on the basis of the synonymisation of *Caloppia* BALOGH, 1958 and *Chaunoproctus* PEARCE, 1906. It is presumably right, but it is also clear that the genus *Chaunoproctus* (= *Caloppia*) is not homogenous (e. g. *Caloppia vargai* BALOGH, 1961 does not belong to the same genus as does *C. basilewskyi*). The third — uncertain — genus belonging to this family, was *Zetorchella* BERLESE, 1916. After my investigations it was found to be synonymous with *Caloppia*, i.e. *Chaunoproctus*.



Figs 33—35. *Lasiobelba capilligera* (BERLESE, 1916): 33 = notogaster, 34 = anogenital region,
35 = leg I

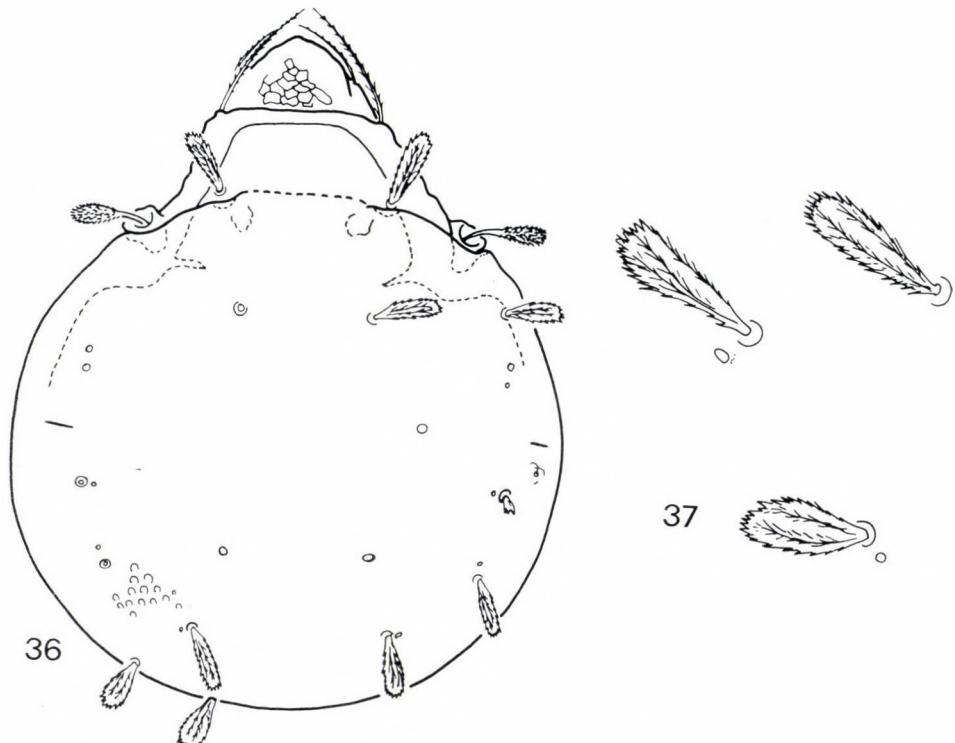
Chaunoproctus pedestris (BERLESE, 1916) (Figs 36—39)

Zetorchella pedestris BERLESE, 1916: 63. — *Zetorchella pedestris*: CASTAGNOLI & PEGAZZANO 1985: 311.

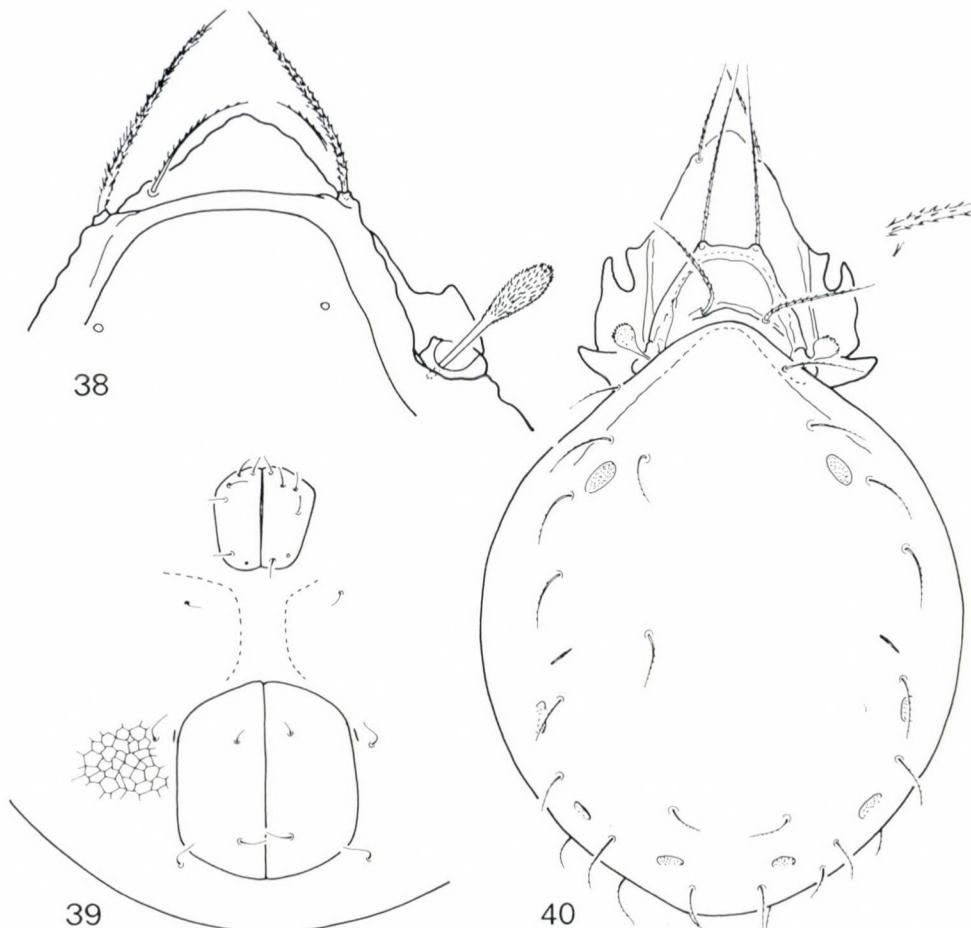
The type-series (cotypes) is present in the Collection. I have seen the slides nos. 160/11—14. BERLESE designated the slides nos. 160/12, 13 and 14 as “tipico”, the slide no. 160/11 was labelled “rotto”. I designate from slide no. 160/13 as lectotype the specimen which is closest to the numbered label. Some specimens are in good condition.

Complementary redescription:

P r o d o r s u m: Outline of the rostral part sinuate in dorsal aspect (Fig. 38). Lamellae and translamella broad, lamellar cuspis reduced. Rostral and lamellar setae setiform, former much thinner than latter. Interlamellar setae phylliform, dilate. Sensillus comparatively short, capitate, its head barbate. Ten pairs of well dilated, phylliform notogastral setae present, their margin and along 1—2 longitudinal veins ciliate (Fig. 37). Dorsosejugal suture not clearly visible medially. Surface areolate (Fig. 36).



Figs 36—37. *Chaunoproctus pedestris* (BERLESE, 1916): 36 = dorsal side, 37 = notogastral setae



Figs 38—39. *Chaunoproctus pedestris* (BERLESE, 1916): 38 = prodorsum, 39 = anogenital region. — Fig. 40. *Lucoppia ornata* (BERLESE, 1916): dorsal side

V e n t r a l r e g i o n s: Genital aperture small, much smaller than the anal one (Fig. 39). Distance between genital and anal apertures greater than the length of the genital plates. Six pairs of genital one pair of aggenital, two pairs of anal and two pairs of adanal setae present. All short and simple. Lyrifissures *iad* in adanal position.

L e g s: All legs tri- and heterodactylous. Solenidia φ_1 and φ_2 arising on a large apophysis.

R e m a r k s: This species presumably is identical with *C. papillatus* (BALOGH, 1958). To this species-group also belong: *C. clavisetosus* BATTACHARYA et CHAKRABARTI, 1975 and *C. crinitus* KARPPINEN, 1966. The distinguishing of these species is possible only by studying the types.

*ORIBATULIDAE THOR, 1929****Lucoppia ornata* BERLESE, 1916 (Fig. 40)**

Lucoppia ornata BERLESE, 1916: 325. — *Lucoppia ornata*: CASTAGNOLI & PEGAZZANO 1985: 288.

Two slides of this species are present in the Collection. One designated as type: no. 177/20 and slide no. 222/13. Both preparations are in good condition and clearly observable that they do not belong to the same species. BERLESE's description is well interpretable, therefore only the specimen in the type-slide represents the species.

Some additional features:

P r o d o r s u m: Rostrum slightly nasiform. Lamellae and translamella well developed, robust. Lamellar setae arising on short cuspides (Fig. 40), they are very long, reaching to the end of rostral setae. Interlamellar setae sitting on a well-developed, waved and arched transversal lath in the interlamellar region. All prodorsal setae well ciliate. Sensillus capitate, its peduncle very short, head barbed.

N o t o g a s t e r: Anterior part elongated and reaching far anteriorly between the bothridia. Notogastral setae comparatively thin, rarely pilose. Four pairs of areae porosae, differences in their form insignificant.

R e m a r k s: There is no doubt that the species belongs to the genus *Lucoppia* BERLESE, 1908.

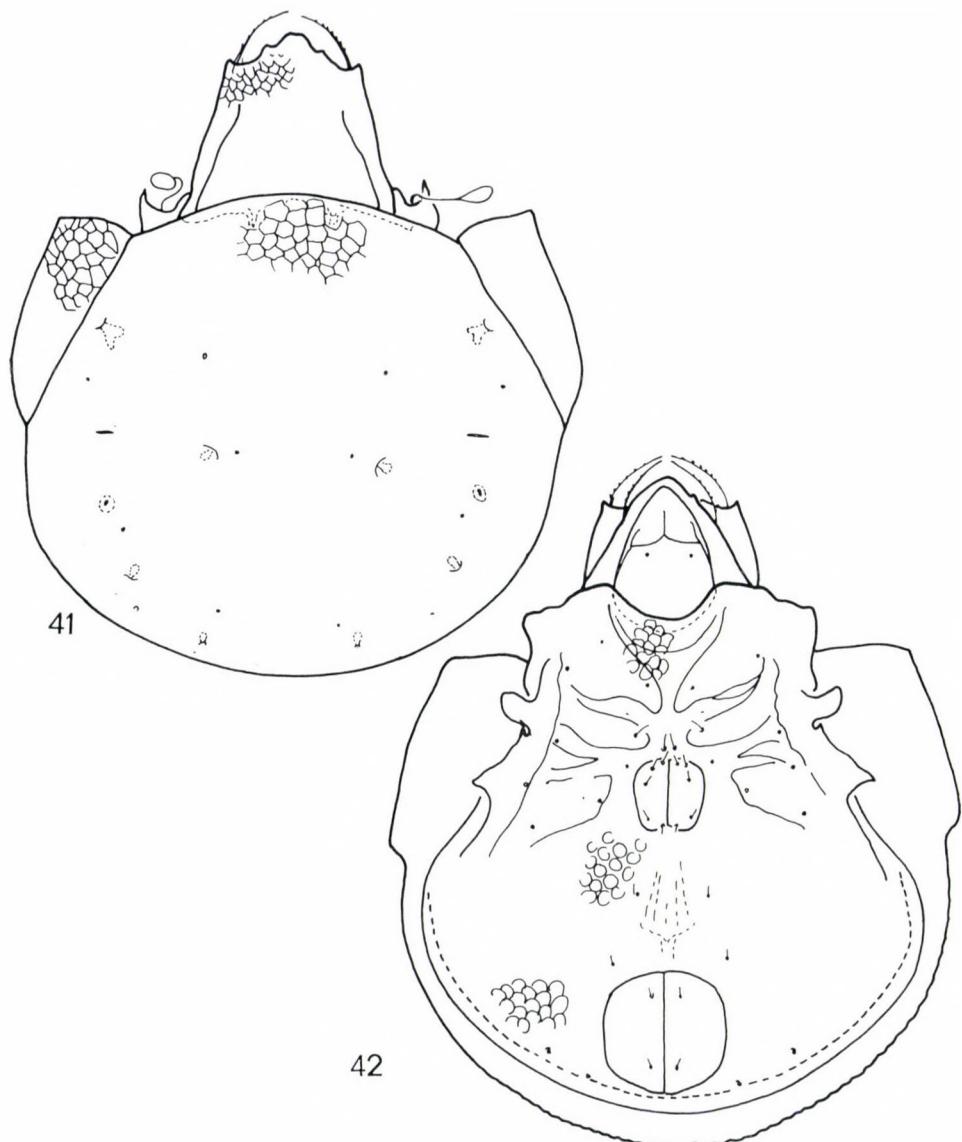
*HAPLOZETIDAE GRANDJEAN, 1936****Trachyoribates ampulla* (BERLESE, 1905) (Figs 41—45)**

Oribates ampulla BERLESE, 1905: 172. — *Trachyoribates ampulla* BERLESE 1908: 3. — *Trachyoribates*: BALOGH 1972: 170. (BERLESE, 1904: sic!).

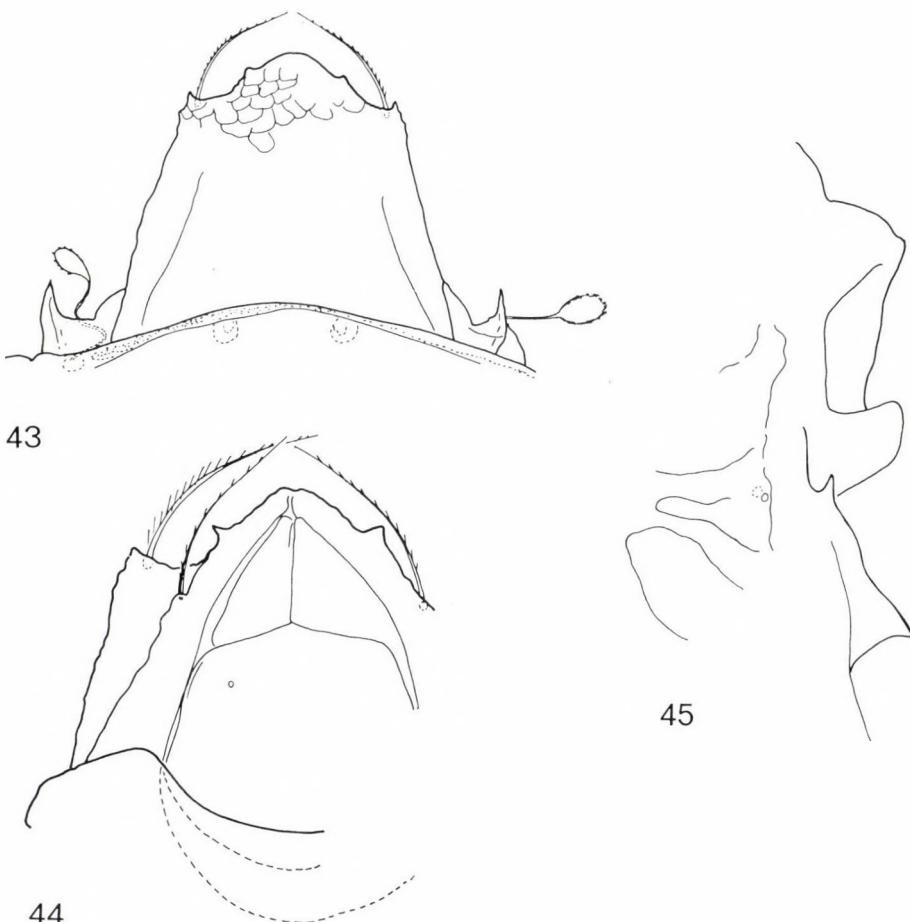
The genus was created by BERLESE after the description of this species without any diagnosis, but mentioned "Oribates Ampulla" as the type of the genus and added *T. ovulum* as a new species. The specimens in the Collection are in good condition. There are three slides (nos. 37/45, 50 and 38/4) and I studied all of them.

Complementary redescription:

D o r s a l s i d e (Fig. 41): Whole surface of the body — including the pteromorpha — ornamented by a polygonate sculpture. Rostral margin sinuate, with two sharp teeth laterally. Insertion of the rostral setae is covered by the lamellae in dorsal aspect (Fig. 43). Lamellae gradually dilate anteriorly, translamella absent. Lamellar setae arising on the anteriorly truncate lamellar



Figs 41—42. *Trachyoribates ampulla* (BERLESE, 1905): — 41 = dorsal side,
42 = ventral side



Figs 43—45. *Trachyborates ampulla* (BERLESE, 1905): — 43 = prodorsum, 44 = gnathosoma,
45 = lateral part of epimeral region

cuspis. Rostral and lamellar setae ciliate. Bothridium with a sharp outer spur. Peduncle of sensillus S-shaped, very long and very thin. Pteromorphae movable. Ten pairs of setal alveoli and four pairs of sacculi present, *Sa* bifurcate and much larger than the others, *S₁* originating conspicuously near to each other.

Ventral side (Fig. 42): The whole surface ornamented by large alveoli. Epimeral borders and apodemes well observable. Epimeral setae minute or represented only by their alveoli. Epimeral setal formula: 3—1—2(?)—3. Pedotecta 2—3 normal, discidium well developed, with robust thorn-like custodium anteriorly (Fig. 45). Five pairs of genital, one pair of aggenital, two pairs of anal and three pairs of adanal setae present. Setae *ad*₃ preanal position.

L e g s: All legs tri- and heterodactylous. Median claws strong and comparatively long, lateral claws very thin and long.

ORIBATELLDAE JACOT, 1925

Lamellobates molecula (BERLESE, 1916) comb. n. (Fig 46)

Achipteria molecula (BERLESE, 1916): 309. — *Achipteria molecula*: CASTAGNOLI & PEGAZZANO 1985: 260.

The type ("tipico", designated by Berlese) of this species (no. 170/34) is present in the Collection. The specimen is in good condition, well observable in dorsal aspect.

Some additional features:

Dorsal aspect (Fig. 46): Rostrum elongate, behind the rostral apex the outline slightly concave, behind this part two small incisions visible. Lamellae slightly asymmetrical, left inner cuspis completely rounded, the right one with a short, sharp apex. Both outer cuspides comparatively short but

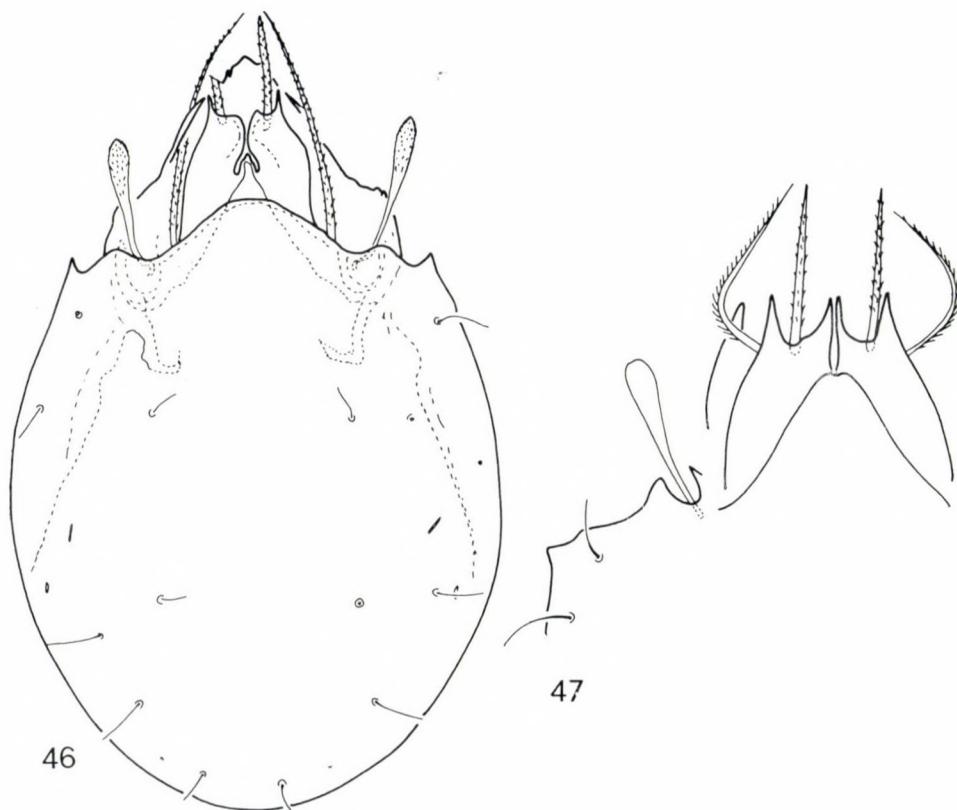


Fig. 46. *Lamellobates molecula* (BERLESE, 1916): dorsal side. — Fig. 47: *Paralamellobates misella* (BERLESE, 1910): prodorsum

narrow and sharply pointed. Lamellar setae spiniform, well barbed, interlamellar setae setiform, reaching to the end of lamellar one, rarely pilose. Sennillus clavate, its surface barbed. Setae of the notogaster typical for this genus.

R e m a r k s: This species is closely related to the type of the genus *Lamellobates* HAMMER, 1958 (*L. palustris* HAMMER, 1958) and to *L. angolensis* BALOGH, 1958. The identification of these species is highly problematic and the study of the types is necessary. The single feature which I am able to mention to distinguish these species is the shape of the rostrum.

Paralamellobates misella (BERLESE, 1910) (Fig. 47)

Oribatella misella BERLESE, 1910: 263. — *Oribatella misella*: CASTAGNOLI & PEGAZZANO 1985: 256.

According to CASTAGNOLI & PEGAZZANO (1985) several slides of this species are present in the Collection, of which I was able to study the type (no. 129/40), labelled "tipico" (original designation by BERLESE), and the slides nos. 145/24 and 156/32. Unfortunately, all specimens are damaged, difficult to study. In spite of this disadvantage, it is clear that this species is identical with or stands very near to *P. ceylanicus* (OUDEMANS, 1915). Further investigations in order to clearly separate the genera *Lamellobates* HAMMER, 1958 and *Paralamellobates* BHADURI et RAYCHAUDHURI (1968) are unavoidable (see also: ENGELBRECHT 1986).

CERATOKALUMMIDAE BALOGH, 1970

Achipterina BERLESE, 1916 stat. n.

Achipterina BERLESE, 1916 (subgen. n.): 58. — *Ceratokalumma* BALOGH 1970: 324, syn. n. — *Ceratokalumma*: J. BALOGH et P. BALOGH 1988: 192.

A d d i t i o n a l d i a g n o s i s: Lamellae decurrent marginally, lamellar cuspis removed far from each other. Lamellar cuspides with two apices, inner apex longer than the outer one. A weak translamella present. Pteromorphae movable, one pair of setae (c_2) arising on them. Four pairs of scarcely observable areae porosae present, 10 pairs of aggenital setae. Monodactylous.

T y p e s p e c i e s: *Achipteria* (*Achipterina*) *oribatelloides* BERLESE, 1916.

R e m a r k s: Only one difference worth of mentioning was establishable between BERLESE's and BALOGH's taxa: the length of the interlamellar setae. But this feature is applicable only at species level. Therefore *Ceratokalumma* BALOGH, 1970 is a junior synonym of *Achipterina* BERLESE, 1916.

Achipterina oribatelloides (BERLESE, 1916) (Fig. 48)

Achipterina (Achipterina) oribatelloides BERLESE, 1916: 58. — *Achipterina (Achipterina) oribatelloides*: CASTAGNOLI et PEGAZZANO 1985: 288.

The specimen in the typus-slide (no. 159/50, "tipico") is in excellent condition. Although some important characters from the ventral regions are not visible, the identification of this taxon presents no difficulty.

Some additional features:

Rostral setae straight, lamellar setae curved inwards, slightly flagellate, Interlamellar setae long, reaching to the rostrum. Sensillus long, clavate, gradually widening anteriorly. A weak sculpture of foveolae ornaments the notogaster. It is hardly observable. Some wrinkles are also visible on the pteromorphae.

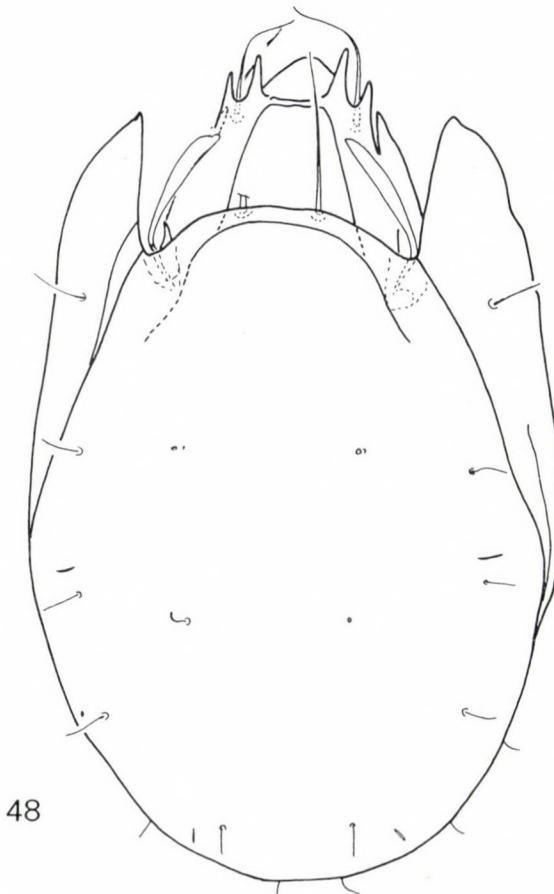


Fig. 48. *Achipterina oribatelloides* (BERLESE, 1916): dorsal side

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EPITRAGINI FROM IRAN (COLEOPTERA, TENEBRIONIDAE)*

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Locality data of 8 species belonging to 3 genera of *Epitragini* are listed from Iran. *Cyphostethe jelineki* sp. n. and *Trichosphaena compactilis* sp. n. are described. New synonymy: *Trichosphaena zarudniana* SEMENOW et SCHUSTER, 1938 = *Tr. zarudnyi* BOGATSHEV, 1949. *Epitrichia iranica* BOGATSHEV, 1967 is transferred to *Trichosphaena*. With 6 original figures.

Species of *Epitragini* are exceptional within *Tentyriinae* as they are mostly winged and not strictly restricted to arid and semiarid habitats but well-represented also in tropical regions. Nevertheless, majority of Old World species is found in dry areas. Winged status is considered to be characteristic of the more generalized forms of Tenebrionidae (DOYEN 1972); *Epitragini* thus appears to be one of the most primitive tribes of *Tentyriinae*. Members of the tribe inhabit the Americas from the Southern United States to South Argentina (the bulk of the known species), the southern parts of the Palearctic region from North Africa through Middle Eastern countries, Middle and Central Asia to India and North Thailand as well as tropical and southern parts of Africa including Madagascar.

The Czechoslovak—Iranian entomological expeditions produced a small but interesting epitragine material. These specimens complemented with additional Iranian material housed in the Muséum d'Histoire Naturelle in Paris provide fresh localities for species which were known mostly from types only. Two Iranian specimens belonging to *Trichosphaena* from the British Museum (Natural History) have also been treated and proved to be new.

Depositories of the studied specimens are indicated by the following four-letter abbreviations in the text:

- BMNH — British Museum (Natural History), London, United Kingdom.
HNHM — Hungarian Natural History Museum, Budapest, Hungary.
MNHN — Muséum d'Histoire Naturelle, Paris, France.
NMPR — National Museum in Prague, Czechoslovakia.

* * *

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* Results of the Czechoslovak—Iranian entomological expeditions to Iran 1970, 1973 and 1977.

CHECKLIST OF IRANIAN EPITRAGINI

- Cyphostethe (Cyphostetha) belutschistanica* KASZAB, 1957: 64.
Cyphostethe (Cyphostetha) iranica KASZAB, 1962: 302.
Cyphostethe (Cyphostethoides) brunnea KASZAB, 1962: 303.
Cyphostethe (Cyphostethoides) jelineki sp. n.
Cyphostethe (Cyphostethoides) semenovi BOGATSHEV, 1947: 80.
Himatismus (Cirimosphaena) villosus HAAG-RUTENBERG, 1870: 90.
Trichosphaena (Trichosphaena) compactilis sp. n.
Trichosphaena (Trichosphaena) iranica (BOGATSHEV, 1967), comb. n. (original combination:
Epitrichia iranica BOGATSHEV, 1967: 350).
Trichosphaena (Trichosphaena) persica SCHUSTER, 1935: 23.
Trichosphaena (Trichosphaena) zarudniana SEMENOW et SCHUSTER in SCHUSTER, 1938: 80 =
zarudnyi BOGATSHEV, 1949: 277, syn. n.

FAUNISTICAL PART

The locality numbers of Czechoslovak—Iranian expeditions as well as localities of other collectings are shown in Fig. 1.

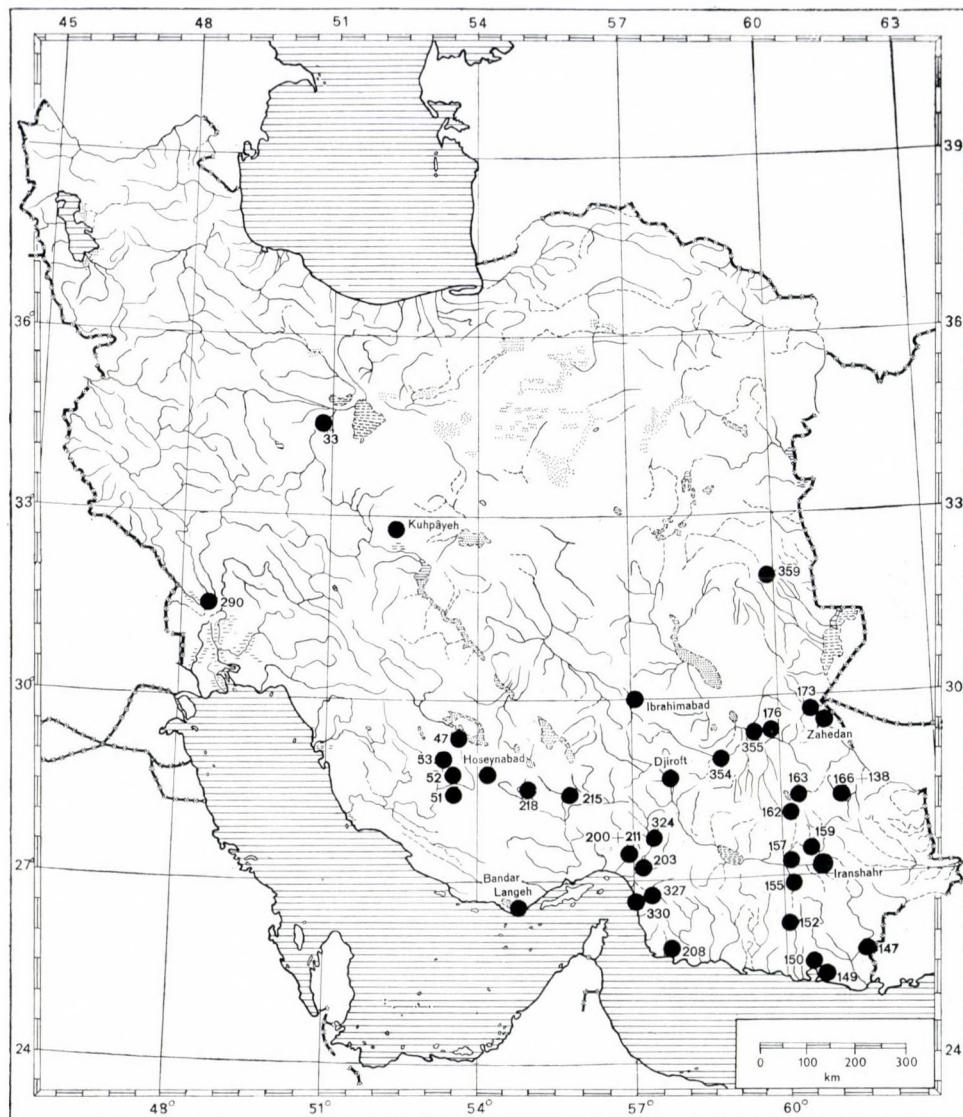
Cyphostethe belutschistanica KASZAB — SE Iran, Bahu-Kalat, 3—4. IV. 1973 (Loc. no. 147) (2, NMPR); SE Iran, 30 km N Bampur, 12—13. IV. 1973 (Loc. no. 159) (5, NMPR; 3; HNHM ex NMPR); SE Iran, 18 km N Bazman, 13—14. IV. 1973 (Loc. no. 162) (1, NMPR); E Iran, 37 km SW Zahedan, 22—23. IV. 1973 (Loc. no. 173) (3, NMPR); S Iran, Minab, 19—20. V. 1973 (Loc. no. 203) (1, NMPR); S Iran, 7 km W Kahkom, 27—28. V. 1973 (Loc. no. 215) (3, NMPR); Iran, Ispahan, Kuhpâyeh, VI. 1966, R. BÉNARD (5, MNHN; 1, HNHM ex MNHN); Iran, W Laizengou, 14. III. 1964, Amygdalus scoparius, G. REMANDIÈRE (1, MNHN). — Distribution: Iran.

Cyphostethe brunnea KASZAB — N Iran, Kushk-e Nosrat, 28. VI. 1970 (Loc. no. 33) (4, NMPR); SW Iran, Bachtegan, 30 km E Sahlabad, 7. VII. 1970 (Loc. no. 47) (11, NMPR; 6, HNHM ex NMPR); S Iran, Jahrom (north), 9. VII. 1970 (Loc. no. 51) (1, NMPR); S Iran, 5 km W Jahrom, Rudkhaneh-ye Shur, 9—10. VII. 1970 (Loc. no. 52) (7, NMPR; 1, HNHM ex NMPR); S Iran, Aliabad, 75 km NW Jahrom, 10.VII.1970 (Loc. no. 53) (3, NMPR); SE Iran, Bahu-Kalat, 3—4. IV. 1973 (Loc. no. 147) (5, NMPR; 1, HNHM ex NMPR); SE Iran, Chah Bahar, 5—6. IV. 1973 (Loc. no. 149) (1, NMPR); SE Iran, 13 km SSE Nikhsahr (riv.), 8—9. IV. 1973 (Loc. no. 152) (5, NMPR; 1, HNHM ex NMPR); SE Iran Ghasemabad, 10 km Bampur (vall.), 11—12. IV. 1973 (Loc. no. 157) (2, NMPR); SE Iran, 30 km N Bampur, 12—13. IV. 1973 (Loc. no. 159) (3, NMPR); S Iran, Hassan Langi, 16—17. V. 1973 (Loc. no. 200) (2, NMPR); S Iran, 16 km N Jask, 22—23. V. 1973 (Loc. no. 208) (3, NMPR); S Iran, Hassan Langi, 24—25. V. 1973 (Loc. no. 211) (1, NMPR); S Iran, 7 km W Kahkom, 27—28. V. 1973 (Loc. no. 215) (3, NMPR); S Iran, 12 km NW Kahgah, 21—22. IV. 1977 (Loc. no. 305) (3, NMPR); S Iran, Hassan Langi, 9—10. V. 1977 (Loc. no. 324) (9, NMPR; 1, HNHM ex NMPR); S Iran, Senderk, 220 m, 12—13. V. 1977 (Loc. no. 327) (3, NMPR); C Iran, Fahraj, 2. VI. 1977 (Loc. no. 354) (1, NMPR); E Iran, Kahrak, 2—3. VI. 1977 (Loc. no. 355) (3, NMPR); E Iran, 25 km NNW Shusf, 6. VI. 1977 (Loc. no. 359) (1, NMPR). — Distribution: Iran.

Cyphostethe iranica KASZAB — E Iran, Kahrak, 23—24. IV. 1973 (Loc. no. 176) (3, NMPR; 2, HNHM ex NMPR); Iran, Iranshar, 14. IV. 1965, Mission Franco-Iranienne (1, MNHN); Iran, Ispahan, Kuhpayeh, VI. 1966, R. BÉNARD (1, MNHN). — Distribution: Iran.

Cyphostethe jelineki sp. n. — See description, p. 62.

Himatismus villosus HAAG-RUTENBERG — SE Iran, Khash, 28. III. 1973 (Loc. no. 138) (2, NMPR); SE Iran, Bahu-Kalat, 3—4. IV. 1973 (Loc. no. 147) (12, NMPR; 4, HNHM ex NMPR); SE Iran, 13 km SSE Nikshahr (riv.), 8—9. IV. 1973 (Loc. no. 152) (2, NMPR); SE Iran, 30 km N Bampur, 12—13. IV. 1973 (Loc. no. 159) (1, NMPR); SE Iran, 9 km S Espaneh, 10. IV. 1973 (Loc. no. 155) (1, NMPR); SE Iran, Khash, 15—16. IV. 1973 (Loc. no. 166) (3, NMPR); S Iran, 16 km N Jash, 22—23. V. 1973 (Loc. no. 208) (1, NMPR); S Iran, Senderk, 220 m, 12—13. V. 1977 (Loc. no. 327) (1, NMPR); Iran, Bandar Langeh, 25. III. 1965, Mission Franco-Iranienne (1, MNHN); Iran, Djiroft, 8. III. 1961, G. REMANDIÈRE (1, MNHN); Iran, Ibrahimabad, Sud de Kerman, 12. III. 1961, G. REMANDIÈRE (1, MNHN); Iran, Khash, 7. IV. 1965 Mission Franco-Iranienne (2, MNHN; 1, HNHM ex MNHN); Iran, Orzouhich, III. 1961,



Trichosphaena zarudniana SEMENOW et SCHUSTER — SE Iran, 30 km N Bampur, 12—13. IV. 1973 (Loc. no. 159) (6, NMPR; 2, HNHM ex NMPR); SE Iran, 30—45 km NNE Bazman, 14. IV. 1973 (Loc. no. 163) (1, NMPR); S Iran, Ziarat, 23 km NWN Bila'i, 14—15. V. 1977 (1, NMPR); Iran, Hoseynabad, 21. IV. 1965, Mission Franco-Iranienne (1, MNHN); Iran, Djiroft, 2. IV. 1965, Mission Franco-Iranienne (1, MNHN); Iran, Minab, 31. III. 1965, Mission Franco-Iranienne (3, MNHN; 1, HNHM ex MNHN); Iran, 100 km Zahedan, 4. IV. 1965, Mission Franco-Iranienne (1, MNHN). — Distribution: Iran.

TAXONOMICAL PART

Cyphostethe (Cyphostethoides) jelineki sp. n.

(Figs 2—3)

Body shape typical of *Cyphostethe*. Colour dark castaneous, head and pronotum blackish. Length 9.8 mm.

Head with eyes flat, genae between eyes and clypeal suture a little longer than length of eyes in dorsal aspect; frontal punctures elongated ovoid, separated by 1.5—2 diameters; clypeal punctures finer; antennae with 2nd segment a little shorter than 4th; 3rd segment about 1.5× as long as 4th. — Pronotum distinctly transverse, evenly convex; width-to-length ratio as 32 : 22; widest point about at the middle; anterior margin nearly straight; posterior margin weakly bisinuate; lateral margins evenly arcuate, well-visible

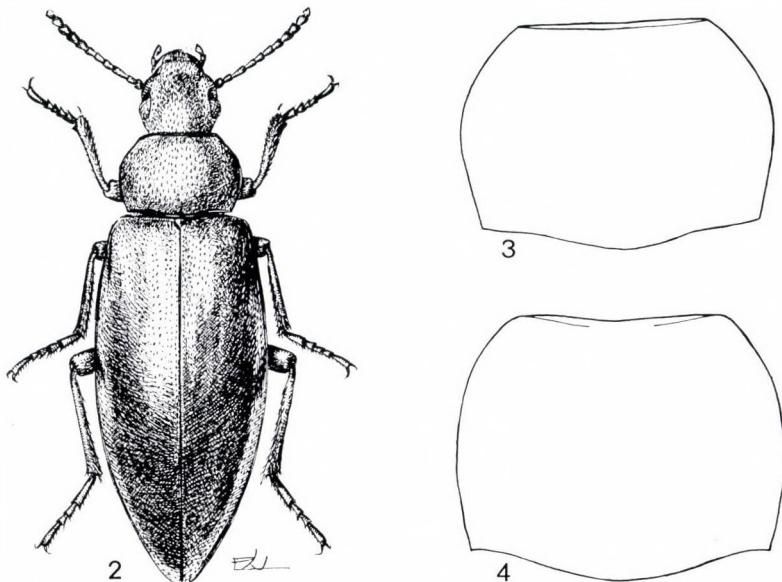


Fig. 2. *Cyphostethe jelineki* sp. n. — Figs 3—4. Pronotal outlines: 3 = *Cyphostethe jelineki* sp. n., 4 = *C. semenovi* BOGATSHEV

throughout the whole length in dorsal view; posterior angles obtuse-angled; anterior margin (Fig. 3) completely bordered, i.e. bordering not interrupted at the middle; discal punctures shortly ovoid, separated by 2–4 diameters; in lateral portions, punctures much coarser and denser to subcontiguous; surface among punctures distinctly microreticulate and less shiny. — **S c u t e l l u m** parallel-sided. — **E l y t r a** with length-to-width ratio as 97 : 45; punctures rounded, smaller and sparser than those of pronotum; irregularly scattered, with hardly traceable parts of longitudinal rows; interspace much less microreticulate than that on pronotum. — **L e g s** simple; fore tibiae straight and not broadened; hind tibiae with 1st segment about as long as 4th. — **H a b i t u s:** Fig. 2.

H o l o t y p e, ♀, labelled as follows: "S Iran, Bezan, 15 km NW Furk, 1000—14 000 m 28—29. 5. 1973", "Loc. no. 218 Exp. Nat. Mus. Praha", "Holotypus ♀ Cyphostethe (Cyphostethoides) jelineki Merkl, 1991" [red]. Deposited in NMPR.

D e r e v a t i o n o m i n i s — The species is dedicated to DR. J. JELINEK, the outstanding expert of Nitidulidae who was a participant of the Czechoslovak—Iranian expeditions.

R e m a r k s — With the obtuse-angled posterior angles of pronotum, this species would run to *Cyphostethe semenovi* BOGATACHEV in KASZAB's (1979) key. The new species, however, has a much more transverse pronotum (more elongate in *semenovi*) and the anterior margin of pronotum is completely bordered (bordering interrupted at the middle in *semenovi*, Fig. 4).

In HOBERLANDT's (1981) report on the Second Czechoslovak—Iranian expedition, the following data are given under the locality number 218:

"No. 218, Gardaneh-e Besan (pass) (28° 27' N, 55° 06' E), 15 km. N. W. of Furk, 1000—1400 m., 28.—29. 5. 1973, Kerman (province), S. Iran. Mountain stony slopes with sparse xerophyloous vegetation with Amygdalus eleagnifolia, Amygdalus scoparia, Pistacia khinjuk, Otostegia aucheri, Astragalus cornutus, Acanthophyllum glumaceum, Convolvulus acanthocladus, Anvillea garcini, Dichyophora persica; rocks with growth of Onosma orientale, Alcea aucheri, Launaea oligocephala, Zataria multiflora, Lactus orientalis, Acer monspessulanum ssp. persicum. Collected from the vegetation and below it, by light trap."

Trichosphaena (Trichosphaena) compactilis sp. n. (Fig. 5)

Body less elongate. Colour reddish brown, legs paler; the whole upper and lower surface covered with greyish, elongate, scale-like hairs. Length 6.5—6.8 mm.

H e a d with eyes flat and small; genae slightly prominent; clypeus weakly convex; cranial surface with flat, round, closely set punctures; antennae not surpassing middle of pronotum; 2nd segment longer than 4th; 3rd segment twice as long as 4th. — **P r o n o t u m** distinctly transverse, much broader than head,

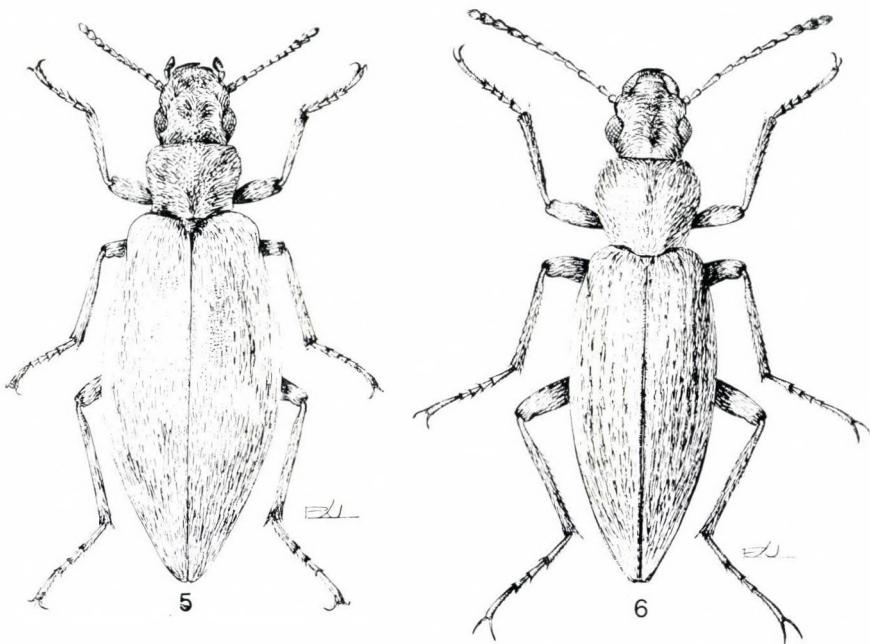


Fig. 5. *Trichosphaena compactilis* sp. n. — Fig. 6. *Trichosphaena iranica* (BOGATSHEV)

evenly convex; width-to-length ratio as 25 : 20; widest point anterior to middle; lateral sides evenly arcuate in anterior half, deeply emarginate in front of base, so hind angles rectangular; puncturation as that of head; hairs directing inwards on lateral portions, backwards at the middle. — *Scutellum* rounded triangular. — *Elytra* fairly convex, elongate ovoid, with length-to-width ratio as 97 : 47; width at humeral angles much less than maximum width posterior to middle; puncturation much finer and more shallow than that of pronotum, hardly visible; no punctural rows; vestiture evenly scattered, not vittate. — *Legs* simple; hind tarsi with 1st segment a little longer than 4th. — *Habitus*: Fig. 5.

Holotype, ♀, labelled as follows: "PERSIA: NR. SIRJAN. 14. V. 1933. H.E.J. Biggs.;" "Brit. Mus. 1934—329"; "Holotypus ♀ *Trichosphaena* (*Trichosphaena*) *compactilis* Merkl, 1991" [red]. Deposited in BMNH. — **Paratype**, ♀, labelled as holotype, except paratype label. Deposited in HNHM.

Derivation nominis — Latin *compactilis* (= squat).

Remarks — The new species clearly differs from *Trichosphaena zarudniana* by having a stouter shape of body (much slenderer in *zarudniana*) transverse pronotum (not so in *zarudniana*) and evenly scattered elytral vestiture (vittate in *zarudniana*). Neither the type nor any identified specimens of

Trichosphaena persica SCHUSTER have been studied (the reasons see under *Tr. zarudniana*). It is clear, however, from the original description that *persica* has vittate elytral vestiture and considerably larger body size (10.5—12 mm in contrast with less than 7 mm of *compactilis*).

Trichosphaena iranica (BOGATSHEV, 1967), comb. n.
(Fig. 6)

Epitrichia iranica BOGATSHEV, 1967: 350; KASZAB 1976: 101. — *Trichosphaena arabica* KASZAB: Kaszab 1979: 260 (misidentification partly).

Absence of hind wings and humeral callus are fundamental features separating *Epitrichia* from other Palearctic genera of *Epitragini*, as emphasized by REITTER (1916), BOGATSHEV (1967) and KASZAB (1976). *Epitrichia iranica* was inserted in a key of three species by BOGATSHEV (1967) but is missing from KASZAB's (1976) key — he stated in a footnote that the species was unknown to him at the time when he prepared his paper.

DR. G. MEDVEDEV kindly lent me the unique holotype of *Epitrichia iranica* for study. Surprisingly, it is clearly winged and has well-developed humeral callus. The two specimens of NMPR mentioned in the "Faunistical Part" are undoubtedly conspecific with the type and are also winged. Therefore *iranica* should be removed from *Epitrichia* and transferred to *Trichosphaena*.

Two specimens housed in HNHM from Saudi Arabia were identified as *Trichosphaena arabica* KASZAB by KASZAB. Actually these belong to *Trichosphaena iranica* as recognized later by KASZAB himself. They are labelled as follows: "Riyadh-Damman km 85 26.4."; "Saudi Arab. 1976 WITTMER, BÜTTIKER"; "arabica Kaszab ♂ det. Kaszab"; "iranica Bog. det. Kaszab"; "Trichosphaena iranica (Bogatshev, 1967) det. O. Merkl, 1991".

The shape of pronotum distinguishes definitely *iranica* from the other Iranian *Trichosphaena* as it is subcordiform, not transverse and lateral sides sinuate very weakly in front of base (Fig. 6).

Trichosphaena (Trichosphaena) zarudniana SEMENOW et SCHUSTER, 1938

Trichosphaena zarudniana SEMENOW et SCHUSTER in SCHUSTER 1938: 80. — *Trichosphaena zarudni* BOGATSHEV, 1949: 277, *syn. n.*

According to KULZER (1963), type specimens of *Trichosphaena persica* and *zarudniana* are deposited in the Museum G. Frey (Tutzing bei München, BRD). Owing to the uncertain status of that museum and the policy of not lending material, these types were inaccessible at the moment of preparing this paper. Fortunately, a syntype of *zarudniana* is found in the HNHM. Further-

more, MR. M. CARL kindly sent me a specimen from the Zoologische Staats-sammlung (München, BRD) which was identified and labelled by A. SEMENOV-TIAN-SHANSKY as *zarudniana*. Although the species was described by SCHUSTER (1938), SEMENOV-TIAN-SHANSKY was the first who recognized it as a new species and the name “*zarudniana*” comes from him. The identification is therefore considered authentic.

On the other hand, Dr. G. MEDVEDEV generously handed over a syntype of *Trichosphaena zarudnyi* BOGATSHEV to the collection of HNHM. There is no doubt that this specimen is conspecific with the above-mentioned *zarudniana*, so the name “*zarudnyi*” is relegated to junior synonymy.

It is worth mentioning that this syntype bears a label reading “*Trichosphaena zarudniana* sp. n. Bogacev det.” handwritten by BOGATSHEV himself. He must have named it *zarudniana* first but obviously in order to avoid homonymy, he described it as *zarudnyi*. The reason for coincidence must be the fact that the collector of both material is the same person — namely N. ZARUDNY.

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SUPPLEMENT TO THE REVISION OF THE
GENUS CEROPALES LATREILLE, I.
(HYMENOPTERA, CEROPALIDAE)

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Two species are described as new: *Ceropales mochii* sp. n. ♂ (from Egypt) and *C. atra* sp. n. ♀ (from Botswana). Further distributional data from Mediterranean region, South America and South Africa as well as remarks concerning the variability of some still less known and a few years ago published taxa are given. With 5 original figures.

After publishing the revision of the world species of the large genus *Ceropales* with 132 species and subspecies, I examined a lot of specimens originating from the different zoogeographic regions, kindly sent me by DR. Q. ARGAMAN, DR. A. MENKE, DR. R. WAHIS and MR. A. ROLANDO. From the rich material some valuable species were found, which were unknown in the under-mentioned countries. By these means the knowledge of the distribution of the still less known species, as well as the spreading data of the recently described taxa proved to be increased. Besides the remarks concerning the variability of some species two new species are described: *Ceropales mochii* sp. n. ♂ (from Egypt) and *C. atra* sp. n. ♀ (from Botswana) (*Ceropales* s. str.: in the *albicincta*- and in the *helvetica*-group).

Subgenus *Ceropales* s. str.

THE MACULATA-GROUP

Ceropales maculata maculata (FABRICIUS, 1775): 1987, MÓCZÁR, Acta Zool. Hung. 33: 125, 128, 131 ♀♂ Fig. 1. — Specimens examined: Israel, Mikhmoret, 20 October 1980, Q. ARGAMAN, 1♀ + 1♂ (Coll. ARGAMAN). The white spots on propodeum and on tergite 1 very small (♀). Widely distributed in the Palearctics, first record for Israel.

THE ALBICINCTA-GROUP

Ceropales albicincta albicincta (Rossi, 1790): 1987, MÓCZÁR, Acta Zool. Hung. 33: 142, 143–146 ♀♂. — Specimens examined: Bulgaria, Untere Kamtschija, 1–30 June 1935, 2 ♀ (Berlin). Although this species is widely distributed from Central-, partly from South Europe to Iran and Japan, it is the first record for Bulgaria.

Ceropales bicoloripes bicoloripes MÓCZÁR, 1967: 1987, MÓCZÁR, Acta Zool. Hung. 33: 142, 147–148 ♀♂. — Specimens examined: Israel, Beit Lid 25 March 1981 1♂, K Vithin 8 August 1980 1♀ and Taret Zevi 8 July 1981 1♀, W Tara 8 May 1986 1♂, all Q. ARGAMAN (Coll. ARGAMAN); Deganya 5 March 1981 1♀ and Jerusalem 1 June 1981 1♂ (Budapest). These specimens partly differ from the type material as follows ♀: Lower face entirely white without

small black spots below antennae; basal half of mandible entirely white (1 ♀) or white with very narrow black spot on lower margin (2 ♀); white bands of tergites remarkably narrower than and in holotype, even interrupted medially on tergite 1 and mesonotum without a white spot, similarly to the paratype also from Mongolia; all coxae black, not reddish, fore femur black basally (3 ♀); all trochanters entirely black, except the white narrow apical margin. ♂: supracypeal with two triangular and rather large black spot below antennae (2 ♂) in the third male entirely white; mandible nearly entirely white basally (1 ♂); mesepisternum sometimes (2 ♂) with white spot below. Among the specimens reported previously only 1 ♂ was known from this species. Distributed in Mongolia, Russian SSR and Greece. First record for Israel.

Ceropales bipartita bipartita HAUPT, 1962: 1987, Móczár, Acta Zool. Hung. 33: 143, 150—151 ♀♂. — Specimens examined: Israel, Bet Guvrin 27 July 1984 Q. ARGAMAN, 2 ♂ (Coll. ARGAMAN and Budapest). New data for the richely yellow coloured species described from Israel.

Ceropales bipartita flava Móczár, 1987: Móczár, Acta Zool. Hung. 33: 143, 151—152 ♀♂. — Specimens examined: Spain. Andalusien, STAUDINGER, 1 ♂ (Berlin). Addition to the description: not only the frons, but pronotal disc, mesonotum and mesepisternum deeply and densely punctured. Only 7 males are known. Distributed in Portugal, South France, Turkey and Cyprus.

Ceropales bipartita mediterranea Móczár, 1987: Móczár, Acta Zool. Hung. 143, 152—153 ♀♂. — Specimens examined: Sardinia, Sorgono leg. KRAUSSE, 1 ♀ (Wien). Identical with the published single ♀ paratype (Sardinia: Ploage). Herewith 1 ♂ from Tunisia: Taborka 28 July 1975 (Coll. WAHIS) differs from the allotype (also from Tunisia) by the nearly entirely yellow pronotum, by the large and quadrangular yellow spot on mesonotum posteriorly in the middle and by the larger spot on propodeum laterally. This subspecies is distributed from Morocco to Tunisia and Sardinia.

Ceropales mochii sp. n. ♂ (Figs 1—4)

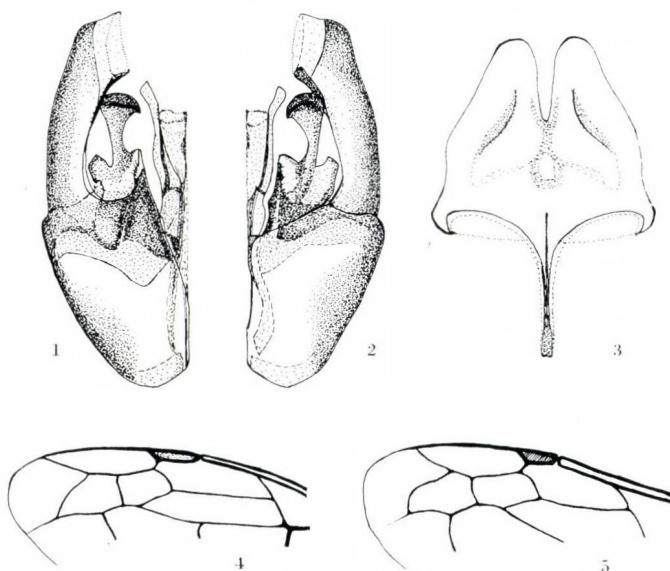
Specimens examined: "Coll. A. MOCHI 5. VII. 58 Amrye Alex. Egitio" 1 ♂, holotype (Coll. Dr. A. MOCHI, Rome).

♀. — Unknown.

♂. — Length 8.3 mm. Black, richely coloured with yellow, partly with ferruginous. The broad and partly lanceolate spot in ocular sinus continues broadly downwards and dissolves into the lower face, including labrum, basal half of mandible and a small spot between antennae; narrow streak on outer orbit; lower side of antennal joints 1—2, nearly the whole pronotal disc, lateral margin narrowly, basal hump and upper margin of pronotal tubercle, tegula, a large spot on mesonotum posteriorly, on scutellum and postscutellum, lateral corners of propodeum, a small spot on episternum posteriorly, broad bands on tergite 1 deeply emarginated medially, on tergite 2—4, moderately emarginated on both sides, large median spots on tergites 5—7, anterior sides of coxae 1, narrow streaks on outer sides of coxae 2—3, gradually smaller and more apical spots on lower sides of femora 1—3, streaks on outer sides of tibiae and metatarsi 1—2, as well as tarsal joints 1—3 of middle leg, yellow; margin of the yellow streaks of spots here and there tinted with ferruginous, e.g. on pronotum, on outer orbit etc. Ferruginous parts: antenna, (only a small spot blackish infuscated on joints 1—2 basally and on 13 apically), apical half of mandible, except teeth, tergite 1 nearly entirely, tergite 2 partly and hardly

laterally, the rest of legs (including trochanters), except small spots on coxae basally, the short basal ring on tarsal joints 2—4 of hind legs. Wings slightly light brownish infuscated, veins, pterostigma brown. Length of cubital (=submarginal) cells 2 + 3 together hardly longer than that of radial cell; cubital cell 2 nearly quadrangular (Fig. 4), lower margin about 1.5 times as long as broad (20 : 13); and as long as four-fifth the length of the cubital cell 3; the latter less than half as long as lower margin (10 : 25), 3rd cubital vein only moderately curved. Body with very fine silvery pubescence.

H e a d distinctly broader than long (between vertex and lower margin of clypeus) (29 : 23), and broader than pronotum (measured behind basal hump, in superior view) (29 : 22). Head gradually narrowed behind eyes. Ocelli in a right angle, separated from each other by two-thirds of the distance between an ocellus and an eye, POL : OOL = 8 : 12. Frons flat, together with clypeus and labrum with very dense and microscopical fine, as well as with scattered, shallow and fine punctures, surface of frons mat, of clypeus weakly shining; frontal sulcus present in a narrow shining line posteriorly. Lower margin of clypeus slightly arcuate. Outer orbit rather narrow, moderately shining with some very fine punctures. Labrum half as long as clypeus, lower margin broadly arcuately rounded. — **A n t e n n a** shorter, reaching the middle of propodeum. Length (and breadth) proportions of antennal joints 1—13 = = 9(8): 5(5): 11(7): 11(7): 11(7): 10(7): 10(7): 10(7): 9(7): 9 (7.5): 9(7.5): 9(7.5): 12(7). — **P r o n o t a l d i s c** short, posterior margin also flat, deeply arcuately emarginated; pronotal tubercle hardly elevated, basal hump remarkably convex, surface concave between them, with 6—7 longitudinal wrinkles between the latter and the broad smooth posterior margin, then with rather deep punctures between tubercle and hump, in another place with scattered and moderate punctures as well as with very dense and microscopical fine punctures. Mesonotum in some places, scutellum, postscutellum partly, nearly the whole surface of mesepisternum with deep and denser, partly with close punctures, where interspaces mostly narrower than punctures, latter with very dense and microscopical fine punctures. Postscutellum hardly impressed medially. Scutellum and postscutellum slightly raised over the level of the notum, steeply sloping the postnotum. Postnotum rather broad medially, slightly narrowed laterally, with a shining line medially, surface mat, both sides partly with hardly distinct and fine longitudinal wrinkles. Propodeum moderately convex on its one-fifth and gradually flattened towards abdomen; surface mat, more or less rough, with scattered and rather deep punctures especially around spiracles, also with some very short and fine clathrate on horizontal part basally, as well as slightly longer laterally, there nearly reaching spiracles. Lateral side of propodeum mat with some punctures, lower corner with some wrinkles, metapleural suture slightly distinct. Sternal lobe deeply excised medially. — **A b d o m e n** smooth, finely reticulated, slightly shining. Ster-



Figs 1—4. *Ceropales mochii* sp. n. ♂: 1—2 = male genitalia in ventral and dorsal view; 3 = sternite 9, 4 = distal part of left fore wing. — Figs 5. *C. atra* sp. n. ♀: distal part of left fore wing (Original).

nite 9 remarkably excised apically (Fig. 3). — Male genitalia: Figs 1—2. — Legs as well as claws of fore and middle tarsi normal with minute subapical tooth, except the inner tooth of fore leg, which being asymmetric, deeply bifid and the last tarsal joint deeply emarginated inside close to it.

This species partly reminds of *C. ruficornis* GUSSAKOVSKIJ, 1931 by the propodeum and colour, but the sculpture not coarse, the rugosity of the latter much finer in *mochii*, having no distinctly longitudinal and diagonal wrinkles, and especially by the sternite 9 not rounded apically. It belongs to the *albicincta*-group on the basis of the sternite 9 remarkably excised apically (which character being uniform in all species of the group, except *C. altaica* F. MORA-WITZ, 1888), and on the basis of sculpture, and colour of body etc.

This species is related to *C. bipartita mediterranea* MÓCZÁR, 1987, but differs chiefly by propodeum having no mostly fine coriaceous sculpture with shallow punctures around spiracles and not clathrate basally and laterally; by lateral side of pronotum having no 3 wrinkles; by tergite 1 not black with yellow posterior bands, by having coxae largely and base of trochanters not black etc. It is near to *C. albicincta seraxensis* RADOSZKOWSKY, 1893, but differs by propodeum having no fine sculpture, by face having no scattered and rather deep punctures, by segment 2 not largely ferruginous, by pronotum having no nearly entirely yellow colour etc.

Ceropales tectigera MÓCZÁR, 1987: MÓCZÁR, Acta Zool. Hung. 33: 43, 150 ♂. — Specimen examined: Greece Turquie, Salonique Collection le Moult 1 ♂, (Budapest). It is easily recognisable especially by the roof-shaped last tergite with a fine medial ridge. Only 2 ♂ known: holotype (from Azerbaijan SSR) and paratype (from Turkey). First record for Greece.

THE RUFICORNIS-GROUP

Ceropales ruficornis GUSSAKOVSKIJ, 1931: 1986, MÓCZÁR, Acta biol. Szeged. 32: 124, 130 ♀♂ Fig. 7. — Specimen examined: Turkey, Urfa, Halfeti 28 June 1987 R. HENSEN, 1 ♀ (Coll. WAHIS). Distributed from Russian SSR, S of Lake Aral to Cyprus. First record for Turkey.

THE VARIEGATA-GROUP

Ceropales latifasciata ARNOLD, 1937: 1986, MÓCZÁR, Acta biol. Szeged. 32: 126, 135 ♀♂. — Specimen examined: Cameroun, Jakiri, près ruisseau prairie alt. 27 July 1987 A. PAULY, 1 ♂ (Coll. WAHIS). It was described from Ethiopia, published also from Zaire. First record for Cameroun.

Ceropales ruficollis CAMERON, 1910: 1986, MÓCZÁR, Acta biol. Szeged. 32: 126, 135—136 ♀♂ Figs 4, 10. — Specimen examined: Tanzania, Mt. Kilimandjaro N of Marangu 1800—2700 m 6—7 March 1971 J. & M. LOURENS, 1 ♀ (Coll. WAHIS). It differs from the typical colour by mandible entirely black, except the red apex; by the ferruginous streak on mesonotum hardly discernible laterally. This species is known only in 5 ♀ and 5 ♂ in Tanzania and Kenya.

Ceropales variegata (FABRICIUS, 1798): 1986, MÓCZÁR, Acta biol. Szeged. 32: 125, 131 ♀♂ fig. 8. — Specimens examined: Umg. Tunis, 5 June 1913, 1 ♂ (Wien). Israel 3 ♂ + 2 ♀ (Coll. ARGAMAN), 1 ♀ (Budapest). This species widely distributed in the Palearctics, first record for Tunisia.

THE HELVETICA-GROUP

Ceropales africana MÓCZÁR, 1989: 1989, MÓCZÁR, Beitr. Ent., 39: 14, 16—19 Figs 1, 11, 19—20, 31—36. — Specimens examined: Botswana from July to January and April 1987 9 ♀ + 9 ♂ (Washington), 3 ♀ + 4 ♂ (Budapest). South Africa; Transvaal Klaserie December 1985, 1986 1 ♀ + 2 ♂ and Namibia, Malaise trap, 1 ♂ (Coll. WAHIS). This recently described species widely distributed nearly in the whole Central and South Africa.

Ceropales atra sp. n. (Fig. 5)

Specimen examined: "Botswana: Serowe Farmer's Brigade January 1987 Malaise trap PER FORCHHAMMER", 1 ♀ holotype (Washington).

♀. — Length 9.5 mm. Black, a rather large spot on ocular sinus, narrow streak along inner eye margin below, lower margin of clypeus, apical half of mandible, outer margin broadened upwards above, lower side of antennal joints 1—5 and joints 10—12 partly, margin of pronotum on every side, including the pronotal tubercle, except anteriorly and partly beneath the basal hump, tegula, spots on mesonotum posteriorly, on scutellum and on postscutellum brown, partly reddish brown; legs nearly entirely black, fore femur-tibia-tarsi reddish brown or dark brown partly and mainly below. Wings usually dark blackish brown, veins, pterostigma black, only costa of fore and hind

wings brown basally (Fig. 5). Length of cubital cells 2 + 3 together and that of radial cell equal length; cubital cell 2 remarkably oblong, its length about twice of its breadth, upper margin only one quarter shorter than lower margin (18 : 24); cubital cell 3 remarkably narrowed above, upper margin less than half as long as lower margin (9 : 25), 3rd cubital vein conspicuously curved before the middle. Abdomen black, tergites (especially the 1st) as trace of transverse band pale brownish translucent before posterior margin. Body with very fine and silvery pubescence.

Head distinctly broader than long (30 : 24) and broader than pronotum over the posterior margin, in superior view. Head conspicuously narrowed behind eyes. Ocelli in an acute angle, situated nearer to each other, distance of them half as long as that between an ocellus and the nearest point of eye, POL : OOL = 8 : 16. Frons slightly curved down, with a distinct narrow frontal sulcus on posterior half. Vertex, frons, supraclypeal area on both sides with deep, on frons dense punctures, interspaces here narrower than punctures for the greater part, surface only slightly shining with microscopical fine alutaceous sculpture, vertex and supraclypeal area less deeply punctured laterally, the area smooth and shining medially. Clypeus slightly convex, with gradually finer punctures downwards, lower margin broadly and hardly arcuated. Labrum triangular, remarkably convex and distinctly longer than length of clypeus medially (17 : 13). Outer orbit remarkably thickened before the middle with an unusual deep, broad and long orbital groove, this reaching beyond the three-quarters length of orbit, its surface smooth and polished. — Antenna as long as head and thorax together. All joints distinctly longer than their breadth, except the quadrangular joint 2. Length (and breadth) proportions of antennal joints 1—12 = 10(8): 5(5): 11(7): 12(7): 11(7): 10(7.5): 11(8): 10(8): 10(8): 9(8): 9(8): 12(8). — Pronotal disc with shallower, the concave lateral sides with deep and scattered punctures, disc strongly thickened, convex especially medially. Mesonotum with deep and scattered, the whole surface of mesepisternum with deep, very dense and strong punctures, interspaces narrower than punctures on some places. Scutellum, postscutellum smooth only with some fine punctures and remarkably raised over the level of the notum. Postnotum very short, transversely wrinkled. Propodeum conspicuously flat over its entire length, both sides of orifice slightly concave, surface distinctly semicircularly wrinkled, median sulcus broad only basally and extending narrowly as far as the middle of propodeum; lateral edge rounded and with deep and close punctures, also around spiracle; lateral side of propodeum partly smooth and unpunctured posteriorly, similarly to anterior part of metapleuron, elsewhere with deep and rather dense punctures. Metapleural suture partly developed, beginning from the pit of the suture. — Abdomen smooth, only moderately shining, lower margin of the last sternite straight and sharply pointed apically. — Hind coxa apressed, partly with deep, partly with fine scattered

punctures, outer side of hind femur with some deep punctures, in them minute bristles. Fore and middle claw with a short and minute subapical tooth, claw of hind tarsus strongly and rectangularly bent. Outer side of hind tibia with scattered short bristles.

This species is related to *C. variolosa* ARNOLD, 1937 and *C. spinolai* MÓCZÁR, 1989, and differs from them especially by the outer orbit having an unusual long and deep orbital groove, by the wings dark blackish brown, by the pronotal disc strongly thickened, by the frons, thorax having largely dense and deep punctures etc.

♂. — Unknown.

Ceropales lawrencei ARNOLD, 1937: 1989, MÓCZÁR, Beitr. Ent. 39: 16, 35—36 ♀♂ Figs 24, 27, 59. — Specimen examined: Senegal, Ndangane 20 February 1988 F. BORGATO, 1 ♂ (Coll. WAHIS). Addition to the description: the light colour of this specimen from Senegal more ivory white, not yellowish white as well as on head and thorax as in those from South Africa. Tergite 6 black, only a minute pale, yellowish white spot before posterior margin medially. Tergite 7 nearly entirely white. Median sulcus of propodeum reaching only the middle of the segment. Tergite 7 slightly impressed in the middle. Last abdominal sternite deep boat-like concave, over its whole surface inside, as well as narrowly incised apically. Only two males were known from this misinterpreted species. Distributed in the eastern part of South Africa. First record for Senegal.

Ceropales multipicta ARNOLD, 1937: 1989, MÓCZÁR, Beitr. Ent. 39: 14, 38—39 ♀♂ Figs 65—67. Specimens examined: Botswana; Serowe Farmer's Brigade, Malaise trap September 1986, August—September 1987 PER FORCHHAMMER 9♀ 2♂ (Washington), 4♀ + 1 ♂ (Budapest). It was known in some specimens from Namibia and Botswana.

Ceropales waltoni ARNOLD, 1937: 1989, MÓCZÁR, Beitr. Ent. 39: 12, 14, 42 ♀♂ Figs 72—74. — Specimens examined: Botswana, Serowe Farmer's Brigade, Malaise trap September—October, January, April, July PER FORCHHAMMER, 3♀ (Washington) 2♀ (Budapest). It was known in 8♀ from South Africa, against the new 5♀ specimens.

Subgenus **Hemiceropales** PRIESNER, 1969

Hemiceropales basirufa ROHWER, 1960: 1986, MÓCZÁR, Acta Zool. Hung. 32: 324, 342 ♀♂ Figs 39—42. — Specimen examined: Venezuela, Guarico Hato Masaguaral 3—10 May 1985 MENKE & CARPENTER, 1 ♂ (Budapest). Known from Peru, Guayana and Brazil. First record for Venezuela.

Ceropales brethesi BANKS, 1947: 1986, MÓCZÁR, Acta Zool. Hung. 32: 324, 339—340 ♀♂ Figs 29—31. — Specimen examined: Brazil, Pelotas 24 November 1956 R. S. do SUL-Brasil, C. BIEZANKO, 1 ♂ (Wien). Venezuela: Guarico Hato Masaguaral 11—19 May 1985 MENKE & CARPENTER 1♀ + 1 ♂ (Washington), 1♀ (Budapest). It was known from Argentina, Paraguay, Bolivia and Brazil. First record for Venezuela.

Ceropales chilensis SPINOLA, 1851: *Hemiceropales chilensis*: 1986, MÓCZÁR, Acta Zool. Hung. 32: 323, 335 Figs 22 ♀♂. — The lectotype and the paralectotypes were designated on the basis of the original material of five specimens from Chile and deposited in Geneva. Studying another SPINOLA's types I found 2♀ and 3♂ in the collection kindly sent me by PROF. V. PARENTI and A. ROLANDO from "Museo di Zoologia Sistematica" of Turin University. These specimens undoubtedly proved to be *C. chilensis*, but they bear neither labels of locality, nor that of another data, similarly to the specimens deposited in Museum of Geneva. I presume that they are also paralectotypes of this species.

Ceropales cribrata cribrata A. COSTA, 1881: *Hemiceropales cribrata cribrata*: 1986, MÓCZÁR, Acta Zool. Hung. 32: 321, 331—334 ♀♂ Figs 16—20. — Specimens examined: Israel; Banita 1 April 1982 1♀ + 1 ♂; 'En Hedva 15 May 1985, 1 ♂ leg. ARGAMAN (Coll. ARGAMAN) and Khan Yunis 12 April 1983, 1 ♂ (Budapest). This species is well known in Europe, Asia and Africa (including South Africa), notwithstanding this is the first record for Israel.

Subgenus **Priesnerius** MÓCZÁR, 1978

Ceropales arnoldi MÓCZÁR, 1988: *Ceropales (Priesnerius) arnoldi*: 1988, MÓCZÁR, Linzer biol. Beitr. 20: 126, 128—130 ♀♂ Figs 14—16, 25—27. — It was omitted from the page-proof of the article above, please insert in the description p. 129 as follows: "South West Africa, Namib/Naukluft Park Kuiseb R nr Gobabeb 28.34 S 15.03 E. 25—28 vii, 1983. Nat. Coll. Kuiseb Survey", "National Coll. of Insects Pretoria, S. Afr." 1 ♀ paratype (Pretoria). The number of specimens examined (p. 128) also changed to 7 ♀ from 6 ♀.

Ceropales deserticola PREISNER, 1955: *Ceropales (Priesnerius) deserticola*, 1988, MÓCZÁR, Linzer biol. Beitr. 20: 123, 131—132 ♀♂ Figs 5—6. — Specimens examined: Senegal, Ndangane 7 April 1986 F. BORGATO 1 ♀ + 1 ♂ (Coll. WAHIS). This species was known from Egypt. First record for the western part of the continent, for Senegal.

Ceropales kongoensis MÓCZÁR, 1988: *Ceropales (Priesnerius) kongoensis*: 1988, MÓCZÁR, Linzer biol. Beitr. 20: 126, 137—139 ♀♂ Figs 31—33. — Specimens examined: South Africa, Transvaal, Guernsey Farm, Klaserle 19—31 December 1985 M. SANBORNE 1 ♀ and Kruger N. P. 12—15 December 1985 W. R. MASON, Malaise trap 1 ♂ (Coll. WAHIS). This recently described species was known mainly in Central Africa. First record for South Africa.

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 MÓCZÁR, L. (1990): Revision of the Subgenus Bifidoceropales Priesner of the Genus Ceropales Latreille (Hymenoptera: Ceropalidae). — Acta Zool. Hung. **36**: 59—85.

FIRST SURVEY OF THE TRIASPIDINI SPECIES
OF THE INDO-AUSTRALIAN REGION
(HYMENOPTERA, BRACONIDAE: CALYPTINAE)

II. THE GENUS SCHIZOPRYMNUS FOERSTER, 1.

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(Received 9 March 1990)

Fourteen species of the genus *Schizoprymnus* FOERSTER are described as new to science from the Indo-Australian Pacific Region; they are the following with their distribution in brackets: *Sch. admirabilis* sp. n. (British North Borneo), *Sch. belairi* sp. n. (S Australia), *Sch. bimus* sp. n. (Philippines), *Sch. corniculiger* sp. n. (NE Australia), *Sch. deres* sp. n. (Laos), *Sch. doryphorus* sp. n. (Viet Nam), *Sch. irrepertus* sp. n. (Viet Nam), *Sch. reflexus* sp. n. (New Hebrides), *Sch. sedlacekorum* sp. n. (New Hebrides), *Sch. subutus* sp. n. (Philippines), *Sch. szelenyi* sp. n. (S. Australia), *Sch. torreador* sp. n. (British North Borneo), *Sch. urticus* sp. n. (Philippines) and *Sch. vissas* sp. n. (New Guinea). With 90 original figures.

***Schizoprymnus (Schizoprymnus) admirabilis* sp. n. ♀**
(Figs 1—6)

Description of the holotype ♀. — Body 3.6 mm long. Head in dorsal view transverse (Fig. 1), 1.85 times as broad as long, eye 1.75 times as long as temple, latter strongly rounded. Ocelli differing in form: fore ocellus round, hind pair of ocelli elliptic, distance between fore and hind ocelli as long as greatest diameter of hind ocellus, POL somewhat longer than OD and OOL 1.8 times as long as POL. In lateral view eye 1.47 times as long as temple. Malar space just longer than basal width of mandible. Clypeus 2.5 times as wide as high (Fig. 2). Face densely punctate, shiny to subshiny; frons around toruli rugose; vertex and temple punctate, interspaces nitidous and about as long as punctures. — Antenna with 26 antennomeres or 24 flagellomeres. First flagellomere three times as long as apically broad, flagellomeres 2—7 gradually shortening, flagellomeres (7—)8—14 transverse and thickening, i.e. 1.8—1.16—1.17 times as broad as long, flagellomeres 15—23 attenuating so that penultimate flagellomere cubic.

Mesosoma in lateral view 1.43 times as long as high. Mesosoma shiny and with hairpunctures. Prescutellar furrow with three keel-formed crenulae, otherwise uneven to smooth. Propodeum rugo-rugulose with a transverse and arched carina ending latero-posteriorly in a pair of tubercles. Precoxal suture

wide and rugose. — Hind femur 3.3 times as long as broad medially. Hind tibia about one third longer than hind tarsus, hind basitarsus as long as tarsal segments 2—4.

Fore wing as long as body. Pterostigma 2.77 times as long as wide, issuing radial vein distally from its middle. Radial cell along metacarpal vein 1.27 times as long as pterostigma, distal end of metacarp almost reaching tip of wing, beyond radial cell second section of metacarp 1.37 times as long as r_1 . D_1 1.2 times as wide as high (Fig. 3, see arrows).

Carapace globose, in dorsal view (Fig. 4) 1.3 times as long as broad at its middle, its rim apically emarginated (Fig. 5); in lateral view (Fig. 6) 2.78 times as long as high, apically not incurved. Tergites rugose (Fig. 4). Ovipositor sheath as long as hind tibia + tarsal segments 1—2 (Fig. 6).

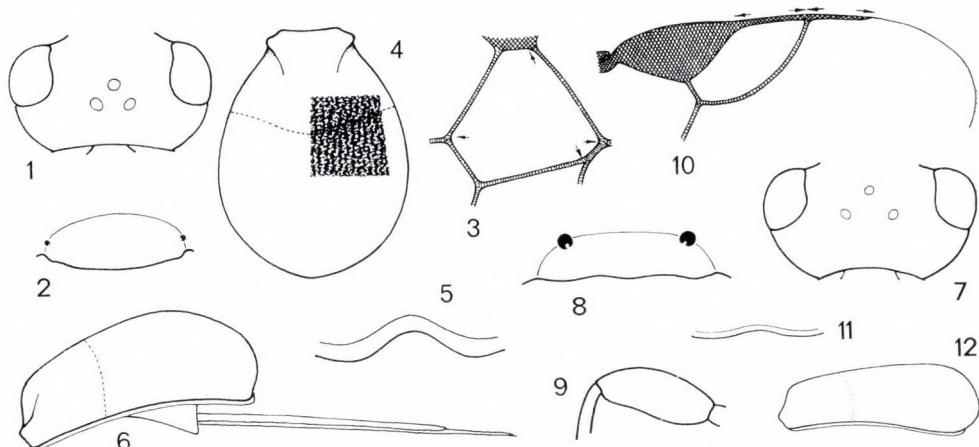
Body reddish yellow; head blackish, hind half of carapace dark brown. Clypeus and mandible yellow, palpi pale yellow. Scape and pedicel dark brown, flagellum black. Tegula yellow. Legs reddish yellow, hind tibia basally yellowish, otherwise together with hind tarsus blackish. Wings subhyaline, pterostigma brown.

♂ and host unknown.

Locality — Holotype ♀: British North Borneo (or Malaysia), Tenompok, Jesselton, 48 km E, 1460 m, 10—19 February 1959, leg. T. C. MAA.

Holotype is deposited in the Bernice P. Bishop Museum, Honolulu.

The new species, *Schizoprymnus* (*Schizoprymnus*) *admirabilis* sp. n., is allied to *Sch. subutus* sp. n. (Philippines), their distinctive features are compiled in a tabular form:



Figs 1—6. *Schizoprymnus admirabilis* sp. n.: 1 = head in dorsal view, 2 = clypeus, 3 = discoidal cell, 4 = carapace in dorsal view, 5 = apical end of carapace, 6 = carapace in lateral view. — Figs 7—12. *Sch. belairi* sp. n.: 7 = head in dorsal view, 8 = clypeus, 9 = hind femur, 10 = distal part of right fore wing, 11 = apical end of carapace, 12 = carapace in lateral view

Sch. admirabilis sp. n.

1. Head in dorsal view less transverse, 1.8 times as broad as long; temple strongly rounded (Fig. 1).
2. Carapace more globose, in dorsal view 1.3 times as long as broad (Fig. 4).
3. *D1* less wide, 1.2 times as wide as high (Fig. 3).
4. Antenna with 26 antennomeres, flagellomeres 8—12 transverse.
5. Ovipositor sheath in lateral view as long as hind tibia + tarsal segments 1—2.
6. Mesosoma and fore half of carapace reddish yellow; legs also reddish yellow; wings subhyaline.

Sch. subutus sp. n.

1. head in dorsal view transverse, twice as broad as long, temple rounded (Fig. 56).
2. Carapace less globose, in dorsal view 1.39 times as long as broad (Fig. 61).
3. *D1* wide, 1.5 times as wide as high (Fig. 59).
4. Antenna with 30 antennomeres, flagellomeres 8—14 transverse.
5. Ovipositor sheath in lateral view as long as hind tibia.
6. Only mesosoma testaceous, propodeum brownish; legs infuscate; wings fumous.

***Schizoprymnus (Schizoprymnus) belairi* sp. n. ♂**

(Figs 7—13)

Description of the holotype ♂. — Body 2 mm long. Head in dorsal view (Fig. 7) transverse, 1.96 times as broad as long, eye one third longer than temple, latter strongly rounded. Ocelli very small, distance between fore and hind ocelli twice as long as OD, POL three times as long as OD and as long as OOL (Fig. 7). In lateral view eye hardly one third wider than temple. Malar space somewhat shorter than basal width of mandible. Clypeus usually narrow, 4.5 times as wide as high, its lower margin bisinuate (Fig. 8). Head polished. — Antenna with 17 antennomeres or 15 flagellomeres. First flagellomere 2.5 times as long as broad apically, further ones gradually shortening so that penultimate two flagellomeres almost cubic.

Mesosoma in lateral view 1.39 times as long as high. Anterior (or horizontal) fore half of pronotum medially rugo-rugulose, laterally rugulose otherwise together with mesonotum, scutellum and mesopleuron polished. Notaulix distinct, subcrenulated. Propodeum rugose. Precoxal suture short, narrow and crenulated. — Legs relatively short, femora thick. Hind femur 2.3 times as long as broad at middle (Fig. 9). Hind tibia one fifth longer than hind tarsus; hind basitarsus just shorter than tarsal segments 2—3.

Fore wing almost as long as body. Pterostigma (Fig. 10) twice as long as wide, issuing radial vein from its middle. Radial cell short, along metacarpal vein somewhat longer than half length of pterostigma, distal end of metacarp far before tip of wing, beyond radial cell second section of metacarp nearly as long as first section (Fig. 10, see arrows). *D1* 1.2 times wider than high, nervulus postfurcal.

Carapace globose, in dorsal view (Fig. 13) 1.55 times as long as broad close behind its middle, its apical rim weakly emarginated (Fig. 11); in lateral

view (Fig. 12) relatively less convex, 2.7 times as long as high at its hind third. Tergites 1—2 antero-posteriorly weakening striated with anastomosis (Fig. 13), fore third of tergite 3 finely and dispersely punctate, otherwise polished.

Body black. Palpi brownish yellow, tegula black. Legs brownish black, tibiae and tarsi brown, femora and tibiae basally yellow(ish). Wings hyaline, pterostigma dark brown.

♀ and host unknown.

Locality — Holotype ♂: South Australia, Belair, National Park, 11—21 January 1978, leg. SZELÉNYI.

Holotype is deposited in the Hungarian Natural History Museum, Hym. Typ. No. 7331.

The new species, *Schizoprymnus (Schizoprymnus) belairi* sp. n., is nearest to *Sch. szelenyi* sp. n. considering their common features as (1) short radial cell, (2) polished third tergite and (3) similar sculpture of tergites 1—2. The two species can be easily distinguished by the following features:

Sch. belairi sp. n.

1. Head in dorsal view (Fig. 7) transverse, twice as broad as long; eye one third longer than temple, latter strongly rounded.
2. Antenna with 15 flagellomeres.
3. Radial cell relatively short (Fig. 10), along metacarp only somewhat longer than half length of pterostigma; distal end of metacarp far before tip of wing.
4. Legs short; hind femur thick, 2.3 times as long as broad (Fig. 9).
5. Legs dark coloured.

Sch. szelenyi sp. n.

1. Head in dorsal view (Fig. 63) less transverse, 1.78 times as broad as long; eye hardly longer than temple, latter rounded.
2. Antenna with 19 flagellomeres.
3. Radial cell relatively long (Fig. 64), along metacarp one quarter shorter than pterostigma; distal end of metacarp reaching tip of wing.
4. Legs not short; hind femur not thick, 3.75 times as long as broad.
5. Legs yellow.

***Schizoprymnus (Schizoprymnus) bimus* sp. n. ♂**

(Figs 14—19)

Description of the holotype ♂. — Body 2.9 mm long. Head in dorsal view transverse (cf. Fig. 7), 1.91 times as broad as long, eye 1.6 times as long as temple, latter rather strongly rounded. Ocelli small, distance between fore and hind ocelli just longer than OD, POL 1.6 times as long as OD and OOL 1.75 times as long as POL. In lateral view eye 1.33 times as wide as (or one quarter wider than) temple (Fig. 14). Malar space as long as basal width of mandible. Head polished, face hairy and with very fine and disperse hairpunctures. — Antenna with 24 antennomeres or 22 flagellomeres. First flagellomere four times as long as broad apically, further 10—11 flagellomeres gradually shor-

tening so that flagellomeres 13—19 subcubic, i.e. hardly longer than broad and flagellomeres 11-12 — 15-16 indistinctly thickening.

Mesosoma in lateral view 1.38 times as long as high. Mesosoma polished, mesonotum hairy and with hairpunctures similar to face; pronotum antero-medially rugulose. Notaulix evenly deep, subcrenulated. Propodeum rugose, postero-laterally with a pair of tubercles. Precoxal suture wide, costulate. — Hind femur 3.5 times as long as broad medially. Hind tibia just longer than hind tarsus, hind basitarsus as long as tarsal segments 2—4.

Fore wing as long as body. Pterostigma (Fig. 15) 2.77 times as long as wide, issuing radial vein distally from its middle. Radial cell long, along metacarpal vein one sixth longer than pterostigma, distal end of metacarp reaching tip of wing, beyond radial cell second section of metacarp 1.4 times as long as r_1 ; r_1 half as long as *cugul* (Fig. 15). D_1 slightly wider than high, nervulus postfurcal.

Carapace less globose, in dorsal view (Fig. 16) 1.76 times as long as broad at its hind third, its rim apically moderately emarginated (Figs 17—18); in lateral view (Fig. 19) relatively more downcurved behind, 3.5 times as long as high behind, apically not incurved below. Tergites 1—2 strongly striated with much anastomosis (Fig. 16), pair of keels on first tergite relatively strong and reaching beyond its hind third; tergite 3 polished.

Body black; face, temple below and tergites 1—2 dark brown. Palpi pale. Scape and pedicel yellowish, flagellum darkening brown. Legs yellow, distal two thirds of hind tibia and entire tarsus infuscate. Wings hyaline, pterostigma brown.

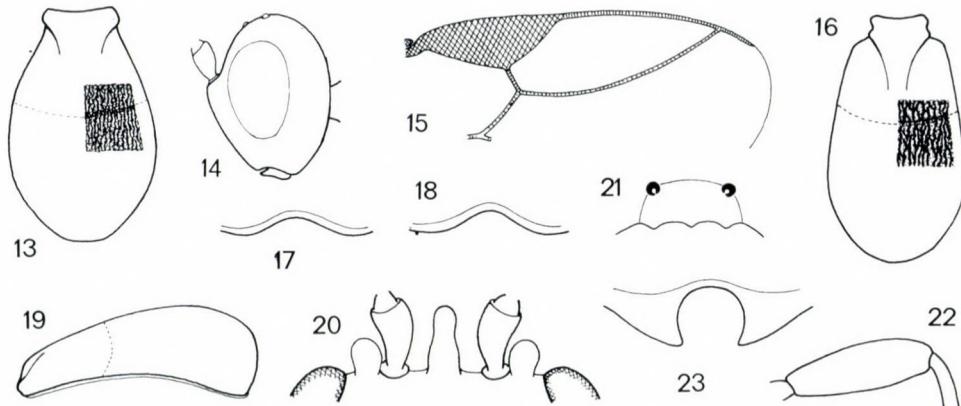


Fig. 13. *Schizoprymnus belairi* sp. n.: carapace in dorsal view. — Figs 14—19. *Sch. bimus* sp. n.: 14 = head in lateral view, 15 = distal part of right fore wing, 16 = carapace in dorsal view, 17—18 = apical end of carapace, 19 = carapace in lateral view. — Figs 20—23. *Sch. corniculiger* sp. n.: 20 = frons in dorsal view, 21 = clypeus, 22 = hind femur, 23 = apical end of carapace

Description of six ♂ paratypes. — Similar to holotype. Body 2.7—3.1 mm long (2.7 : 1, 2.8 : 1, 2.9 : 1, 3 : 2, 3.1 : 1). Eye 1.5—1.65 times as long as temple. Antenna with 23—25 antennomeres (23 : 1, 24 : 3, 25 : 1, antenna of 1 ♂ damaged). Pterostigma 2.95—3 times as long as wide. Carapace in lateral view 3—3.5 times as long as high. Body dark brown, head blackish (2 ♂♂).

♀ and host unknown.

Locality — Holotype ♂: Philippines, Mountain prov., Abatan, Buguias, 60 km S of Bontoe, 1800—2000 m, 11—12 June 1964, leg. H. M. TORRERILLAS. — 2 ♂ paratypes: same data as holotype. — 2 ♂ paratypes: same locality and collector, 27 May 1964. — 1 ♂ paratype: same locality and collector, 31 May — 1 June 1964. — 1 ♂ paratype: same locality and collector, 13 June 1964.

Holotype and 5 paratypes are deposited in the Bishop Museum, Honolulu; 1 paratype in the Hungarian Natural History Museum, Budapest, Hym. Typ. No. 7332.

The new species, *Schizoprymnus (Schizoprymnus) bimus* sp. n., is nearest to *Sch. urticus* sp. n., their comparison and distinction see there, p. 97.

***Schizoprymnus (Schizoprymnus) corniculiger* sp. n. ♀**
(Figs 20—24)

Description of the holotype ♀. — Body 2.7 mm long Head in dorsal view transverse, just not twice as broad as long, eye almost twice as long as temple, latter rounded. Frons with unusual appendages: laterally a pair of tubercles (between eye and torulus) and medially with a cornicule (between toruli) (Fig. 20). Ocelli middle sized, distance between fore and hind ocelli as long as OD, POL one third longer than OD and OOL 1.66 times as long as POL. In lateral view eye one third wider than temple. Malar space one third longer than basal width of mandible. Clypeus 2.54 times as wide as high, its margin with three denticules (Fig. 21). Head polished. — **Antenna** with 22 antennomeres or 20 flagellomeres. First flagellomere three times as long as broad apically, further ones gradually shortening and indistinctly thickening so that flagellomeres 9—19 cubic.

Mesosoma in lateral view 1.44 times as long as high. Anterior (or horizontal) part of pronotum medially rugose, laterally rugo-punctate, otherwise together with mesonotum, scutellum and mesopleuron polished. Notaulix evenly deep, subcrenulated. Prescutellar furrow wide, subcrenulated. Precoxal suture wide and strongly punctate. Propodeum rugulose-lacunose. — **Legs** relatively strong. Hind femur thick, 3.1 times as long as broad at middle (Fig. 22). Hind tibia somewhat longer than hind tarsus; hind basitarsus as long as tarsal segments 2—4.

Fore wing as long as body. Pterostigma (cf. Fig. 40) 2.87 times as long as wide, issuing radial vein from its middle. Radial cell along metacarpal

vein just longer than pterostigma; distal end of metacarp reaching tip of wing, beyond radial cell second section of metacarp twice as long as *rl*. *D1* just wider than high, nervulus postfurcal.

C a r a p a c e globose, in dorsal view (Fig. 24) 1.5 times as long as broad about middle; apical rim of carapace semicircularly emarginated (Fig. 23); in lateral view 2.2 times as long as high at hind, apically somewhat incurved below. Carapace basally striate, posteriorly switching to longitudinal-parallel arranged and weakening punctation (Fig. 24) so that tergite 3 polished with very fine and disperse hairpunctures (Fig. 89). Suture between tergites 1—2 distinct (Fig. 24). Ovipositor sheath in lateral view as long as hind tibia.

Head and mesosoma blackish brown to brown, carapace brown. Scape and pedicel yellowish, flagellum darkening brown. Palpi pale, tegula brown. Legs brown; coxae, trochanters and base of tibiae yellow, tarsi 1—2 yellowish. Wings hyaline, pterostigma brown.

Description of one female paratype — Body 3 mm long. Head in dorsal view 1.84 times as broad as long. Antenna with 25 (right antenna) and 26 (left antenna) antennomeres. Carapace in dorsal view 1.56 times as long as broad about middle; tergites 1—2 rather longitudinally rugose, tergite 3 medially with a streak-like polished field, otherwise with posteriorly weakening and linear punctuation (Fig. 90). Ground colour of body testaceous. Legs yellow, all femora and tibiae 2—3 with faint brownish tint.

♂ and host unknown.

Locality — Holotype ♀: Australia, SE Queensland, Mt. Glorious, sclerophyll forest, 13—16 February 1961, leg. L. et M. GRESSITT. — 1 ♀ paratype Australia, SE Queensland, Mt. Glorious, 13 February 1961, leg. L. et M. GRESSITT.

Holotype is deposited in the Bernice P. Bishop Museum, Honolulu; 1 paratype in the Hungarian Natural History Museum, Hym. Typ. No. 7333.

The new species, *Schizoprymnus (Schizoprymnus) corniculiger* sp. n., is related to *Sch. irrepertus* sp. n., their common features are (1) polished head and mesosoma and (2) long radial cell. The two species are differentiated by the following features:

Sch. corniculiger sp. n.

1. Frons with three appendages: a median cornicule and a pair of lateral tubercles (Fig. 20).
2. Ovipositor sheath as long as hind tibia.
3. Legs somewhat strong; hind femur 3.1 times as long as broad (Fig. 22).
4. Antenna with 17 flagellomeres.
5. Femora brown.

Sch. irrepertus sp. n.

1. Frons without appendages.
2. Ovipositor sheath as long as mesosoma and carapace together.
3. Legs usual in size; hind femur 3.84 times as long as broad (Fig. 39).
4. Antenna with 20 flagellomeres.
5. Femora yellow.

Sch. corniculiger sp. n. is also related to *Sch. belairi* sp. n. considering their (1) thick femora, (2) polished third tergite and (3) pterostigma issuing radial vein from its middle. The two species are distinct by the following features:

Sch. corniculiger sp. n.

1. Frons with three appendages: a median cornicule and a pair of lateral tubercles (Fig. 20).
2. Radial cell as long as pterostigma (cf. Fig. 40).
3. Apical rim of carapace semicircularly emarginated (Fig. 23).
4. Antenna with 20 flagellomeres.
5. Body blackish brown to brown; coxae and trochanters yellow.

Sch. belairi sp. n.

1. Frons without appendages.
2. Radial cell distinctly shorter than pterostigma (Fig. 10).
3. Apical rim of carapace slightly emarginated (Fig. 11).
4. Antenna with 15 flagellomeres.
5. Body black; coxae and trochanters brownish black.

Schizoprymnus (Schizoprymnus) deres sp. n. ♀
(Figs 25—32)

Description of the holotype ♀. — Body 3.3 mm long. Head in dorsal view transverse (Fig. 25), 2.1 times as broad as long, eye distinctly one third longer than temple, latter constricted. Ocelli relatively large, distance between fore and hind ocelli slightly longer than OD, PO 1.66 times as long as OD and OOL 1.6 times as long as POL. In lateral view eye 1.57 times as wide as temple (Fig. 26). Malar space as long as basal width of mandible. Head sculptured: face medially densely (and confluent) punctate, laterally rugose; frons and vertex also rugose, temple polished with hairpunctures. — Antenna with 26 antennomeres or 24 flagellomeres. First flagellomeres three times as long as apically broad, further nine ones gradually shortening so that flagellomeres 11—18 cubic, flagellomeres 19—24 gradually attenuating so that penultimate flagellomere 1.43 times as long as broad.

Mesosoma in lateral view 1.43 times as long as high. Pronotum nitidous, medially uneven to rugulose, laterally costulate and above with a polished field. Mesonotum nitidous and punctate, punctuation of its median lobe somewhat denser than lateral lobe; notalix evenly deep crenulated. Scutellum rugose. Propodeum scabrous with a transverse and arched carina as well as a pair of postero-lateral tubercles. Mesopleuron shiny, punctate, precoxal suture wide and costate. — Hind femur (Fig. 27) three times as long as broad medially. Hind tibia somewhat longer than hind tarsus, hind basitarsus as long as tarsal segments 2—3.

Fore wing as long as body. Pterostigma (Fig. 28) 2.5 times as long as wide, issuing radial vein from its middle. Radial cell along metacarpal vein as long as pterostigma, distal end of metacarp approaching tip of wing, beyond radial cell second section of metacarp 1.36 times as long as r_1 . D_1 somewhat wider than high; nervulus less postfurcal, i.e. d_1 very short, about as long as its own width (Fig. 29 ↓).

Carapace globose, in dorsal view (Fig. 30) 1.53 times as long as broad at its middle, its rim apically semicircularly emarginated and with a pair of denticles (Fig. 31); in lateral view (Fig. 32) 2.28 times as long as high behind, apically not incurved. Tergites rugose (Fig. 30). Ovipositor sheath long, in ventral view as long as hind tibia + tarsal segments 1—2.

Ground colour of body black. Palpi pale. Scape, pedicel and flagellomeres 1—2 yellow, rest of flagellum darkening brownish. Tegula brownish yellow. Legs yellow, hind tibia apically and hind tarsal segments distally darkening. Wings hyaline, pterostigma brown.

Description of two female paratypes. — Similar to holotype. Body 3.5 mm long. Antenna with 27 antennomeres. Carapace in dorsal view 1.45 times as long as broad.

♂ and host unknown.

Locality — Holotype ♀: Laos, Vientiane prov., Ban Van Eue, light trap, 15 May 1966, "native collector". — 2 ♀ paratypes: same locality, 1 ♀: 15 May 1966 and 1 ♀: 31 May 1966.

Holotype and 1 paratype are deposited in the Bernice P. Bishop Museum, Honolulu; 1 paratype in the Hungarian Natural History Museum, Budapest, Hym. Typ. No. 7334.

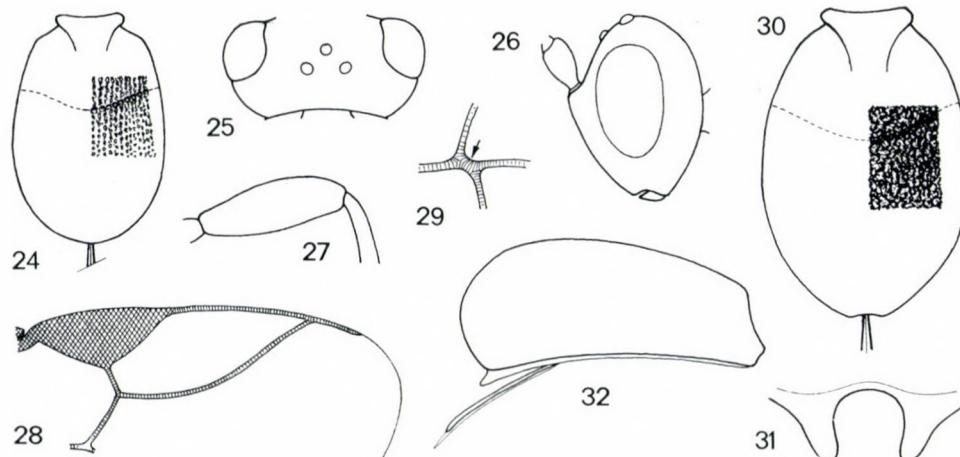


Fig. 24. *Schizoprymnus corniculiger* sp. n.: carapace in dorsal view. — Figs 25—32. *Sch. deres* sp. n.: 25 = head in dorsal view, 26 = head in lateral view, 27 = hind femur, 28 = distal part of right fore wing, 29 = first section of discoidal vein ($d_1\downarrow$), 30 = carapace in dorsal view, 31 = apical end of carapace, 32 = carapace in lateral view

The new species, *Schizoprymnus (Schizoprymnus) deres* sp. n., is related to *Sch. tortilis* PAPP, 1984 (Laos, Vietnam) and *Sch. subutus* sp. n., their common features are as follows: (1) head transverse, at least twice as broad as long, (2) temple constricted, (3) flagellomeres distally cubic or transverse, (4) tergites rugose. The distinction of the three species is disclosed in a tabular form:

Sch. deres sp. n.

1. Antenna with 26—27 antennomeres.
2. Rugosity of tergites relatively rough (Fig. 30); apical rim of carapace somewhat more semicircularly emarginated (Fig. 31).
3. In lateral view eye 1.5 times as wide as temple (Fig. 26).
4. Body 3.3—3.5 mm long.

Sch. deres sp. n.

1. Flagellomeres at most cubic; antenna with 26—27 antennomeres.
2. Radial cell as long as pterostigma (Fig. 28); *D1* somewhat wider than high (cf. Fig. 3).
3. Scutellum rugose, notaulex narrow.
4. Mesosoma black.

Sch. tortilis PAPP

1. Antenna with 20—21 antennomeres.
2. Rugosity of tergites relatively less rough (Fig. 82); apical rim of carapace somewhat less semicircularly emarginated (Fig. 71 in Papp 1984: 156).
3. In lateral view eye as wide as temple.
4. Body 2.2—2.7 mm long.

Sch. subutus sp. n.

1. Median flagellomeres transverse; antenna with 30 antennomeres.
2. Radial cell longer than pterostigma (Fig. 58); *D1* wide, 1.54 times as wide as high (Fig. 59).
3. Scutellum smooth and shiny, notaulex wide.
4. Mesosoma testaceous.

***Schizoprymnus (Schizoprymnus) doryphorus* sp. n. ♀**

(Figs 33—35)

Description of the holotype ♀. — Body 3 mm long. Head in dorsal view (cf. Fig. 1) transverse, 1.87 times as broad as long, eye one third longer than temple, latter strongly rounded. Ocelli small, distance between fore and hind ocelli slightly longer than OD, POL twice as long as OD and OOL 1.375 times as long as POL. In lateral view eye somewhat wider than temple. Malar space twice as long as basal width of mandible, thus head in frontal view (Fig. 33) somewhat elongated. Head polished, face with disperse and fine hairpunctures, clypeus punctate. — Antenna broken.

Mesosoma in lateral view 1.44 times as long as high. Mesonotum, scutellum and mesopleuron polished; mesonotum with hairpunctures (similar to that of face), notaulex deep and crenulated; precoxal suture wide and rugose. Propodeum rugose, its declivous part more or less uneven to smooth, shiny. — Hind femur 3.75 times as long as broad at middle. Hind tibia and tarsus equal in length; hind basitarsus just longer than tarsal segments 2—4.

Fore wing about as long as body. Pterostigma 2.77 times as long as wide, issuing radial vein from its middle. Radial cell long, along metacarpal vein one-sixth longer than pterostigma, distal end of metacarpal reaching tip of wing, beyond radial cell second section of metacarpal clearly twice as long as *rl*.

C a r a p a c e globose, in dorsal view (Fig. 34) 1.47 times as long as broad somewhat posteriorly from its middle, apically emarginated (cf. Fig. 41); in lateral view (Fig. 35) three times as long as high. Tergites 1—2 striated with anastomosis, interspaces subcrenulated, striation from hind part of tergite 2 and on entire tergite 3 switching over slightly weakening punctuation (Fig. 34). Medio-longitudinal streak of tergite 3 polished. Ovipositor sheath long, as long as body.

Body brownish black. Palpi yellowish. Tegula brown. Legs yellow, distal two thirds of hind tibia and hind tarsus dark. Wings hyaline, pterostigma brown.

♂ and host unknown.

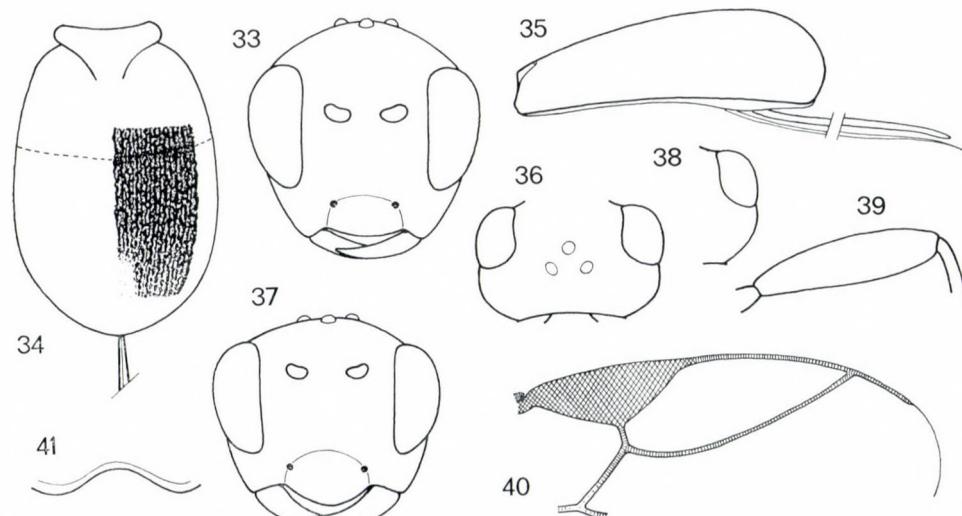
Locality — Holotype ♀: Viet Nam, Fyan, 900—1000 m, 11 July—9 August 1961, leg. N. R. SPENCER.

Holotype is deposited in the Bernice P. Bishop Museum, Honolulu.

The new species, *Schizoprymnus (Schizoprymnus) doryphorus* sp. n., is related to *Sch. irrepterus* sp. n., their distinction see there, p. 87.

***Schizoprymnus (Schizoprymnus) irrepterus* sp. n. ♀**
(Figs 36—43)

Description of the holotype ♀. — Body 2.4 mm long. Head in dorsal view (Fig. 36) subcubic, 1.66 times as broad as long, eye and temple equal in



Figs 33—35. *Schizoprymnus doryphorus* sp. n.: 33 = head in frontal view, 34 = carapace in dorsal view, 35 = carapace in lateral view. — Figs 36—41. *Sch. irrepterus* sp. n.: 36 = head in dorsal view, 37 = head in frontal view, 38 = right part of head in dorsal view, 39 = hind femur, 40 = distal part of right fore wing, 41 = apical end of carapace

length, latter rounded. Ocelli small, distance between fore and hind ocelli equal to hind OD, POL 1.6 times as long as OD and one third shorter than OOL. In lateral view eye as wide as temple. Malar space as long as basal width of mandible. Head in frontal view transverse (Fig. 37). Head polished, face with disperse and very fine hairpunctures, clypeus punctate. — *A n t e n n a e* with 19 antennomeres or 17 flagellomeres. First flagellomere 3.5 times as long as broad apically, further ones gradually shortening and thickening so that flagellomeres 10—13 subcubic, last four flagellomeres slightly attenuating so that penultimate one 1.5 times as long as broad.

M e s o s o m a in lateral view 1.37 times as long as high. Pronotum, mesonotum, scutellum and mesopleuron polished, notalix deep and crenulated. Propodeum rather weakly carinated, almost smooth, shiny. Precoxal suture wide and rugose. — *H i n d f e m u r* (Fig. 39) 3.84 times as long as broad at middle. Hind tibia and tarsus equal in length; hind basitarsus somewhat shorter than tarsal segments 2—4.

F o r e w i n g as long as body. Pterostigma wide (Fig. 40), 2.64 times as long as wide, issuing radial vein from its middle. Radial cell long, along metacarpal vein slightly longer than pterostigma; distal end of metacarp reaching tip of wing, beyond radial cell second section of metacarp three times as long as *r1*. *D1* 1.19 times as wide as high, nervulus distinctly postfurcal.

C a r a p a c e globose, in dorsal view (Fig. 42) 1.52 times as long as broad somewhat posteriorly from its middle, apically emarginate (Fig. 41); in lateral view 2.75 times as long as posteriorly high (Fig. 43). Tergites 1—2 striated with little anastomosis, interspaces subcrenulated. Tergite 3 laterally with weakening striation otherwise polished. Ovipositor sheath long, as long as mesosoma and carapace together.

Body black, head with brownish tint. Tegula blackish brown. Legs yellow, hind tibia and tarsus fumous. Wings hyaline, pterostigma brown.

Description of four female paratypes. — Similar to holotype. Body 2.4 (3 ♀♀) and 2.5 mm (1 ♀). Ocelli smaller, distance between two ocelli slightly longer than hind OD, temple slightly more rounded (2 ♀♀, Fig. 38). *D1* 1.17—1.19 times as wide as high. Hind femur four times (3 ♀♀) and 4.2 times (1 ♀) as long as broad. Tegula dark brown (3 ♀♀) to yellowish brown (1 ♀).

♂ and host unknown.

Locality — **H o l o t y p e** and 4 ♀ paratypes: Viet Nam, Mt. Lang Bian, 1500—2000 m, 19 May—8 June 1961, leg. N. R. SPENCER.

Holotype and 3 paratypes are deposited in the Bernice P. Bishop Museum, Honolulu; 1 ♀ paratype in the Hungarian Natural History Museum, Budapest, Hym. Typ. No. 7335.

The new species, *Schizoprymnus* (*Schizoprymnus*) *irrepertus* sp. n., is nearest to *Sch. politus* PAPP, 1984 (Papua New Guinea) considering their (1) long ovipositor sheath, (2) carinated and almost smooth propodeum, (3) form and

size of pterostigma and radial cell and (4) more or less polished carapace. Their distinctive features are as follows:

Sch. irreptus sp. n.

1. Head in dorsal view subcubic, 1.66 times as broad as long (Fig. 36).
2. Tergites 1—2 striated, tergite 3 polished; border between tergites 1—2 faintly distinct (Fig. 42).
3. Antenna with 19 antennomeres.
4. Ovipositor sheath nearly as long as body (Fig. 43).
5. Tegula dark brown, wings hyaline.

Sch. politus PAPP

1. Head in dorsal view transverse, 1.85 times as broad as long.
2. Tergites 2—3 almost entirely polished, tergite 1 medially sculptured, otherwise smooth to uneven and shiny; suture between tergites 1—2 deep and crenulated.
3. Antenna with 25—26 antennomeres.
4. Ovipositor sheath somewhat longer than carapace.
5. Tegula yellow, wings brownish fumous.

The new species is related to *Sch. doryphorus* sp. n. (Viet Nam), their common features are (1) long ovipositor sheath, (2) form and size of pterostigma and radial cell, (3) apically emarginate carapace and (4) yellow legs. The two species are clearly differentiated by the following features:

Sch. irreptus sp. n.

1. Tergite 3 polished.
2. Ovipositor sheath shorter than body.
3. Head in frontal view not elongated, malar space as long as basal width of mandible (Fig. 37).
4. Head in dorsal view subcubic, 1.66 times as broad as long, temple rounded (Fig. 36).
5. Carapace in lateral view 2.75 times as long as high, below relatively more convex (Fig. 43).

Sch. doryphorus sp. n.

1. Tergite 3 sculptured, only its median streak-like area polished.
2. Ovipositor sheath as long as body.
3. Head in frontal view somewhat elongated, malar space twice as long as basal width of mandible (Fig. 33).
4. Head in dorsal view transverse, 1.87 times as broad as long, temple strongly rounded (cf. Fig. 1).
5. Carapace in lateral view three times as long as high, below relatively less convex (Fig. 35).

***Schizoprymnus (Schizoprymnus) reflexus* sp. n. ♀**
(Figs 44—49)

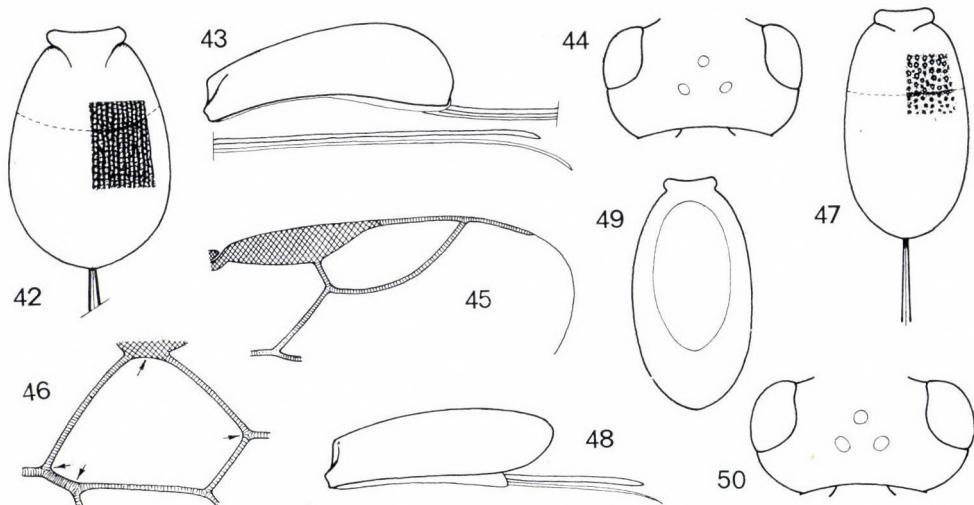
Description of the holotype ♀ — Body 2.4 mm long. Head in dorsal view transverse (Fig. 44), 1.84 times as broad as long, eye almost one third longer than temple, latter rounded. Ocelli small, distance between fore and hind ocelli nearly twice as long as OD, POL as long as OD and POL somewhat shorter than OOL. In lateral view width of eye equal to greatest width of temple. Malar space as long as basal width of mandible. Face and clypeus smooth, cheek uneven; otherwise head polished. — Antenna with 21 antennomeres or 19 flagellomeres. First flagellomere distinctly three times as long as a broad apically, further ones gradually shortening and slightly thickening so that last 11 flagellomeres subcubic to cubic.

Mesosoma in lateral view 1.57 times as long as high. Mesonotum and scutellum polished, notaule faintly indicated by fine punctures. Propodeum rugose and with a pair of lateral spines. — Hind femur almost four times as long as broad distally. Hind tarsus one fourth shorter than tibia; hind basitarsus as long as tarsal segments 2—4.

Fore wing somewhat shorter than body. Pterostigma (Fig. 45) four times as long as wide, issuing radial vein distal from its middle. Radial cell short, radial vein ending far before tip of wing, i.e. length of radial cell along metacarpal vein one third shorter than that of pterostigma; beyond radial cell second section of metacarp one quarter shorter than length of radial cell along metacarp (or first section of metacarp). D1 wide, 1.3 times as wide as high, nervulus distinctly postfurcal (Fig. 46, see arrows).

Carapace elongate-cylindric in form, in dorsal view (Fig. 47) 1.78 times as long as broad at middle, in lateral view apico-ventrally deeply incurved (Fig. 48), in ventral view (Fig. 49) cavity about one quarter shorter than carapace itself. Rim of ventral cavity distinct (Fig. 48). Carapace antero-posteriorly with strong to weakening punctuation, punctuation anteriorly rather confluent, dorso-medially as well as its posterior third entirely polished. In lateral view ovipositor sheath as long as hind tibia (Fig. 48).

Ground colour of head and mesosoma blackish, carapace dark brown, ventrally brown, rim yellowish. Legs yellowish brown. First three antennomeres brownish yellow, further antennomeres darkening brown. Wings subhyaline, pterostigma brownish.



Figs 42—43. *Schizopyrmnus irrepertus* sp. n.: 42 = carapace in dorsal view, 43 = carapace in lateral view. — Figs 44—49. *Sch. reflexus* sp. n.: 44 = head in dorsal view, 45 = distal part of right fore wing, 46 = discoidal cell, 47 = carapace in dorsal view, 48 = carapace in lateral view, 49 = carapace in ventral view. — Fig. 50. *Sch. sedlacekorum* sp. n.: head in dorsal view

Description of two female paratypes. — Similar to holotype. Head in dorsal view 1.84 (1 ♀) and 1.88 times (1 ♀) as broad as long, eye about one quarter longer than temple. Mesosoma in lateral view 1.43 times (1 ♀) as long as high. Ground colour of head and mesosoma brown (1 ♀) or blackish brown (1 ♀), carapace brown (1 ♀) or light brown (1 ♀).

♂ and host unknown.

Locality — Holotype ♀: New Hebrides, Epi Island, Vaemali, Malaise-trap, 12 August 1967, leg. J. et M. SEDLACEK. — 2 ♀ paratypes: same locality and collector, 100—150 m, 16—21 August 1967 (1 ♀) and 8 August 1967 (1 ♀).

Holotype and 1 ♀ paratype are deposited in the Bernice P. Bishop Museum, Honolulu; 1 ♀ paratype in the Hungarian Natural History Museum, Budapest, Hym. Typ. No. 7336.

The new species, *Schizoprymnus (Schizoprymnus) reflexus* sp. n., is nearest to *Sch. sedlacekorum* sp. n., their common features are as follows: (1) radial cell short (Figs 45, 51), (2) carapace ventrally deeply incurved (Figs 48, 49), (3) carapace more or less elongate (Fig. 47, 53), (4) mesosoma in lateral view less stout, 1.43—1.57 times as long as high. The two species are distinguished by the features tabulated below:

Sch. reflexus sp. n.

1. Temple in dorsal view rounded, almost one third shorter than eye (Fig. 44).
2. Antenna with 21 antennomeres.
3. Carapace posteriorly with weakening punctuation (Fig. 47), medially from its middle and apically entirely polished.
4. Pterostigma four times as long as wide (Fig. 45); discoidal cell one third wider than high, nervulus more postfurcal (Fig. 46).

Sch. sedlacekorum sp. n.

1. Temple in dorsal view constricted, half as long as eye (Fig. 50).
2. Antenna with 23 antennomeres.
3. Carapace evenly and strongly striated without polished field (Fig. 53).
4. Pterostigma three times as long as wide (Fig. 51); discoidal cell somewhat wider than high, nervulus less postfurcal (Fig. 52).

***Schizoprymnus (Schizoprymnus) sedlacekorum* sp. n. ♂**

(Figs 50—55)

Description of the holotype ♂. — Body 2.5 mm long. Head in dorsal view (Fig. 50) transverse, twice as broad as long, eye almost twice as long as temple, latter constricted. Ocelli middle sized, distance between fore and hind ocelli equal to OD, POL somewhat longer than OD and OOL one third longer than POL (Fig. 50). In lateral view width of eye one third greater than that of temple. Malar space as long as basal width of mandible. Head polished, face and clypeus smooth and shiny. — Antenna with 23 antennomeres. First flagellomeres 3.5 times as long as apically broad, further ones gradually shortening and very slightly attenuating so that penultimate flagellomere 1.66 times as long as broad.

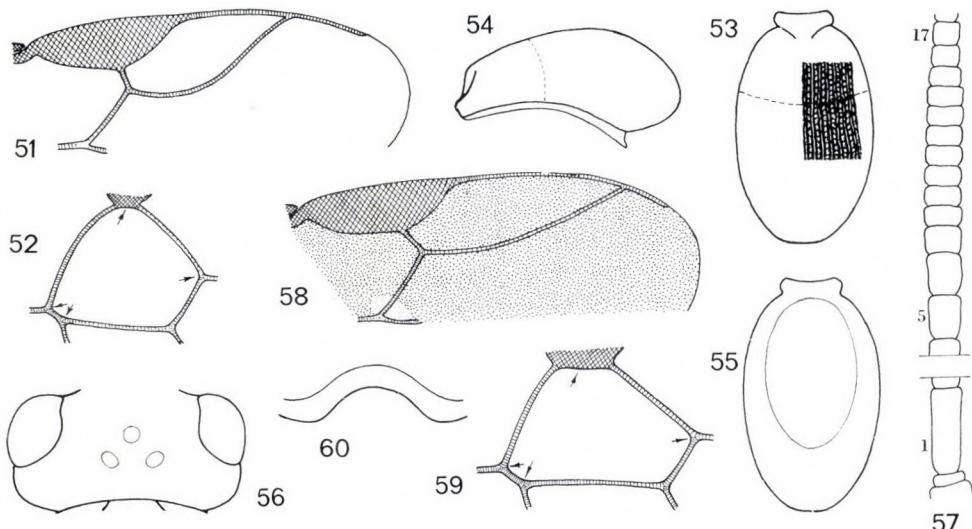
Mesosoma in lateral view 1.37 times as long as high. Pronotum, mesonotum, scutellum and mesopleuron polished, notaux crenulated. Propodeum rugose with a pair of lateral tubercles. — Hind femur 3.46 times as long as broad distally. Hind tibia and tarsus equal in length; hind basitarsus as long as tarsal segments 2—4.

Fore wing as long as body. Pterostigma (Fig. 51) three times as long as wide, issuing radial vein distally from its middle. Radial cell short, i.e. length of radial cell along metacarpal vein one quarter shorter than pterostigma, distal end of metacarp rather approaching tip of wing; beyond radial cell second section of metacarp one third shorter than length of radial cell along metacarp (or first section of metacarp). D_1 slightly wider than high (Fig. 52).

Carapace in dorsal view (Fig. 53) less globose or rather elongate, 1.68 times as long as broad at middle; in lateral view (Fig. 54) twice as long as high posteriorly and apico-ventrally deeply incurved; in ventral view cavity about one quarter shorter than carapace itself (Fig. 55). Rim of ventral cavity distinct (Fig. 54). Carapace strongly striated, interspaces crenulated (Fig. 53).

Ground colour of head and mesosoma dark brown to brown, carapace brown. Legs yellow. Scape and pedicel yellow, flagellomeres 1—2 darkening yellowish to brownish, further ones dark brown. Wings subhyaline, pterostigma brown.

♀ and host unknown.



Figs 51—55. *Schizoprymnus sedlacekorum* sp. n.: 51 = distal part of right fore wing, 52 = discoidal cell, 53 = carapace in dorsal view, 54 = carapace in lateral view, 55 = carapace in ventral view. — Figs 56—60. *Sch. subetus* sp. n.: 56 = head in dorsal view, 57 = flagellum with flagellomeres 1 and 5 to 17, 58 = distal part of right fore wing, 59 = discoidal cell, 60 = apical end of carapace

Locality — Holotype ♂: New Hebrides, Epi Island, Vaemali, 100—150 m, 6—10 August 1967, leg. J. et M. SEDLACEK.

Holotype is deposited in the Bernice P. Bishop Museum, Honolulu.

Etimology — The new species is dedicated to its collectors, JOE and MARIA SEDLACEK (Brookfield, Australia), keen collectors of insects and former resident managers of New Guinea Field Station in Wau (Bishop Museum).

The new species, *Schizoprymnus (Schizoprymnus) sedlacekorum* sp. n., is nearest to *Sch. reflexus* sp. n., their comparison and distinction see at this species, p. 89.

***Schizoprymnus (Schizoprymnus) subutus* sp. n. ♀**
(Figs 56—62)

Description of the holotype ♀. — Body 3.5 mm long. Head in dorsal view transverse (Fig. 56), twice as broad as long, eye twice as long as temple, latter rounded. Ocelli relatively large, distance between fore and hind ocelli as long as OD, POL somewhat longer than OD, OOL almost twice as long as POL. In lateral view eye 1.5 times as wide as temple. Malar space as long as basal width of mandible. Face punctate, medially with confluent punctation; frons and ocellar field punctate, otherwise head with disperse punctation, nitidous to polished. — Antenna with 30 antennomeres or 28 flagellomeres. First flagellomere three times as long as broad apically, flagellomeres 2—7 distinctly shortening, flagellomeres 8—14 transverse and thickening, i.e. 1.8 times as broad as long (Fig. 57), further ones attenuating so that penultimate seven flagellomeres (or flagellomeres 21—27) cubic.

Mesosoma in lateral view 1.57 times as long as high. Anterior part of pronotum rugo-rugulose, posteriorly polished. Mesonotum shiny, finely punctate; notalix relatively wide, deep, crenulated. Prescutellar furrow wide and with seven crenulae. Scutellum polished and with a few fine punctures. Propodeum rugo-rugulo-uneven, on its declivous part with small shiny fields, latero-posteriorly with a pair of tubercles. Mesopleuron with fine and disperse punctuation, precoxal suture costate. — Legs strong, femora thick. Hind femur 2.76 times as long as broad medially. Hind tibia 1.5 times as long as hind tarsus, hind basitarsus as long as tarsal segments 2—3.

Fore wing as long as body. Pterostigma (Fig. 58) three times as long as wide, issuing radial vein distally from its middle. Radial cell along metacarpal vein 1.22 times as long as pterostigma, distal end of metacarpal approaching tip of wing, beyond radial vein second section of metacarp 1.8 times as long as *r1*. *D1* wide, 1.54 times as wide as high (Fig. 59).

Carapace globose, in dorsal view (Fig. 61) 1.45 times as long as broad at its middle, its rim apically emarginated (Fig. 60); in lateral view (Fig. 62) 2.52 times as long as high behind, apically not incurved. Tergites rugose (Fig.

61). Ovipositor sheath long, in lateral view as long as hind tibia + half basitarsus.

Head and carapace blackish brown mesosoma testaceous, propodeum brownish. Scape and pedicel yellowish, flagellum darkening brownish. Palpi pale. Tegulae yellowish. Legs infuscate, hind leg rather brown. Fore coxa + trochanter, fore femur apically, fore tibia + tarsus entirely yellowish; middle tibia + tarsus brownish yellowish; base of hind tibia whitish. Wings fumous, pterostigma brown.

♂ and host unknown.

Locality — Holotype ♀: Philippine Islands, Los Baños, April 1921, leg. F. X. WILLIAMS.

Holotype is deposited in the Bernice P. Bishop Museum, Honolulu.

The new species, *Schizoprymnus (Schizoprymnus) subutus* sp. n., is allied to *Sch. deres* sp. n. (Laos) (see there, p. 84) and *Sch. admirabilis* sp. n. (British North Borneo) (see there, p. 77) as well as to *Sch. torreador* sp. n. (British North Borneo). The latter species are distinguished from *Sch. subutus* by the following features:

Sch. subutus sp. n.

1. In dorsal view eye twice as long as temple (Fig. 56).
2. Antenna with 30 antennomeres, first flagellomere three times as long as broad apically; flagellomeres 8—14 more transverse, i.e. 1.8 times as broad as long (Fig. 57).
3. Carapace globose, in dorsal view 1.45 times as long as broad, its rugosity with less longitudinal elements (Fig. 61).
4. Mesonotum finely punctate, vertex and temple finely punctate to punctate, interspaces polished.
5. Ovipositor sheath in lateral view as long as hind tibia + half basitarsus (Fig. 62).
6. Body blackish brown, mesosoma testaceous, legs infuscate.
7. Body 3.5 mm long.

Sch. torreador sp. n.

1. In dorsal view eye somewhat longer than temple (Fig. 68).
2. Antenna with 36 antennomeres, first flagellomere four times as long as broad apically; flagellomeres 11—15-16 less transverse, i.e. 1.1—1.3 times as broad as long (Fig. 70).
3. Carapace somewhat elongate, in dorsal view 1.7 times as long as broad, its rugosity with more longitudinal elements (Fig. 72).
4. Mesonotum foveolate to punctate; vertex and temple rugose.
5. Ovipositor sheath in lateral view three times as long as hind tibia (Fig. 71).
6. Body black, legs blackish brown.
7. Body 5 mm long.

***Schizoprymnus (Schizoprymnus) szelenyi* sp. n. ♀**

(Figs 63—76)

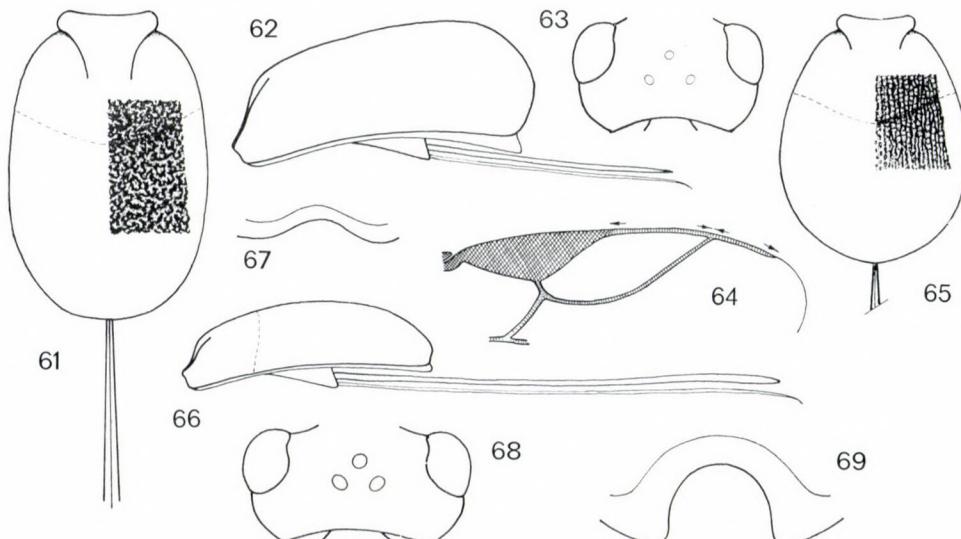
Description of the holotype ♀. — Body 2.4 mm long. Head in dorsal view (Fig. 63) transverse, 1.78 times as broad as long, eye hardly longer than temple, latter rounded. Ocelli small, quite similar to that of *Sch. belairi* sp. n. (Fig. 63). In lateral view eye hardly wider than temple. Malar space as long as

basal width of mandible. Head polished. — *A n t e n n a e* with 21 antenno-meres or 19 flagellomeres. First flagellomere three times as long as broad apically, further ones gradually shortening and slightly thickening so that flagellomeres 8—15 cubic, penultimate three flagellomeres attenuating so that slightly longer than broad, i.e. subcubic.

M e s o s o m a in lateral view 1.43 times as long as high. Anterior (or horizontal) fore part of pronotum medially rugose, laterally rugo-striate, otherwise together with mesonotum, scutellum and mesopleuron polished; notaulix distinct, subcrenulated. Propodeum rugose. Precoxal suture narrow and crenulated. — *H i n d f e m u r* 3.75 times as long as broad somewhat distally from its middle (cf. Fig. 39). Hind tibia and tarsus equal in length; hind basitarsus as long as tarsal segments 2—4.

F o r e w i n g as long as body. Pterostigma (Fig. 64) three times as long as wide, issuing radial vein from its middle. Radial cell short, along metacarpal vein one quarter shorter than pterostigma, distal end of metacarpal approaching tip of wing, beyond radial cell second section of metacarp only one third shorter than first section (Fig. 64, see arrows). *D I* somewhat wider than high, nervulus postfurcal.

Carapace globose, in dorsal view (Fig. 65) 1.36 times as long as broad behind its middle, apically emarginated (Fig. 67); in lateral view (Fig. 66) relatively more convex, 3.12 times as long as high about its middle, apically not



Figs 61—62. *Schizoprymnus subetus* sp. n.: 61 = carapace in dorsal view, 62 = carapace in lateral view. — Figs 63—67. *Sch. szelenyi* sp. n.: 63 = head in dorsal view, 64 = distal part of right fore wing, 65 = carapace in dorsal view, 66 = carapace in lateral view, 67 = apical end of carapace. — Figs 68—69. *Sch. torreador* sp. n.: 68 = head in dorsal view, 69 = apical end of carapace

incurved (Fig. 66). Tergites 1—2 antero-posteriorly weakening striate with anastomosis, striation on hind part of second tergite switching to weakening punctuation; third tergite basally finely punctate, otherwise polished. Ovipositor sheath in lateral view almost twice as long as carapace.

Body black. Palpi pale yellow, tegula blackish. Legs reddish yellow; distal two-thirds of hind tibia as well as middle + hind tarsi with blackish suffusion. Wings hyaline, pterostigma dark brown.

♂ and host unknown.

Locality — Holotype ♀: South Australia, Belair, National Park, 11—21 January 1978, leg. SZELÉNYI.

Holotype is deposited in the Hungarian Natural History Museum, Budapest, Hym. Typ. No. 7337.

Etymology — The new species is dedicated to its collector, Dr. GUSZTÁV SZELÉNYI (1904—1982), the well-known specialist of Chalcid and Proctotrupid wasps.

The new species, *Schizoprymnus (Schizoprymnus) szelenyi* sp. n., is nearest to *Sch. belairi* sp. n., their distinction see there, p. 78.

Schizoprymnus (Schizoprymnus) torreador sp. n. ♀

(Figs 68—72)

Description of the holotype ♀ — Body 5 mm long. Head in dorsal view transverse (Fig. 68), twice as broad as long, eye somewhat, i.e. 1.2 times as long as temple, latter rounded. Ocelli relatively large and round, distance between fore and hind ocelli shorter than diameter of hind ocellus, POL slightly longer than OD, OOL 2.2 times as long as POL (Fig. 68). In lateral view eye just longer than temple. Malar space as long as basal width of mandible. Head rugose, clypeus foveolate and with laterally striate elements. — Antennae with 36 antennomeres or 34 flagellomeres. First flagellomere four times as long as apically broad, flagellomeres 2—10 distinctly shortening, flagellomeres 11—15-16 somewhat transverse and somewhat thickening, i.e. 1.1—1.3 times as broad as long (Fig. 70), flagellomeres (16)-17—33 attenuating so that penultimate flagellomere 1.33 times as long as broad.

Mesosoma in lateral view 1.5 times as long as high. Anterior part of pronotum medially rugose, laterally rather densely rugose; its hind part above polished, below strongly punctate and shiny. Mesonotum foveolate to punctate, shiny; notaulix relatively deep and crenulated. Propodeum rugose, with a pair of latero-posterior tubercles. Mesopleuron punctate, precoxal suture wide and costate. — Hind femur 3.16 times as long as broad medially. Hind tibia 1.2 times as long as hind tarsus, hind basitarsus just longer than tarsal segments 2—3.

Fore wing about as long as body. Pterostigma 2.66 times as long as wide, issuing radial vein distally from its middle. Radial cell along metacarpal

vein one fifth longer than pterostigma, distal end of metacarp reaching tip of wing. — Wings in bad condition, they stucked to each other due to the careless mounting.

C a r a p a c e somewhat elongate, in dorsal view (Fig. 72) 1.7 times as long as broad behind, its rim apically semicircularly emarginated (Fig. 69); in lateral view 2.62 times as long as high behind, apically not incurved (Fig. 71). Tergites rugose with relatively more longitudinal elements (Fig. 72). Ovipositor sheath long, in lateral view three times as long as hind tibia.

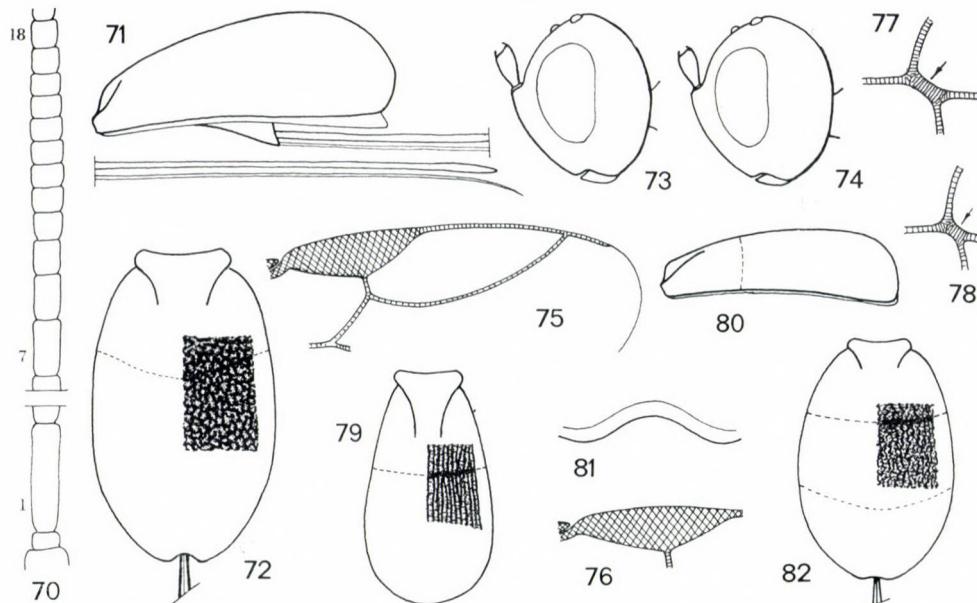
Body black. Scape and pedicel with brownish tint, flagellum black. Palpi brown. Pronotum and tegula brownish. Legs blackish brown, base of hind tibia and hind basitarsus brownish yellow. Wings hyaline, pterostigma brown.

♂ and host unknown.

Locality — **H o l o t y p e ♀:** British North Borneo (or Malaysia), Tenompok, Jesselton, 48 km E, 1460 m, 26—31 January 1959, leg. T. C. MAA.

Holotype is deposited in the Bernice P. Bishop Museum, Honolulu.

The new species, *Schizoprymnus (Schizoprymnus) torreador* sp. n., is nearest to *Sch. subutus* sp. n. (Philippines), the distinction of the two species see there, p. 92.



Figs 70—72. *Schizoprymnus torreador* sp. n.: 70 = flagellum with flagellomeres 1 and 7 to 18, 71 = carapace in lateral view, 72 = carapace in dorsal view. — Figs 73—81. *Sch. urticus* sp. n.: 73—74 = head in lateral view (73 = holotype, 74 = paratype), 75 = distal part of right forewing (holotype), 76 = pterostigma (paratype), 77—78 = first section of discoidal vein or $dl \downarrow$ (77 = holotype, 78 = paratype), 79 = carapace in dorsal view, 80 = carapace in lateral view, 81 = apical end of carapace. — Fig. 82. *Sch. tortilis* PAPP: carapace in dorsal view

Schizoprymnus (Schizoprymnus) urticus sp. n. ♂
 (Figs 73—81)

Description of the holotype ♂. — Body 2.4 mm long. Head in dorsal view transverse (cf. Fig. 63), 1.82 times as broad as long, eye only slightly longer than temple, latter rounded. Ocelli small, distance between fore and hind ocelli somewhat longer than OD, POL 1.75 times as long as OD and OOL twice as long as POL. In lateral view eye slightly wider than temple (Fig. 73). Malar space one-fifth longer than basal width of mandible. Head polished. — A n t e n n a with 21 antennomeres or 19 flagellomeres. First flagellomere four times as long as broad apically, further ones gradually shortening so that penultimate flagellomere 1.43 times as long as broad.

M e s o s o m a in lateral view 1.44 times as long as high. Mesosoma polished; pronotum antero-medially rugulose-uneven, propodeum rather faintly carinated, areolae laterally rugulose, otherwise uneven to almost smooth, shiny, with a pair of postero-lateral tubercles. Notaulix evenly deep, suberenu- lated; precoxal suture indistinct. — H i n d f e m u r 3.75 times as long as broad medially. Hind tibia somewhat longer than tarsus, hind basitarsus as long as tarsal segments 2—4.

F o r e w i n g as long as body. Pterostigma (Fig. 75) three times as long as wide, issuing radial vein distally from its middle. Radial cell long, along metacarpal vein as long as pterostigma, distal end of metacarp reaching tip of wing, beyond radial cell second section of metacarp twice as long as *rl*; *rl* relatively short, *cugul* three times as long as *rl* (Fig. 75). *D1* just wider than high, *d1* distinct, i. e. nervulus clearly postfurcal (Fig. 77 ↓).

C a r a p a c e less globose, in dorsal view (Fig. 79) 1.82 times as long as broad at its hind third, apically moderately emarginated (Fig. 81); in lateral view relatively less convex, 3.46 times as long as high behind (Fig. 80). First suture unusually distinct. Tergites 1—2 striated with little anastomosis (Fig. 79), hind third of tergite 2 and tergite 3 entirely polished.

Body blackish brown, pronotum and metapleuron + propodeum brown. Palpi greyish pale. Scape and pedicel yellowish, flagellum darkening brown. Legs yellow, distal two-thirds of hind tibia infuscate. Wings hyaline, pterostigma yellowish.

Description of three male paratypes. — Body 2.4—2.5 mm long. Head in dorsal view 1.65—1.73 times as broad as long, between temples minutely broader than between eyes (2 ♂♂), in lateral view temple somewhat broader than eye (Fig. 74). Antenna with 19 (1 ♂) and 20 (2 ♂♂) antennomeres. Precoxal suture distinct by rugosity. Pterostigma 3.5 times as long as wide (Fig. 76). Nervulus just postfurcal, i.e. *d1* very short, as long as or slightly longer than its own width (Fig. 78 ↓). Carapace in dorsal view 1.61 times (1 ♂), 1.67 times (1 ♂) and 1.75 times (1 ♂) as long as broad at its hind third.

Head and mesonotum + scutellum dark brown, otherwise mesosoma and carapace brown (1 ♂).

♀ and host unknown.

Locality — Holotype ♂: Philippines, Mountain province, Abatan, Buguias, 60 km S of Bontoc, 1800—2000 m, 11—12 June 1964, leg. H. M. TORREVILLAS. — 3 ♂ paratypes: same locality and collector, 27 May 1964 (2 ♂♂) and 31 May — 2 June 1964 (1 ♂).

Holotype and 2 paratypes are deposited in the Bernice P. Bishop Museum, Honolulu; 1 paratype in the Hungarian Natural History Museum, Budapest, Hym. Typ. No. 7338.

The new species, *Schizoprymnus* (*Schizoprymnus*) *urticus* sp. n., reminds of *Sch. bimus* sp. n. (Philippines), their common features are (1) transverse head, (2) long radial cell, (3) pterostigma issuing radial vein distally, (4) polished third tergite, (5) carapace apically moderately emarginated, (6) distinct first suture of carapace and (7) yellow legs. The two species are distinguished by the following features:

Sch. urticus sp. n.

1. In dorsal view eye only slightly longer than temple, latter rounded (cf. Fig. 63).
2. Striation of tergites 1—2 less strong and with less anastomosis (Fig. 79), second tergite behind polished, i.e. second tergite not entirely striated.
3. Antenna with 19—21 antennomeres.
4. Carapace in lateral view (Fig. 80) less downcurved behind.
5. Ground colour of body dark brown to brown.

Sch. bimus sp. n.

1. In dorsal view eye 1.6 times as long as temple, latter strongly rounded (Fig. 7).
2. Striation of tergites 1—2 strong and with more anastomosis (Fig. 16), second tergite entirely striated.
3. Antenna with 24—25 antennomeres.
4. Carapace in lateral view (Fig. 19) more downcurved behind.
5. Ground colour of body black.

***Schizoprymnus* (*Schizoprymnus*) *vissas* sp. n. ♀**

(Figs 83—87)

Description of the holotype ♀. — Body 2.7 mm long. Head in dorsal view transverse (Fig. 83), 1.8 times as broad as long, eye one third longer than temple, latter deeply rounded. Ocelli small, fore ocellus round, hind pair of ocelli elliptic in form; distance between fore and hind ocelli equal to greatest hind OD, POL twice as long as OD, OOL somewhat longer than POL. In lateral view eye somewhat wider than temple. Clypeus 2.2 times as wide below as high medially. Malar space 1.3 times as long as basal width of mandible. Head polished. — Antenna with 27 antennomeres or 25 flagellomeres. First flagellomere four times as long as broad apically, further ones gradually shortening so that flagellomeres 11—24 cubic.

Mesosoma in lateral view 1.57 times as long as high. Mesosoma smooth and nitidous. Fore half of pronotum uneven-subrugulose. Notaulix

evenly deep, with fine crenulation. Precoxal suture rather finely costate. Propodeum rugose with a medio-longitudinal carina — Hind femur 3.46 times as long as broad. Hind tibia somewhat longer than hind tarsus, hind basitarsus also somewhat longer than tarsal segments 2—3.

Fore wing as long as body. Pterostigma (Fig. 84) 3.46 times as long as wide, issuing radial vein from its middle. Radial cell approaching tip of wing, along metacarpal vein slightly longer than length of pterostigma, distal end of metacarp reaching tip of wing; beyond radial cell second section of metacarp one third longer than r_1 , c_{uq1} three times as long as r_1 . D_1 slightly wider than high, nervulus distinctly postfurcal.

Carapace globose, in dorsal view (Fig. 85) 1.52 times as long as broad behind, apically weakly emarginate (Fig. 87); in lateral view less convex, 3.2 times as long as high behind (Fig. 86). Tergites 1—3 evenly and longitudinally striate with little anastomosis, medio-longitudinally with a weakly sculptured to almost smooth and shiny streak-like field (Fig. 85). Ovipositor sheath as long as two thirds of hind tibia.

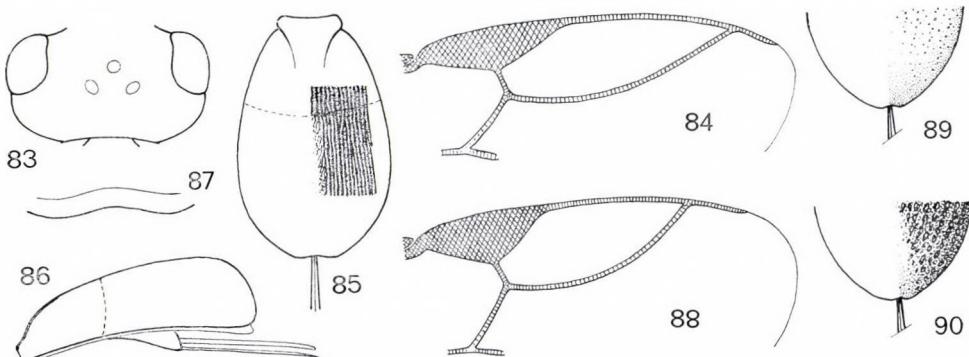
Body brownish black. Palpi brown. Mandible yellowish, apically blackish. Antenna brown, scape and pedicel with yellowish tint. Tegula brown. Legs dark brown, tarsi with yellowish suffusion. Wings subhyaline, pterostigma brown.

♂ and host unknown.

Locality — Holotype ♀: NE New Guinea, Wau, Morobe district, 1250 m, 3 October 1962, leg. J. SEDLACEK.

Holotype is deposited in the Bernice P. Bishop Museum, Honolulu.

The new species, *Schizoprymnus (Schizoprymnus) vissas* sp. n., is similar to *Sch. urticus* sp. n. (Philippines) and *Sch. tortilis* PAPP, 1984 (Laos, Viet Nam) considering their common features as (1) long radial cell, (2) apical rim of cara-



Figs 83—87. *Schizoprymnus vissas* sp. n.: 83 = head in dorsal view, 84 = distal part of right fore wing, 85 = carapace in dorsal view, 86 = carapace in lateral view, 87 = apical end of carapace. — Fig. 88. *Sch. tortilis* PAPP: distal part of right fore wing. — Figs 89—90. *Sch. corniculiger* sp. n.: hind part of carapace in dorsal view (89 = holotype, 90 = paratype)

pace moderately emarginate, (3) striate carapace (*Sch. urticus*), (4) flagellomeres distally cubic (*Sch. tortilis*). The distinctive features of the three species are disclosed in a tabular form:

Sch. vissas sp. n.

1. Tergite 3 sculptured.
2. Flagellomeres 11—24 cubic.
3. Pterostigma issuing radial vein from its middle (Fig. 84).
4. Legs dark brown.

Sch. vissas sp. n.

1. Pterostigma relatively less wide, 3.4 times as long as wide; radial cell approaching tip of wing (Fig. 84).
2. Ovipositor sheath short, in lateral view as long as two thirds of hind tibia.
3. Antenna with 27 antennomeres.
4. Legs dark brown.

Sch. urticus sp. n.

1. Tergites 3 polished.
2. Every flagellomere distinctly longer than broad.
3. Pterostigma issuing radial vein distally from its middle (Fig. 75).
4. Legs yellow.

Sch. tortilis PAPP

1. Pterostigma relatively wide, 2.5—2.7 times as long as wide; radial cell ending far before tip of wing (Fig. 88).
2. Ovipositor sheath long, in lateral view as long as hind tibia + tarsal segments 1—2.
3. Antenna with 20—21 antennomeres.
4. Legs reddish yellow.

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Further references see here.

MAGYAR
TUDOMÁNYOS AKADÉMIA
KÖNYVTARA



A REVIEW OF THE ORIENTAL SPECIES OF *POECILOSOMELLA DUDA* (DIPTERA, SPHAEROCHERIDAE)

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The Oriental species of the genus *Poecilosomella* DUDA, 1920 were studied (mostly based on types). The Afrotropical and the Oriental regions share no common species in this genus. *P. apicata* (RICHARDS, 1963) is a junior synonym of *P. multipunctata* (DUDA, 1925). *P. cryptica* sp. n. (Taiwan) is described. Lectotype designations are given for *P. amputata* (DUDA, 1925), *P. furcata* (DUDA, 1925), *P. longinervis* (DUDA, 1925), *P. multipunctata* (DUDA, 1925) and *P. varians* (DUDA, 1925). A key is constructed for the Oriental species. With 36 original figures.

This is the second part of a review of the species of *Poecilosomella* DUDA, 1920 in the World. The first part for the Afrotropical species was published recently (PAPP 1990). Now the Oriental — more precisely South Asian, Australasian and Pacific — species are revised. All but one of the known species were seen, the types of a majority of the hitherto described species were studied. Almost 2000 specimens were identified but most of them belong to the very common and wide-spread *P. punctipennis* (WIED.).

It was found that the Oriental (s. lat.) and the Afrotropical regions share no common species (for discussion see under *P. angulata* and *P. punctipennis*). Only two species occur in Australia and New Guinea (*P. pectiniterga*, *P. punctipennis*) and only one, namely *P. punctipennis* in the Pacific region, incl. Hawaii. It is assumed that the distribution of the species below was originally restricted to the Oriental region only, however, these latter species have been spread secondarily by human activity.

The factual number of the Oriental species (18) has not changed by the time of the present study: one new junior synonym was found [*P. apicata* (RICHARDS, 1963) to *P. multipunctata* (DUDA, 1925)] and one new species (*P. cryptica*) is described. However, it seems very probable that several new species will be described also from this region (T. HAYASHI, pers. comm.).

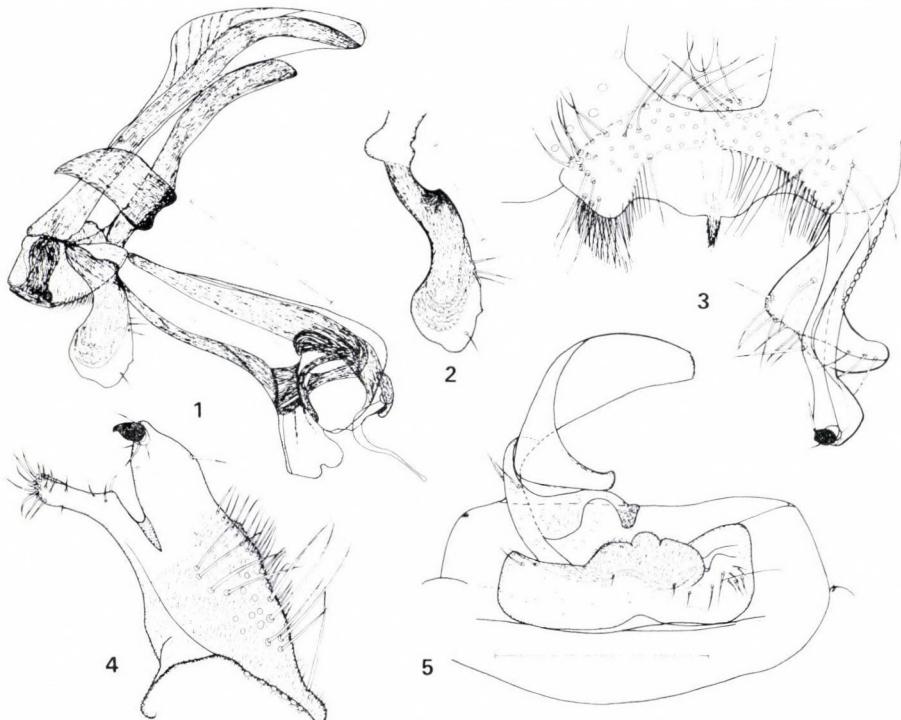
I owe a great debt of gratitude to the following colleagues and institutions for sending me types and other specimens and for providing me information: Dr. BRIAN R. PITKIN (British Museum, Natural History, BMNH), Dr. R. GAEDIKE (Institut für Pflanzenschutzforschung, Bereich Eberswalde, former Deutsches Entomologisches Institut, DEI), Dr. PAUL H. ARNAUD, Jr. (California Academy of Sciences, San Francisco, CAS), Drs CLAUDE BESUCHET and IVAN LÖBL (Muséum d'Histoire Naturelle Genève, MHNG), Dr. RUTH LICHTENBERG-CONTRERAS (Naturhistorisches Museum, Wien, NHMW), Dr. ROY DANIELSSON (Zoological Museum, Lund, ZML) and Dr. PIOTR OOSTERBROEK (Zoologisch Museum, Universiteit van Amsterdam).

Poecilosomella aciculata (DEEMING, 1969)
 (Figs 1—5)

Leptocera (Poecilosomella) aciculata DEEMING, 1969: 60.

Material studied: Holotype male (BMNH): 1) Tapplejung Distr., Sangu, C 6200', mixed vegetation by a stream in a gully, ix-x. 1961; 2) Brit. Mus. East Nepal Exp. 1961—62. R. L. COE Coll., B. M. 1962—177; 3) "Leptocera (Poecilosomella) aciculata sp. nov. HOLOTYPE ♂" det. J. C. DEEMING, 1963 (genitalia in a microvial without any fluid, kept in a bigger microvial). — Other characters: 4 ♂ 1 ♀ (HNHM): India, Darjeeling, West Bengal — 12. IV. 1967, leg. TOPÁL. 6 ♂ 1 ♀ (ZML, HNHM): Ceylon (Sri Lanka): Central Prov.: Harrasbedda; 20 mls E Kandy; Pidurutalagala; Sabaragamuwa Prov.: Deerwood, Kuruwita; 5 mls NNW Balangoda; E. Prov.: Madura Oya; Lund University Ceylon Expedition 1962, BRINCK—ANDERSSON—CEDERHOLM (locs 90:III, 96, 116:II, 135, 138, 146); 3 ♂ 4 ♀ (DEI): Sunda-Exped. RENSCH: Badjawa, W. Flores, 17. VI. 27., Sembaloen, Lombok, 30—31. III. 27., Rana Mésé, W. Flores, 20—20. VI. 27.

Measurements (holotype, in mm): body length 2.21, wing length 2.20, wing width 0.98, antennae 0.31, arista ca. 0.725, its cilia 0.03, length of scutellum 0.36, apical scutellar bristle 0.74, mg_2 and mg_3 of wing 0.535, 0.552, ratio 0.969.



Figs 1—5. Genitalia of *Poecilosomella aciculata* (DEEMING, 1969) male: 1 = aedeagal complex, lateral view, 2 = postgonite, 3 = subanal plate and right gonostylus, caudal view, 4 = gonostylus, outer (lateral) view, 5 = sternites 5—7, ventral view. — Scales: 0.2 mm for Fig. 1, (also for Figs 12, 22, 24, 26, 28, 29, 32), 0.2 mm for Figs 2—4 (also for Figs 11, 13, 15, 23, 25, 27, 30, 33—35), 0.5 mm for Fig. 5 (also for Figs 14, 21, 31)

Basic colour dark brown, proboscis also dark brown. Two pairs of *ors*, 4 thin but moderately long *ifr* pairs, *vi* strong, *pm-s* and *g* weak. Gena at narrowest 0.14 mm, longitudinal axis of eye 0.38 mm. Thoracic chaetotaxy: 1 *h*, 2 *np*, 1 *pra* (anterior *ia*), 1 *ia*, 1 *sa*, 1 *pa* (or 2 *pa*), 2 *dc*, 2 *sc*, 2 *stpl*. Fore tarsomeres 2–5 white, fore basitarsus dark in basal 2/3, white in apical 1/3. No *va* on mid tibia but mid tibia ventrally with long dense hairs (similar hairs on mid trochanter and on base of mid femur), mid basitarsus anteroventrally with a row of thicker bristles, posteroventrally with a row of shorter bristles. A distinct dark brown spot on the apex of *R2+3* vein, diffuse light brown spots on the apical and basal 1/6 of *R4+5*, larger diffuse spots on *Rs* (confluent with that of the apex of *RI*) and around the humeral vein. *ta-tp* equal to or even shorter than *tp*. Basic colour of wings light brown, also veins light brown (somewhat darker), dark brown on the areas of spots. Halteres dark brown.

Genitalia (of a male from India): *S5* with tripartite hairy emargination medially (Fig. 5), *S5* with moderately long bristles only; subanal plate (Fig. 3) with long dense hairs and with a mediocaudal pointed and hairy process; gonostylus (Figs 3, 4) trilobed, a geniculate narrow process anteriorly, medially bulging part with long bristles and a caudal and lateral process with a strong apical thorn; postgonite (Fig. 2) short and blunt; basiphallus (Fig. 1) of normal size, ventrally with short hairs, distiphallus rather long, its apical thread-like process short.

Distribution: HACKMAN (1977): "Ceylon, Nepal"; Sunda (new): W Flores, Lombok; India (new).

Poecilosomella albipes (DUDA, 1925)

Leptocera (Poecilosomella) albipes DUDA, 1925: 86.

It was described on the basis of a single male ("Mt. Banahao P. L. BAKER") in the BEZZI's Collection (not seen). Another specimen which fits well to its description was studied (1 ♂ (DEI): Ceylon Horn (on the reverse side an unreadable note) coll. LICHTWARDT — D E M [?]. Its measurements (in mm): body length 2.83, wing length 2.38, wing width 1.14, length of scutellum 0.41, width of scutellum 0.53, length of apical scutellar 0.59, *ta-tp* 0.233, *tp* 0.19, ratio 1.227.

Dark brown; wings brown, apical area of *R2+3* and *Rs—RI* area dark brown. Antennae reddish with some dark hue on flagellomere apically, 3 pairs of minute *ifr*, 1 long posterior reclinate 1 short anterior exclinate pairs of *ors*, facial plate and protuberance glossy dark brown, frons with an M-shaped pattern. Apical half of fore basitarsus and fore tarsomeres 2–4 white, 5th one dark brown. Legs shining dark brown, hind tibia basally and apically yellow on a small section, mid tarsomeres yellow, apex of 2nd hind tarsomere and whole 3rd hind tarsomere light yellow. Male fore tibia ventrally with some moderately long hairs only (similar hairs on tarsomeres posterally). Male mid tibia with long *va*, ventrally with moderately long and not dense hairs (mainly

in the apical half). One short and one long pairs of sternopleural bristles. Wings without a vein appendage on $R_2 + 3$, $R_2 + 3$ apically strongly (perpendicularly) but arcuately upcurved. Knob of halteres dark brown, stalk yellow. Male genitalia not studied.

Distribution: HACKMAN (1977): "Philippines (Luzon)"; Sri Lanka (new).

Poecilosomella amputata (DUDA, 1925)

Leptocera (Poecilosomella) amputata DUDA, 1925: 97.

Lectotype male (HNHM): 1) Formosa, SAUTER; 2) Chip Chip 909. I.; 3) "Limosina punctipennis W." det. KERTÉSZ; 4) "Poecilosomella amputata n. sp. ♂" Det. Dr. O. DUDA; 5) (red) TYPUS. — **Paralectotype** female (HNHM): 1) Formosa, SAUTER; 2) Polisha, 908. XII.; 3) (same as on LT); 4) "P. amputata ♀" Det. Dr. O. DUDA. The paralectotype female is conspecific with the lectotype male.

Measurements in mm: body length ca. 2.50 (lectotype, abdomen downcurved), 2.75, wing length 2.54 (lectotype), 2.83, wing width 1.19 (lectotype), 1.36.

Dark brown, frons red, face shining reddish yellow. Three pairs of short *ifr*, *oc* strong, 2 strong *ors*, *occe*, *occ* rather long; 2 *dc*, 2 *stpl*. Scutellum as long as wide (or shorter); apical scutellars much longer than scutellum. All tibiae with a yellow ring at middle and also both ends yellow. Male fore tibia and basitarsus as well as 2nd tarsomere with long hairlike setae ventrally, posteroventrally and anteroventrally; hairs much longer than diameter of pedal parts they emerge. Basal 2/3 of fore basitarsus dark brown, other parts of fore tarsi yellow. Male mid tibia ventrally with long hairs (except for its base), no *va* but 5 posterally curved short thornlets (forming a comb) on the apex of tibia. Male mid femur anteroventrally and posteroventrally with a row of long hairs. Armature of mid tibia as in the related species, a rather long *pd* at proximal 1/3 and distal 4/5. Wing veins ochreous, only costa light brown. Costa with short bristles also on first costal section. $R_2 + 3$ without a vein appendage apically but apical curvature nearly angulate (not perpendicular). Apical half of $R_4 + 5$ strongly upcurving to $C. ta-tp/tp$ ratio 1.15. Upper edge of discal cell sharp-angled, lower edge obtuse-angled. A diffuse dark brown spot around the apical part of $R_2 + 3$, another even more diffuse brown spot on apex of RI to $R_2 + 3 - R_4 + 5$ fork.

Genitalia not studied.

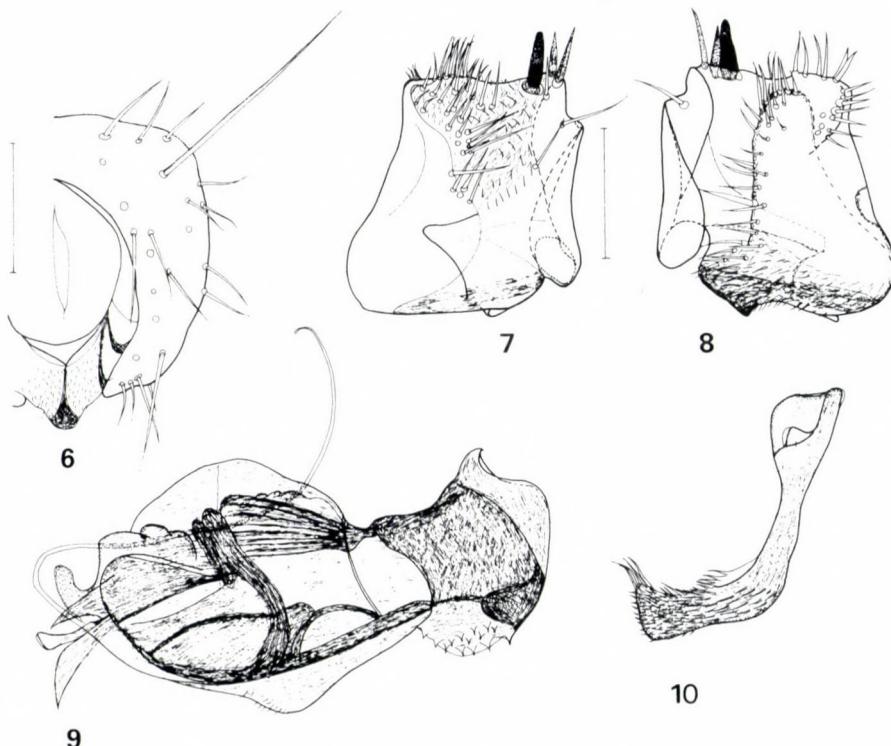
Distribution: known from its type-locality (Formosa) only.

Poecilosomella angulata (THOMSON, 1869)
 (Figs 6—10)

Limosina angulata THOMSON, 1869: Kongliga svenska Fregatten...: 602.

There is no specimen of this species in the collection of the HNHM or any other museum collections from the Oriental or Pacific regions known by me. RICHARDS' (1973) comment deserves to be quoted: "Duda records it from New Guinea (Specimen in the museum of Budapest), Duda is normally so accurate that I hesitate to suggest that the specimen was really *L. (P.) punctipennis* which the species much resembles except for the characters given in the key. DUDA (1925) illustrates the wing. The species is supposed to have been introduced to America by the slave trade." Only *P. punctipennis* was found in Hawaii, too; cf. MARSHALL in EVENHUIS (1989).

In order to allow a reliable identification, five drawings are given for the details of the male genitalia (Figs 6—10).



Figs 6—10. Genitalia of *Poecilosomella angulata* (THOMSON, 1869) male: 6 = subanal plate, caudal view, 7—8 = gonostylus in lateral view: 7 = inner view, 8 = outer view, 9 = aedeagus, lateral view, 10 = postgonite. — Scales: 0.2 mm for Fig. 6, 0.1 mm for Figs 7—10 (also for Figs 16—18)

Subanal plate (Fig. 6) simple, without any long bristles and with a blunt ventral projection. Lobes of gonostylus all short (Figs 7—8), with two thick setae (thorns) besides the apical tooth (Fig. 8), the latter is rather long but comparatively thin. Basiphallus (Fig. 9) ventrally with minute hairs emerging on small projections. Distiphallus (Fig. 9) robust, apical thread-like process long. Postgonite (Fig. 10) angulately bent, with numerous short hairs and with some longer hairs apically.

Poecilosomella annulitibia (DEEMING, 1969)

Leptocera (Poecilosomella) annulitibia DEEMING, 1969: 62—63, Figs 5, 10, 18.

Material studied: Holotype male (BMNH): 1) Tapplejung Distr., river banks below Tamrang Bridge, c. 5,500 ft., x-xi. 1961 (R. L. COE) (abdomen and genitalia in a microvial).

Measurements in mm: body length 1.75 + abdomen, wing length 2.58, wing width 1.17, second costal section 0.775, 3rd costal section 0.81 (ratio 0.957), *ta-tp* 0.17, *tp* 0.18, arista 0.776.

Facial plate yellowish brown, anterior part of frons and a small subocular (supravibrissal) area reddish yellow. Aristal cilia ca. 0.02 mm, cilia on flagellomere 0.02—0.025 mm. Four pairs of moderately long *ifr*. Basic colour of thorax dark brown, mesonotal and scutellar spots grey or silvery grey. Male fore tibia ventrally with long dense hairs, basitarsus and fore tarsomeres posterally with similar but shorter hairs. Male mid tibia with a distinct *va*, as long as or longer than diameter of tibia subapically. Mid tibia ventrally with moderately long (shorter than diameter of tibia) thin erect and blunt bristles like in Fig. 5 of DEEMING (1969). Fore tarsomeres bicolorous: basitarsus yellow in its apical half, tarsomeres 2—3 yellow, tarsomeres 4—5 dark brown; mid basitarsus and other mid tarsomeres yellow, apical parts of hind basitarsus and tarsomeres 2—3 yellow, whole 4th and 5th tarsomeres dark brown. Scutellum as long as wide, apical scutellar much longer than scutellum. Wings with distinct (0.06 mm) vein appendage on *R₂₊₃*, dark spots around it and on *Rs-R₁* area. Humeral vein and humeral area dark, *ta-tp* somewhat shorter than *tp*. Costal vein just overrunning apex of *R₄₊₅*.

Male subanal plate with a blunt shovel-formed appendage (blunt glossiform also in profile). Hypandrium forms a shield-like wide sclerite below aedeagal apodeme. Periandrium with a pair of strong dorsal bristles. Gonostylus bilobed, posteral one proclinate with a blunt apical thorn (not sharp as in Fig. 18 of DEEMING 1969), anterior one shorter than posteral, with short or medium long thin bristles (hairs) only. Postgonites arcuately curved and pointed. Aedeagus comparatively simple.

Distribution: known only from Nepal.

Poecilosomella borboroides (WALKER, 1860)

Ephydria borboroides WALKER, 1860: 235. — *Limosina ornata* DE MEIJERE, 1908: 177. — *Limosina picturata* MALLOCH, 1912: Proc. U.S. natn. Mus. 43: 653 (for synonymies see more in HACKMAN 1977).

M a t e r i a l s t u d i e d: 1 ♂ (HNHM): Formosa SAUTER — Polisha, 908. XII. — “P. ornata De Meij. ♂” Det. Dr. O. DUDA. 3 ♂ 1 ♀ (ZML, HNHM): Ceylon (Sri Lanka), NW Prov., Mundal; Sabaragamuwa Prov., Deerwood, Kuruwita; Bopathella Falls; Lund University Ceylon Expedition, 1962. BRINCK—ANDERSON—CEDERHOLM (locs 40, 90:III, 91:I). — 1 ♂ (HNHM): India, Orissa, Daitari, 600—700 m, soil traps, 24. XII. 1966, leg. TOPÁL (No. 53); 1 ♀ (HNHM): ibid., from forest shrubs, 5. I. 1967 (No. 121); 1 ♀ (HNHM): ibid., from forest litter, 23. XI. 1967 (No. 925).

D i s t r i b u t i o n: HACKMAN: “Celebes, Ceylon, India [Assam], Java, Malaya, Philippines [Luzon]”; India (Orissa), Formosa.

Poecilosomella brunettii (DEEMING, 1969)

Leptocera (Poecilosomella) brunettii DEEMING, 1969: 63, Figs 7, 13, 19.

M a t e r i a l s t u d i e d: H o l o t y p e male (BMNH): 1 [round, red margined] Holo-type; 2) INDIA: Darjeeling, 13—19. IX. 1913, E. BRUNETTI [handwriting]; 3) [upside down] Pres. by BRUNETTI, B. M. 1927—184; 4) “*Leptocera (Poecilosomella) brunettii* sp. n. HOLOTYPE ♂” det. J. D. DEEMING, 1963. The holotype (glued on a triangular paper card) is in poor condition: abdomen with genitalia are preserved in a glass microvial with glycerine, right wing missing (but see Fig. 13 of DEEMING 1969), left fore leg and both middle legs are glued on the same and another paper triangles.

Basic colour of frons dark brown, reddish medially, *ifr* lines and orbital plates greyish silvery. Flagellomere with comparatively long cilia apically. No strong genal bristle (i.e. upcurving genal/peristomal bristles all short). Three pairs of moderately long *ifr* bristles. Head bristles robust. Arista with short cilia. Thorax ventrally with numerous long and thick bristles. Tibiae without yellow rings, knees and apices lighter. Male fore femora and tibia without long hairs, fore basitarsus brown, ochreous only apically. Mid tibia with very long *va* (half as long as basitarsus). Two pairs of strong *dc*. Wings rather broad, costal hairs all short. *R2 + 3* apically nearly angularly bent to costa, there with a brown spot. *ta-tp* shorter than *tp*. Male genitalia are very characteristic: gono-stylus with additional small lateral thorn, subanal plates with their long ventral processes (see Fig. 19 of DEEMING 1969).

Poecilosomella sp. near *brunettii*: DEEMING 1969: 65, Fig. 20.

Male (BMNH): Assam, Shillong, 16. X. 1920. — R. Senior White, B. M. 1924—100 — “*Leptocera* ♂ (*Poecilosomella*) sp. n. near *Brunettii* DEEMING, det. J. C. DEEMING, 1967”.

The state of preservation of this specimen does not allow any more study (more than involved in DEEMING 1969), its abdomen with genitalia is separated in a glass microvial. It must be closely related to *brunettii*, justified by its wing pattern, long *va* bristle on mid tibia, colour of legs and its long processes on male subanal plate.

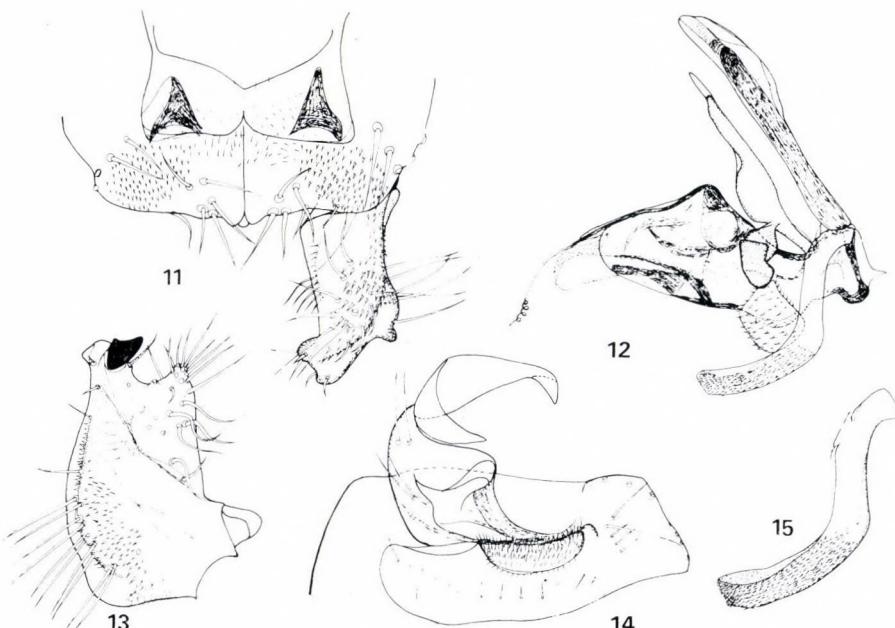
Poecilosomella cryptica sp. n.
 (Figs 11—15)

H o l o t y p e male (HNHM): 1) Formosa SAUTER; 2) Koshun, 1908. X.; 3) “*P. varians* n. sp. ♂” Det. Dr. O. DUDA. [this is a paralectotype of *P. varians* (DUDA)]; dirty, wings glued together, abdomen with genitalia removed and kept in a plastic microvial with glycerine. — **P a r a t y p e s**: 1 ♀ (HNHM); 1) Formosa SAUTER; 2) Chip Chip, 909. III.; 3) “*Limosina punctipennis* W.” det. KERTÉSZ; 4) “*P. varians* ♀” Det. Dr. O. DUDA [this is a paralectotype of *P. varians* (DUDA), see also there]. 1 ♂ (HNHM): 1) Formosa SAUTER; 2) Polisha, 908. XII.; 3) “*P. varians* ♀” Det. Dr. O. DUDA (without head). 1 ♀ (HNHM): ibid., Mt. Hoozan, 1910. V.

M e a s u r e m e n t s in mm: ca. 2.9 (holotype, abdomen downcurved), 2.5—2.67 (paratype ♀♀), wing length 2.71 (holotype), 2.58 (paratype ♂), 2.58, 2.67 (paratype ♀♀), wing width 1.25 (holotype), 1.21 (paratype ♂), 1.21, 1.24 (paratype ♀♀).

This is a species very close to *P. varians* (DUDA), only its differentiating features are mentioned below; however, the male genitalia are quite distinct (see also key below).

Fore tibia and basitarsus with long hairs as in *varians*, also mid tibial *va* bristles strong. Second costal section shorter than third (on holotype 0.60 mm vs. 0.64 mm, ratio 0.94, on one of the paratypes 0.69 mm vs. 0.73 mm, ratio 0.945).



Figs 11—15. Genitalia of *Poecilosomella cryptica* sp. n., paratype male. 11 = subanal plate and right gonostylus in caudal view, 12 = aedeagal complex, lateral view, 13 = gonostylus, outer (lateral) view, 14 = sternites 5—7, 15 = postgonite, lateral view. — Scales: Figs 11, 13, 15 as for Fig. 2, Fig. 14 as for Fig. 5, Fig. 12 as for Fig. 1

Vein $R_2 + 3$ curved apically in a wide arcus. $R_4 + 5$ rather S-shaped; diffuse but distinct and dark spots also on the apex of $R_2 + 3$, $R_4 + 5$. First costal section with hairs much longer than in *P. varians*.

Male 5th sternite (Fig. 14) with bigger but less bulging medial part than in *P. varians*. Subanal plate (Fig. 11) with shorter bristles, without any processes, its medial part bare. Gonostylus (Fig. 13) without extremely large and thick bristles, apical thorn shorter but thicker than in *varians* and bidentate apically; gonostylar lobes less distinct. Postgonite (Fig. 15) less angulately bent, apical part longer, basal part shorter than in *P. varians*, the whole postgonite more slender. Basiphallus rather simple (Fig. 12), distiphallus with a pair of fleshy and hairy lobes basally, similar to those of *varians* but this lobe otherwise shaped and hairs much shorter; apical thread-like process long and thin.

Distribution: Formosa.

Poecilosomella furcata (DUDA, 1925)

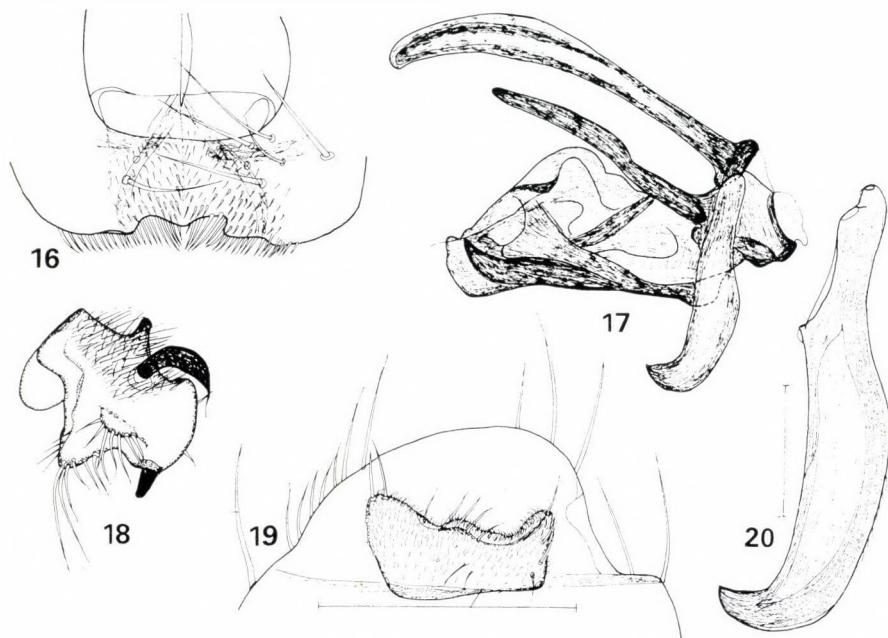
(Figs 16—20)

Leptocera (Poecilosomella) furcata DUDA, 1925: 91.

Material studied: Lectotype male (HNHM): 1) Formosa SAUTER; 2) Chip Chip 909. III.; 3) "Limosina sp. nicht punctipennis WIED." [KERTÉSZ's handwriting]; 4) "Poecilosomella furcata n sp ♂" Det. Dr. O. DUDA; 5) [red] Typus. — Paralectotype female (HNHM): 1) Formosa SAUTER; 2) Polisha 908. XII.; 3) "Poecilosomella furcata ♀" Det. Dr. O. DUDA. — Other types: 1 ♂ (HNHM): Vietnam, No. 157, Prov. Lao cai, Lao cai — 1971. XI. 29. leg. TOPÁL et MATSKÁSI.

Measurements of lectotype (in mm): body length 2.79, wing length 2.875, wing width 1.36, *ta-tp* 0.276, *tp* 0.224 (ratio 1.23).

Dark brown, almost black; frons vivid red, orbital plates and sagittal line silvery. Two pairs of exinate *ors*; *occe*, *occi* much shorter than in *P. amputata*; a long upcurving *g* bristle. Thorax very wide with silvery "poecilosomella" pattern. Two pairs of strong *dc*, 2 strong *stpl*. Scutellum slightly longer than wide, *apsc* much longer than scutellum. Legs dark brown, tibiae with yellow rings at middle (also both ends yellow). Basal 2/3 of fore basitarsus, all 4th and 5th tarsomeres and base of 2nd tarsomere dark brown, other parts of fore tarsi ochreous yellow. Male fore femur with 2—3 long bristles dorsally in apical third. Male fore tibia and 2 basal tarsomeres ventrally, posteroventrally and anteroventrally with long dense hairs, posteral row of hairs extremely long. Armature of mid tibia similar to that of the related species but all the bristles (incl. short ones) comparatively thick; *pv-s* at basal 1/3 and distal 3/4, ventral side with short hairs only. No *va* bristle but 3 short thick setae instead (longer than in *P. amputata*). Alar plane light brown, veins light brown (darker than alar plane), costa dark brown. $R_2 + 3$ apically angulate with a comparatively long vein appendage (stump vein). $R_4 + 5$ strongly S-shaped. Upper corner of discal cell acute-angled (though not much less than 90°), lower corner obtuse.



Figs 16—20. Genitalia of *Poecilosomella furcata* (DUDA, 1925), male. 16 = subanal plate, caudal view, 17 = aedeagal complex, lateral view, 18 = gonostylus, outer (lateral) view in its widest extension, 19 = sternite 5, ventral view, 20 = postgonite, lateral view. — Scales: 0.5 mm for Fig. 19, 0.05 mm for Fig. 20, Figs 16—18 as for Fig. 7

Alar base dark brown, diffuse dark spots on apex of $R_2 + 3$, R_1 and on $R_2 + 3 - R_4 + 5$ fork to R_1 (separated from the other one).

Male 5th sternite (Fig. 19) much less wide than abdomen with some long bristles medially. Subanal plate (Fig. 16) without distinct process, covered with moderately long, dense and thick hairs. Gonostylus (Fig. 18) peculiar with a long, curved blade-like thorn laterally, apical thorn blunt, bristles sparse and moderately long. Postgonite (Fig. 20) much curved apically. Distiphallus robust (Fig. 17) apical thread-like process thin and short. Hypandrial apodeme much shorter than aedeagal apodeme (Fig. 17).

Distribution: Formosa; Vietnam (new).

Poecilosomella himalayensis (DEEMING, 1969)

Leptocera (Poecilosomella) himalayensis DEEMING, 1969: 61—62, Figs 4, 11, 16.

Material studied: Holotype male (BMNH): 1) Holotype; 2) Taplejung Distr. River banks below Tamrang Bridge, c 5500' x-xi. 1961.; “♂”; 3) BRIT. MUS. East Nepal Exp. 1961—62. R. L. COE Coll., B. M. 1962—177; 4) “*Leptocera (Poecilosomella) himalayensis* sp. nov. HOLOTYPE ♂” det. J. C. DEEMING, 1963 (the holotype is pinned through its abdomen). — Paratypes: 1 ♂ 1 ♀ (BMNH): same data (double mounted alike holotype with minutia into poliporus bricklets; paratype male's abdomen with genitalia in a glass microvial with glycerine).

Measurements of holotype (in mm): body length 2.21, wing length 2.18, width 0.95, scutellar length 0.34, scutellar width 0.48 (ratio 0.71), second costal section 0.62, third costal section 0.585 (ratio 1.06), *ta-tp* 0.145, *tp* 0.16 (ratio 0.90).

Arista with short cilia, 4 pairs of moderately long and thin *ifr* (lost on holotype). Thoracic chaetotaxy: 1 *h*, 2 *np* (prealar one on a callus), 1 *prsut*, 1 *sa*, 1 *ia*, 1 *pa*, 2 *dc*, 1 short and thin *prsc*. Male fore tibia and basitarsus posterally and posteroventrally with rather short hairs (much shorter than diameter of basitarsus there). Distal 1/3 of male mid tibia ventrally with very long dense hairs (see Fig. 4 of DEEMING 1969), ventroapically with several bristles obviously thicker though shorter than other hairs, no upright (perpendicular) stiff hairs on tibia. Second hind tarsomere long and thick. Costa and radial veins dark brown, other veins lighter (ochreous); a diffuse round brown spot on the apical part of $R_2 + 3$, another diffuse spot on the $R_2 + 3$ and $R_4 + 5$ fork, incl. *RI*; distal half of $R_4 + 5$ straight or nearly so (see Fig. 11 of DEEMING). For other features see DEEMING (1969).

Male genitalia characterized by the very long black and blunt (more or less racket-shaped) thorn on the ventromedial process of gonostylus and a deep V-shaped posteromedial process on *S*₅.

Distribution: Nepal.

Poecilosomella longinervis (DUDA, 1925)

Leptocera (Poecilosomella) longinervis DUDA, 1925: 103.

Material studied: Lectotype male (HNHM): 1) Formosa, SAUTER; 2) Kosempo, 908. III. 29.; 3) "P. longinervis n. sp. ♂" Det. Dr. O. DUDA; 4) [red] Typus. — Paralectotypes: 3 ♀ (HNHM): 1) Formosa, SAUTER; 2) Taihoku, 1912. IV.; 3) "P. longinervis ♀" Det. Dr. O. DUDA. — Other material: 1 ♀ (DEI): Daitotei (Form.), H. SAUTER, V.—VI, 1914 — "Poecilosomella longinervis DUDA" det. Dr. W. HENNIG, 1939. 1 ♀: (Zool. Dept., Tel Aviv Univ.): India: Mizoram, Aizawl, 31. X. 84. coll. ZAII.

Measurements in mm: body length 3.29 (lectotype), 2.50, 2.71, 3.33 (paralectotypes), wing length 3.125 (lectotype), 2.79, 2.83, 3.375 (paralectotypes), wing width 1.22 (lectotype), 1.12—1.33 (paralectotypes).

Dark brown, frons red, face, genae red or reddish ochreous, pleurae partly red, at least humerus and notopleurae also reddish. Pedicel and scape red, flagellomere fuscous. In some specimens also thorax is reddish. No genal bristle. Anterior *ors* 0.138 mm, posterior *ors* 0.26 mm, *occe*, *occi* long. Arista only 0.62 mm. Four (rarely 3) pairs of short and thin *ifr*. Genae very wide. Two pairs of strong *dc* bristles, 2 thin *stpl*. Length of scutellum (lectotype) 0.66 mm, width 0.57 mm, apical *sc* 0.62 mm. Legs dark brown, both ends of tibiae (also apices of femora) yellow, a wide yellow ring at about middle of tibia. Both fore tarsi, left mid tarsi and left tibia of the lectotype lost, in paralectotype females 2/3 of fore

basitarsus and tarsomeres 4—5 dark brown, other parts fuscous yellow. No long hairs on male fore tibia (apical half ventrally with some upright hairs, which are much shorter than the diameter of tibia). No long hairs on mid tibia and tarsi. Mid tibia with a comparatively long curved *va* spur surrounded by 4 black short but thick bristles. Anterodorsals on mid tibia: 1 short or moderately long bristles at proximal 1/6 and at distal 3/5 (this one is rather anterad), 1 long one at proximal 1/3, 1 extremely long and thick bristle at distal 2/3. Postero-dorsals: 1 moderately long, nearly dorsal one at distal 4/5, short bristles at proximal 1/4, 1/3, at middle, at distal 2/3 and 4/5. Wings almost clear, veins light brown (incl. costa), costa at conjunction with *R1*, apex of *R4+5*, *R2—5* fork and *R1* above the fork (are) dark brown. *R4+5* only slightly upcurving, *M* almost parallel, diverging only apically. Second costal section 1.09 mm, third section 0.63 mm, ratio 1.73. *ta-tp* 0.233, *tp* 0.181 (ratio 1.29).

Male epandrium with 2 pairs of very long bristles. Genitalia not studied. Female cerci with 2 pairs of very long wavy bent hairs.

Distribution: HACKMAN (1977): "Burma, China, Formosa, India, Nepal".

Poecilosomella meijerei (DUDA, 1925)

Leptocera (Poecilosomella) Meijerei DUDA, 1925: 90. — *Poecilosomella dudai* HACKMAN, 1977: 405 as a new name for *Leptocera (P.) meijerei* DUDA, 1925, in *Leptocera* a junior secondary homonym of *Limosina (Scotophilella) meijerei* DUDA, 1918.

This species was described on a single specimen in DE MEIJERE's collection "Tjibadas 5000—6000", Koningsberger". This specimen was not found in the DE MEIJERE's collection (P. OOSTERBROEK, pers. communication). DUDA's description defines a form (see key below) distinctly, i.e. up to the present time we cannot exclude the existence of a species, which fits DUDA's description. The name *meijerei* was included also in the key below, although it is a doubtful species.

Poecilosomella multipunctata (DUDA, 1925)

Leptocera (Poecilosomella) multipunctata DUDA, 1925: 101—103.

Material studied: Lectotype female (HNHM, present designation): 1) Formosa SAUTER; 2) Kankau, 1912. VII.; 3) "P. multipunctata" Det. Dr. O. DUDA; 4) [red] TYPUS. — Paratypes: 11 ♀ (HNHM): same data but without the red type label (labelled now with red margined "Paralectotypus" labels as "L. (Poecilosomella) multipunctata DUDA, 1925, ♀".* 4 ♂ 16 ♀ (DEI): Kankau (Koshun), Formosa, H. SAUTER, VII. 1912 — "Poecilosomella multipunctata DUDA" det. Dr. W. HENNIG, 1939. 1 ♂ 3 ♀ (DEI): Sunda-Exped. RENSCH: 1 ♂: Soembawa-Besár, W. Soembawa, 24. IV.—2. V. 27; 1 ♀: Badjawa, W. Flores, 1200 m, 17. VI. 27.; 2 ♀: Plawangan, 2600 m, Lombok, 3. IV. 27.

* DUDA (1925: 103) wrote on 16 ♀; the other four females must be lost there (most probably during a loan to the late Dr. M. P. ARADI, for details see elsewhere). The two males that DUDA selected as types in the BEZZI's collection, labelled "Mt. Makiling Luzon, Baker" should be regarded as paralectotypes.

Lectotype female. Body length ca. 2.92 mm (abdomen downcurved), wings 2.25×0.93 mm; body length of paralectotypes 2.29—3.75 mm.

Similar to *P. longinervis* but body darker, mesonotum blackish brown. Arista short, 0.44 mm with long (0.03 mm) cilia. Genae narrower than in *P. longinervis*, an upcurving genal bristle present. 2—3 pairs of short and thin *ifr*. Anterior *dc* pair shorter than in *P. longinervis*, wings also comparatively shorter. Scutellum 0.57 mm long, *apsc* 0.62 mm. Apical half of *R4 + 5* rather definitely upcurving, terminal section of vein *M* (a vein fold) strongly S-formed, i.e. upcurving at middle, diverging from *R4 + 5* at apex (cf. also RICHARDS 1963: Pl. XVII). mg_2/mg_3 0.733 mm/0.44 mm = 1.67. $ta\text{-}tp/tp$ 0.198 mm/0.147 mm = 1.35. Female cerci with one short and one moderately long pairs of bristles, viz. they are conspicuously shorter than in *P. longinervis*. Some other features are mentioned in the description of the holotype of *L. apicata* RICH. below.

Distribution: HACKMAN (1977): "Formosa, India, Philippines [Luzon, Palawan]"; Indonesia (new): Soembawa, W. Flores, Lombok.

Leptocera (Poecilosomella) apicata RICHARDS, 1963: 614—615, Pl. XVII.

Holotype male (CAS): 1) San Jose, Mindoro, P[hilippine] I[slands], X. 30—45, E. S. Ross; 2) "Leptocera (Poecilosomella) apicata RICH. Type ♂" [RICHARDS' handwriting]. (glued on a triangular paper card). — Paratype female (CAS): id., "Leptocera apicata RICH. allotype ♀ left wing on slide".

Body length 3.04 mm (measured along the downcurving abdomen), wings 2.33×1.08 mm; paratype 2.58 mm, width of wing 0.97 mm (right wing not measurable, tip of wing lost). Frons vivid red with 3 pairs of thin and short *ifr*; orbital plates silvery brown, 2 *ors* exinate, facial plate shining reddish yellow with distinct facial protuberance between antennal bases; *vi* long though not thick (apices meeting at middle); genae wide and much widening posteriorad with a distinct though thin upcurving genal bristle. Antennae reddish brown. Thorax and abdomen dark (blackish) brown, mesonotum with characteristic silvery greyish pattern; 2 postsutural pairs of *dc*, 2 *stpl*. Scutellum 0.55 mm, *apsc* 0.60 mm long (in paratype female 0.517 mm vs. 0.59 mm). Tibiae dark brown (knees yellow) each with 2 yellow rings (apically and in the basal 2/5). Male fore tibia dorsally and ventrally with long dense hairs but these hairs shorter than tibial diameter; fore basitarsus dark brown in its basal 2/3, also tarsomeres 4—5 dark brown, apex of basitarsus and tarsomeres 2—3 ochreous (brownish yellow). Mid tibia ventrally without any long hairs or bristles; *ad-s*: a very long at basal 1/3, 1 extremely long at distal 4/7 (in female an additional subbasal short bristle, in male this is as short as *pd-s*); *pd-s* very short, at most 1/3 of the length of basal *ad*; no long *va* but several black curved hooklets at

apex ventrally. Wings brownish, veins ochreous to light brown, darker brown on humeral, on R_1 , on the apex of $R_2 + 3$ and on the Rs base as well as subbasally. mg_2/mg_3 0.74 mm/0.57 mm = 1.30, $ta\text{-}tp/tp$ 0.23 mm/0.16 mm = 1.42 (in paratype 1.625). Abdominal terga with lateromarginal setae as long as 0.38 mm. Otherwise as in RICHARDS' description.

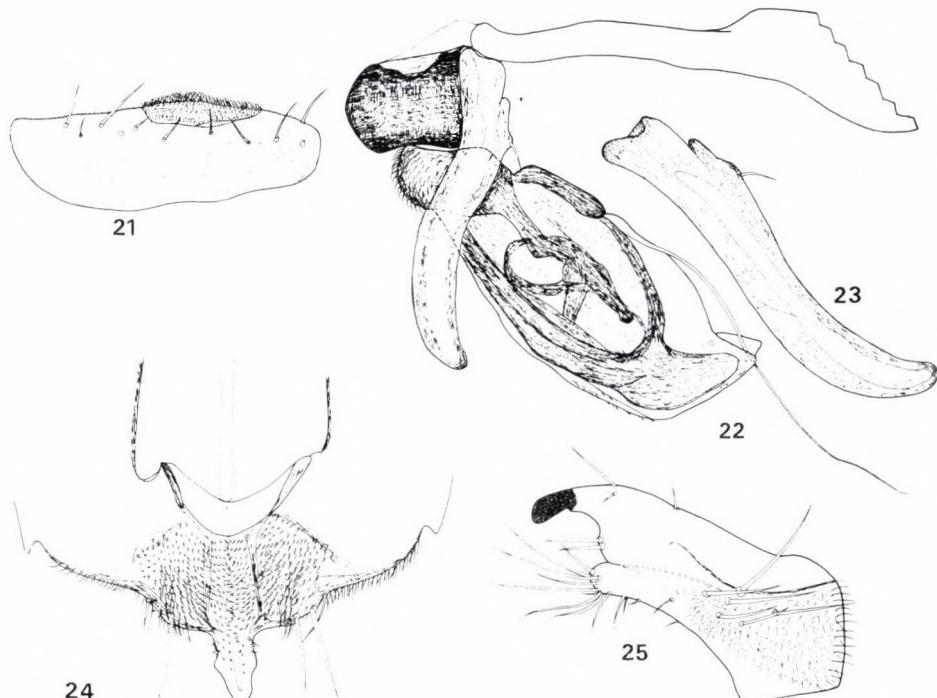
These specimens are conspecific with the lectotype of *P. multipunctata* (DUDA, 1925), i.e. this name is a junior synonym of *P. multipunctata*.

Poecilosomella nepalensis (DEEMING, 1969)

(Figs 21—25)

Leptocera (Poecilosomella) nepalensis DEEMING, 1969: 63, Figs 6, 12, 17.

Material studied: Holotype male (BMNH): 1) [round, red-margined] Holotype; 2) Tapplejung Distr., River banks below Tamrang Bridge, c. 5500' x-xi. 1961.; 3) Brit. Mus. East Nepal Exp. 1961—62. R. L. COE Coll. B. M. 1962—177; 4) "Leptocera (Poecilosomella) nepalensis sp. n. HOLOTYPE ♂" det. J. C. DEEMING, 1963 (double mounted in a polyporus bricklet; right wing missing on holotype but see Fig. 12 of DEEMING 1969).



Figs 21—25. Genitalia of *Poecilosomella nepalensis* (DEEMING, 1969), male: 21 = sternite 5, 22 = aedeagal complex, lateral view, 23 = postgonite, lateral view, 24 = subanal plate, caudal view, 25 = gonostylus, outer (lateral) view. — Scales: Fig. 21 as for Fig. 5, Figs 22, 24 as for Fig. 1, Figs 23, 25 as for Fig. 2

Body length ca. 2.42 mm, wings 2.67×1.05 mm. No genal bristle. Antennae red with some dark brown hue on apical part of pedicel and flagellomere. Three pairs of moderately long *ifr* (4 in the original description). Left pleura with 1 *stpl*, right side with an additional short *stpl*. Fore tibia and femur with long and dense ventral hairs. Fore tarsomeres with long posteral black hairs. Mid tibia with 2 *va* (moderately long); ventrally with long erect bristles (as in Fig. 6 of Deeming). Apical part of vein *R₂₊₃* nearly perpendicular to costa, this corner with a distinct vein appendage; all the apical part involved in a small dark spot. Otherwise as in its original description (incl. armature of mid tibia).

P a r a t y p e ♂ (BMNH): same data; genitalia prepared and stored in microvial.

M a t e r i a l o t h e r t h a n t y p e s: 1 ♂ (MHNG): Nepal, Malemchi, 2900 m, 18. IV. 1981, I. LÖBL, No. 30; 1 ♂ (HNHM): India: West Bengal, Darjeeling District, Ghum — Sanchal Reserve Forest, 2300 m — 1967. IV. 12., leg. TOPÁL, No. 318.

Male S5 (Fig. 21) simple with a mediocaudal hairy area; subanal plate (Fig. 24) with a blunt and long medial process and with numerous short but thick setae; aedeagus (Fig. 22) robust, base of distiphallus with hairs ventrally, apical process thin and long; postgonite (Fig. 23) slightly curved and blunt apically. Gonostylus as in Fig. 25.

D i s t r i b u t i o n: Nepal, India.

Poecilosomella nigrotibiata (DUDA, 1925)

Leptocera (Poecilosomella) nigrotibiata DUDA, 1925: 98—99, 84. — *Poecilosomella nigrotibia* HACKMAN, 1977: 405, 819 ((Index)) — *Leptocera (Poecilosomella) nigrotibiata*: DEEMING, 1964: 166.

Material studied: **H o l o t y p e** male (HNHM): 1) Formosa SAUTER; 2) Takao, 1907. X. 26.; 3) "Limosina punctipennis W." det. KERTÉSZ; 4) "P. nigrotibialis n. sp." Det. Dr. O. DUDA; 5) [red] Typus. — **O t h e r m a t e r i a l:** 1 ♀ (DEI): Maruyama (Form.), H. SAUTER, IV. 1914 — DEI — "Poecilosomella multipunctata ??" — "Poecilosomella nigrotibiata DUDA" det. Dr. W. HENNIG, 1939.

Body length ca. 2.29 mm (abdomen much downcurved, i.e. not well measurable), wings 2.125×0.98 mm. Body dark brown incl. frons, face and genae. Facial plate not much protruding at antennal base. Genae not much wide, 0.18 mm below eyes, genal bristle short but discernible. Arista 0.62 mm, its cilia 0.027 mm long. Four pairs of short *ifr*, 2 exinate pair of *ors*, *occe*, *occ* moderately long but thin. Scutellum wider than long, *apsc* much longer than scutellum. Femora and fore tibia (only the very base yellow) all dark brown, mid and hind tibiae with narrow middle rings and also both apices yellow. Fore basitarsus dark brown (except for its distal 1/4), tarsomeres 4—5 also dark brown, tarsomeres 2—3 light yellow. Fore tibia and tarsi (down to tarsomere 5)

with very long dense hairs ventrally, posteroventrally and posterally, longest hairs on fore tarsi posterally as long as 0.32 mm. Armature of mid tibia: *ad-s*: 1 small bristle at 7/40, 1/4, 5/8; 1 long and thick at 3/8, an almost anterol one at 29/40, 1 long and very thick bristle at 4/5; *pd-s*: 1 moderately long bristle each at 1/4, 7/20; 1 long at 19/40, 1 very long and thick at 31/40. A distinct *va* of 0.10 mm. No long hairs ventrally on mid tibia or on mid basitarsus. Wings light brown, veins slightly darker. Costal hairs comparatively long. Apical part of *R₂₊₃*, *R₂₋₅* fork with a section of *R₁*, *R_{1-C}* conjunction and base of wing with diffuse dark brown spots. Vein *R₄₊₅* strongly upcurved into costa, vein *M* S-shaped, i.e. apical part much divergent from *R₄₊₅*. *mg₂/mg₃* 0.46 mm/0.52 mm = 0.89, *ta-t_p/tp* 0.164 mm/0.138 mm = 1.19. — Genitalia not studied.

Distribution: Taiwan (Formosa).

Poecilosomella pectiniterga (DEEMING, 1964)

Leptocera (Poecilosomella) pectiniterga DEEMING, 1964: 1646, Figs 1—2.

Material studied: 1 ♂ (DEI): Sunda-Exped. RENSCH, Badjawa, W. Flores, 1200 m, 17. VI. 27.; 16 ♂ (ZML, HNHM): Lund University Ceylon Expedition, 1962, BRINCK—CEDERHOLM—ANDERSSON: 8 ♂: Sabaragamuwa Prov., Stream at 2500 ft, 5 mls NW Balangoda, 22. II. 62, Loc. 96 — Swept above surface of small stream. 4 ♂: NW Prov., 7 mls NE Puttalam, 1. II. 62. Loc. 34:I — Swept on shrubs in jungle. 1 ♂: Sabaragamuwa Prov., Gilimale, Alt. 300 ft, 6 mls NE Ratnapura, 20. II. 62. Loc. 93 — Ravine with small stream. 1 ♂: Centr. Prov, Stream, 20 mls E. Kandy, 12. III. 62. Loc. 135 — Swept on grass in forest.

Distribution: Sri Lanka (new), Flores (new), Christmas and Biak Is, Australia (N. T., N.S.W., Qld., see RICHARDS 1973).

Poecilosomella punctipennis (WIEDEMANN, 1824) (Figs 26—30)

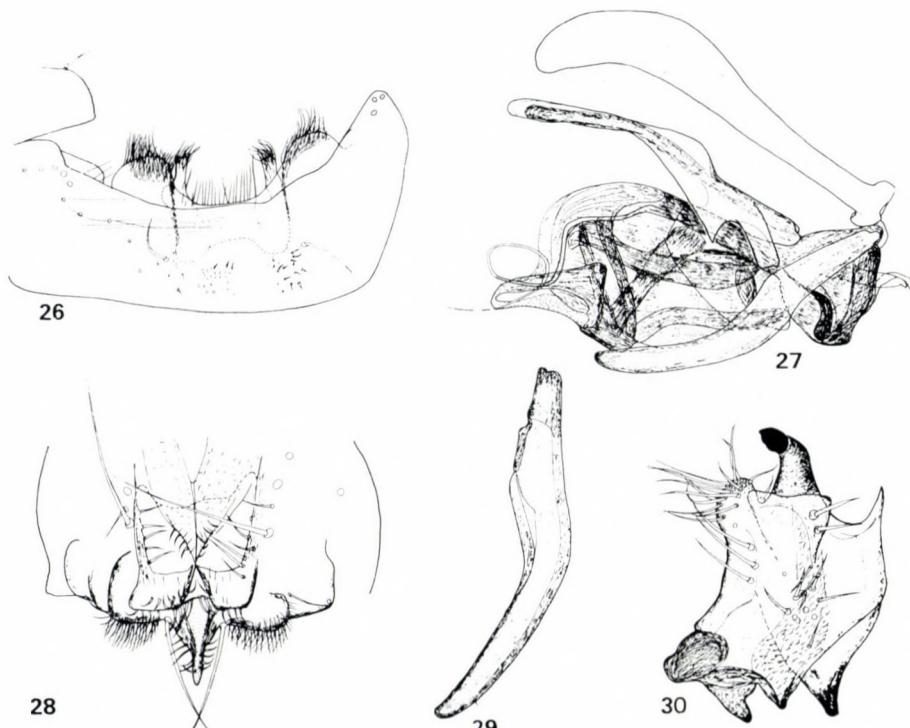
Copromyza punctipennis WIEDEMANN, 1824: 59.

This is the type-species of the genus (subsequent des. of RICHARDS 1930: Proc. zool. Soc. Lond. 1930: 268).

Material studied: 1 ♂ (CAS): Chizuka, Okinawa I. Jul.—Sept., G. E. BOHART, C. L. HERNAGE. INDIA: 126 ♂ 101 ♀ (HNHM, leg. Gy. TOPÁL): 18 ♂ 7 ♀: Darjeeling, West Bengal, 12. IV. 1967; 69 ♂ 62 ♀: Daitari, Distr. Orissa, 24. XII. 1966; 39 ♂ 31 ♀: Konarak, Orissa, 26. XII. 1966; 1 ♀: Jabalpur, Madhya Pradesh, 31. III. 1967. 3 ♂ 1 ♀ (HNHM): Calcutta environs, 1908, Brunetti, "Poecilosomella punctipennis W." Det. Dr. O. DUDA. 2 ♀ (DEI): Calcutta — coll. Oldenberg — "Limosina punctipennis W.". 2 ♂ 3 ♀ (HNHM): India or., BIRÓ, 1902, Matheran, 800 m, VII. 8. — SRI LANKA: 4 ♂ 5 ♀ (ZML, HNHM): Lund University Ceylon Expedition, 1962, BRINCK—CEDERHOLM—ANDERSSON: 1 ♂: Centr. Prov., Stream, 20 mls E Kandy, 12. III. 62. Loc. 135 — Swept of grass in forest; 2 ♂ 1 ♀: S. Prov., Haycock Mnt. Alt. 1100 ft, 21 mls NNE Galle, 29. I. 62. Loc. 34:I — Swept on shrubs in jungle; 1 ♀: E. Prov., Gal Oya, Alt. 300 ft., 14 mls E Bible, 8. III. 62. Loc. 122 — Swept on shrubs in jungle; 1 ♂: Sabaragamuwa Prov., Deerwood, Kuruwita, 6 mls NW Ratnapura, 18—21. II. 62. Loc. 90:III; — Ravine with small stream; 3 ♀: ibid., Stream at 2500 ft, 5 mls NW Balangoda, 22. II. 62. Loc. 96 — Swept above surface of small stream; 1 ♂ (DEI): Bandarg Wela, Ceylon — coll. LICHTWARDT. — INDONESIA: 743 ♂ 641 ♀ (DEI, HNHM):

Sunda-Exped. RENSCH, 1927: 714 ♂ 624 ♀: Badjawa, W. Flores, 1200 m, 17. VI.; 24 ♂ 12 ♀: Rana Mesê, W. Flores, 20.—30. VI.; 1 ♀: Ende, Flores, 10.—16. VI.; 3 ♂ 2 ♀: Gili Moetoe, O. Flores, 14.—20. VII.; 1 ♀: Semongkat, W. Soembawa, 10.—15. V.; 2 ♂ 1 ♀: Soembawa-Besár, W. Soembawa, 24. IV.—2.V. — VIETNAM: 1 ♂ (HNHM): TOPÁL et MATSKÁSI, 1971, No. 262. — TAIWAN: 44 ♂ 24 ♀ (HNHM, det. O. DUDA as *punctipennis*): Takao, Koshun, Kosempo, Kankau, Taihoku, Chip-Chip; 29 ♂ 27 ♀ (DEI, some specimens with the identification label of W. HENNIG and O. DUDA): Kankau (Koshun), Taihoku, Daitotei, Tainan, Paroe, Macuyama, Chosokei. — HAWAII: 2 ♂ 4 ♀ (HNHM): Laulalei, Oahu, II-1952, D. E. HARDY (or) Upper Olaa, Forest Hawaii, 4000', VI-1956 (or) Kohala Mts., 3300'—3500', VIII—29—66, I. A. Tenorio (or) Puu Laalau, Kohala Mats, Hawaii, 4000', 3—VIII—60, D. E. HARDY. — PAGO PAGO: 2 ♂ (CAS): Tutuila, VI—21—53. NEW GUINEA: 1 ♀ (HNHM): N. Guinea, BIRÓ, 1898. IX. 20—30., Sattelberg, Huon Gulf — "Poecilosomella punctipennis W." Det. Dr. O. DUDA.

The last specimen in our list above was published also by DUDA (1925) but he mentioned a specimen of *P. angulata* from New Guinea in the collection of HNM too. There is not such a specimen in this collection. The species *P. punctipennis* is a widespread and common fly from India to Hawaii; it has probably invaded the Australasian and Pacific regions through human activity (commerce etc.). It has been found in numerous islands of the Pacific. Contra-



Figs 26—30. Genitalia of *Poecilosomella punctipennis* (WIEDEMANN, 1824), male. 26 = sternite 5, ventral view, 27 = aedeagal complex, lateral view, 28 = subanal plate, caudal view, 29 = postgonite, lateral view, 30 = gonostylus, outer (lateral) view, in widest extension. — Scales: Figs 26, 28, 29 as for Fig. 1, Figs 27, 30 as for Fig. 2

rily, all the Afrotropical records published hitherto have been proven as mis-identification. Indeed, this is a highly variable species, particularly so for its colouration (body and legs). Five drawings (Figs 26—30) are given to promote a reliable separation from its congeners. It must be noted that TENORIO's (1968: Fig. 9c) drawing on its male gonostylus is correct enough for its safe identification.

Male S5 of an intricate form (Fig. 26): two pairs of weakly sclerotized lobes, which define also a membranous surface with long hairs perpendicular to the plane of S5; subanal plate (Fig. 28) with a large thin (almost sharp) ventral process and with numerous moderately long and ventrally directed bristles; cerci stretched ventrally into a pair of wide flat processes; gonostylus (Fig. 30) much different from that of *P. angulata*; basiphallus simple (Fig. 27) postgonite only slightly curved and almost bare (Fig. 29).

Poecilosomella rectinervis (DUDA, 1925)

Leptocera (Poecilosomella) rectinervis DUDA, 1925: 100.

H o l o t y p e male (NHMW): 1) Java occident., Mons Gede, 8000' Aug. 1892, H. FRUHSTORFER; 2) "Poecilosomella rectinervis n. sp. ♂" Dr. Dr. O. DUDA; 3) (red) Type. Pinned on a "00" much curved weak and soft pin.

Measurements in mm: body length 2.75, wing length 3.08, width 1.45, *ta* 0.138, *ta-tp* 0.233, *tp* 0.224, scutellar length 0.50, scutellar width 0.655.

Dark brown, anterior part of frons, flagellomere and face reddish. Some head and tibial bristles broken, the holotype specimen is somewhat mouldy, this is why mesonotal colour (pattern) not discernible (or not existing). Arista dark and long (0.79 mm) with rather short cilia. Three pairs of short *ifr*, 2 pairs of strong exinate *ors*. Very small facial protuberance below antennae, *vi* long but no genal bristle. Gena at *vi* about half as wide as eye and much widening posteriorad. Scutellar bristles broken on the holotype, scutellum much wider than long, *prst* bristle ca 1/3 of posterior *dc* only. Femora all dark brown, tibiae reddish yellow with broad dark brown rings subapically on fore tibia, subbasally and subapically on mid and hind tibiae. Fore tarsomeres 1—3 yellow, tarso-meres 4—5 dark brown, basitarsus darkened basally. Fore tibia and basitarsus posterally with longer straight hairs (they are much shorter than diameter of tibia), dorsal preapical on fore tibia as long as diameter of tibia. Mid tibia and basitarsus without any long bristles or hairs. Armature of mid tibia: a long dorsal at 5/6, a very long, rather anterol one at apical 2/3, 1 short bristle at 1/5, a moderately long one at 1/3; a very long posterodorsal at 3/4, some 4—5 short *pd-s* between this one and base (the bristle at 1/3 rather long and paired with *ad*); *va* moderately long but distinct. Wings brown, costa, *R1*, *R2+3*, *R4+5* and basal veins dark brown; dark brown spots on the humeral vein, on

apical area of $R_2 + 3$ and around Rs as well as on apical section of R_1 . Wings also somewhat darker around apex of $R_4 + 5$ and in a diffuse patch on cross-veins. Alula wide and rounded. $R_2 + 3$ parallel with C , apically nearly perpendicular to C in a section of 0.19 mm but without a vein appendage. Costal vein with a long inclinate basal bristle. $R_4 + 5$ almost straight on its apical half, M nearly parallel with it.

Abdomen with long lateromarginal bristles on tergites only. Genitalia not studied.

Distribution: HACKMAN (1977): "Burma, Java".

Poecilosomella varians (DUDA, 1925)

(Figs 31—36)

Leptocera (Poecilosomella) varians DUDA, 1925: 99.

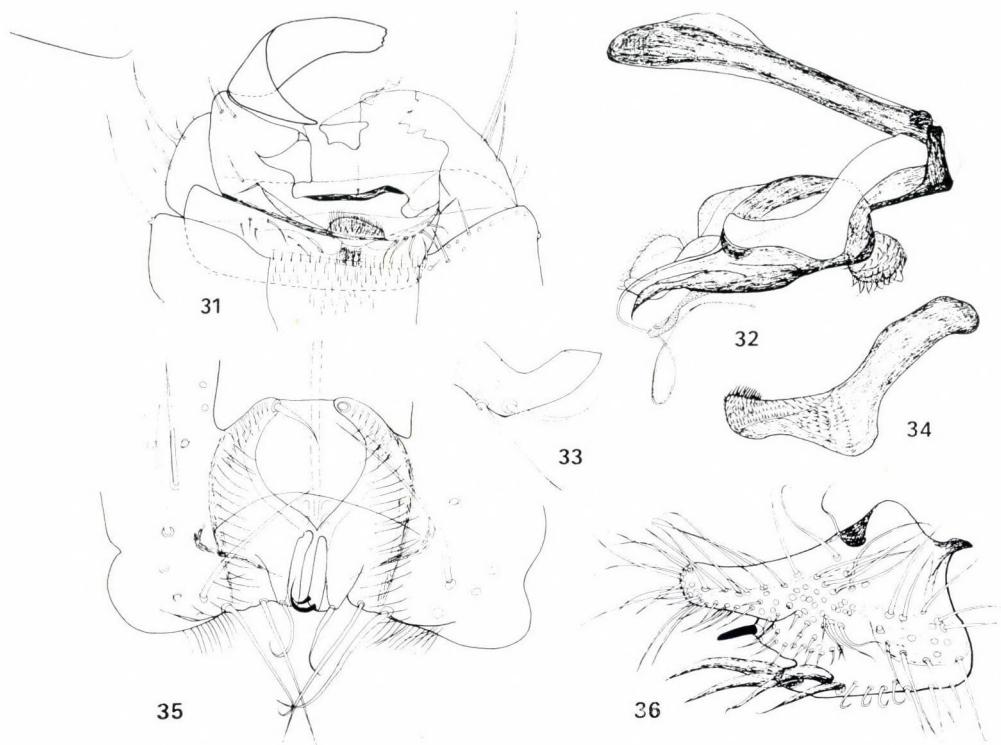
Lectotype male (HNHM): 1) Singapore BIRÓ 1898; 2) "P. varians ♂" Det. Dr. O. DUDA. — Paratypes (HNHM): 1 ♂ (this is the holotype of *P. cryptica*, see there); 1) Formosa SAUTER; 2) Koshun, 1908. X.; 3) "Poecilosomella varians n. sp. ♂", Det. Dr. O. DUDA; 1 ♀ (this is a paratype of *P. cryptica*): 1) Formosa SAUTER; 2) Chip Chip, 909. III.; 3) "Limosina punctipennis W." det. KERTÉSZ; 4) "P. varians ♀" Det. Dr. O. DUDA.

Materials other than types: 1 ♀ (HNHM): Singapore BIRÓ 1898 — "P. varians?", Det. Dr. O. DUDA. 1 ♀ (HNHM): India or., BIRÓ 1902 — Matheran 800 m, VII. 8. — "P. varians ♀" Det. Dr. O. DUDA. 6 ♂ 6 ♀ (HNHM): India, Darjeeling, West Bengal — 12. IV. 1967, leg. TOPÁL. 25 ♂ 18 ♀ (DEI) and 2 ♂ 2 ♀ (HNHM): Sunda-Exped. RENSCH, Badjawa, W. Flores, 1200 m, 17. IV. 27.

Measurements in mm: body length 2.17 (lectotype), 2.00—2.71 mm (other specimens), wings 1.875×0.88 (lectotype).

Dark brown; frons, face and genae vivid red, the latter somewhat fuscosus. Face (antennal bases) much protruding; 4 (3—5) short *ifr*, *occe*, *occi* only moderately long. A yellow ring on all tibia at middle (i.e. also on fore tibia). Basal 3/5 or 2/3 of fore basitarsus, base of 2nd tarsomere and fore tarsomeres 4—5 dark brown, rest yellow. Fore tibia and fore tarsi with long hairs ventrally, posteroventrally and posterally but all these hairs much shorter than in *nigrotibiata* (i.e. not longer than diameter of tibia). Mid tibia with a long *va*; armature of mid tibia: *ad-s*: a short one at 6/37, 9/37, 21/37 each, a short anterol one at 25/37; a long and thick bristle at 12/37 and 31/37; *pd-s*: a short bristle at 10/37, 15/37, 19/37, 23/37, a long one at 29/37. Wings almost clear, only base brown, veins ochreous, only some sections dark brown (apex of $R_2 + 3$, $R_2 - 5$ fork with a section of R_1 above R_1 —Cconjointment). Second costal section 0.52 mm, third 0.46 mm, ratio 1.13. *ta-tp* 0.138, *tp* 0.164 mm, i.e. *tp* longer (ratio 0.84). For other characteristics see DUDA (1925).

Male genitalia peculiar. Sternite 5 wide, medially with a small hairy and soft process (Fig. 31), *S₆* of an intricate form, incl. a sclerite perpendicular to the plane of *S₅* (see arrow on Fig. 31). Subanal plate (Fig. 35) with very long



Figs 31—36. Genitalia of *Poecilosomella varians* (DUDA, 1925), male. 31 = sternites 4—7, 32 = aedeagal complex, lateral view, 33 = process of subanal plate, sublateral view, 34 = postgonite, lateral view, 35 = subanal plate, caudal view, 36 = gonostylus, outer (lateral) view. — Scales: Fig. 31 as for Fig. 5, Fig. 32 as for Fig. 1, Figs 33—35 as for Fig. 2

bristles and with a pair of extremely big upcurved chitinous processes (Fig. 33). Gonostylus (Fig. 36) trilobed, hind lobe bears 4 extremely thick and long bristles, the usual thorn rather long but comparatively thin and blunt. Postgonite (Fig. 34) angulately bent, apex blunt with numerous short but thick hairs. Distiphallus with a pair of fleshy and hairy processes basally (Fig. 32), apical thread-like process long and thin.

Distribution: HACKMAN (1977): "Burma, Formosa, Malaya"; India (new), W. Flores (new).

A KEY FOR THE ORIENTAL SPECIES OF *POECILOSOMELLA* DUDA

- 1 (8) Vein $R_2 + 3$ with a distinct vein appendage (stump vein) apically.
- 2 (5) Second costal section much shorter than third. Male mid tibia and basitarsus without long cilia. A long upcurved genal bristle present.
- 3 (4) No *va* on mid tibia (3 short thick setae instead). Male fore tibia and 2 basal tarsomeres with long dense hairs on whole their ventral half. Gonostylus peculiar (Fig. 18) with a long, curved, bladelike thorn laterally. Postgonite (Fig. 20) much curved apically.
— Formosa, Vietnam.
furcata (DUDA, 1925)
- 4 (3) A strong *va* on mid tibia. A doubtful species. — Java.
meijerei (DUDA, 1925)

- 5 (2) Second costal section about as long as third section. Male mid tibia and basitarsus with long cilia. No strong genal bristle.
- 6 (7) Anterol bristle of mid tibia equidistant between the two long anterodorsals. Male subanal plate with a blunt shovel-formed appendage. Postgonites arcuately curved and pointed. *annulitibia* (DEEMING, 1969)
- 7 (6) Anterol bristle of mid tibia much nearer to proximal anterodorsal than to long distal anterodorsal. Male subanal plate with a long medial process (Fig. 24). Postgonite (Fig. 23) slightly curved, blunt apically. *nepalensis* (DEEMING, 1969)
- 8 (1) Vein $R_2 + 3$ without a vein appendage apically.
- 9 (12) Fore basitarsus partly and all other fore tarsomeres completely white. Male mid tibia with long hairs ventrally. Wings with dark spots (pattern).
- 10 (11) Hind tibia with one yellow ring. No *va* on mid tibia *aciculata* (DEEMING, 1969)
- 11 (10) Hind tibia all dark, without any light ring. Mid tibia with a long *va* *albipes* (DUDA, 1925)
- 12 (9) No parts of fore tarsomeres white, though they are at least partly yellow.
- 13 (14) Arista with very long cilia. Costal hairs rather long. Second costal section much shorter than third. Male mid tibia and basitarsus ventrally without long hairs (= *ornata* (DE MEIJERE, 1908)) *borboroides* (WALKER, 1860)
- 14 (13) Arista with short cilia only. Costal hairs shorter. Second costal section as long as, or longer than third section.
- 15 (18) Scutellum very long, as long as apical scutellar bristles or nearly so. mg_2/mg_3 about 1.5 or more. All posterodorsal bristles on mid tibia short, i.e. no strong paired bristles on dorsal half of the mid tibia. Male mid tibia with some short curved/inclinate ventroapical spurs.
- 16 (17) Body reddish, i.e. frons, face and genae red or reddish ochreous, at least pleurae partly red. Four (rarely 3) pairs of short and thin *ifr*. Genae very wide, wings long. No genal bristle. Female cerci with 2 pairs of very long wavy bent hairs *longinervis* (DUDA, 1925)
- 17 (16) Body dark, e.g. mesonotum blackish brown. Only 2 or 3 pairs of short and thin *ifr*. Genae narrower than in *longinervis*, wings comparatively shorter. An upcurving genal bristle present. Female cerci with 1 short and moderately long pairs of bristles only (= *apicata* (RICHARDS, 1963) syn. n.) *multipunctata* (DUDA, 1925)
- 18 (15) Scutellum normal. Second costal section variable but usually shorter. Mid tibia with at least 1 long posterodorsal, i.e. mid tibia with strong paired bristles. Male mid tibia with or without long ventroapical bristle.
- 19 (20) Ventroapical bristle of mid tibia very long, ca. half as long as mid basitarsus. Tibiae without light rings. Male mid tibia ventrally without long hairs. Gonostylus with an additional black lateral thorn *brunettii* (DEEMING, 1969)
- 20 (19) Mid tibia with or without long *va* bristle; if present, much shorter than half length of mid basitarsus.
- 21 (28) Male mid tibia ventrally with long hairs.
- 22 (25) Mid tibia with strong *va* bristle.
- 22 (24) Vein $R_4 + 5$ slightly bent towards the costa (see Fig. 1 of DEEMING 1964). Male sternite 5 laterally on the right side with a row of 9–12 extremely long bristles. Posterior lobe of gonostylus without apical tooth *pectiniterga* (DEEMING, 1964)
- 24 (23) Vein $R_4 + 5$ more strongly bent up to the costa. Male sternite 5 normal, i.e. without extremely long bristles on the right side. Gonostylus (Fig. 30) with apical tooth on posterior lobe. *punctipennis* (WIEDEMANN, 1824)
- 24 (22) Mid tibia without strong *va* bristle.
- 25 (27) Male mid tibia with a comb of upright thornlets apically. Apical half of $R_4 + 5$ strongly upcurved towards the costa *amputata* (DUDA, 1925)
- 27 (26) Male mid tibia ventroapically with several bristles obviously thicker but shorter than adjacent hairs. Apical half of $R_4 + 5$ straight or nearly so *himalayensis* (DEEMING, 1969)
- 28 (21) Male mid tibia ventrally without long hairs; ventroapical bristle more or less strong.
- 29 (30) Male fore tibia and basitarsus with short hairs posterally. Vein $R_2 + 3$ apically angularly bent to costa *rectinervis* (DUDA, 1925)
- 30 (29) Male fore tibia, basitarsus and other tarsomeres with long hairs posterally (ventrally to posterally).
- 31 (32) Facial plate not much protruding. No yellow ring on the middle of fore tibia. Hairs on male fore tibia and tarsi very long (some hairs more than twice longer than tibia diameter). Face, frons and genae dark brown. Wings with diffuse brown spots *nigrotibiata* (DUDA, 1925)

- 32 (31) Facial plate strongly convex with a distinct facial protuberance. A yellow ring also on the middle of fore tibia. Hairs on male fore tibia and tarsi shorter (not longer or not much longer than diameter of tibia).
- 33 (34) Wings almost clear (base brownish), only some sections of veins dark brown. Apical section of $R_2 + 3$ close to costa and curved in short arcus terminally. Male subanal plate with pair of extremely big upcurved processes (Fig. 33). Hind lobe of gonostylus with 4 extremely thick and long bristles (Fig. 36) *varians* (DUDA, 1925)
- 34 (33) Diffuse but distinct and dark spots on the apex of radial veins. First costal section with hairs much longer than in *varians*. Apical section of $R_2 + 3$ more distant from costa and curved in a wide arcus terminally. Male subanal plate without any processes (Fig. 11). Gonostylus (Fig. 13) without extremely long and thick bristles *cryptica* sp. n.

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A REVISION OF THE GENUS PEPLOMINETTIA SZILÁDY (DIPTERA, LAUXANIIDAE)

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The genus *Peplominettia* SZILÁDY, 1943 is redefined including the characteristics of the male genitalia. *P. milleri* sp. n. is described from Algeria and a key is given for its three species. With 13 original figures.

SZILÁDY (1943) described “*Peplominettia* n. g.” in two lines as follows: “Mit den Merkmalen von *Peplomyza*, aber nur mit 2 Dorsozentralborsten und mit den für die Minettien charakteristischen ia-Borsten.” The genus was based on *P. striata* sp. n., its description was as perfunctory as that of the genus. No wonder that HENNIG (1951) did not think his *Minettia codinai* would have been included in that genus. STUCKENBERG (1971) published an excellent review of the Old World genera of *Lauxaniidae*. There *Peplominettia* was fitted in his key although he did not study it.

In 1978 DR. RAYMOND M. MILLER (University of Natal, Pietermaritzburg) asked for a loan of the type-series of *P. striata* preserved in the collection of the Zoological Department, Hungarian Natural History Museum, Budapest (below HNHM) in order to know the features of *Peplominettia* and to compare it with some lauxaniid forms from South Africa. All that material was lost when returned to Budapest. DR. MILLER photographed some specimens and he kindly put the photos at my disposal (see below). Our colleagues, F. ZILAHY and DR. O. Gy. DELY made a collecting trip in Algeria in 1980 when DR. DELY collected several specimens of a *Peplominettia* species. These specimens served as a basis for a redescription/redefinition of the genus. It seemed important to define the genus with the features of male genitalia. GRIFFITHS (1972) clearly misinterpreted the parts of the lauxaniid genitalia. STUCKENBERG's (1971) drawings are very informative, only his naming of some of the parts is not in accordance with usage in the related families. The present author published several papers on the Palaearctic *Lauxaniidae*; there the nomenclature for the genital parts was consistently used. However, most of the Old World lauxaniid genera has not been defined by genital features.

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A DIAGNOSIS FOR THE GENUS *PEPLOMINETTIA*

Head normal without any modifications on frons, face or antennae. Large black spots between and beside antennal bases (Figs 9, 13). Head bristles strong, 2 reclinate *ors*, *pvt* long and cruciate. Arista feathered (with long dorsal and ventral rays). Mesonotum and pleurae vittate, *prst* (posthumeral) and *ia* bristles present, 0 + 3 *dc* pairs, 1 *prsc* (more or less strong). Wings patterned, small black spines ("strong fringe") on costa reaching ca. 3/5 of *mg3* costal section. Male *T7* and *S7* form a complete sclerotised ring (Fig. 1, protandrium of STUCKENBERG) incl. 7th spiracle. Surstyli borne on apex of epandrium (Fig. 12), cerci simple, postgonites asymmetrical. An intersurstylar bridge between bases of surstyli (Fig. 2). Aedeagal apodeme comparatively small, aedeagal base forms a ring with hypandrium (the latter being a simple small half of a ring). Type-species: *Peplominettia striata* SZILÁDY, 1943: 183 (monotypic).

In STUCKENBERG's (1971) key *Peplominettia* is not definitely separable from *Minettia* (several species of *Minettia* s. lat. have patterned wings, numerous species of *Minettia* have feathered arista and vittate mesonotum etc.). As he admitted correctly *Minettia* "probably not a monophyletic entity but an aggregation of species having in common an *ia* bristle". I think, the giant genus *Minettia* is a paraphyletic group in the present day sense. A possible way towards its satisfactory taxonomy is to establish monophyletic groups for the *Minettia* species, like *Peplominettia* in our sense.

***Peplominettia codinai* (HENNIG, 1951)**

Minettia codinai HENNIG, 1951: 75.

Holotype male (D.E.I.): 1) [handwritten] "Mont. Alegre, 18. VII. 10"; 2) "Peplomyza Codinai Lichtw." det. Lichtwardt; 3) coll. Oldenberg; 4) [red] Holotypus "1972" [on the reverse side]; 5) [red, round] "Type"; 6) [red] Holotypus.

Body length 5.22 mm, wings 4.76 × 1.96 mm.

Frons yellow with some greyish hue on orbits and around them, three large dark brown spots between and beside antennal bases. Cheeks, genae and facial plate as well as palpi and haustellum yellow. Ocellar bristles very long reaching suture, ca 0.69 mm, *vti* 0.83 mm from tip to base, numerous long and thin *pm-s*, one most ventral *g*, one long ventral/subcervical *g*.

Mesonotum grey laterally, yellowish grey in sagittal third, with yellow microtomentum. Six rows of rather well-ordered *acmi*. Pleurae with a wide dark brown band from below humerus to the base of haltere and with a less dark band from supracoxal bristle to the distal dorsal margin of katepisternum (other parts of pleurae yellow to ochreous). Thoracic bristles: 1 *h* (and some other short dorsal hairs), 2 *np*, 1 *prst* (or posthumeral), 2 *sa* (or 1 *pra*, 1 *sa*), 1 *ia*, 1 *pa*,

$0 + 3 dc$ (anterior dc only 0.36 mm), 1 short $prsc$ reaching only to middle of scutellum, 2 sc , 1 mp (and some long and thin setae), 2 $stpl$ (right side with a 3rd middle pair), 1 proepimeral/supracoxal pair of bristles.

Legs mainly yellow, only mid and hind knees (distal ends of femora) brown. Tibial preapicals strong on fore and mid tibiae, short and weak on hind tibia. Mid tibia with only one strong ventroapical and one dorsal preapical. Ventral spur on hind tibia short, 0.095 mm.

Wings dark brown from costal to $r2 + 3$ radial cells, $r4 + 5$ cell less dark but unicolourous brown, crossveins without large dark brown spots on but brown margined. Also basal areas of wing brown. Halteres ochreous.

Abdomen mainly yellow, tergites with diffuse lateral brownish-grey bands on distal (not marginal!) area of tergites. Marginal bristles comparatively short, only twice longer than discals. Male genitalia comparatively small, gonostyli rather narrow, liguliform in lateral view. Cerci brown and covered with dense but short and thin hairs.

Peplominettia milleri sp. n.

(Figs 1—9)

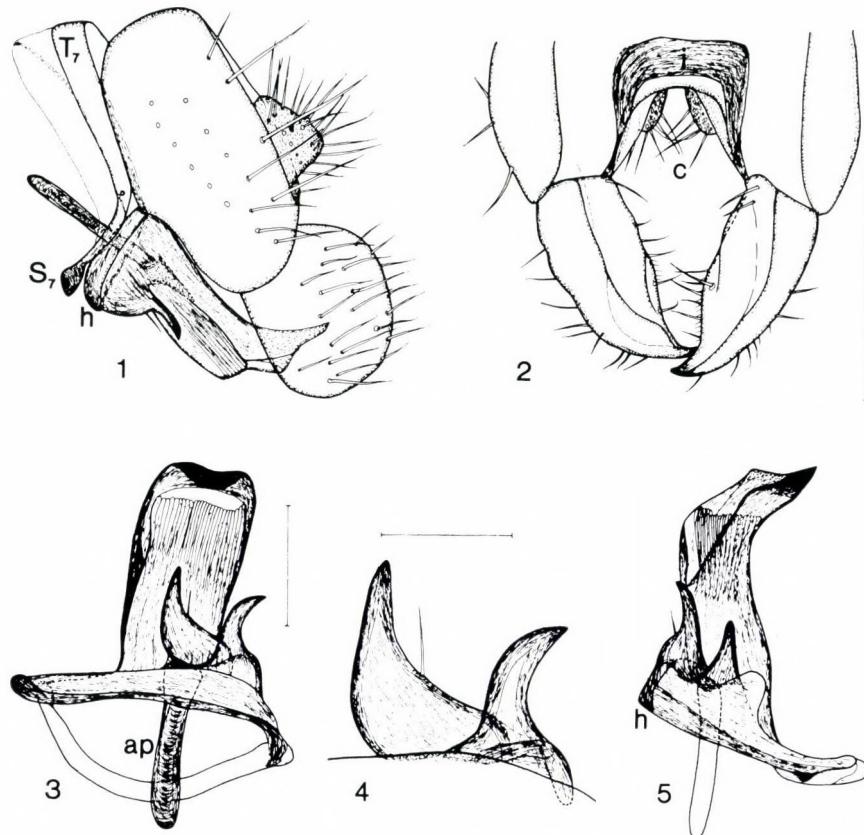
Holotype male (HNHM): Algeria Les Cascades (El-Ourit), 6 km E of Tlemcen, 800 m, 1980. VI. 20., leg. DELY O. — Paratypes: 4♂, 2♀ (HNHM): same data.

Measurements in mm: body length 5.38 (holotype), 5.03—5.65 (paratypes), wing length 5.52, 5.17—5.93, wing width 2.17, 2.04—2.33.

Ground colour yellow with light greyish microtomentum. Frons yellow with diffuse darker grey transverse band through bases of anterior *ors*. Three large velvety black spots between and beside antennae (Fig. 9). Antennae, face, cheeks, genae and palpi yellow (the latter sometimes darker, greyish yellow). Head chaetotaxy: 2 reclinate *ors*, very long *vte*, *vti*, *oc*, very long and crossing *pvt*, moderately long postoculars, *pm* and genal setulae, 2 *g* ventrally (longer than other bristles). Longest rays of arista 0.22 mm.

Thorax with dark brownish gray stripe from suprathumeral region to the supraalars; another pair of dark stripes on ventral part of humerus (postpronotum) to wing base. Mesonotum with a wide grey stripe medially, anepimeron (pteropleuron) with a dark spot below alar base. Chaetotaxy: 1 *h* 2 *np*, 1 *prst* (posthumeral), 1 *pra*, 1 *sa*, 1 *ia*, 1 *pa*, $0 + 3 dc$, 1 *prsc*, 2 *sc*, 1 proepimeral (supracoxal), 1 anepisternal (*mp*), 2 katepisternal (*stpl*); anterior *dc* 0.90 mm, medial *dc* 1.22 mm, anepisternal 0.86 mm, several other anepisternals of 0.45 mm or shorter, *prsc* 0.91 mm. Eight rows of not well-ordered *acmi*.

Legs not modified, yellow, hind femora dark brown apically, hind femora anteriorly with a longitudinal brown stripe. Mid tibia with ventroapicals of 0.41 mm and 0.24 mm, dorsal preapicals of 0.40 mm and 0.31 mm.



Figs 1—5. *Peplominettia milleri* sp. n., paratype male, genitalia: 1 = postabdomen with genitalia, lateral view, 2 = surstyli, intersurstylar bridge and cerci, cranial (anterior) view, 3 = aedeagal complex, ventral view, 4 = postgonites in ventral view, 5 = aedeagal complex, lateral view (*ap*: aedeagal apodeme, *c*: cerci, *h*: hypandrium, *i*: intersurstylar bridge, *S₇*: 7th sternite, *T₇*: 7th tergite). — Scales: 0.5 mm for Figs 1—2, 0.2 mm for Figs 3, 5, 0.1 mm for Fig. 4

Wings light brownish, large dark brown spots on crossveins (Fig. 8), apical third of costal cell, *r1* cell, *r2+3* radial cell and apical part and upper/distal ca. 1/3 of *r4+5* radial cell, apical part of medial cell diffuse brown. Vein *R1* dorsally with several (4—5) setulae. Veins dark brown. Strong fringe on 3/5 of *mg3*. Terminal section of vein *M* 1.50 mm, intracrossvein section 1.22 mm, ratio 1.23. Halteres yellow.

Abdominal terga (T3-) dark brown in their cranial half (dark bands broken medially), yellow to greyish yellow caudally. Marginal bristles rather long, longer than terga (on T3—7). Male genitalia with large surstyli (Fig. 1), surstyli nearly symmetrical, with short bristles only (Fig. 2). A definite intersurstylar bridge between bases of surstyli (Fig. 2). Postgonites (Fig. 3, 4) strongly asymmetrical, right postgonite ventral to aedeagus, aedeagus (Fig.

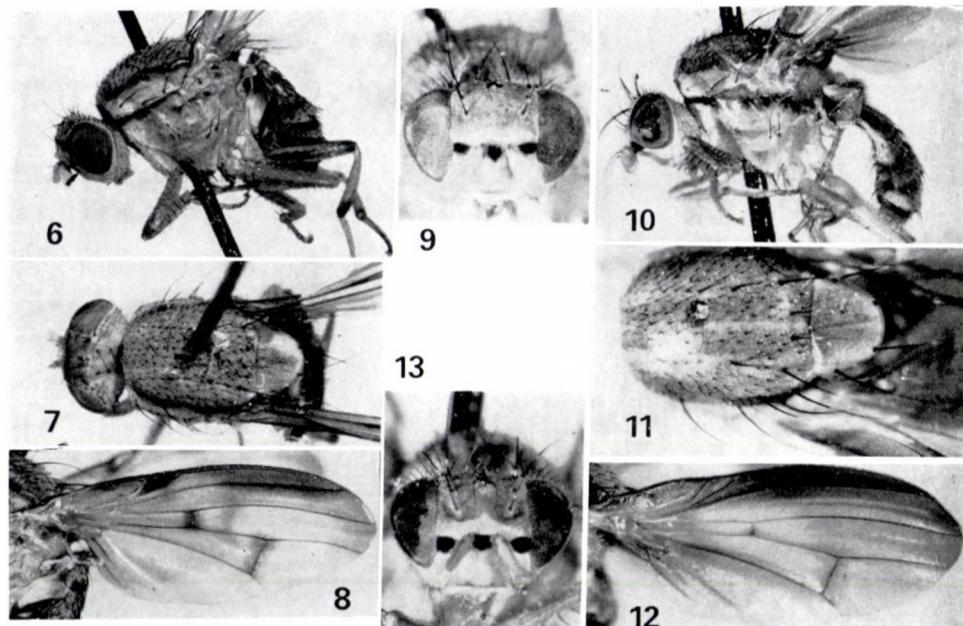
3, 5) with a strongly sclerotised apical process, aedeagal apodeme comparatively short (Fig. 3, 5). Cerci with moderately long bristles.

There were specimens of a *Peplominettia* species, other than *P. striata* (i.e. this one) in the collection of the Zoological Department, HNHM, when Szilády described his *striata*. The specimens he labelled as "connectens" from Ain Draham were never described but were also sent to DR. R. MILLER with the *striata* specimens. DR. MILLER took photographs on one specimen which are published here as Figs 6—9.

***Peplominettia striata* SZILÁDY, 1943**

(Figs 10—13)

It was described from Bel Mehtia (Tunisia). However, it is obvious that only a part of the specimens of the set of specimens with SZILÁDY was from Bel Mehtia (the others were from Ain Draham and Les Chênes; that is why "Algeria, Tunisia" was given for its distribution in the Catalogue of Palaearctic Diptera [PAPP 1984]). As I wrote above, all of the type-series sent back to



Figs 6—13. 6—9: *Peplominettia milleri* sp. n. (SZILÁDY's "connectens" from Ain Draham): 6 = lateral view, 7 = dorsal view, 8 = left wing, 9 = head in frontal view; 10—13: *Peplominettia striata* SZILÁDY: 10 = lateral view (Les Chênes), 11 = dorsal view (Bel Mehtia, syntype), 12 = left wing (Ain Draham), 13 = head in frontal view (Les Chênes) (Photo: Dr. RAYMOND M. MILLER)

Budapest by DR. R. MILLER disappeared (never arrived to the HNHM). Only two wings remained which were put into a glass microvial with glycerine and returned in 1986 to the collection of the HNHM. DR. MILLER took photographs on specimens from Bel Mehtia, Ain Draham and Les Chênes, which are published here as Figs 10–13. The wings are not designated as a lectotype specimen; it is more reasonable to wait for specimens collected in North Africa, since the features of *striata* are known to an extent which permits us to identify the conspecificity of those future specimens with the type-series of *striata*. The features of *striata* and those of the holotype of *codinai* seem very similar. However, I think that a synonymization of the two names would be proposed or rejected on the basis of the study of the male genitalia of specimens from Portugal (Spain) and those of newly collected specimens of *striata* from Tunisia or Algeria.

KEY TO SPECIES OF *PEPLOMINETTIA*

- 1 (2) Subcostal cell dark brown (almost black) but costal cell only partly dark, crossveins with large dark spots, $r4+5$ radial cell darkened in its distal third only (Fig. 8). Pleurae without an unbroken dark band from humerus to haltere (Fig. 6). Anterior *dc* nearly as long as middle *dc* (Fig. 9), *prsc* very long reaching distal margin of scutellum (Fig. 7). Two dorsal preapicals and two ventroapicals on mid tibia **P. milleri** sp. n.
 - 2 (1) Both costal and subcostal cells dark brown, crossveins without large spots though margined in brown (Fig. 12), $r4+5$ radial cell evenly brown (codinai) or brown at least in its distal 2/3. Anterior *dc* much shorter than middle *dc* (Fig. 11), *prsc* shorter, reaching ca. middle of scutellum (Fig. 11). Pleurae with a wide dark band from below humerus to haltere (Fig. 10). Only one preapical and one ventroapical on mid tibia.
 - 3 (4) $r4+5$ radial cell unicolorous brown. Acrostichal area of mesonotum nearly unicolorous yellowish grey **P. codinai** (HENNIG, 1951)
 - 4 (3) $r4+5$ radial cell brown only its distal 2/3 (Fig. 12). Acrostichal area with a pair of grey stripes (Fig. 11) **P. striata** SZILÁDY, 1943

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ZUR KENNTNIS DER ORGILUS-ARTEN DER MONGOLEI (HYMENOPTERA, BRACONIDAE)*

A. TAEGER

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(Eingegangen am 20 November 1989)

(Contribution to the *Orgilus* species of Mongolia.) Eleven species of the genus *Orgilus* HALIDAY are reported from Mongolia of which four species are described as new to science: *O. affinis* sp. n., *O. brevipalpis* sp. n., *O. distinguendus* sp. n. and *O. kaszabi* sp. n. One species, *O. luctuosus* TAEGER, is new to the fauna of Mongolia. With 13 original figures.

Herr Dr. JENŐ PAPP (Budapest) war so freundlich, mir eine Anzahl von *Orgilus*-Exemplaren zu übergeben, die (mit einer Ausnahme) von Dr. Z. KASZAB in den Jahren 1965—1968 in der Mongolei gesammelt worden sind. Dieses Material soll zum Anlaß genommen werden, eine Übersicht über die bisher aus der Mongolei bekannten *Orgilus*-Arten zu geben. Beiträge zur Kenntnis der Gattung im Gebiet wurden von PAPP (1967, 1971) und TOBIAS (1972) vorgelegt. Weitere Arten meldete TAEGER (1989) im Rahmen der Paläarktis-Revision der Gattung.

Im Zusammenhang mit der Auswertung der vorliegenden Ausbeute von Dr. Z. KASZAB konnten fünf weitere Arten für die Mongolei festgestellt werden, wovon vier bisher unbeschrieben waren. Insgesamt sind somit 17 Spezies aus der MVR bekannt. Die Auswertung beschränkt sich hauptsächlich auf die ♀♀. Mir liegen aus verschiedenen Expeditionsausbeuten ca. 60 mongolische *Orgilus*-♂♂ vor, die nicht mit hinreichender Sicherheit einer bestimmten Art zugeordnet werden können. Ein Teil dieser Tiere repräsentiert sehr wahrscheinlich bislang unbeschriebene Spezies. Da die Determination der ♂♂ sehr oft mit großen Unsicherheiten behaftet ist, werden diese im Rahmen vorliegender Arbeit meist nicht berücksichtigt. Jedenfalls ist noch mit zahlreichen neuen Arten aus dem Gebiet zu rechnen.

Bei den Fundortangaben in der folgenden Liste sind die stets wiederkehrenden Angaben der Etiketten "MONGOLIA" und "Exp. Dr. Z. KASZAB, 1965 (1966, 1967, 1968)" weggelassen. Für die Typen wird die Etikettierung vollständig aufgeführt. Unkommentiert aufgeführte Spezies wurden von TAEGER (1989) behandelt, ohne daß mittlerweile neue Daten vorliegen.

Orgilus affinis sp. n. (Abb. 4, 8, 9, 12)

♀: Körperlänge 3,0 mm; Vorderflügellänge ca. 2,7 mm. — Fühler: Etwa körperlang, mit 30 Gliedern; Scapus ca. 1,7 mal so lang wie breit, die apikale Schnittfläche etwa so lang wie die Scapusaußenseite (Abb. 8); Scapus ca. 1,5 mal so lang wie das 3. Fühlerglied; 3. Fühlerglied ca. 2,0 mal so lang wie breit und etwa so lang wie das 4.; Geißelglieder im subapikalen Bereich alle etwas länger als breit (Abb. 9). — Kopf: Etwa so breit wie das Mesosoma, in dorsaler Sicht stark und rundlich verengt (Abb. 4); Hinterkopf deutlich ausgebuchtet; Occipitalrand in dorsaler Sicht etwa bis in Höhe des Ocellarfeldes reichend; Kopf ca. 1,75 mal so breit wie lang; OD : POL : OOL ca. 1 : 1,7 : 2,1;

* Ergebnisse der zoologischen Forschungen von Dr. Z. Kaszab in der Mongolei, Nr. 503.

Augen in dorsaler Sicht ca. 1,7mal so lang wie die Schläfen; Augen ca. 1,6mal so hoch wie breit; Gesicht ca. 1,05mal so breit wie ein Auge hoch; Malarraum ca. 0,4mal so lang wie ein Auge hoch; Epistomalsutur fast fehlend; Maxillarpalpen ca. 0,8mal so lang wie der Kopf hoch; Endglied der Labialpalpen etwa 4mal so lang wie breit; Oberkopf und Schläfen weitläufig punktiert und glänzend; Gesicht runzlig chagriniert und matt, Clypeus nur wenig glatter; Malarraum, untere Wangen und Occipitalanhang chagriniert, matt.

M e s o s o m a: 1,65mal so lang wie hoch, ca. 1,2mal so hoch wie breit; Pronotum im unteren Bereich chagriniert, in der Mitte runzlig punktiert, oben punktiert und glänzend; Praescutum dicht punktiert, etwas glänzend, im hinteren Bereich runzlig; Seitenlappen des Mesonotum und Scutellum punktiert und glänzend; Notauli deutlich; Mesopleuren deutlich punktiert, ein breiter Raum über den Sternauli jedoch fast völlig glatt; Mesosternen deutlich punktiert, glänzend; Sternauli einfach, kaum geboren; Metapleuren runzlig chagriniert, im vorderen Bereich wenig glatter; Propodeum etwas stärker runzlig als die Metapleuren, apikal mit kurzen Kielen. — **B e i n e:** Hinterhüften ca. 0,7mal, Hinterschienen ca. 1,4mal so lang wie die Hinterschenkel; Hinterschenkel ca. 3,3mal so lang wie breit; innerer Sporn der Hinterschienen ca. 0,6mal so lang wie der Basitarsus; Hinterhüften auf der Außenseite chagriniert

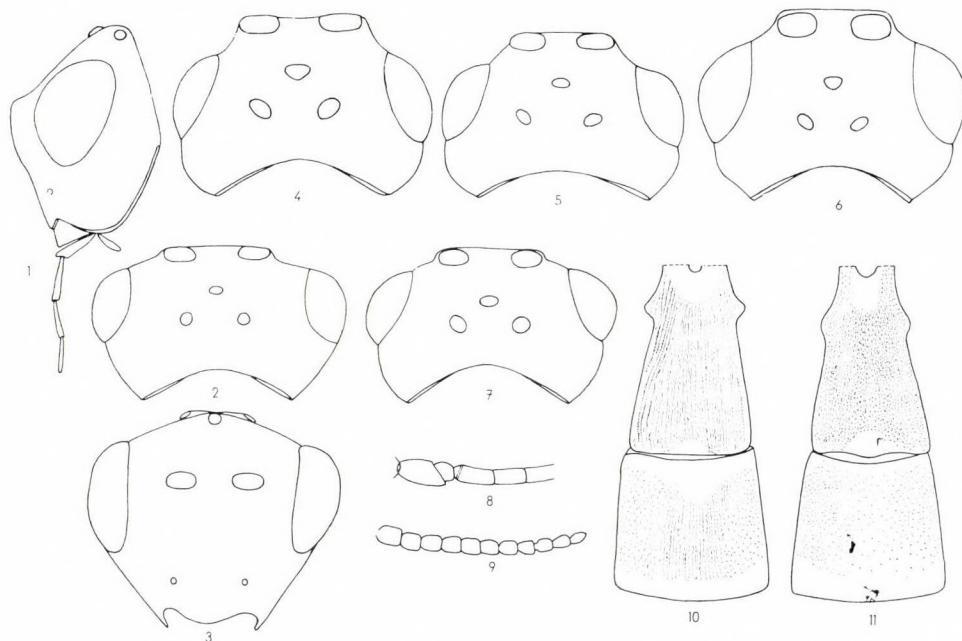


Abb. 1—7. Kopf: 1—3 = *Orgilus brevipalpis* sp. n., 4 = *O. affinis* sp. n., 5 = *O. kassabi* sp. n., 6 = *O. dorni* TAEGER, 7 = *O. obesus* TAEGER. — Abb. 8—9. *O. affinis* sp. n.: 8 = Fühlerbasis, 9 = Fühlerspitze. — Abb. 10—11. Tergite 1—2: 10 = *O. mongolicus* TAEGER, 11 = *O. distinguendus* sp. n.

und matt; Hinterschenkelaußenseite pustelartig skulpturiert und glänzend, nur zum Teil etwas chagriniert; Klausen einfach.

F l ü g e l: Hinterflügel 4,8mal so lang wie breit; im Vorderflügel Entfernung der Spitze der Marginalzelle zur Flügelspitze ca. 0,6mal so lang wie $I - RI$; Ader $2 + 3 - M$ etwa so lang wie $2 - SR + M$ (Abb. 12).

M e t a s o m a: Etwas schmäler als das Mesosoma, seitlich bis zum 4. Tergit deutlich gekantet, im hinteren Bereich des 4. Tergites sowie im vorderen Bereich des 5. Tergites Kante rundlich bzw. undeutlich; 1. Tergit ca. 1,1mal so lang wie apikal breit, 2. Tergit ca. 0,6mal so lang wie basal breit; 1. Tergit mit deutlichen Dorsalcarinae, die etwas über die Tergummitte reichen; Skulptur des Metasomas ziemlich einheitlich fein und dicht, seidig glänzend, apikale Tergite im hinteren Bereich flacher punktiert; 2. Sutur durch feine Punktfurche markiert; Bohrerklappen ca. 2,7mal so lang wie die Hinterschenkel, ca. 0,8mal so lang wie die Vorderflügel bzw. so lang wie Metasoma und Propodeum zusammen.

F ä r b u n g: Schwarz; bräunlich sind die Spitzenhälften der vorderen und mittleren Schenkel, die Vorderschienen sowie die Basalhälften der mittleren und hinteren Schienen und die an den Schenkeln gelegenen Trochanteren der Hinterbeine; Tegulae und Tarsen pechbraun; Flügel kaum getrübt; Geäder bräunlich, $C + SC + R$ und Stigmavorderrand dunkler.

W i r t: Unbekannt.

Typenmaterial — **H o l o t y p u s**, ♀: "MONGOLIA: Chövsgöl aimak 8 km N von Somon Burenchaan, am Fluss Delger mörön, 1450 m, Exp. Dr. Z. KASZAB, 1968" "Nr. 1115 16. VII. 1968" (Coll. Budapest, Hym. Typ. No. 7339). Erhaltungszustand sehr gut.

D i s k u s s i o n: Im Bestimmungsschlüssel (TAEGER 1989) wird man zu *O. ponticus* TOBIAS oder *O. saponariellae* TAEGER geführt, ohne daß hinreichende Übereinstimmung mit den dort angegebenen Merkmalen besteht. — Charakteristisch ist für *O. affinis* der relativ lange Bohrer, bei *O. saponariellae* und *O. ponticus* sind die Bohrerklappen nur zwischen 1,6 und 2,0mal so lang wie die Hinterschenkel. Weitere Unterschiede der beiden Arten im Vergleich zu *O. affinis* sind:

O. ponticus: Scapus apikal deutlich schräger abgeschnitten, die apikale Schnittfläche ca. 1,5mal so lang wie die Scapusaußenseite; subapikale Fühlerglieder weniger schlank; Oberkopf und Praescutum mit deutlicher Chagrinerung; Metasomaskulptur deutlich stärker und runzlig.

O. saponariellae: 5. Tergit seitlich meist deutlich gekantet; Mesosoma ca. 1,8—1,9mal so lang wie hoch; 1. Tergit etwas grober skulpturiert als die folgenden Tergite.

1 ♂ aus der Mongolei ("Čojbalsan aimak, 40 km O von Somon Tamzagbulag, 600 m"; "Nr. 389 11. VIII. 1965") dürfte ebenfalls zu *O. affinis* n. sp. gehören. Das Exemplar weist eine schwächere Gesichtsskulptur und eine leicht runzlige Metasomapunktur auf, weshalb es nicht als Paratypus aufgeführt wurde.

Orgilus brevipalpis sp. n. (Abb. 1—3, 13)

♀ (♂ unbekannt): Körperlänge 5,0 mm; Vorderflügellänge 3,3 mm. — Füller: Etwas kürzer als der Körper, mit 35 Gliedern; Scapus ca. 1,5mal so lang wie breit; Scapus ca. 1,1mal so lang wie das 3. Glied; 3. Glied ca. 2,5mal so lang wie breit und etwa 1,2mal so lang wie das 4.; Geißelglieder im subapikalen Bereich alle deutlich länger als breit. — Kopf: Etwa so breit wie das Mesosoma, in dorsaler Sicht hinter den Augen kräftig und schwach rundlich verengt (Abb. 2); Hinterkopf mäßig tief ausgebuchtet; Occipitalrand in dorsaler Sicht etwa bis in Höhe des Ocellarfeldes reichend; Kopf etwa 1,9mal so breit wie lang; OD : POL : OOL ca. 1 : 2,0 : 2,8; Augen in dorsaler Sicht ca. 1,4mal so lang wie die Schläfen; Augen ca. 1,4mal so hoch wie breit; Gesicht ca. 1,4mal so breit wie ein Auge hoch (Abb. 3); Malarraum ca. 0,6mal so lang wie ein Auge hoch; Epistomalsutur flach eingedrückt; Maxillarpalpen ca. 0,8mal so lang wie der Kopf hoch; 3. Glied der Maxillarpalpen (von der Spitze an gerechnet) ca. 0,75mal so lang wie der Malarraum (vgl. Abb. 1); Endglied der Labialpalpen ca. 4mal so lang wie breit; Oberkopf punktiert und glänzend; Stirn seitlich (an den Augen) dicht und etwas runzlig punktiert, obere Augenecken mit schwacher Chagrinierung; Schläfen, Gesicht und Clypeus weitläufig punktiert und glänzend; Wangen im Bereich des Occipitalrandes, Malarraum und Occipitalanhang fein chagriniert und kaum glänzend.

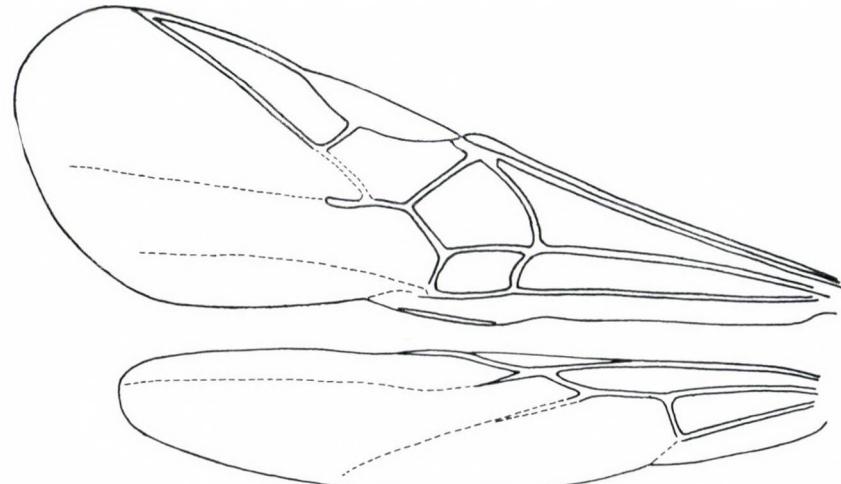
Mesosoma: 1,6mal so lang wie hoch, ca. 1,3mal so hoch wie breit; Pronotum runzlig punktiert und glänzend, unterer Bereich mit leichter Chagrinierung; Mesonotum und Scutellum weitläufig punktiert und glänzend; Notauli deutlich; Mesopleuren wenig punktiert, stark glänzend; Sternauli fast gerade und grob punktiert, nach unten in die deutlich punktierten Mesosternen übergehend; Metapleuren dicht und grob punktiert und glänzend, hinten und unten runzlig; Propodeum grob runzlig und etwas glänzend, basal mit großen glatten Flächen und apikal mit wenig deutlichen Kielen. — Beine: Hinterhüften ca. 0,55mal, Hinterschienen ca. 1,3mal so lang wie die Hinterschenkel; Hinterschenkel 5,0mal so lang wie breit; innerer Sporn der Hinterschienen knapp 0,5mal so lang wie der Basitarsus; Hinterhüften dorsal grob und runzlig punktiert, die Außenseite punktiert und glänzend; Hinterschenkel auf der Außenseite dicht punktiert mit glatten Zwischenräumen; Klauen einfach.

Fügel: Hinterflügel 4,1mal so lang wie breit; im Vorderflügel Entfernung der Spitze der Marginalzelle zur Flügelspitze ca. 0,8mal so lang wie J—RI; Ader 2 + 3—M etwa so lang wie 2—SR + M (Abb. 13).

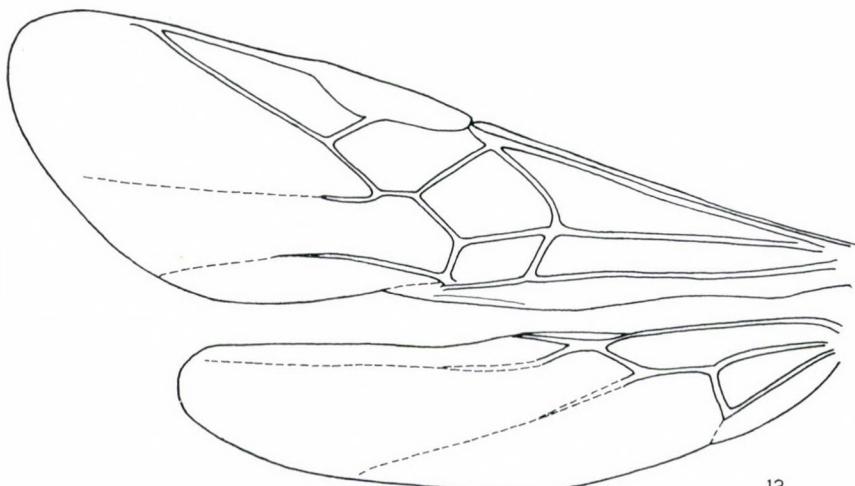
Metasona: Etwas schmäler als das Mesosoma, seitlich etwa bis in das basale Drittel des 3. Tergites scharf gekantet; 1. Tergit 1,25mal so lang wie apikal breit; 2. Tergit ca. 0,8mal so lang wie basal breit; 1. Tergit ohne deutliche Dorsalcarinae, seitlich an der Basis längsstreifig; 1. Tergit grob runzlig und glänzend, apikales Viertel glatt; 2. Tergit in der Basalhälfte mit Ausnahme der

Seiten runzlig punktiert und glänzend; übrige Tergite glatt; 2. Sutur schwach; Bohrerklappen ca. 1,5mal so lang wie die Hinterschenkel, ca. 0,6mal so lang wie die Vorderflügel.

Färbung: Schwarz; gelbbraun sind: Palpen, Mandibeln und Vorderrand des Clypeus, Fühlerbasis (Scapus dorsal dunkler), Tegulae und Humer alplatten, die Hinterecken des 1. Tergites sowie zum großen Teil die Beine; an den Beinen sind bräunlich verdunkelt: die an den Hüften liegenden Trochanteren, die Innenseiten der vorderen und mittleren Schenkel, die Spitzen der mittleren und hinteren Schienen, die Tarsen, die Hinterhüften dorsal und ventral, Hinterschenkel mit Ausnahme der Rückseite und der Basis der Außenseite;



12



13

Abb. 12—13. Flügel: 12 = *Orgilus affinis* sp. n., 13 = *O. brevipalpis* sp. n.

Flügel leicht getrübt in braunem Geäder; Stigmavorderrand und $C + SC + R$ dunkler.

W i r t: Unbekannt.

Typenmaterial — Holotypus, ♀: "MONGOLIA, Bajanchongor aimak, Changaj Gebirge Ulaan čolon, 18 km S vom Pass Egijn davaa, 2300 m Exp. Dr. Z. KASZAB, 1966", "Nr. 552. 21. VI. 1966" (Coll. Budapest, Hym. Typ. No. 7340). Erhaltungszustand: gut, linke Mittelschiene und -tarsus sowie rechter Maxillarpalpus und rechte Fühlerspitze fehlend.

D i s k u s s i o n: Die Art gleicht habituell und farblich weitgehend *O. obesus* TAEGER, der bislang aus den Alpen und den Pyrenäen bekannt ist. Charakteristisch sind für beide Arten die relativ großen Körpermaße, die schlanken Schenkel, das breite Gesicht und der kurze Bohrer. — *O. obesus* lässt sich von *O. brevipalpis* durch folgende Merkmale unterscheiden: Maxillarpalpen etwa so lang wie der Kopf hoch, 3. Glied (von der Spitze an gezählt) etwas so lang wie der Malarraum; subapikale Fühlerglieder (beim ♀) nicht länger als breit; Kopf in dorsaler Sicht hinter den Augen kaum verengt (Abb. 7); Skulptur kräftiger (Gesicht mit deutlich gerunzelten Bereichen und meist z. T. chagrinierter; Sternauli mehrreihig; Skulptur der Hinterhüften dorsal und auf der Außenseite viel stärker; Hinterschenkelaußenseite dichter skulpturiert); Palpen schwarzbraun. *O. obesus* ist skulpturell ziemlich variabel, so daß von dieser Art ähnlich schwach skulpturierte Exemplare vorstellbar sind. Die übrigen oben aufgeführten Unterschiede machen es jedoch sehr wahrscheinlich, daß *O. brevipalpis* nicht als Extremform von *O. obesus* anzusehen ist.

Orgilus distinguendus sp. n. (Abb. 11)

♂♀: Körperlänge 2,9—4,0 mm; Vorderflügellänge 2,5—3,3 mm. — **F ü h l e r:** Beim ♀ etwas kürzer als der Körper, beim ♂ länger, mit 31 Gliedern; Scapus ca. 1,6mal so lang wie breit, ca. 1,2—1,3mal so lang wie das 3. Glied; 3. Glied beim ♀ ca. 2,6—2,8mal, beim ♂ ca. 2,2mal so lang wie breit und etwa 1,2mal so lang wie das 4.; beim ♀ Geißelglieder im subapikalen Bereich alle etwas länger als breit, beim ♂ alle Geißelglieder deutlich länger als breit. — **K o p f:** Etwas breiter als das Mesosoma, in dorsaler Sicht deutlich und rundlich hinter den Augen verengt (vgl. Abb. 5); Hinterkopf deutlich ausgebuchtet; Occipitalrand in dorsaler Sicht etwa bis in Höhe des Ocellarfeldes reichend; Kopf etwa 1,7—1,8mal so breit wie lang; OD : POL : OOL ca. 1 : 2,0—2,6 : 2,2—3,0; Augen in dorsaler Sicht ca. 1,5—1,8mal so lang wie die Schläfen; Augen ca. 1,4mal so hoch wie breit; Gesicht ca. 1,1—1,2mal so breit wie ein Auge hoch; Malarraum ca. 0,5—0,55mal so lang wie ein Auge hoch; Epistomal-sutur deutlich, aber nicht sehr tief; Maxillarpalpen ca. so lang wie der Kopf hoch; Endglied der Labialpalpen ca. 4—5mal so lang wie breit; ziemlich dicht chagrinierter und matt; Gesicht besonders im mittleren Bereich weniger chagrinierter und glänzend; Clypeus wenig punktiert, glänzend.

M e s o s o m a: 1,5—1,6mal so lang wie hoch, ca. 1,25mal so hoch wie breit; Pronotum dicht chagriniert und matt, besonders in der Mitte runzlig; Mesonotum schwach chagriniert und glänzend, neben dem Notauli stärker chagriniert; Skulptur im hinteren Bereich der Seitenlappen am schwächsten; Scutellum kaum punktiert mit geringer Chagrinierung, die auch fehlen kann; Notauli deutlich; Mesopleuren mit sehr schwacher Chagrinierung, über den mehrreihigen Sternauli glatt; Mesosternen chagriniert, wenig glänzend; Metapleuren matt chagriniert, unten und hinten runzlig; Propodeum runzlig chagriniert, basal mit glatten Flächen, apikal mit kurzen Kielen. — **B e i n e:** Hinterhüften ca. 0,55mal, Hinterschienen ca. 1,3mal so lang wie die Hinterschenkel 4,5—4,7mal so lang wie breit; innerer Sporn der Hinterschienen ca. 0,55mal so lang wie der Basitarsus; Hinterhüften und Hinterschenkel auf der Außenseite fein chagriniert und seidig glänzend, an den Hinterhüften die Skulptur im unteren Bereich schwächer; Klauen einfach.

F l ü g e l: Hinterflügel ca. 4,6—4,7mal so lang wie breit; im Vorderflügel Entfernung der Spitze der Marginalzelle zur Flügelspitze ca. 0,8—0,9mal so lang wie $I - RI$; Ader $2 + 3 - M$ etwa so lang wie $2 - SR + M$.

M e t a s o m a: Etwas schmäler als das Mesosoma, seitlich etwa bis in das basale Drittel des 3. Tergites scharf gekantet; 1. Tergit ca. 1,4—1,5mal so lang wie apikal breit; 2. Tergit ca. 1,0mal so lang wie basal breit; 1. Tergit ohne deutliche Dorsalcarinae, leicht runzlig bis etwas längsstreifig chagriniert, basal und apikal in der Mitte glatt (Abb. 11); 2. Tergit mehr oder weniger fein punktiert und glänzend, die Skulptur basal am stärksten, im apikalen und mittleren Bereich glatt und glänzend; manchmal nur Skulptur an den Seiten des basalen Drittels vorhanden; übrige Tergite glatt; 2. Sutur flach und deutlich; Bohrerklappen ca. 3,7—4,0mal so lang wie die Hinterschenkel, ca. 1,4—1,6mal so lang wie die Vorderflügel.

F ä r b u n g: Schwarz; beim ♀ ist bräunlich bis gelbbraun: Fühlergeißelbasis besonders auf der Unterseite, Mandibeln, oft der Clypeusvorderrand, die vorderen und mittleren Beine mit Ausnahme der an den Hüften gelegenen Trochanteren sowie der Innenseiten der Schenkel und Teile der Tarsen; Hinterbeine stärker verdunkelt, an den Hüften nur die schmalen Spitzen und mehr oder weniger die Basis der Schenkelaußenseite aufgehellt; Flügel leicht getrübt mit bräunlichem Geäder, $C + SC + R$ und Stigmavorderrand dunkler.

W i r t: Unbekannt.

Typenmaterial — **H o l o t y p u s**, ♀: "MONGOLIA Chövsgöl aimak 3 km SW von Somon Burenchaan, 1650 m Exp. Dr. Z. KASZAB, 1968"; "Nr. 993 21. VI.—16. VII. 1968" (Coll. Budapest, Hym. Typ. No. 7341). Erhaltungszustand: sehr gut, eine Bohrerklappe aufgeklebt. Wichtige Angaben zum Holotypus: Skulptur des 2. Tergites relativ schwach; Körperlänge 3,2 mm. — **P a r a t y p e n:** 1 ♂ mit gleichen Angaben wie der Holotypus (Coll. Budapest, Hym. Typ. No. 7344). 1 ♀: wie der Holotypus, jedoch "Nr. 1113 16. VII. 1968" (Coll. Eberswalde). 1 ♀: "MONGOLIA, Central aimak Ulan-Boator, Nucht im Bogdo ul, 1650 m, Exp. Dr. Z. KASZAB, 1966"; „Nr. 493 4.VI. 1966" (Coll. Budapest, Hym. Typ. No. 7342). 1 ♀: wie voriges, jedoch "1650—1950m" und „Nr. 494" (Coll. Budapest, Hym. Typ. No. 7343). 1 ♀: "N. Mongolei Leder 92" (Coll. Wien).

D i s k u s s i o n: Bei Benutzung des Bestimmungsschlüssels (TAEGER 1989) gelangt man zum Couplet 117 (*O. mongolicus* TAEGER, *O. dubius* TAEGER). Der aus Italien beschriebene *O. dubius* unterscheidet sich von *O. distinguendus* durch dickere Schenkel (Hinterschenkel 3,9mal so lang wie breit), gedrungenere Fühler und durch schwächere Skulptur an den äußeren Orbiten. — *O. mongolicus* unterscheidet sich durch viel dichtere Skulptur des Praescutums und der an die Notauli grenzenden Teile der Seitenlappen, die in starkem Kontrast zu den glatten Flächen der Seitenlappen steht. Außerdem ist die Skulptur der beiden Basaltergite viel kräftiger und deutlich längsstreifig (Abb. 10). Die Bohrerklappen sind bei *O. mongolicus* etwa 3,3—3,4mal so lang wie die Hinterschenkel. Mir liegt ein ♀ vor ("Mittelgobi aimak Delgerchangaj ul 6 km S v. Somon Delgerchangaj, 1650 m"; "Nr. 909 11.VII.1967"), das einen kürzeren Bohrer (wie *mongolicus*) hat und außerdem auf dem Metasoma etwas stärker skulpturiert ist. Aufgrund dieser Abweichungen wurde das entsprechende Tier nicht mit in die Paratypenserie von *O. distinguendus* aufgenommen. *O. kaszabi* sp. n. unterscheidet sich von *O. distinguendus* durch schwächere Skulptur der äußeren Orbiten und des Mesosomas, die längeren Bohrerklappen sowie eine etwas dunklere Färbung. Mir liegt ein weiteres ♀ vom loc. typ. vor (Nr. 1113), das unter Umständen ein extrem abweichendes Exemplar von *O. distinguendus* ist. Bei diesem ♀ sind Gesicht und Mesonotum viel glatter als bei den Typen, außerdem ist die Skulptur des 2. Tergites anders verteilt (als Dreieck an der Tergumbasis) und die Hinterschenkel sind ca. 4,2mal so lang wie breit. Ich halte es für möglich, daß hier eine weitere Art vorliegt. Da das Tier jedoch zusammen mit *O. distinguendus* gesammelt wurde und die Unterschiede nicht sehr groß sind, soll es vorläufig nicht als sp. n. benannt werden. Weiteres Material wird hier vielleicht zu einem späteren Zeitpunkt eine Klärung ermöglichen.

Orgilus dovnari TOBIAS, 1986 — 1 ♀: "Central aimak Sosgoni ovoo, 5—10 km N von Ulan-Baator, 1500—1700 m"; "Nr. 926 19.—20., 23.—24. VII. 1967". 1 ♀: "Central aimak 11 km OSO von Somon Bajanzogt, 1600 m"; "Nr. 944 13. VI. 1968". 1 ♀: "Chövsgöl aimak 4 km NW von der Stadt Mörön, 1500 m"; "Nr. 1126 19. VIII. 1968".

Die Bestimmung dieser 3 ♀ ist nicht ganz zweifelsfrei, da die Färbung der Beine sehr dunkel ist. Die Tiere tendieren somit zu *O. pimpinellae* NIEZABITOWSKI s.l. Da die Hinterschenkel der vorliegenden Exemplare wenig schlanker (4,6—4,8mal so lang wie breit) und die Bohrerklappen etwas länger (2,4—2,6mal so lang wie die Hinterschenkel) sind als bei *O. pimpinellae* üblich, halte ich die Tiere für zu *O. dovnari* gehörig. Die früher aus der Mongolei gemeldeten *dovnari*-Exemplare (TAEGER 1989) sind ebenfalls z. T. melanistisch.

Orgilus elongatus PAPP, 1971 — 1 ♀ + 2 ♂: "Bajan-Ölgij aimak im Tal des Flusses Chavcalyn gol, 25 km V von Somon Cagannuur, 1850 m"; "Nr. 1056 3. VII. 1968". 2 ♂: "Central aimak 11 km S vom Pass Zosijn davaa, 90 km S von Ulan-Baator, 1650 m"; "Nr. 771 7. VI. 1967". 1 ♀: "Südgobi aimak Tachilga ul zw. Zogt-Ovoo und Dalanzadgad 1550 m"; "Nr. 792 12. VI. 1967". 1 ♂: "Yellow Gobi 1. IX. 1977 leg. G. MOLNÁR".

Die Art ist bisher nur aus der Mongolei bekannt. Das Exemplar aus dem Südgobi aimak hat eine bräunliche Körperfärbung.

Orgilus kaszabi sp. n. (Abb. 5)

♀ (♂ unbekannt): Körperlänge 3,6 mm; Vorderflügellänge 2,8 mm. — Fühler: Kürzer als der Körper, mit 30 Gliedern; Scapus ca. 1,6mal so lang wie breit, ca. 1,1mal so lang wie das 3. Glied; 3. Fühlerglied knapp 2,5mal so lang wie breit und ca. 1,2mal so lang wie das 4., alle Geißelglieder wenigstens etwas länger als breit. — Kopf: Etwas breiter als das Mesosoma, in dorsaler Sicht hinter den Augen deutlich und rundlich verengt (Abb. 5); Occipitalrand in dorsaler Sicht etwa bis in Höhe des Occipitalrandes reichend; Hinterkopf ausgebuchtet; Kopf ca. 1,75mal so breit wie lang; OD : POL : OOL = 1 : 2,5 : 3,0; Augen in dorsaler Sicht ca. 1,5mal so lang wie die Schläfen; Augen ca. 1,5mal so hoch wie breit; Gesicht ca. 1,2mal so breit wie ein Auge hoch; Malarraum 0,5mal so lang wie ein Auge hoch; Maxillarpalpen wenig kürzer als der Kopf hoch; Endglied der Labialpalpen ca. 3mal so lang wie breit; Epistomal-sutur schwach; Kopf chagriniert, matt; mittleres Gesicht punktiert mit leicht chagrinierten oder fast glatten Zwischenräumen; Clypeus glatt mit wenigen Punkten; äußere Orbiten nur sehr schwach chagriniert.

Mesosoma: 1,5mal so lang wie hoch, ca. 1,2mal so hoch wie breit; Pronotum chagriniert, in der Mitte runzlig; Mesonotum und Scutellum punktiert und glänzend; Notauli tief, fast bis zur Scutellarfurche reichend; Mesopleuren kaum punktiert und glänzend, Mesosternen etwas punktiert mit sehr schwach angedeuteter Chagrinierung; Sternauli deutlich, mehrreihig; Metapleuren chagriniert, im hinteren und unteren Bereich runzlig, vorn fast glatt; Propodeum grob runzlig chagriniert, basal mit glatten Flächen, apikal mit kurzen Kielen. — Beine: Hinterhüften knapp 0,6mal, Hinterschienen ca. 1,2mal so lang wie die Hinterschenkel; Hinterschenkel ca. 4,7mal so lang wie breit; innerer Sporn der Hinterschienen ca. 0,5mal so lang wie der Basitarsus; Hinterhüften dorsal fein chagriniert und matt, an den Seiten Skulptur nach unten deutlich schwächer werdend und glänzend; Hinterschenkel auf der Außenseite chagriniert; Klauen einfach.

Fügel: Hinterflügel 4,8mal so lang wie breit; im Vorderflügel Abstand der Spitze der Marginalzelle zur Flügelspitze ca. 0,8mal so lang wie 1—RI; Ader 2 + 3—M im Vorderflügel etwa so lang wie 2—SR + M.

Metasoma: Etwas schmäler als das Mesosoma, seitlich bis in den Basalbereich des 3. Tergites scharf gekantet; 1. Tergit ca. 1,4mal so lang wie apikal breit; 2. Tergit ca. 0,9mal so lang wie basal breit; 1. Tergit ohne deutliche Dorsalcarinae, jedoch runzlig chagriniert, besonders im Basalbereich an der Seite längsstreifig, Basis und Apikalbereich in der Mitte glatt; 2. Tergit runzlig punktiert, die Kanten und das apikale Drittel glatt; übrige Tergite glatt; 2. Sutur schwach; Bohrerklappen ca. 5,5mal so lang wie die Hinterschenkel, d. h. ca. 1,6mal so lang wie der Körper bzw. 2,1mal so lang wie die Vorderflügel.

Färbung: Schwarz; Fühlergeißelbasis, Vorderhüften und Vorderschenkel sowie alle Schienen und Tarsen pechbraun. Flügel schwach getrübt mit bräunlichem Geäder, *C + SC + R* und Stigmavorderrand dunkler.

Wirt: Unbekannt.

Typenmaterial — Holotypus, ♀: "MONGOLIA Baj an-Ölgij aimak am Pass Schine davaa 27 km S von Somon Cagannuur, 2690 m Exp. Dr. Z. KASZAB, 1968"; "Nr. 1055 3. VII. 1968" (Coll. Budapest, Hym. Typ. No. 7345). Erhaltungszustand: linkes Mittelbein und rechtes Hinterbein hinter den Trochanteren abgebrochen und fehlend.

Diskussion: Die Art führt im Bestimmungsschlüssel (TAEGER 1989) zu Couplet 114 und (wenn die Bohrerklapplänge zu Grunde gelegt wird) weiter zum Artenpaar *O. dorni* TAEGER / *O. hofferi* ČAPEK (Couplet 115). *O. kaszabi* unterscheidet sich auf den ersten Blick durch die erheblich dunklere Färbung (beide Arten mit ausgedehnt hellen Beinen, *O. dorni* außerdem mit hellerem Metasoma). Weitere Unterschiede beider Arten im Vergleich mit *O. kaszabi* sind (dem Vergleich lagen der Holotypus von *O. dorni* und 4 ♀♀ von *O. hofferi* aus Österreich zugrunde):

O. dorni: 1. Tergit 1,8mal so lang wie apikal breit, deutlich längsstreifig; OD : POL ea. 1,5 (Abb. 6); Skulptur dichter; äußere Orbiten, Mesonotum neben den Notauli, Mesosternen, Metapleuren und Hinterhüften auf der Außenseite chagriniert und ziemlich matt; Propodeum nicht so grob gerunzelt; Notauli nicht so stark eingedrückt; Hinterschenkel ca. 4,0mal so lang wie breit.

O. hofferi: Bohrerkappen 1,5—1,6mal so lang wie die Vorderflügel; 2. Tergit nur im basalen Drittel schwach punktiert oder fast ganz glatt; Hinterschenkel 4,0—4,3mal so lang wie breit; Propodeum weniger stark gerunzelt.

Zur Unterscheidung von *O. distinguendus* siehe oben.

Ich widme die neue Art ihrem Sammler DR. ZOLTÁN KASZAB (1915—1986), der sich durch seine umfangreichen Aufsammlungen bleibende Verdienste bei der Erforschung der Entomofauna der Mongolei erworben hat.

Orgilus luctuosus TAEGER, 1987 — 1 ♂: "Archangaj aimak Changaj Gebirge, 8 km W von Somon Urdtamir, 1620m"; "Nr. 538 19. VI. 1966".

Die Art war bisher nur aus Korea bekannt, neu für die Mongolei.

Orgilus meyeri TELENKA, 1933 — 2 ♀♀: "Bajanchongor aimak Oase Echin gol, 90 km NO von Grenzposten Cagan bulag, 950 m"; "Nr. 855 27.—28. VI. 1967".

Die farblich sehr variable Art war bereits aus der Mongolei bekannt (TAEGER 1989). 1 ♀ entspricht farblich dem Lectotypus der Art, das andere ♀ ist am Metasoma deutlich verdunkelt.

Orgilus nitidiceps TAEGER, 1989 — 1 ♀: "Uvs aimak Sandgebiet Altan els 35 km WNW von Somon Tes, 1400 m"; "Nr. 1007 23. VI. 1968".

Die Art ist bisher nur aus der Mongolei bekannt.

Orgilus pimpinellae NIEZABITOWSKI, 1910 s. l. — 1 ♀: "Chövsgöl aimak 8 km N von Somon Burenchaan am Fluss Delger mörön, 1450"; "Nr. 1115 16. VII. 1968".

Das Exemplar ähnelt sehr den oben als *O. dovnari* gemeldeten Tieren. Die Beine sind jedoch dunkler und die Hinterschenkel nur ca. 4,2mal so lang wie breit. Die Bohrerkappen sind 2,5mal so lang wie die Hinterschenkel.

Unter dem Namen *O. pimpinellae* wird möglicherweise eine ganze Gruppe von ähnlichen Arten zusammengefaßt (vgl. TAEGER 1989).

Orgilus thomsoni TAEGER, 1989 — 1♀; "Uvs aimak zw. See Örög nuur und der Stadt Ulaangom, 2—7 km OSO vom Pass Ulaan davaa 1690—1950 m"; "Nr. 1032 28. VI. 1968".

Die Art wurde bereits früher unter Vorbehalten aus der Mongolei gemeldet (TAEGER 1989). Das oben erwähnte Exemplar stimmt gut mit den europäischen Tieren überein.

L i s t e der aus Mongolei bekannten *Orgilus*-Arten

affinis sp. n.	meyeri TELENGA, 1933
brevipalpis sp. n.	minutus SZÉPLIGETI, 1898
distinguendus sp. n.	mongolicus TAEGER, 1989
dormi TAEGER, 1989	nitidiceps TAEGER, 1989
dovnari TOBIAS, 1986	pimpinellae NIEZABITOWSKI, 1910
elongatus PAPP, 1971	radialis JAKIMAVIČIUS, 1972
ischnus MARSHALL, 1898	temporalis TOBIAS, 1976
kaszabi sp. n.	thomsoni TAEGER, 1989
luctuosus TAEGER, 1987	

SCHRIFTTUM

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REDESCRIPTION OF THE GENUS *IOESSA* ERDŐS, 1955 (HYMENOPTERA, ENCYRTIDAE)

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Redescription of the peculiar monotypic encyrtid genus *Ioessa* is known only from Hungary. Taxonomic position of the genus is ascertained. It is placed in the subtribe *Coenocercina* of the tribe *Bothriothoracini* of the subfamily *Encyrtinae*. The genus *Ioessa* is closely related to the genus *Zaommoencyrtus* GIRAUT, 1916. With 8 original figures.

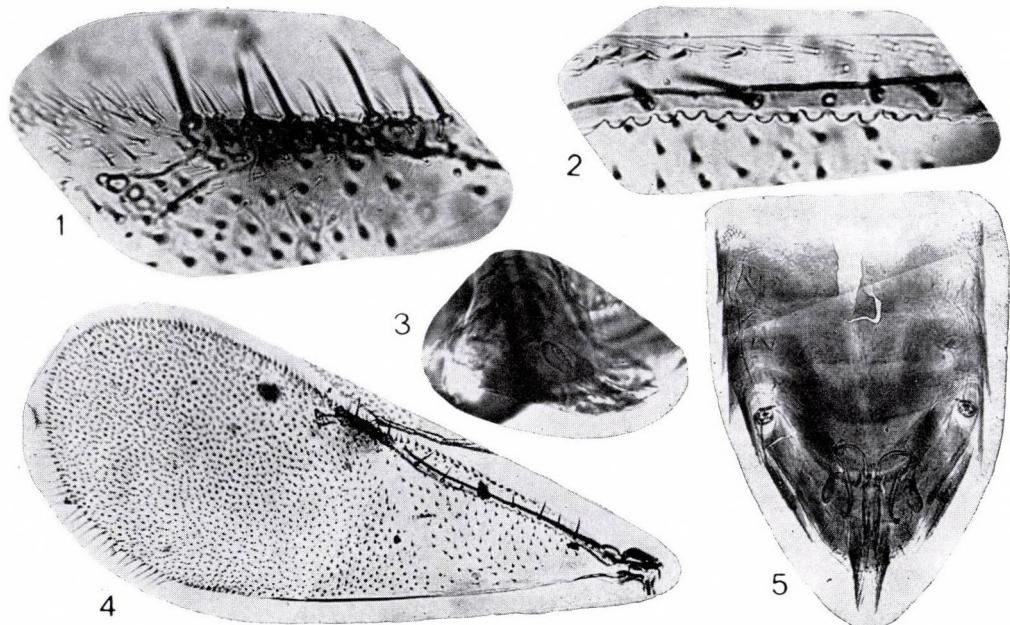
The genus *Ioessa* has been briefly described by ERDŐS (1955) in an interesting paper dedicated to the entomoph fauna of *Phragmites australis* (= *vulgaris*). Its type species *Ioessa crassicornis* ERDŐS was collected by ERDŐS on *Phragmites australis* near the Lake Velence. The author placed this genus characterized by strongly flattened body into the tribe *Leptomastidini* (now the tribe *Anagyrini* of the subfamily *Tetraconeminae*). ERDŐS described mandibles of *I. crassicornis* as having 2 apical teeth, and that was the reason of erroneous taxonomic placement of the genus. Until now this genus, still unknown outside of Hungary, remained enigmatic for specialists and its taxonomic position was uncertain.

According to ERDŐS (1955) the type series of *Ioessa crassicornis* consisted of 4 females and 1 male. The junior author of the present article has found 3 females and 1 male, which are undoubtedly syntypes in the collection of DR. J. ERDŐS, preserved now in Hungarian Natural History Museum in Budapest. In 1980 one female of this syntypic series was designated (in litt.!) by DR. G. SZELÉNY as a lectotype. During his visit to Hungary in March 1989 the senior author (V. A. TRJAPITZIN) dissected one of the female paralectotypes of *I. crassicornis* and the thorough study of a microscopic slide permitted us to ascertain some morphologic characters of this species more precisely. Its mandibles proved to be 3-toothed, and paratergites of the abdomen absent. This new information gives us the reason to place the genus *Ioessa* in the subfamily *Encyrtinae*.

Ioessa Erdős, 1955

ERDŐS, 1955: 41, 47—48, figs 5c, 8; ERDŐS, 1964: 17, 30, 51—52, fig. 12; TRJAPITZIN, 1978: 279.

Female. — Body elongated, strongly flattened. — Head prognathic (mouth directed forward) also strongly flattened. Frontovertex very broad. Ocelli forming an obtuse-angled triangle. Eyes big, not pubescent, their inner orbits almost parallel. Malar space very small. Facial cavity (scrobes) absent. — Antennae (Fig. 8) attached at mouth border, short, strongly clavate. Radicula short, somewhat enlarged. Funicle 6 segmented, all its segments transverse. Clava large, 3-segmented, its apex not truncated. Mandibles 3-toothed, the middle tooth somewhat longer than others (Fig. 3). Maxillar palpi 4-segmented, all segments being short. — Pronotum short, transverse, not divided. Mesonotum without parapsidal lines, wider than long. Apices of axillae touching together. Scutellum well developed, its apex rounded (Fig. 7). Propodeum very short, horizontal. — Wings not shortened, forewings reaching wellbeyond apex of gaster, not infuscated. Submarginal vein of the forewings without triangular expansion in the apical third and with a peculiar structure on hind edge. Costal cell large. Marginal vein rather long, stigmal vein considerably shorter than marginal, postmarginal vein rudimentary; apex of stigmal vein



Figs 1—5. *Ioessa crassicornis* ERDŐS: 1—2 = venation of fore wing, 3 = right mandible, 4 = left fore wing, 5 = gaster

beaklike (Fig. 4). Wing plate weakly pubescent, oblique bare (hairless) stripe well developed, hairs on its borders not differentiated in size; base of wing proximad from hairless line pubescent. Apical fringe developed. — Legs rather short, tarsi 5-segmented. Middle metatarsus (the first tarsal segment) elongated and somewhat enlarged; mesotibial spur well developed but rather thin (Fig. 6). Hind femora somewhat enlarged; hind metatarsus not shortened. — Gaster moderately elongated, as long as or a little shorter than mesosoma (thorax + propodeum) (Fig. 5). Pygostyles at the level from somewhat before apical third up to a half of gaster length; sides of gaster before pygostyles almost parallel (in dry specimens), paratergites not discovered. VII sternite reaching apex of gaster. Oviposition apparatus very short, occupying only apical part of gaster; ovipositor sheaths almost not protruding in dry collection specimens, but still rather well developed, somewhat longer than outer and inner plates.

Male. — Funicular segments of antennae less transverse. Clava short, undivided. Pygostyles on the level of 1/2 the length of gaster.

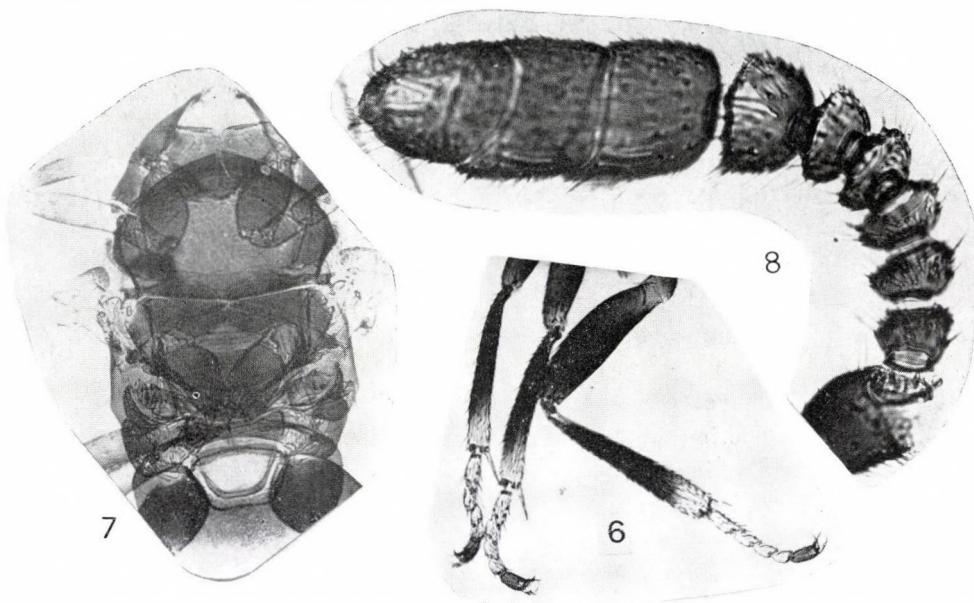
Ioessa crassicornis ERDŐS, 1955

Female. — Head (facial view) wider than long (5 : 3), and a little wider than thorax. Breadth of frontovertex about 3/5 to 5/9 the maximum breadth of head. Eyes occupying 4/5 the length of head (facial view). Malar space 3—4 times less than eye length. Antenna, and mandible see on Figs 3 and 8. — Pronotum approximately 6 times as wide as long and about 3 times shorter than mesoscutum; the latter approximately 2 times as wide as long. Scutellum as long as mesoscutum and somewhat wider than long (7 : 5). Propodeum measured in the middle about 5 times shorter than scutellum. Forewings 2.6—2.7 times longer than their greatest breadth, their venation and chaetotaxy see on Figs 1—2. Apices of the middle and hind legs on Fig. 6. Protruding part of ovipositor sheaths about 13 times shorter than gaster length.

Body dark, its upper side with not strong greenish-blue-violet metallic lustre, almost smooth. Antennae brown-black, or almost black. Forewings transparent, with a small infuscation under marginal vein. Knees, and apices of tibiae brownish-yellow; the light parts occupy about 1/4—1/3 of the middle, and about 1/4 of the hind tibiae. Mesotibial spur and tarsi brownish-yellow; the last segment of tarsi fuscous. Protruding part of ovipositor sheaths.

Length of body 1—1.2 mm.

Male. — Scape of antennae about 2 times longer than pedicel, which is as long as next 2 funicular segments taken together. 1st funicular segment narrower than the 2nd. Segments 2—6 almost equal in breadth and only moderately transverse; 6th funicular segment may be nearly quadrate. Clava suboval, a half



Figs 6—8. *Ioessa crassicornis* ERDŐS: 6 = legs, 7 = thorax, 8 = antennae

broader than the 6th funicular segment and a little longer than 2 preceding segments combined.

Length of body 0.9 mm.

Type material: 3 ♀♀, 1 ♂ (syntypes). Hungary: Gárdony, de Fragmite vulgaris Lam. 10. VII. 1953, leg. Dr. J. ERDŐS. 1 ♀ (Hym. Typ. No. Mus. Budapest 6743) was selected and labelled by Dr. G. SZELÉNYI in 1980 as "Lectotype" but Dr. SZELÉNYI did not publish this designation. So we designate here the same specimen as lectotype, and the other 2 ♀♀ (Nos 6744 and 6745) and 1 ♂ (No. 6746) as paralectotypes. The paralectotype (♀) No. 6745 was dissected and placed by us into a slide in Kieffer medium III.

Remarks. The genus *Ioessa* is closely related to *Zaommoencyrtus* GIRAUT (subtribe Coenocercina, tribe Bothriothoracini, subfamily Encyrtinae) and its female differs from that of *Zaommoencyrtus* in longer marginal vein of the forewings (in *Zaommoencyrtus* notably shorter than stigmal vein), in more minute and not differentiated pubescence of wing plate and in not swollen hind tibiae. Funicle of antennae of male of *Ioessa* has very short pubescence, while that of *Zaommoencyrtus* (an undescribed species from Voronezh region) is covered with long hairs.

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TAXONOMIC STUDIES ON THE GENERA
SIDERIDIS HÜBNER, SARAGOSSA STAUDINGER
AND CONISANIA HAMPSON (LEPIDOPTERA,
NOCTUIDAE: HADENINAE)

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Survey of the *Sideridis* genus-group; the phylogenetic relationships of the genera *Sideridis*, *Conisania*, *Saragossa* and *Heliophobus* are discussed and a new phylogenetic approach of these genera is given. A new genus, *Cornutifera* for *S. simplex*, a new subgenus, *Dianthivora* for *Sideridis implexa*, two new species, *Sideridis hercizi* sp. n. (Caucasus) and *C. discistroides* sp. n. (Mongolia); three new subspecies, *Saragossa siccanorum poecilographa* ssp. n. (Iraq), *C. poelli daghestanensis* ssp. n. (Daghestan) and *C. renati meszarosi* ssp. n. (Bulgaria) are described. The taxonomic relationships of the taxa of the *Conisania leineri* group and the taxonomic position of *Saragossa porosa* EVERSMANN are discussed. *Heliophobus* HÜBNER is downgraded to the subgenus of *Sideridis*, *Trichospolas* DRAUDT is synonymized with *Conisania*. With 105 figures and two photoplates.

Introduction — The higher classification of the family *Noctuidae* was influenced for a long time by the system proposed by HAMPSON. His conception, based often on some features having the phylogenetic value not enough clarified (e.g. hairy or lashed eyes), resulted in a general system in which many, phylogenetically important (mainly synapomorphic) characteristics remained hidden. Therefore it is not surprising, that the systems based either on the larval characteristics (AHOLA 1989; BECK 1960, 1989; MERZHEEVSKAYA 1967) or the anatomy of the genitalia are more or less different from the Hampsonian and their phylogenetic conclusions are partly or merely opposite from the latter one.

In some previous papers (RONKAY & VARGA 1989, 1990) it was stated that the genera, placed formerly into the separate subfamilies *Noctuinae*, *Hadeninae*, *Cucullinae* and *Amphipyrinae*, possibly being close to the phyletic lines of the earlier phylogenetic divergences, have a unified general configuration of the male genitalia. These genera, beside displaying clearly the process of derivation from the mentioned common basic structure "groundplan"), can be also characterized by numerous common (derived) features as follows:

- the strong sclerotization of the costal margin of the valva which is terminated in an additional clasping processus (digitus, in some other works as "clasper");
- the cucullus is wide, spatulate or spoon-like, bearing strong setae (macrotricha) and a well-developed corona;

- the harpe (clasper) is usually reduced to its basal plate, having only supporting role as an apomorphic stage of the originally reversible clasping organ, moved by the muscles of the sacculus;
- the clavus is sclerotized, firmly joined to the fultura inferior and bears specialized setae and sensory hairs;
- the sacculus is sclerotized having strong musculature, the saccular extension is large and strong, often plays the clasping role of the reduced harpe.

Beside these above-mentioned characteristics, a tendency of dyssymmetrization of the digitus, the saccular extension, the clavus (and the harpe) can be found in certain genera, especially in the most apomorphic species and species-groups. This tendency, representing also the development of the lock-and-key system of the genitalia, is an important factor in the increase of the specific variability.

By these arguments, the genus-group of the *Hadeninae*, containing the genera *Saragossa*, *Sideridis* (including *Heliothobus*), *Hada*, the *Mamestra* s.l., *Hyssia*, *Pachetra*, *Haderonia*, *Polia* and *Tricheurois*, forms a monophyletic unit. This suprageneric unit shows strict connections with the *Mythimna-Leucania* complex, and, with the SE Asian (Indo-Malayan and Australo-Malayan) fauna, very probably having a SE Gondwana origin. An important period of their differentiation proceeded in the monsoonic SE Asian mountainous regions (in the ancient 'Kathaysia'), and there were two main possibilities for the expansion into the temperate Palaearctic (and Nearctic) territories. One of them was throughout the arboreal connection with the taiga biome, canalizing the faunal movement from the monsoonic montane forests to the S Siberian montane taiga — boreal and circumpolar taiga (as zonobiomes). The second one was the xeromontane chain from the Himalaya range through the barriers of the Inner and Central Asian high mountains to the eremic and W Palearctic oreal biomes.

The plesiomorphic type of the vesica of these genera is a long, tubular structure with a long distal fascia of spiniform cornuti ('fasciculate cornuti') and a shorter proximal diverticulum bearing a single, thorn-like cornutus. The secondary modifications of this configuration are as follows:

- the reduction of the proximal cornutus (and diverticulum);
- the elongation of the proximal diverticulum, in connection with the change of the cornutus into a bundle of cornuti;
- the differentiation of a sclerotized lamina (sometimes with a tooth-like cornutus) from the carina;
- appearance of a horn-like, sclerotized extension of the carina;
- the transformation of the tubular vesica into a helical or recurved configuration;
- the transformation of the tubular vesica into a T-shaped configuration;
- the presence of a row of large, strong cornuti at the place of the distal fascia.

Beside this genus-group, *Hadeninae* contains some other large genus groups of different evolution (and some small, specialized genera representing different phyletic lines). One of them, by the tubular basic configuration of the vesica, refers to the common phylogenetic roots with the firstly discussed genus-group. It contains externally very different genera as *Lasionycta*, *Eriopy-*

godes, *Monostola*, *Cerapteryx*, *Tholera*, *Niaboma* (= *Manobia*), etc. The second group displays the irradiation from the high montane steppe-zones to the eremic and circumboreal open biomes (*Cardiestra*, *Aglossestra*, *Discestra*, *Cardepinia*, *Hadula*, *Thargelia*, *Anarta*, etc.). This genus-group is characterized by the relatively short, usually recurved vesica with one or two long diverticula bearing small cornuti; fasciculate cornuti are absent. The saccular extension is often elongated and asymmetric. An other genus-group has a SE Asian centre of dispersion and is connected to the humid broad-leaved forest areas (the genus *Orthosia* s.l. and its close relatives); this group shows connections with some "Cuculliinae" and "Amphipyrinae" genera. The relationships of these genus groups will be discussed in details in the subsequent papers.

It is important to note that the double abdominal coremata can be found in every major line of *Hadeninae* as a plesiomorphic feature of the trifine *Noctuidae* 'subfamilies' with the exception of *Noctuinae*. The presence of them, therefore, has no phylogenetic significance, but their reduction, as a convergent phenotypic phenomenon, may appear in several genera. The other, similarly convergent character of many *Hadeninae* groups is the presence of a sclerotized, sometimes extreme prominence of the frons (see BOURSIN 1964, etc.). As this prominence is typical for eremic-xeromontane species of various *Noctuidae* 'subfamilies' (*Euxoa*, *Pachyagrotis*, *Cladocerotis*, *Metopoceras*, *Metalopha*, several quadrifine genera, etc.), it presumably has the function in digging out from the firm, dry soil after hatching from the pupa.

GENERAL CHARACTERIZATION OF THE GENERA SIDERIDIS, SARAGOSSA AND CONISANIA

In the genus group under discussion, by the configuration of the male genitalia, the genera *Sideridis*, *Saragossa* and *Conisania* are very closely related. In her revision SUKHAREVA (1973) considered *Sideridis* and *Conisania* as two subgenera of the same genus. Moreover, she placed a species which we undoubtedly relegated as a member of *Saragossa* (*S. porosa* EVERSMANN) into that common genus. *Sideridis* is a Holarctic genus, but some related genera occur in the Indo-Australian territory. The species of the genus *Heliothobus* have no distinctive differences as compared with *Sideridis*. Our opinion is similar to the conception of SUKHAREVA who synonymized *Heliothobus* with *Sideridis* (although her result were not accepted by other authors), but we think it would be reasonable to separate it on subgeneric level as a homogeneous, surely monophyletic unit. The recently discovered *S. remmi* is very close to the E Palaearctic *S. peculiaris*, this fact was not clearly stated in the original description of *remmi*.

Although the study of the Nearctic species and the survey of the Indo-Australian genera of this genus group is necessary to the revisional work of

Sideridis, two distinct developmental lines are separated here, one of them on generic, the other one on subgeneric level.

The species *simplex* STAUDINGER, placed formerly into the genus *Sideridis* displays a very special configuration of the vesica which reflects to an earlier separation from the main line of *Sideridis*. It has the area most close to the presumable ancient centre of dispersion and some species of the endemic New Zealandian genus *Graphania* HAMPSON (= *Maoria* WARREN) show surprisingly conspicuous similarity to *simplex*. A new, monotypical genus, *Cornutifera* gen. n. is erected here for *simplex*.

The exact phylogenetic relationships of 'Sideridis' *implexa* HÜBNER (= *Discestra* i.) are dubious, as its taxonomically important features show connections with *Saragossa* and *Sideridis*. The majority of the external features are common with *Saragossa* (except the antenna of the male), since the genitalia of both sexes are also close to *Sideridis*. According to BECK (pers. comm.) the larval features of *implexa* are strictly different from any other European species of this genus group. This species is considered as a specialized line of development and a new subgenus, *Dianthivora* subgen. n. is erected for it in the genus *Saragossa*, tentatively.

The genus *Saragossa* contains only few, strictly Palaearctic and characteristically eremic species. The configuration of the male genitalia is simplified, the digitus short (*incerta*) or reduced (*siccanorum*), in case of *porosa* a bit longer and flattened, the saccular extension simple. The proximal cornutus of the vesica is reduced, remained only in case of *incerta*, the fasciculate cornuti present.

The species of the genus *Conisania* show the most extremely specialized (autapomorphic) features. The vesica in the majority of species is T-shaped, the proximal cornutus may be very large (*lahoulicola*), transformed into a bundle of spiniform cornuti (*renati*, *leineri*-group, *arida*, *suavis* and *discestroides*) or reduced (*capsivora*). The carina often bears a sclerotized lamina which can appear as a more or less strong cornutus. The saccular extensions are asymmetric in the *suavis-discestroides* pair of species; the distal parts of valvae, especially in cases of the E Asian taxa, are strongly modified (*xanthothrix*, *leuconeephra*, *roseipicta* etc.).

On the basis of the morphological and zoogeographical features discussed above the genera and subgenera are shortly redescribed as follows:

Sideridis HÜBNER, [1821] 1816

Verz. bekannter Schmett., p. 232.

Type species: *Noctua evidens* HÜBNER, 1808, primary homonym of *Noctua evidens* THUNBERG, 1784. Replacement names: *Leucania evidens* var. *lampra* SCHAWERDA, 1913, validated by KOCAK (1989). *Sideridis anapheles* NYE, 1975, a proposed replacement name for *Sideridis evidens* HÜBNER. (NYE, 1975; POOLE 1989).

Species examined:

<i>Sideridis lampra</i> (SCHAWERDA, 1913)	<i>peculiaris</i> (STAUDINGER, 1888)
<i>rosea</i> (HARVEY, 1874)	<i>remmi</i> KONONENKO, 1982
<i>satanella</i> (ALPHERAKY, 1892)	<i>incommoda</i> (STAUDINGER, 1888)
<i>albicolon</i> (HÜBNER, [1813])	<i>unica</i> (LEECH, 1889)
<i>egena</i> (LEDERER, 1853)	<i>unica suavina</i> (DRAUDT, 1950) stat. n.
<i>demotica</i> (PÜNGELER, 1902)	

D i a g n o s i s: Proboscis developed, palpi obliquely porrect, second joint with long hair-scales. Frons with rounded, smooth protuberance, clypeus developed as a prominent, sclerotized crest. Tarsi of forelegs with a series of strong spines, last one often very strong, claw-like. Abdomen strong, males usually have coremata.

M a l e g e n i t a l i a (Figs 1—20, 25—28, 49—50): cucullus large, spatulate, covered with strong setae and a well-developed corona. Costal margin angulate, digitus usually short, sometimes more or less spatulate (e.g. *S. egena*), in some species reduced (*S. lampra*, *S. rosea*). Harpe represented by its basal, bar-shaped plate, with the exception of some species. (*S. lampra*, *S. rosea*, *S. satanella*) in which a plesiomorphic claw-like form can be observed. In these species the extension of sacculus less differentiated since more developed and sclerotized in other members of genus (*S. albicolon*, *S. egena*). Clavus poorly differentiated, marked mostly only as a rough, strongly sclerotized and/or sculptured surface with some setae on the inner face of sacculus. Vesica long, tubular; often recurved (*S. satanella*, *S. rosea*, *S. lampra*), helically coiled (*albicolon*). It may have a broad, proximal diverticulum with (*S. remmi*, *S. peculiaris*) or without cornutus (*S. incommoda*, *S. unica*). In some species this proximal diverticulum long, tubular, bearing a second fascia of spine-like cornuti (*S. egena*, *S. satanella*). Distal fascia of cornuti usually well-developed and strong, except in case of *S. satanella*.

F e m a l e g e n i t a l i a: Ovipositor short and weakly sclerotized, ostium bursae wide and strong. Ductus bursae flattened, posterior part usually strongly sclerotized. Cervix bursae large, elongated or curved, adapting to tubular or helicoid structure of vesica. Corpus bursae elliptical, membranous, with large, rounded signa arranged into two or four rows, sometimes reduced to a pair of signa. Sternite VIII with deep, triangular or smaller and rounded incision at ostium bursae; heavily sclerotized and firmly connected with ostium.

***Heliophobus* BOISDUVAL, 1828**

Eur. Lepid. Index Methodicus, p. 69

Type species: *Phalaena saponariae* BORKHAUSEN, 1792 (= *Phalaena reticulata* GOEZE 1782)

S p e c i e s e x a m i n e d:

Sideridis (Heliophobus) reticulata (GOEZE, 1782)

unicolor (ALPHERAKY, 1889) (?bona sp., see BEHOUNEK 1986)

kitti (SCHAWERDA, 1914)

texturata (ALPHERAKY, 1892)

(= *nepalensis* PLANTE, 1982, syn. n.)

The external and genital structures of *Heliophobus* and *Sideridis* display a great similarity. The differential features (reduction of digitus, less developed harpe, strongly sclerotized extension of sacculus, elongated form of distal fascia of cornuti or its separation into smaller groups of "sclerosetae") can also appear in different groups of *Sideridis*, consequently hardly allow a generic distinction. As *Heliophobus* forms a compact, Transpalaearctic group, it seems to be reasonable to relegate as a subgenus of *Sideridis*.

Cornutifera gen. n.

Type species: *Mamestra simplex* STAUDINGER, 1889, Stettiner ent. Z., 1889: 39 (= *irkutica* SUKHAREVA, syn. n.)

M a l e g e n i t a l i a (Figs 23—24): digitus broad, flattened, harpe plate-like, less developed. Saccular extension strongly sclerotized, upturned, pointed and slightly curved. Carina very strong, thorn-like, vesica tubular and recurved, without any diverticula but with a series (15—20) of very strong cornuti. Abdominal coremata absent.

F e m a l e g e n i t a l i a: ovipositor short and wide, posterior papillae anales rounded, gonapophyses moderately long. Ostium bursae wide and strong, trapezoidal. Ductus bursae flattened, wide, proximally dilated, strongly sclerotized; conjoined to bursa copulatrix with a wide, rugulose zone. Cervix bursae huge, falciform, strongly sclerotized and slightly rugulose. Bursa copulatrix elongated, lower part dilated. Walls of bursa copulatrix membranous, with four rows of rounded, large signa.

Saragossa STAUDINGER, 1900

Dtsch. ent. Z. Iris 13: 109

Type-species: *Saragossa seiboldi* STAUDINGER 1900 l. c. (by monotypy) (= *Onychestra* HAMPSHOR, 1905, Cat. Lep. Phal. p: 223, type-species: *Mamestra siccanorum* Staudinger, 1870 Berl. ent. Z. 1870: 114).

Species examined:

Saragossa siccanorum (STAUDINGER, 1870)
seiboldi STAUDINGER, 1900
incerta ((STAUDINGER, 1896)
porosa (EVERSMANN, 1854), comb. n.
porosa kendresiensis (KOVÁCS, 1968)
implexa (HÜBNER, [1909]), comb. n.

D i a g n o s i s : Proboscis developed, palpi porrect with an elongated 3. segment, 1—2. joints fringed with hairs; frons with a smooth, rounded prominence and with a sclerotized plate (labrum) below the frons, laterally elongated ("wings"). Antennae (male) very finely pectinated. Tarsi on forelegs very short.

M a l e g e n i t a l i a (Figs 31—48): Uncus spatulate; cucullus broad, covered with setae and bordered by a developed corona, harpe plate-like, digitus short or reduced, processus of sacculus not differentiated. Vesica tubular, broad, only with one fascia of cornuti in distal position; sometimes with a tiny, spine-like proximal cornutus. Coremata absent (exception: *S. implexa*).

F e m a l e g e n i t a l i a: ovipositor very short and relatively weak, ostium bursae large, quadrangular, sclerotized. Ductus bursae elongated and flattened, with more sclerotized, longitudinal crests. Cervix bursae large, rugulose, partly heavily sclerotized, corpus bursae membranous, with rounded signa.

TAXONOMIC NOTES

Saragossa porosa (EVERSMANN, 1854)

The species of often discussed and uncertain taxonomic position "Orthosia" p., "Hyssia" p. auct.) must belong to this genus, based both on its external features and genital configuration. It is an eremic species, distributed from SW-Siberia and Transcaspia to SE Ukraina with a typical marginal exclave, represented by a well-differentiated subspecies (*S. porosa kendresiensis* Kovács, 1968) in the saline grasslands of the Pannonian basin.

Dianthivora subg. n.

Type species: *implexa* HÜBNER 1808 Samml. eur. Schmett. 4. (by monotypy)

D i a g n o s i s: male genitalia of *Saragossa*-type (like in *siccatorum* STAUDINGER) (Figs 29—30, 40—48), cucullus very broad with well developed corona digitus very short and flattened; harpe plate-like, narrow, poorly developed; without saccular extension and clavus. Aedoeagus with strongly developed sclerotized and finely dentate carina, vesica with a smaller proximal and with a brush of cornuti. Coremata present. — Female genitalia agrees with that of *Sideridis*.

According to BECK (1989, pers. comm.) the caterpillar is very dissimilar to all European species of this genus-group studied by him.

Conisania HAMPSON, 1905

Cat. lep. Phal. 5.: XIV: 472

Type-species: *Apamea leineri* FREYER, 1836 Neuere Beitr. Schmett. 2: 145, pl. 184/3 (by original designation).

S p e c i e s e x a m i n e d:

<i>Conisania leineri</i> (FREYER, 1836)	<i>arida</i> (LEDERER, 1855)
<i>leineri pomerana</i> (SCHULZ, 1869)	<i>vidua</i> (STAUDINGER, 1888)
<i>leineri bovina</i> (STAUDINGER, 1888)	<i>egenoides</i> BOURSIN, 1966
<i>poelli</i> STERTZ, 1915	<i>xanthothrix</i> BOURSIN, 1960
<i>poelli ostrogovichi</i> DRAUDT, 1933 bona ssp.	<i>mienshani</i> (DRAUDT, 1950)
<i>poelli daghestanica</i> ssp. n.	<i>roseipicta</i> (DRAUDT, 1950)
<i>albina</i> (STAUDINGER, 1896) bona sp.	<i>leuconephra</i> (DRAUDT, 1950)
<i>arterialis</i> (DRAUDT, 1936) comb. n., stat. n.	<i>suavis</i> (STAUDINGER, 1892)
<i>capsivora</i> (DRAUDT, 1933)	<i>discestroides</i> sp. n.
<i>renati</i> (OBERTHÜR, 1890)	<i>lahoulicola</i> HACKER et VARGA, 1990 (in press)
<i>renati meszarosi</i> ssp. n.	

D i a g n o s i s: proboscis developed, palpi obliquely porrect, the 1—2 segments below with long hairs. Frons sclerotized with small rounded prominence. Antennae of males ciliated. Tibiae with spine on outer side, tarsi short with curved claws.

M a l e g e n i t a l i a (Figs 51—105): Uncus normal in most species or thick in other ones (*leineri* group), spatulate with stick-like modified setae. Cucullus and corona present in most species, strongly modified or reduced in some eastern or central Asiatic ones (*C. leuconephra* DRAUDT, *C. xanthothrix* BOURSIN.). Digitus short and broad, sometimes (*suavis*-group, *roseipicta*) reduced, or, on the other hand, extremely developed (*leuconephra*, *lahoulicola*). Processus of sacculus usually well-differentiated, sclerotized; with an asymmetric configuration in the *suavis*-group. Clavus firmly unified with sacculus often debate and covered

with setae. Aedoaeagus short and stout, carina sclerotized and differentiated in various forms (spine-like: *renati*; with a claw-like big cornutus: *xanthothrix*; dentate and firmly attached to the penis-tube: *capsivora* etc.). Vesica shortened, tubular or saccate, perpendicular to the axis of the aedoaeagus, in the most cases with a fascia of cornuti on the tip of a proximal, spacious diverticulum and with an other one in distal position. Coremata absent (no exception is known).

The female genitalia can be characterized by the following general features: ovipositor short and wide, posterior papillae anales usually small and rounded, gonapophyses moderately long. Ostium bursae strongly sclerotized, large, quadrangular or trapezoidal. Ductus bursae flattened and wide, usually moderately long, sometimes (e.g. *capsivora* DRAUDT) long. Both surfaces strongly sclerotized, partly granulosely. Its margins often with stronger bars, sometimes with a membranous-granulose lateral appendage. Ductus bursae conjoined with bursa by a wide and rugulose, sclerotized zone. Size of cervix bursae variable, usually rounded, dorsal surface of its apical part sclerotized and often folded or/and rugulose. (in *capsivora* elongated and pointed, its sclerotization weaker and smooth). Corpus bursae large elliptical, membranous, with large, rounded signa forming two parallel rows; number of them variable, can be reduced to a sole signum or a pair of large signa.

The last sternite, similarly to some groups of *Hadena* SCHRANK, 1802, medially divided into two sclerotized parts, the shape of them is variable, rounded or subtriangular.

A part of the *Conisania* species is arranged into some species-groups, other species seem to be rather isolated, displaying very peculiar, specialized (autapomorphic) structures, e.g. *C. xanthothrix* BOURSIN, *C. capsivora* DRAUDT, *C. leuconephra* DRAUDT, *C. roseipicta* DRAUDT, *C. lahulicola* HACKER et VARGA.

TAXONOMIC REMARKS ON THE *CONISANIA LEINERI* FREYER SPECIES-GROUP

Conisania leineri FREYER was considered as polytypic species displaying intensive subspeciation and the validity of *C. poelli* STERTZ as separate species was an "evergreen" matter for taxonomic discussion for a long time. By the detailed studies of the genitalia of both sexes we could find some small but constant differences between *leineri* (and its races), *poelli*, *albina* and *arterialis*. These differences can be found in the shape and the length-width ratio of the uncus, the shape and size of the digitus and the sclerotized extensions of the carina (Figs 51—82) in the males; the length and sclerotization of ductus bursae and the configuration of cervix bursae in the females. So we cannot accept BOURSIN's opinion (1966: 155—156) that *leineri* and *poelli* are only subspecies of a single polytypic species and HAMPSON's statement considering *albina* as a subspecific unit within *C. leineri* (HAMPSON 1905, l. c. p. 472—473).

In our opinion the species of the *leineri* group represent three lines of development. The different races of *leineri* and the Mongolian *albina* can be undoubtedly derived from a common ancestral taxon and their separation was very probably earlier than the divergence of *leineri* and *poelli*; the species *arterialis* is a possible western relict member of the *albina* line. The significantly smaller differences in the genital features of *leineri* and *poelli* reflect to their relative recent dichotomy. The strong homogeneity of the *poelli* races in their external and genital characteristics is an important — indirect — argument for their specific identity as this fact implies a formerly more widespread taxon having wide contact zone with *leineri*. The recent distribution pattern is very probably the result of the late Glacial and Postglacial faunal movements. The different races of *leineri* inhabit the *Artemisia* steppes of the forest-steppe belt from C Europe to the S Ural region and Turkestan (*pomerana*: Germany; *leineri*: Austria, Moravia, Slovakia, Hungary; *cervina*: S Russia; *furcata*: S Ural; *bovina*: Turkestan). The main habitats of the western populations are sandy grasslands with *Artemisia campestris* but they occur in xerotherm limestone slopes and plateaus, too. The *poelli* races live in xeromontane steppes and rocky grasslands. The nominate *poelli* is typical for the Inner Alpine xerotherm slopes ("inneralpine Trockengebiete"), *ostrogovichi* is close to the Transylvanian 'Érchezegység' since *daghestanensis* is the inhabitant of the xeromontane steppes. The most probable theory for the genesis of their area — by the analysis of the recent areas — is that the races of *poelli* are the results of a more ancient process (possibly 'protocratic' relicts of the last glaciation) since the subspecies of *leineri* are the isolates of a postglacial expansion in a steppe-phase.

Conisania poelli ostrogovichi DRAUDT, stat. n.

C. ostrogovichi DRAUDT was synonymised as species with *C. leineri* FREYER by BOURSIN (1966: 156) with the following comment: "... It may be perhaps separate 'race' (Rasse) on the calcareous area near Cluj (Klausenburg)", but on the next page it was completely synonymised with *C. leineri poelli* STERTZ, 1915. This taxon belongs to the *poelli*-line and displays characteristic differences in the colouration and the wing pattern; its area is completely isolated from all the other described taxa of the *leineri*-group, consequently it can be regarded as a separate subspecies.

Conisania arterialis DRAUDT 1936, comb. n.

(Ent. Rdschau 53: 470)

Trichospolas arterialis as a new species and at the same time a monotypic new genus closely related to *Conisania* (cf. DRAUDT in SEITZ Suppl. III: p. 254) was described based on a pair (male, female) of syntypes, collected in "Daghestan". The types were destroyed during the Second World War in Darmstadt (coll. DRAUDT). In the collection of the ZIN, Leningrad a series of a conspicuous *Conisania* was found with the locality: Petrovsky port (Primorskye peski) near Mahachkala (Daghestan). The study of the male genitalia (slide No. 3436 VARGA) (Figs 51—52) confirmed their basic similarity with *C. leineri* FREYER. The specimens agreed completely with the description and the figure of *T. arterialis* DRAUDT and the locality is possibly also the same. Therefore, the dissected male was designated as the neotype of *Trichospolas arterialis* DRAUDT and at the same time *Conisania arterialis* (DRAUDT, 1936) comb. n. was stated.

Despite of the extremely different external features (reduction of markings, pale arenaceous-yellow ground-colour, a *Mythimna*-like habitus), the genitalia are very similar to those of the other taxa of the *leineri*-group.

DESCRIPTIONS OF NEW SPECIES AND SUBSPECIES

Sideridis herczigi sp. n.

H o l o t y p e: male, "USSR, ChIASSR, Furtoug 1000 m, 12 July 1989, leg. HERCZIG, UHERKOVICH, HORVÁTH, SZOLLÁT, SÁRKÖZI", slide No. 3332 RONKAY. Deposited in Coll. HERCZIG (Tata, Hungary).

D e s c r i p t i o n: wingspan 34 mm, length of forewing 15 mm. Head and thorax light sepia-brown with some ochreous shade, palpi, collar and tegulae marked with dark brown-grey hairs. Forewing an elongated triangle, apex finely pointed. Ground colour light, unicolorous ochreous-grey with some brownish irroration. Wing pattern pale and diffuse, brownish, transverse lines sinuous, double. Orbicular a pale shadow, reniform and claviform stigmata marked with some darker scales. Medial line a diffuse, darker brown stripe, subterminal, line a pale whitish ghost, defined by dark arrowhead-spots on inner side. Hind-wing whitish-grey, cellular lunule pale but visible. Veins covered with brown, marginal suffusion narrow, dark brownish. Underside of wing whitish-grey, forewing suffused with brownish. Transverse line a row of dark spots on veins, cellular lunule of hindwing small, rounded.

M a l e g e n i t a l i a (Figs 49—50): uncus long, anterior part slender, distal third dilated, like a head of a snake. Tegumen wide and high, penicular lobes large. Fultura inferior small, deltoidal, vinculum short, strong, V-shaped.

Valvae symmetric, elongated, strongly sclerotized. Sacculus wide, big, clavus a wide, setose plate. Saccular extension heavily sclerotized, large, rounded triangular. Harpe a less strong, narrow bar, costal extension well-developed, strong, finger-like. Cucullus rounded, partly fused with dilated ventral edge of valva, corona forms a setose field. Aedeagus cylindrical, ventral side of carina a sclerotized plate terminated in a short, peaked processus, dorsal lamina longer, granulose. Vesica everted forward, then divided into two arms. Dorsal arm a long, curved sac with a sole spine at its tip, ventral arm very long, tubular, bearing two small bundles of spiniform cornuti sitting on small, rounded diverticula.

Abdominal coremata present, well-developed.

The new species resembles to a very pale, less marked specimen of *Conisania renati meszarosi* or a short-winged *Sideridis egena* LEDERER but the differences in the male genitalia are great. The configuration of the cucullus is an unique feature of *herczigi* in the genus-group, all the related species have well-separated cucullus, connected with the proximal part of the valva with a narrow neck. The saccular extension and the costal processus are somewhat similar to those of *C. egenoides* but are essentially smaller. The differences between *herczigi* and the similar *C. renati* and *S. egena* can be easily recognized by the Figs 9, 11, 83—86.

Saragossa siccanorum poecilographa ssp. n. (Plate I: 6)

H o l o t y p e : male, Iraq, SO v. Ruthba 7.10. 1965 in coll. E. VARTIAN (Vienna). — **P a r a t y p e s :** 22 males and 14 females with the same data and 27. 10. 1963 from the same place (coll. VARTIAN), 2 males with the same data (coll. VARGA), 1 male, Iraq, Shibchah stone desert, 260 m., 150 km. SW of Najaf, 18. 1. 1979, coll. O. JAKES (Brno), 1 female, Iraq, (without more information) (coll. HNHM).

Slides Nos 996 and 4851 VARGA (males).

The specimens collected in Turkey (cf. HACKER 1985) belong also to the same subspecies (slide 4774 (VARGA)).

Head, thorax and forewings deep ochraceous, without dark brownish or greyish colouration. All white markings are very clear, relatively broad and often contrasted with fine blackish-brown margins. Reniform large, whitish; orbicular of the same colour, finely dark bordered and with an ochraceous filling. Claviform short, with dark margin. Antemediane double, serrate, filled with whitish scales. Subterminal slightly arcuate, cilia irrorated. Hindwings pure white, abdomen light greyish-ochraceous.

The male genitalia (Figs 46—48) are of the same configuration as in the nominotypical subspecies (40—42), but the angle of the costa before the cucullus is smaller, narrower.

The new subspecies is a little larger and broader-winged than the nominotypical one and its very irrorate ochraceous-white colouration is also rather con-

spicuous. The new subspecies occurs in salinized oases in desert-like habitats of Iraq and in some alkaline semi-deserts of Inner and SE Anatolia. The nomotypic subspecies seems to be also halophilous and is widely distributed from S Ukraine through Transcaspio and Turkestan to the W Mongolia (Dzhungarian Gobi). The specimens from the latter territory are little darker and perhaps larger on average than S Russian (Sarepta) and Turkestanian ones (Aksu), but it seems for us as insufficient for a description as distinct subspecies. In the male genitalia we could not find any significant differences (Figs 43—45). The species *Saragossa siccanorum* STAUDINGER is new for the fauna of Mongolia (W Mongolia, Chovd aimak, Bulgan sum, 1300—1400 m, 1986. leg. GYULAI et VARGA; 8 males and 2 females).

Conisania poelli daghestanensis ssp. n. (Plate II: 12)

H o l o t y p e: Daghestan, Chodzal-machi, 29. 6. 1926, leg. Rjabov (coll. ZIN, Leningrad). — P a r a t y p e s: 3 males with the same data (ZIN, Leningrad). Slide No. 3395 VARGA.

D i a g n o s i s: head, thorax and forewings light ochraceous brown with whitish-greyish irroration. All markings obsolescent with the exception of the whitish-grey orbicular. Hindwings brownish-grey. The new subspecies seems to be related to *C. poelli poelli* STERTZ. and *C. poelli ostrogovichii* DRAUDT, but more greyish and the darker irroration is essentially stronger than in the former races. The genital structures (Fig. 70) do not differ essentially from those of other *poelli* subspecies (Figs 67—69, 71—74).

Conisania renati meszarosi ssp. n. (Plate II: 16)

H o l o t y p e: male, "Bulgaria, Sofia-Kostinbrod", "1982. V. 30, leg. MÉSZÁROS Z." (coll. HNHM Budapest). — P a r a t y p e s: a long series from the same locality, 30. 5—01. 06. 1982, leg. MÉSZÁROS Z. et BALÁSHÁZY L.; 03—09.06. 1990, leg. HERCZIG et SZEŐKE (collections of the collectors, HNHM Budapest, etc.). Slide No. 4317 VARGA.

D e s c r i p t i o n: The new race can be characterized by its unicolorous brown colouration of the forewings, the elements of pattern fine, more or less sharp, blackish-brown. The fillings of the double markings not or only very slightly whitish; the only intensive white part of the wing is the reniform spot. The hindwing whitish with relatively narrow but consistent dark brown-grey marginal suffusion. The external differences between *renati renati* and *renati meszarosi* are surprisingly large, the new subspecies differs from the nominate one by the following features:

- ground colour of forewing unicolorous, light chocolate-brown, without whitish and lighter grey irroration in basal and medial fields;
- transverse lines less sinuous, their filling not or only very poorly whitish;
- claviform spot strong, well-defined, blackish;
- marginal suffusion of hindwing wider and homogeneously dense, dark brown-grey.

In spite of the relatively large and conspicuous differences between the two races in colouration and wing pattern, the configuration of the male genitalia is very similar (Figs 83—86), only some minute differences can be found in the shape of valvae (cucullus, ventral edge) and in the shape and size of the tooth of the carina.

The species displays a strictly disjunct distribution: the nominate race occurs in C Spain and the newly discovered race is represented by a small population in NW Bulgaria. This population inhabits a very dry rocky steppe on a carstic plateau N from Sofia.

The new subspecies is dedicated to the well-known Hungarian lepidopterist, Dr. ZOLTÁN MÉSZÁROS, who discovered it.

Conisania discestroides sp. n. (Plate II: 14)

H o l o t y p e: male, "Mongolia, Bayanhongor aimak, Mts. Ih Bogd Uul, 1850 m, valley of Pitut river, 100°13'E 45°00'N, 1987. 07. 24—26, leg. L. PEREGOVITS, M. HREBLAY, T. STÉGER", slide No. 4899 VARGA. — **P a r a t y p e s:** 2 males, Mongolia, Saarga Mort, 20 km NE of Ulaan Baatar, 1400—1500 m, 107°04'E 48°03'N, 17—19. 07. 1987, leg. PEREGOVITS, HREBLAY et STÉGER; 2 males, Mongolia, Central aimak, Tsagaan Davaa, 1400—1600 m, 11—14. 07. 1988, leg. Cs. SZABÓKY. Slide No. 2455 RONKAY.

D e s c r i p t i o n: wingspan 32—36 mm, length of forewing 15—17 mm. Head and thorax light violaceous-grey with some brownish and ochreous hairs, collar and tegulae marked with dark brown stripes at tips. Abdomen greyish-brown, without dorsal crest. Ground colour of forewing light violaceous-grey with fine ochreous-bronze shine; medial field and some parts of marginal area with rosy-brownish shade. Transverse lines dark blackish-brown, double and sinuous, filled with ground colour. Orbicular spot large, slightly flattened and oblique, incompletely encircled with blackish and filled with light ochreous-grey. Reniform elongated, greyish, encircled with blackish-brown, with a dark grey inner annulus. Claviform large, rounded, dark violaceous-brown; median area the with similarly dark violaceous-brownish patch around reniform. Subterminal line whitish, sinuous, forms a large M at veins m_1 - cu_2 ; defined by a row of dark brown triangular spots on inner side. Inner part of marginal area nearly unicolours, light violaceous-grey with only fine darker suffusion on veins. Terminal line whitish-ochreous with a row of dark brown arrowheads and triangles. Cilia dark brown, spotted with rosy-whitish. Hindwing light, shiny cupreous-brown with bronze shine, cellular lunule and transverse line diffuse, darker brown. Marginal suffusion wide but not homogeneously dark, terminal line dark brown, cilia shiny rosy-ochreous with interrupted brown medial line. Underside of wings light, shiny ochreous-grey, inner part of forewing suffused with brownish. Cellular lunules and transverse lines conspicuous, wide, dark brown on both wings; cilia as on upper side.

M a l e g e n i t a l i a (Figs 103—105): uncus slender, pointed, tegumen wide and moderately high; penicular lobes narrow but well-discernible. Fultura

inferior consists of two parts: ventral part a small, triangular, medially peaked plate, dorsal part larger, elongated, shield-like with slightly dilated apical part and double medial crest. Vinculum strong, V-shaped. Valvae large and strongly sclerotized; basal part wide and rounded, medially strongly constructed, cucullus more or less triangular. Sacculi asymmetric: right clavus a curved hook with a serrate crest, left clavus much wider and shorter, without serrate part. Saccular extension well-developed on right side, rounded, with a claw-like processus. Posterior part of sacculus on left side a wide lamina without processus. Harpe a flattened bar, ampulla absent. Costal margin with a more or less expressed triangular emergence, conjoined with ventral crest of cucullus. Cucullus without sclerotized apical lamina, corona strong. Aedeagus cylindrical, distally curved. Carina with a sclerotized, roof-like dorsal plate. Vesica everted forward, T-shaped. Dorsal arm long, arcuate, finely granulose, with a small, membranous diverticulum and a bundle of spiniform cornuti apically. Ventral arm recurved, with a flattened, pocket-like diverticulum at base and a narrow field of spiniform cornuti.

The new species is very similar in appearance to *C. suavis* STAUDINGER and *Sideridis unica suavina* (DRAUDT, 1950) (comb. n.). *Discestroides* and *suavis* represent a sibling species-pair and the external differences are slight but visible. The transverse lines of *discestroides* are less sharp and less sinuous, the inner part of marginal area is significantly lighter and more unicolorous. The configuration of the male genitalia displays conspicuous differences between the two taxa as follows (Figs 100—102):

- C. discestroides*: (1) saccular extension with a claw-like, relatively short processus on right side, (2) right clavus of *discestroides* is strong, hooked, with serrate crest, (3) processus of saccular extension reduced on left side, (4) cucullus without sclerotized apical lamina, (5) carina with a strong, roof-like dorsal plate, (6) cornutus at distal end of aedeagus absent.
- C. suavis*: (1) saccular extension with a very strong, bill-like processus on right side, (2) right clavus of *suavis* is small or reduced, without serrate crest, (3) saccular extension has a triangular processus of left side, (4) cucullus with a sclerotized apical lamina, (5) carina without sclerotized dorsal plate, (6) distal end of aedeagus with a conical, peaked cornutus.

The another similar species *S. unica suavina* has a significantly smaller size and shorter wings, the dark pattern usually less sharp. In the configuration of the male genitalia there are essential differences (see Figs 13—18).

The new species has an allopatric distribution with the closest relative, *C. suavis* STAUDINGER, as the former is known only from Mongolia while the latter occurs in the Soviet Far East and Chinese Manchuria. The occurrence of *C. suavis* in other parts of China is dubious, the published data from the Mien Shan Mts. and N Yuennan (DRAUDT 1950) are to be confirmed. On the basis of the significant morphological differences, the two related taxa should be considered, in spite of their allopatric distribution, as two distinct species.

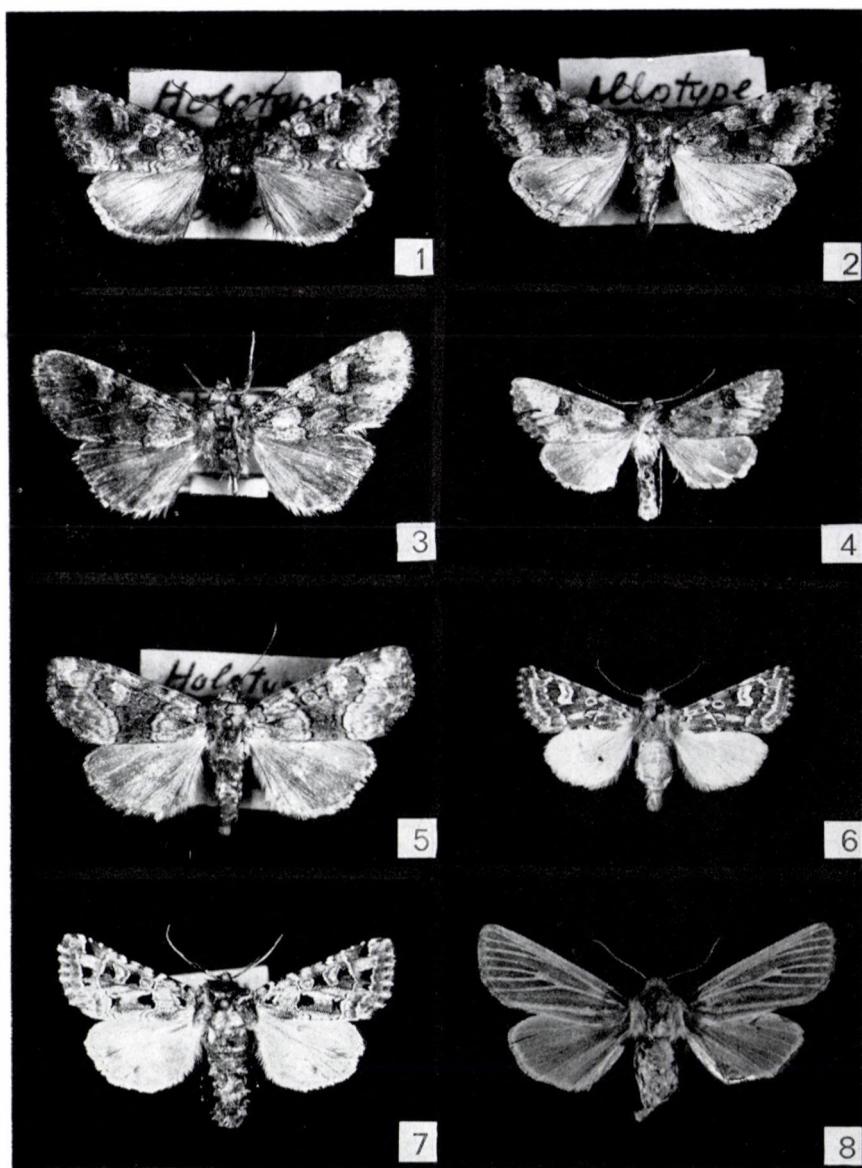
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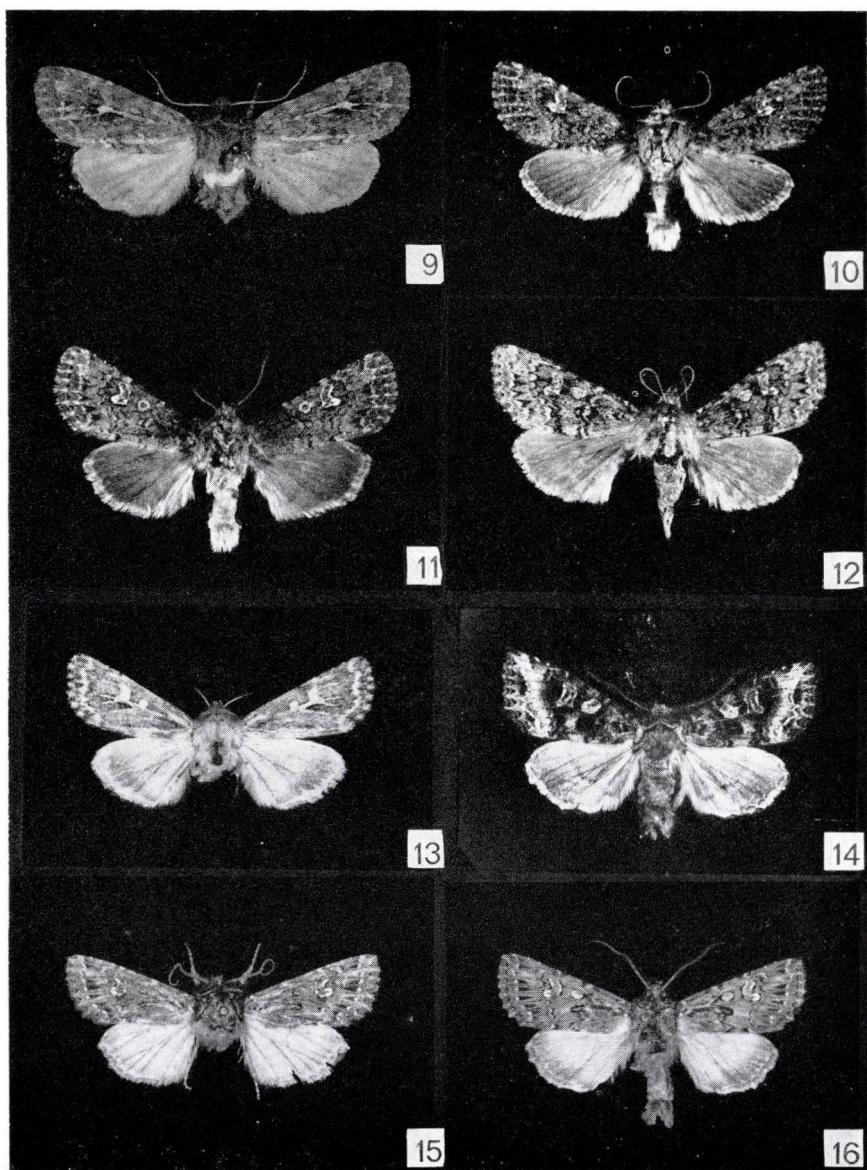
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Plate I

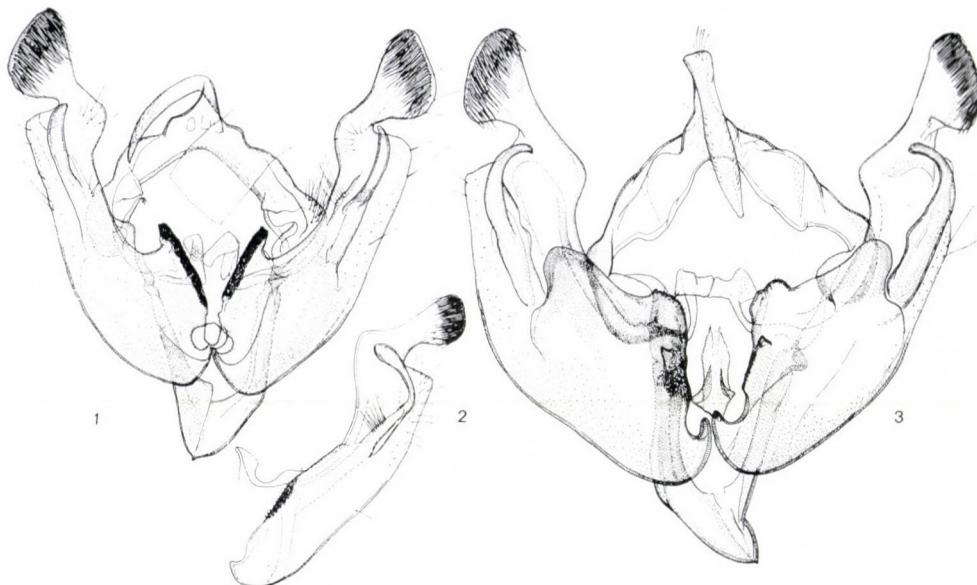


1 = *Sideridis unica suavina* DRAUDT: Holotype, China. — 2 = *Sideridis unica suavina* DRAUDT: Allotype, China. — 3 = *Siderides unica* LEECH: USSR, Far East. — 4 = *Sideridis satanella* ALPHERAKY: Nepal. — 5 = *Hada abnormis* DRAUDT: Holotype, China. — 6 = *Saragossa siccanorum poecilographa* ssp. n. Paratype, Iraq. — 7 = *Saragossa porosa* EVERSMANN: Sarepta. — 8 = *Conisania arterialis* Draudt: Neotype, USSR, Daghestan

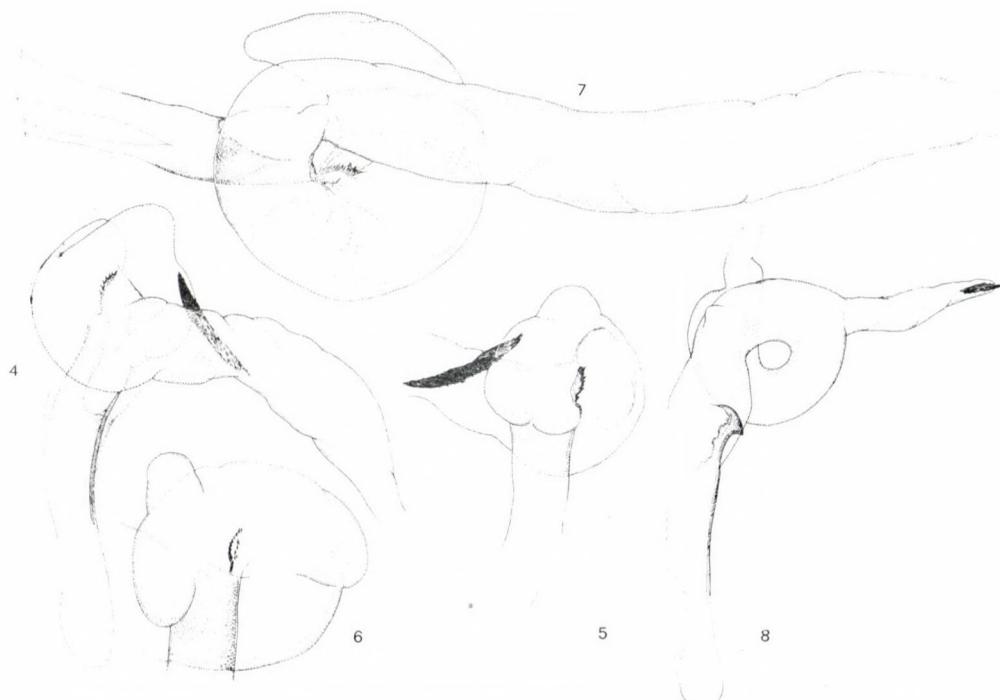
Plate II



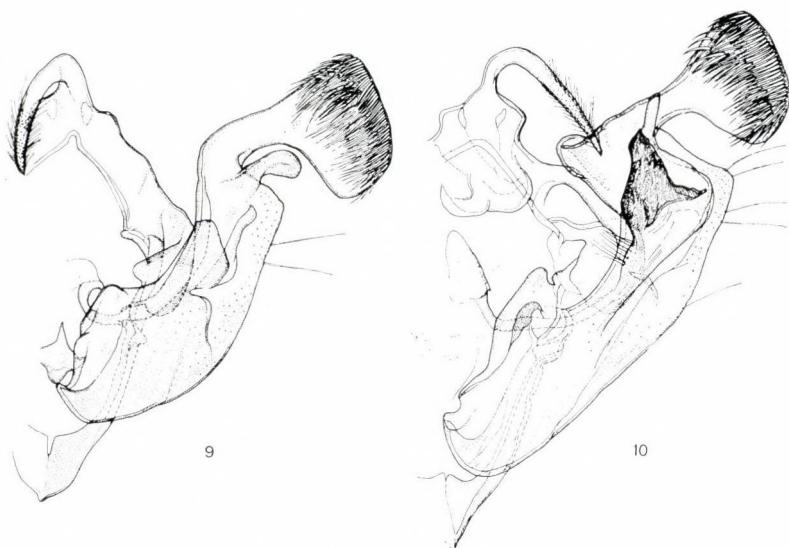
9 = *Conisania leineri pomerana* SCHULZ: Germany — 10—11 = *Conisania poelli poelli* STERTZ: Ötztaler Alpen. — 12 = *Conisania poelli daghestanensis* ssp. n.: Paratype, USSR, Daghestan. — 13 = *Conisania albina* STAUDINGER: Mongolia. — 14 = *Conisania discistroides* sp. n.: Holotype, Mongolia. — 15. *Conisania renati renati* OBERTHÜR: Spain, Albarracin. — 16 = *Conisania renati meszarosi* ssp. n.: Paratype, Bulgaria



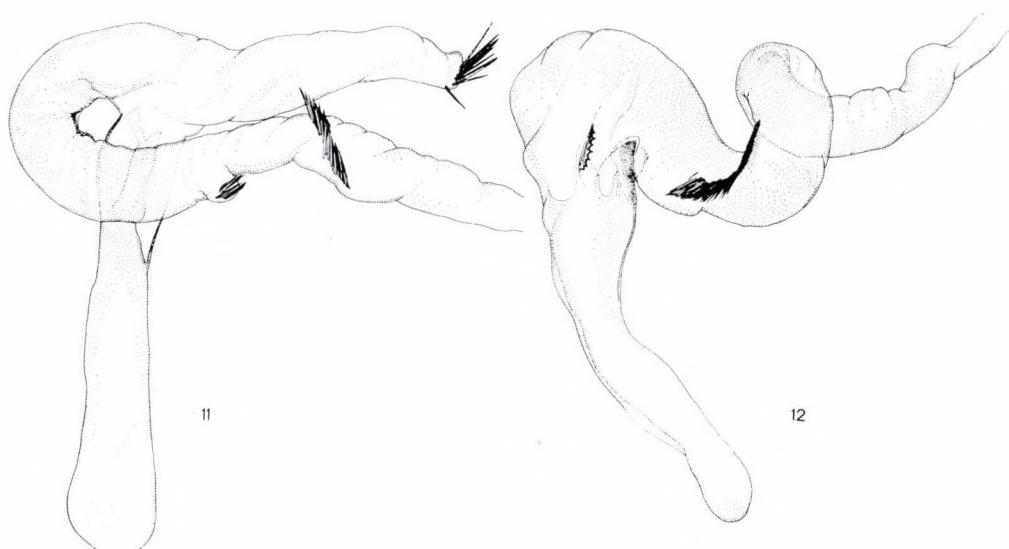
Figs 1—3. 1 = *Sideridis lampra* SCHAWERDA, Hungary; 2 = *S. satanella* ALPHERAKY, Nepal
3 = *S. rosea* HARVEY, Canada, Ontario



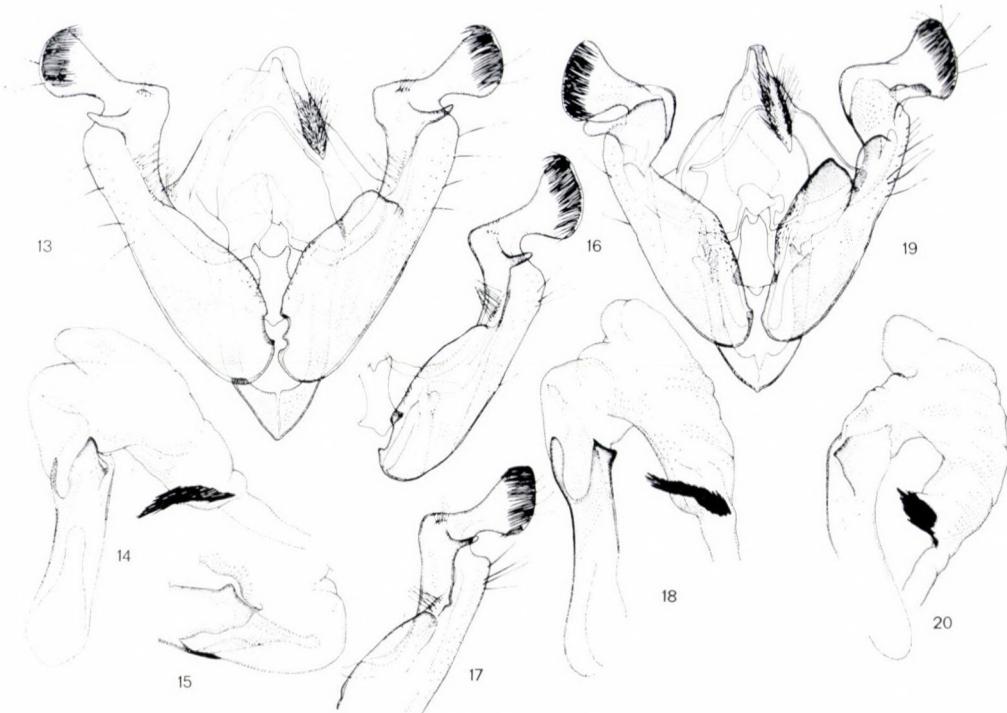
Figs 4—8. 4—6 = *Sideridis lampra* SCHAWERDA, Hungary; 7 = *S. rosea* HARVEY, Canada, Ontario; 8 = *S. satanella* ALPHERAKY, Nepal



Figs 9—10. 9 = *Sideridis eguna* LEDERER, Mongolia; 10 = *S. albicolon* HÜBNER, Hungary



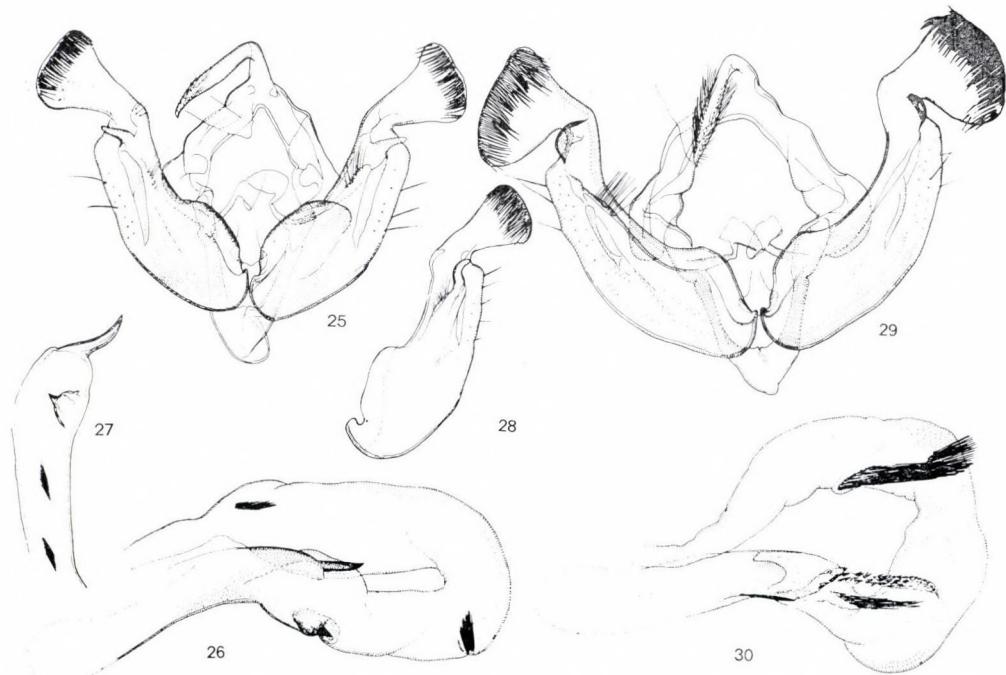
Figs 11—12. 11 = *Sideridis eguna* LEDERER, Mongolia; 12 = *S. albicolon* HÜBNER, Hungary



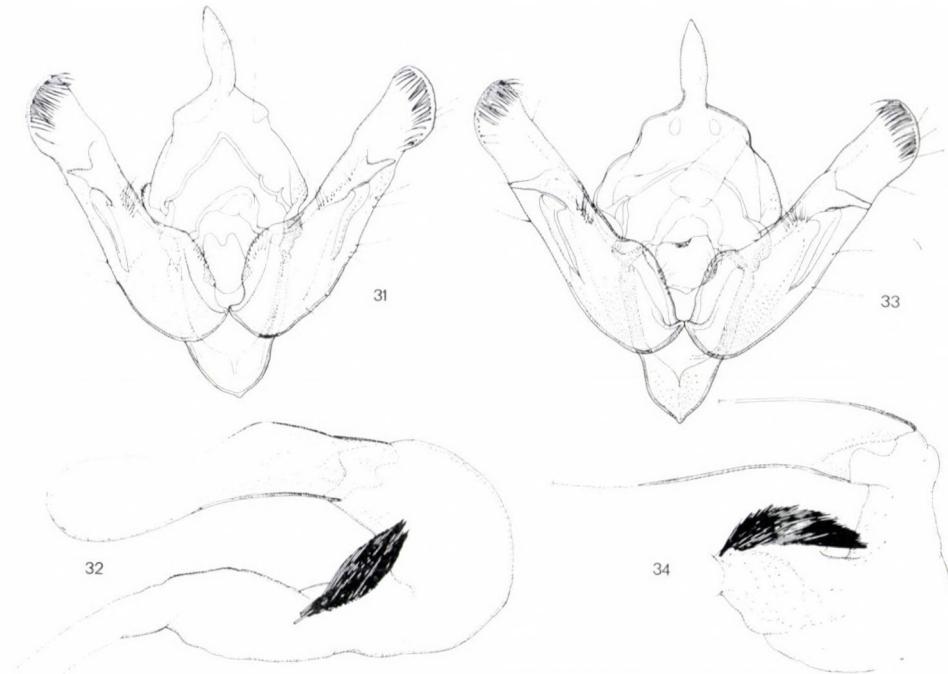
Figs 13—20. 13—15 = *Sideridis unica suavina* DRAUDT, holotype, China; 16 = *S. unica* LEECH, USSR, Far East; 17—18 = *S. unica* ssp., Mongolia; 19—20 = *S. incommoda* STAUDINGER, Ussuri



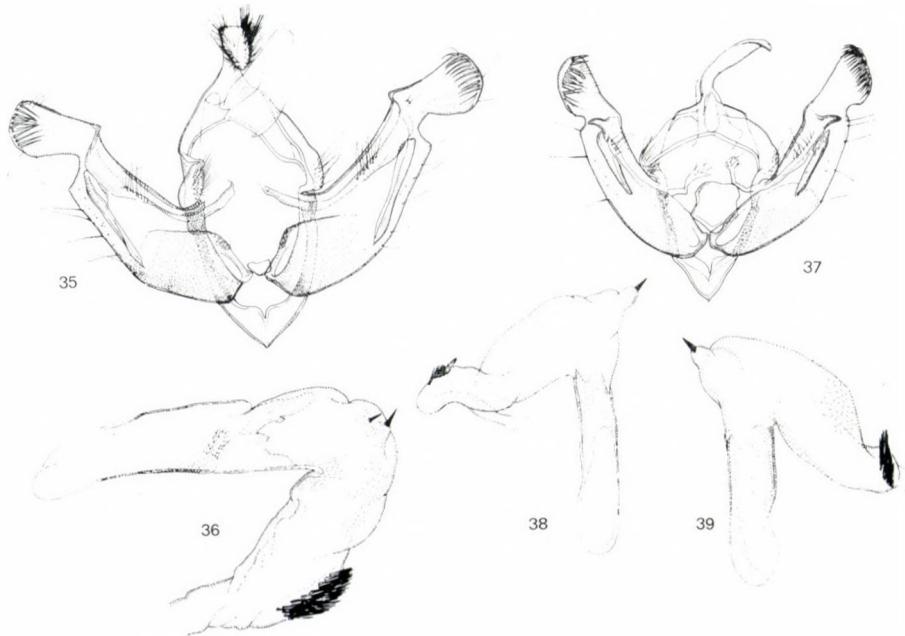
Figs 21—24. 21—22 = *Hadulipolia odiosa* STAUDINGER, Mongolia; 23—24 = *Cornutifera simplex* STAUDINGER, Mongolia



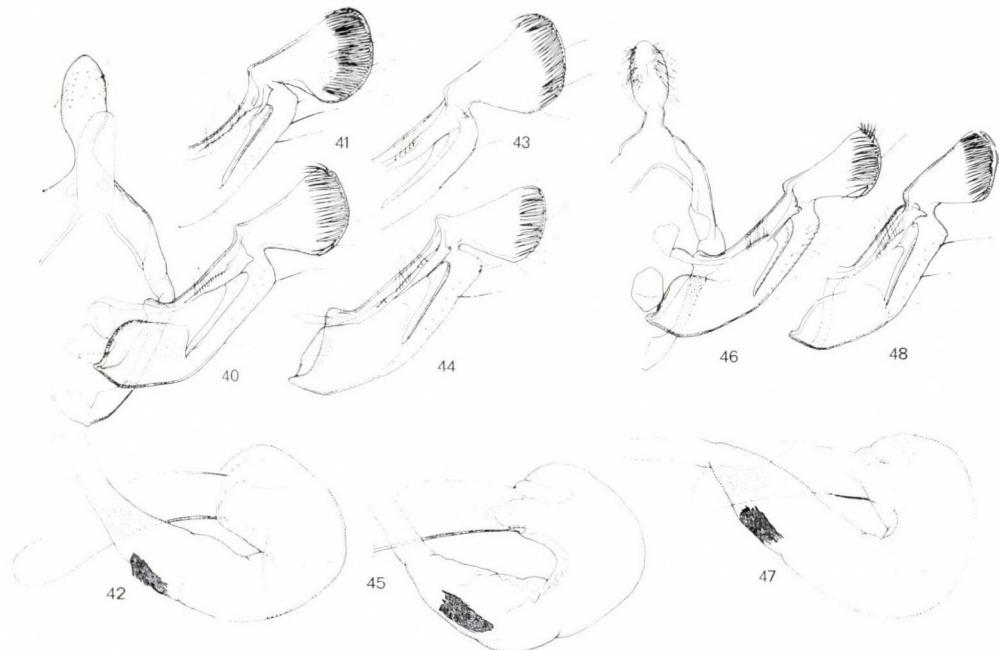
Figs 25—30. 25—28 = *Sideridis peculiaris* STAUDINGER, 25—26 = China, Aksu, 27—28 holo-type, USSR, Samarkand; 29—30 = *Saragossa implexa* HÜBNER, Hungary



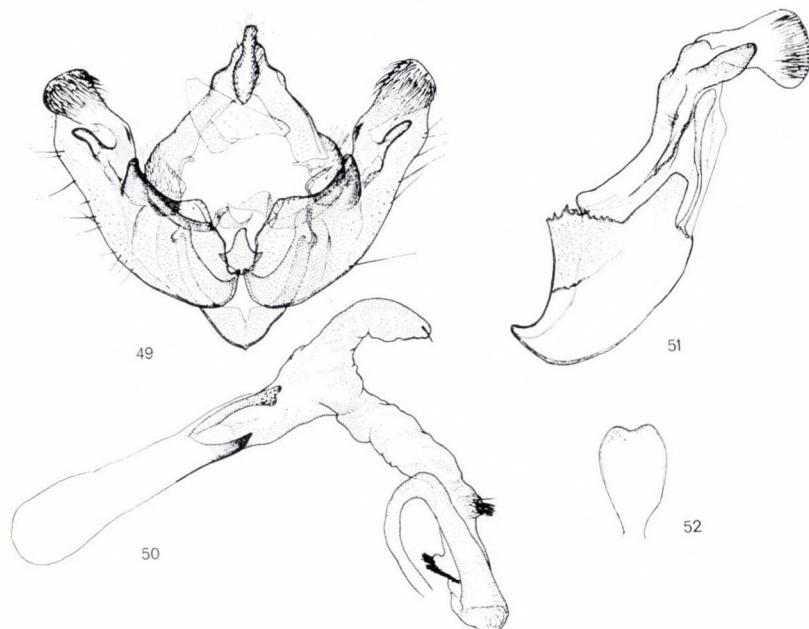
Figs 31—34. 31—32 = *Saragossa porosa kenderesiensis* Kovács, Hungary; 33—34 = *S. porosa* EVERSMANN, Sarepta



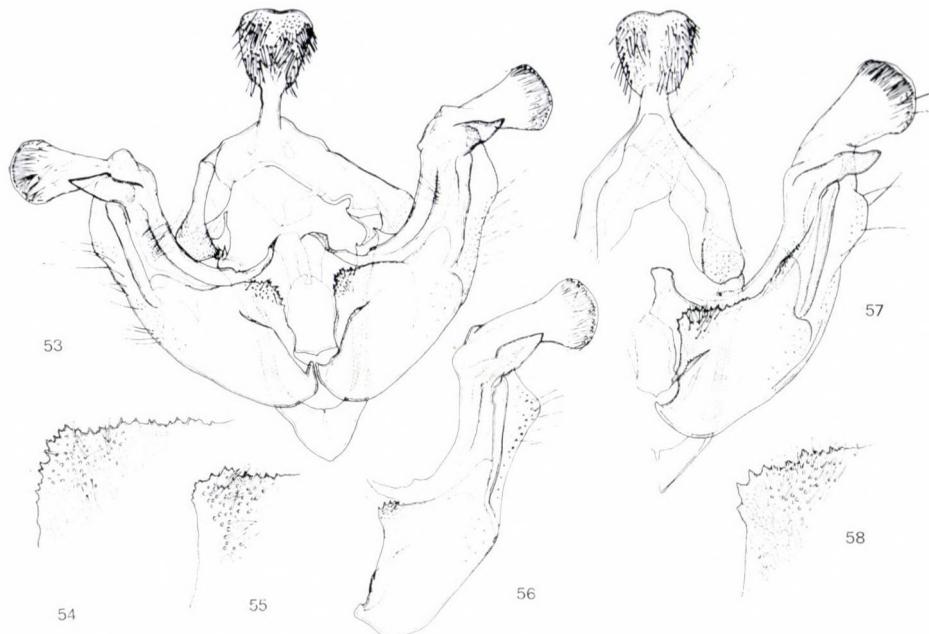
Figs 35—39. 35—36 = *Saragossa seboldi* STAUDINGER, Spain; 37—39 = *S. incerta* STAUDINGER, Mongolia



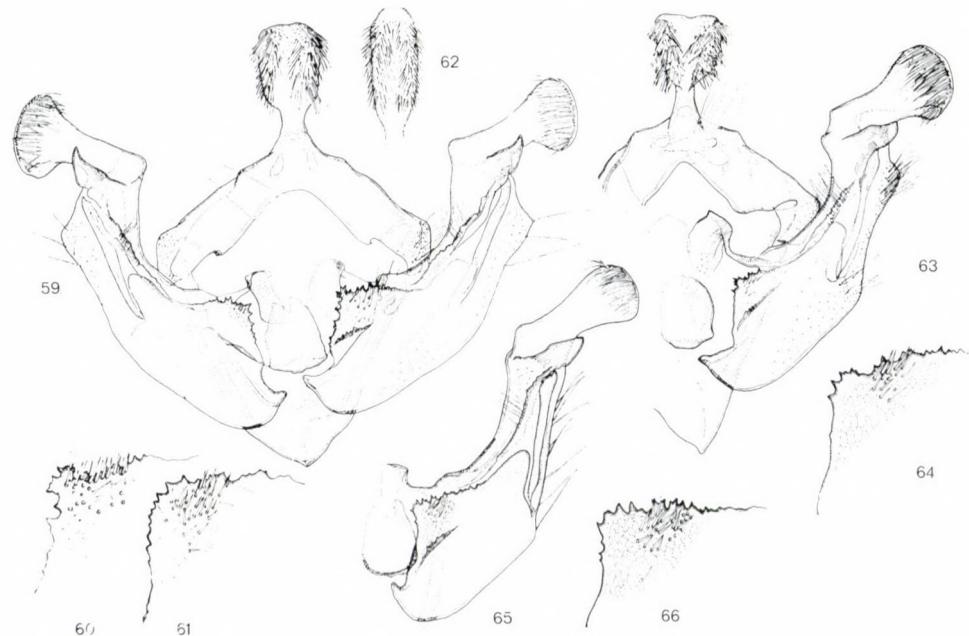
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46—48 = *S. siccanorum poecilographa* ssp. n., paratypes, Iraq



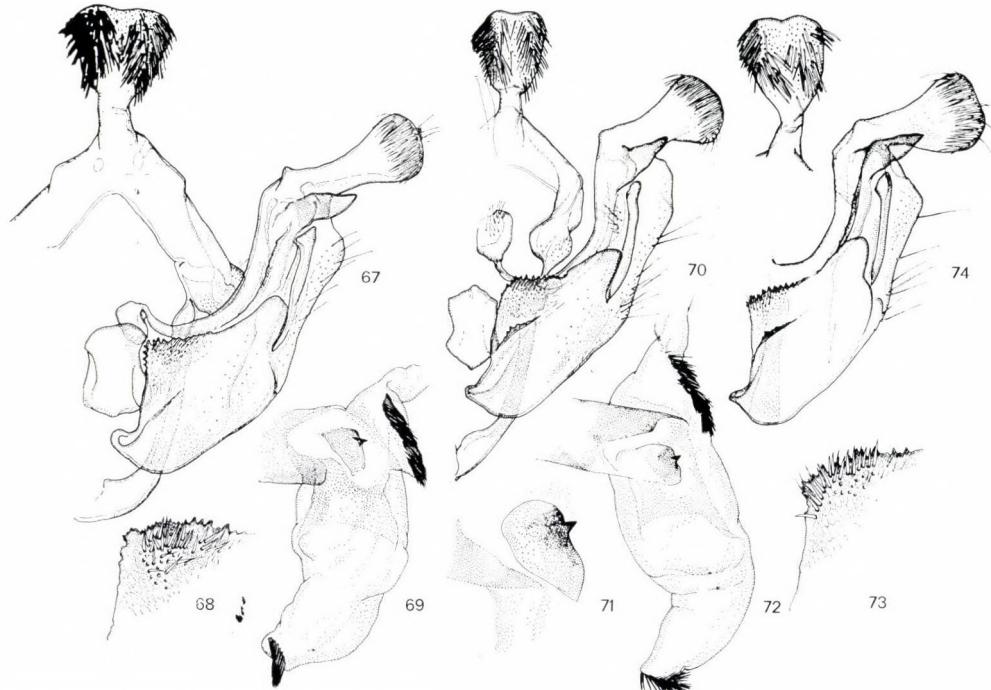
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DRAUDT, USSR, Daghestan



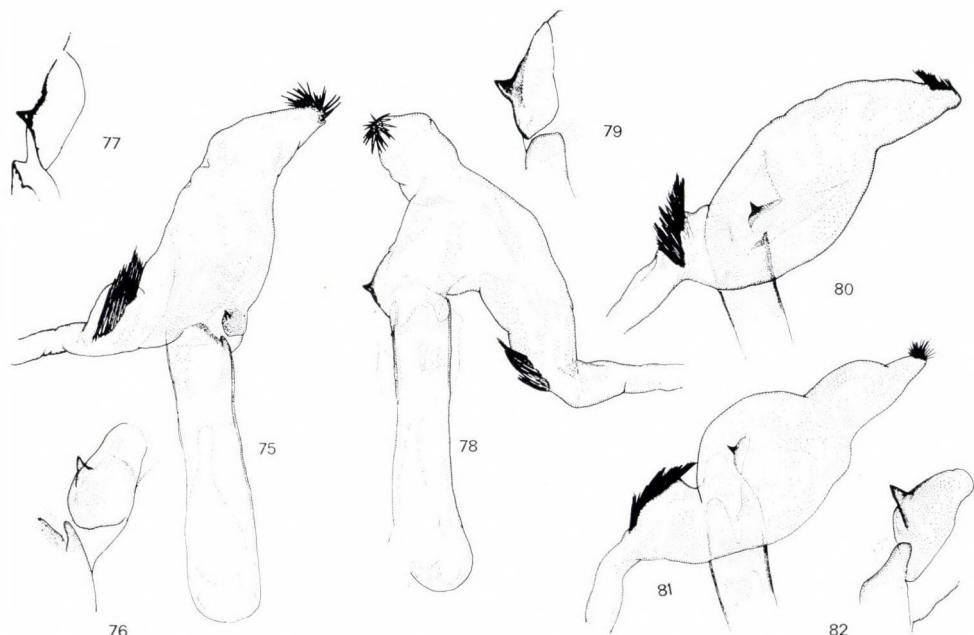
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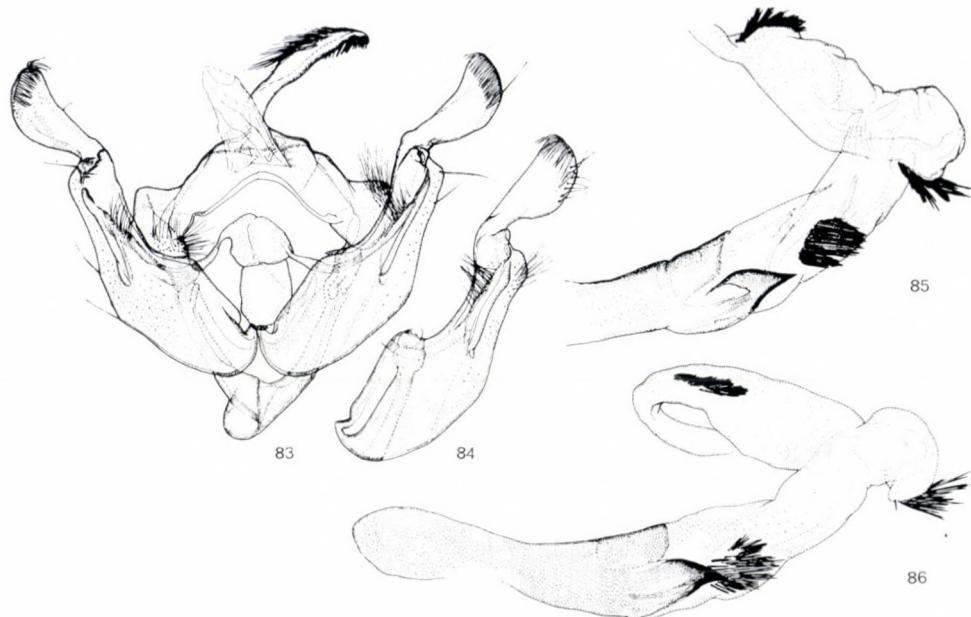
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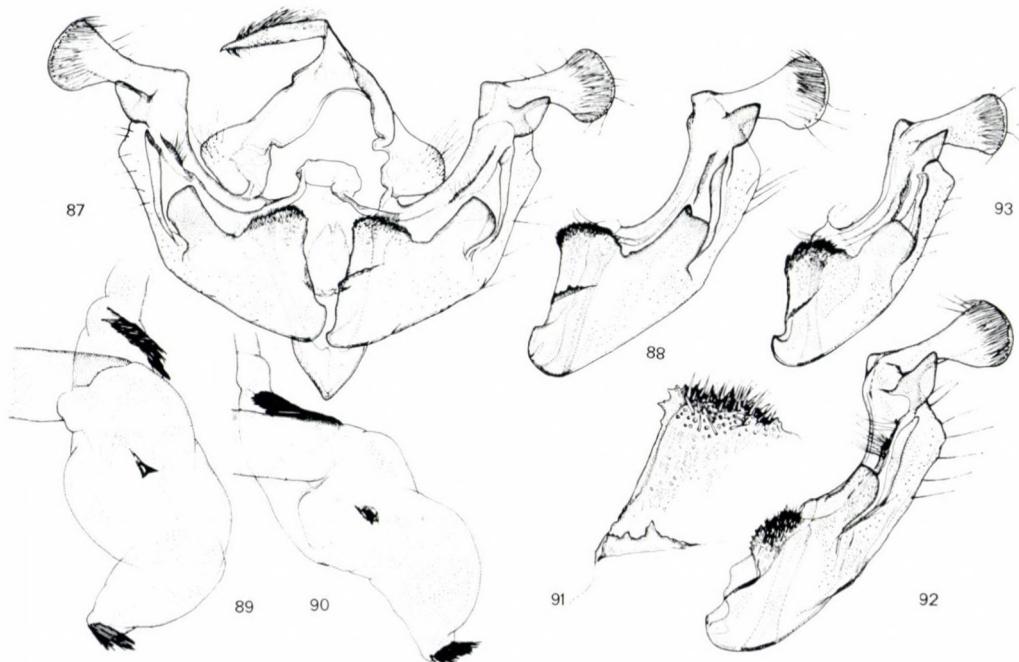
Figs 67—74. 67—69 = *Conisania poelli ostrogovichi* DRAUDT, Transylvania; 70 = *C. poelli daghestanensis* ssp. n. Holotype, Daghestan; 71—74 = *C. poelli poelli* STERTZ Ötztaler Alpen



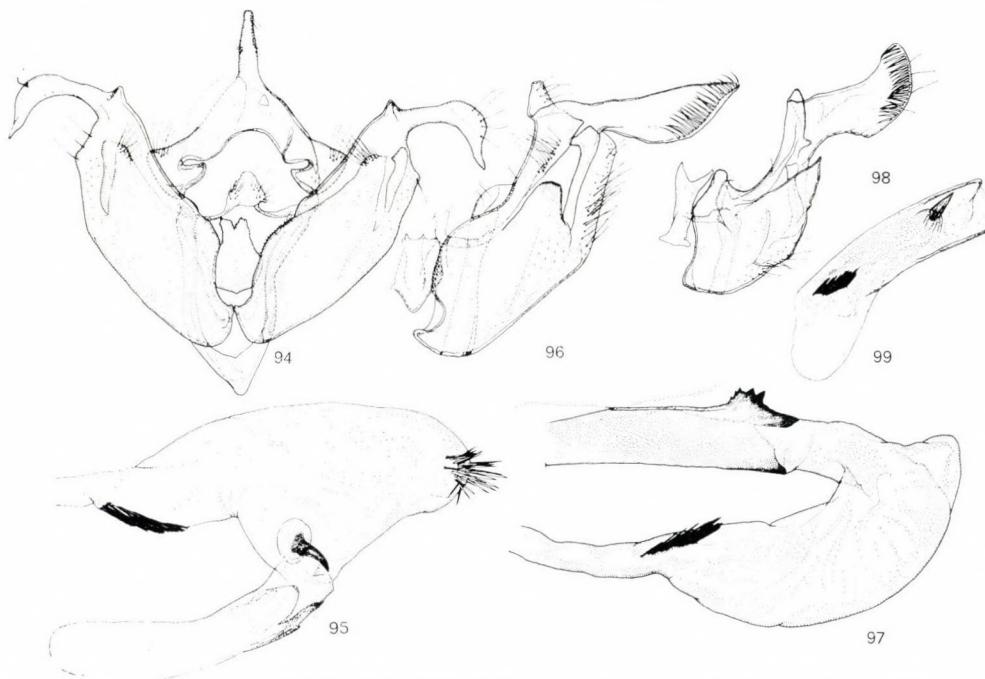
Figs 75—82. 75—76 = *Conisania leineri leineri* FREYER, Hungary; 77 = *C. leineri pomerana* SCHULZ, Germany; 78—79 = *C. albina* STAUDINGER, Mongolia; 80 = *C. leineri furcata* EVERSMANN, Sarepta; 81—82 = *C. leineri bovina* STAUDINGER, Ili.



Figs 83—86. 83—84 = *Conisania renati meszarosi* ssp. n., paratypes, Bulgaria; 85—86 = *C. renati renati* OBERTHÜR, Spain, Albarracín



Figs 87—93. 87—92 = *Conisania arida* LEDERER, Mongolia; 93 = holotype, Altai



Figs 94—99. 94—95 = *Conisania xanthothrix* BOURSIN, Afghanistan; 96—97 = *C. capsivora* DRAUDT, Turkey; 98—99 = *C. roseipicta* DRAUDT, Holotype, China



Figs 100—105. 100—102 = *Conisania suavis* STAUDINGER, Amur valley, (100 = holotype); 103—105 = *C. discestroides* sp. n., Mongolia, 103—104 = paratype, 105 = holotype

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H-1088 Budapest, Puskin utca 3, Hungary

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EINE NEUE TENTYRIA-ART AUS IRAQ (COLEOPTERA, TENEBRIONIDAE)

M. CARL

Zoologische Staatssammlung, Münchhausenstrasse 21
D-8000 München 60 BRD

(Eingegangen am 9ten November, 1990)

(A new species of the genus *Tentyria* from Iraq.) Description of a species of *Tentyria* Latreille, 1802 as *T. varioculata* sp. n. located in Iraq. With 2 original figures.

Neben der von mir beschriebenen *Tentyria geliae* CARL, 1989 sammelte ich von 1984—1986 eine weitere *Tentyria*-Art, die mit der o.g. Art syntop ist. Dazu kam undeterminiertes Material derselben Art aus Budapest (TMB). Die Publizierung der vorliegenden neuen Art verzögerte sich nicht zuletzt deshalb, da es trotz mehrfacher Versuche nicht gelang, den Holotypus von *Tentyria granulicauda* KOCH aus dem Museum Frey zu entleihen.

Die Differentialdiagnose basiert daher auf der Originalbeschreibung von KOCH (1940).

Abkürzungen:

TMB = Természettudományi Múzeum, Budapest

ZSM = Zoologische Staatssammlung, München

PSA = Privatsammlung des Autors

***Tentyria varioculata* sp. n. (Abb. 1—2)**

Die Körperoberfläche schwarz und schwach glänzend, die Oberseite fein und gleichmäßig dicht punktiert. Die Körperlänge der Art variiert von 11,9—14,4 mm (n = 18).

K o p f: Stets schmäler als das Pronotum, Klypeusvorderrand gerundet, flach. Die Augen stets über die seitliche Kontur herausragend, sehr variabel in der Form. Exemplare aus dem Norden des Verbreitungsgebietes besitzen — von oben betrachtet — schmale, seitlich flachgedrückte Augen, die südlichen Exemplare (Holotypus) eher gerundete Augen. — Die Fühler längenvariabel, manche Fühler erreichen nur die Basis des Pronotums, andere überragen sie. Längen-/Breitenindex des 2. Fühlergliedes: 1,3—1,57 (n = 17) Längen-/Breitenindex des 3. Fühlergliedes: 3,5—3,95 (n = 17).

Pronotum: Rechteckig, Seiten und Basis gerundet, Vorderrand \pm gerade. Die Vorderecken herabgebogen, die Hinterecken gerundet. Bis auf ein kurzes Stück in der Mitte des Vorderrandes gerandet. Die Pronotumbreite der Art variiert von 2,6—3,0 mm (n = 18).

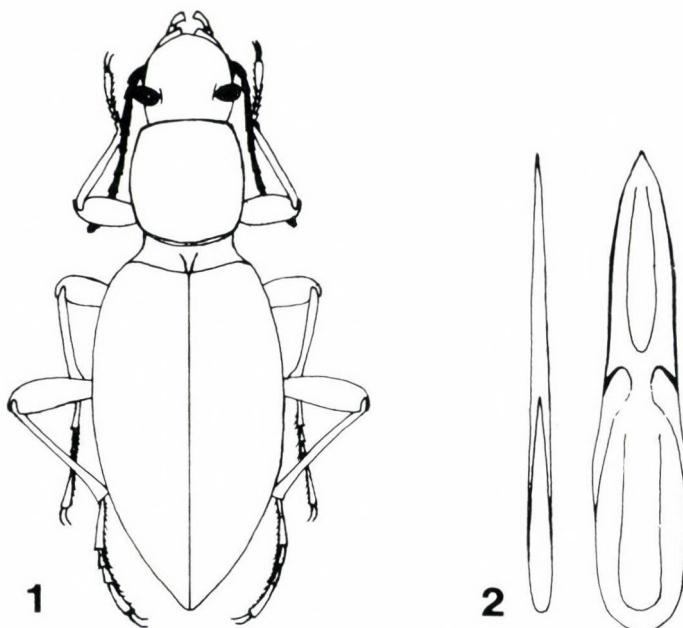


Abb. 1—2. *Tentyria varioculata* sp. n.: 1 = Habitusbild in Dorsalansicht, 2 = Aedoeagus

Abdomen: Langoval, die Elytren glatt, bei wenigen Exemplaren an der äußersten Spitze mit angedeuteter Körnelung. Die Basis deutlich wulstig gerandet.

Körperunterseite: Die Gula mit einer einfachen, zuweilen undeutlich flachen Punktgrube. Zumeist schwächer punktiert als die Körperoberseite. — **Beine:** Vergleichsweise lang, ohne besonders auffallende Merkmale. — **Aedoeagus** (Abb. 2): Der Penis nadelartig dünn und spitz, die Spitze gerauht.

D i f f e r e n t i a l d i a g n o s e — *Tentyria granulicauda* KOCH (Bushire, Iran) weist nach der Originalbeschreibung von KOCH große morphologische Ähnlichkeiten mit *Tentyria varioculata* sp. n. auf und unterscheidet sich nur in zwei wesentlichen Punkten:

- (1) Am Flügeldeckenabfall und an deren Seiten findet sich bei *T. granulicauda* (sic!) KOCH "eine feine, erhabene Körnelung". Dies ist bei *T. varioculata* sp. n. nicht der Fall.
- (2) "Das 2. Fühlerglied ist mehr als dreimal so lang wie breit, das 3. Glied zwei einhalbmal so lang wie breit." Bei *T. varioculata* sp. n. dagegen ist das 2. Fühlerglied höchstens ein einhalbmal so lang wie breit, das 3. Glied stets deutlich mehr als dreimal so lang wie breit.

Ein Typenvergleich wäre nach wie vor wünschenswert.

H o l o t y p u s ♂: Karbala, Ukhaidir, Iraq, 9. 12. 1977, leg. TOPÁL et ZILAHY. Der Holotypus wird im TMB aufbewahrt. — Paratype n: 1 ♂ + 3 ♀♀ wie Holotypus (TMB); 1 ♂, Kirkuk, Iraq, 16. 3. 1986, leg. M. Carl und 1 ♀, Baiji, Iraq, April 1984, leg. R. Carl (ZSM). 4 ♂♂, Fundorte wie oben und 7 ♀♀, Fundorte wie oben (PSA).

Verbreitung: Die Art ist durch drei Fundorte aus Nord- und Zentral-Iraq repräsentiert.

* * *

D a n k s a g u n g — Für das Bereitstellen des undeterminierten Materials aus Budapest (TMB) danke ich Herrn Dr. O. MERKL.

SCHRIFTTUM

KOCH, C. (1940): Der Saharo-Sindische Verbreitungs-Typus bei der ungeflügelten Tenebrioniden-Gattung Mesostena. — *Rivista di Biologia Coloniale* 3 (1—2): 122—128.

ÜBER DIE VERBREITUNG NEUER UND BEKANNTER DICHOGASTER UND EUTRIGASTER ARTEN AUS MITTEL- UND SÜDAMERIKA (OLIGOCHAETA, OCTOCHAETIDAE). REGENWÜRMER AUS SÜDAMERIKA 15

Cs. CSUZDI & A. ZICSI

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H-1088 Budapest, Puskin utca 3, Ungarn*

(Eingegenagen am 20ten Dezember, 1990)

(On the distribution of new and known Dichogaster and Eutrigaster species of Central and South America, Oligochaeta, Octochaetidae. Earthworms of South America 15.) A new subgenus *Eutrigaster* (*Graffia*) subgen. n. from Central America is established. Four new species, *Eutrigaster* (*Eutrigaster*) *franzi* sp. n., *Eutrigaster* (*Graffia*) *montana* sp. n., *Eutrigaster* (*Graffia*) *michaelseniana* sp. n. and *Eutrigaster* (*Graffia*) *eiseni* sp. n. are described. The geographical distribution of *Dichogaster* and *Eutrigaster* species occurring in South and Central America are discussed. With 14 original figures.

Von Teilnehmern der Ungarischen Bodenzoologischen Expedition, die in verschiedenen Ländern Südamerikas auch zahlreiche Regenwürmer gesammelt haben (I. ANDRÁSSY, J. BALOGH, I. LOKSA, S. MAHUNKA u. A. ZICSI 1965–1966 Chile, Argentinien u. Paraguay; J. BALOGH, S. MAHUNKA u. A. ZICSI 1966–1967 Bolivien; I. LOKSA u. A. ZICSI 1986–1987, Ecuador; Cs. CSUZDI u. A. ZICSI 1988, Ecuador), konnten auch viele der Familie Octochaetidae angehörende Arten nachgewiesen werden. Diese und die von PROF. DR. H. FRANZ und DR. P. W. HUMMELINCK aus der Karibik gesammelten Vertreter dieser Familie ermöglichten uns weitere Beiträge zur Verbreitung dieser Arten zu liefern.

Die Beschreibung der neuen Arten sowie die Revision der aus diesem Gebiet stammenden bekannten Arten, veranlasste uns das im Zoologischen Institut und Museum der Universität Hamburg und im Museo ed Istituto die Zoologia Sistematica della Università, Torino aufbewahrte Originalmaterial zu überprüfen. Für einen Arbeitsplatz im Museum von Hamburg und Torino sprechen wir den Herren PROF. DR. M. DZWILLO und DR. A. ROLANDO auch an dieser Stelle unseren besten Dank aus. Unser Dank gebührt auch Herrn G. SOROS der durch ein Stipendium dem Erstautor den Aufenthalt in Zoologischen Institut und Museum von Hamburg ermöglichte.

BEARBEITUNG DES MATERIALS

Die Gattung *Dichogaster* s.l. ist innerhalb der Familie Octochaetidae, aber auch unter den terrestrischen Oligochaeten eine der artenreichesten Gruppen. Ihre Verbreitung erstreckt sich vom tropischen Afrika bis in die tropischen Gebiete Mittel- und Südamerikas. Die Verbreitung der endemischen Arten liegt vorwieglich zwischen dem nördlichen und südlichen Wendekreis, aber auch die Kosmopoliten sind über die 30. Breitgrade selten angetroffen worden. An dieser Stelle wollen wir uns mit denjenigen Artengruppen dieser Gattung befassen die in Mittel- und Südamerika verbreitet sind.



Abb. 1. Verbreitung der endemischen *Dichogaster* und *Eutrigaster* Arten in Mittel- und Südamerika. Nummerierung entspricht der in Tabelle 1 angegebenen Nummern

Innerhalb der Gattung *Dichogaster* s.l. kommen Arten mit speziell abweichenden Merkmalen vor die als Endemismen Mittelamerikas und der Karibik betrachtet werden können (GRAFF 1957, OMODEO 1958, SIMS 1987). Bei einem Teil dieser Arten liegt der erste Rückenporus im 10. Segment oder dahinter. Diese Arten verfügen über eine einheitliche Samentasche, die nicht

Tabelle 1.Die in Mittel- und Südamerika vorkommenden endemischen Arten bzw. Unterarten der Gattung *Dichogaster* und *Eutrigaster*

<i>Eutrigaster (Eutrigaster) COGNETTI, 1904</i> a)	<i>Eutrigaster (Graffia) subgen. n.</i> b)	<i>Dichogaster</i> BEDDARD, 1888 c)
1. franzi sp. n.	13. eiseni sp. n.	29. andina COGNETTI, 1904
2. grandis SIMS, 1987	14. gagzoi (MICHAELSEN, 1908)*	30. badajos RIGHI, AYRES et BITTENC, 1978
3. guetare (RIGHI et MERINO, 1987)	15. godeffroyi (MICHAELSEN, 1890)*	31. ibaia RIGHI, AYRES et BITTENC, 1978
4. hilaris (COGNETTI, 1904)	16. guatemalae (EISEN, 1900)*	32. jamaicae EISEN, 1900
5. kepo (RIGHI et MERINO, 1987)	17. hartmeyeri (MICHAELSEN, 1908)	33. medellina MICHAELSEN, 1914 ???
6. lineri (RIGHI, 1972)	18. keiteli (MICHAELSEN, 1898)*	34. servi RIGHI et AYRES, 1975
7. montecyanensis SIMS, 1987	19. manni (MICHAELSEN, 1935)	35. tristani COGNETTI, 1907
8. oraedivitis COGNETTI, 1904	20. michaelseniana sp. n.	
9. orobia (GRAFF, 1957)	21. montana sp. n.	
10. ribacourti (EISEN, 1900)	22. picadoi (MICHAELSEN, 1912)*	
11. townsendi (EISEN, 1900)	23. reichardti (MICHAELSEN, 1908)	
12. vialis (MICHAELSEN, 1912)	24. s. sporadonephra (COGNETTI, 1905)*	
	25. s. disa (RIGHI, 1972)	
	26. uhleri (MICHAELSEN, 1935)	
	27. verens (COGNETTI, 1905)*	
	28. viridis (EISEN, 1900)*	

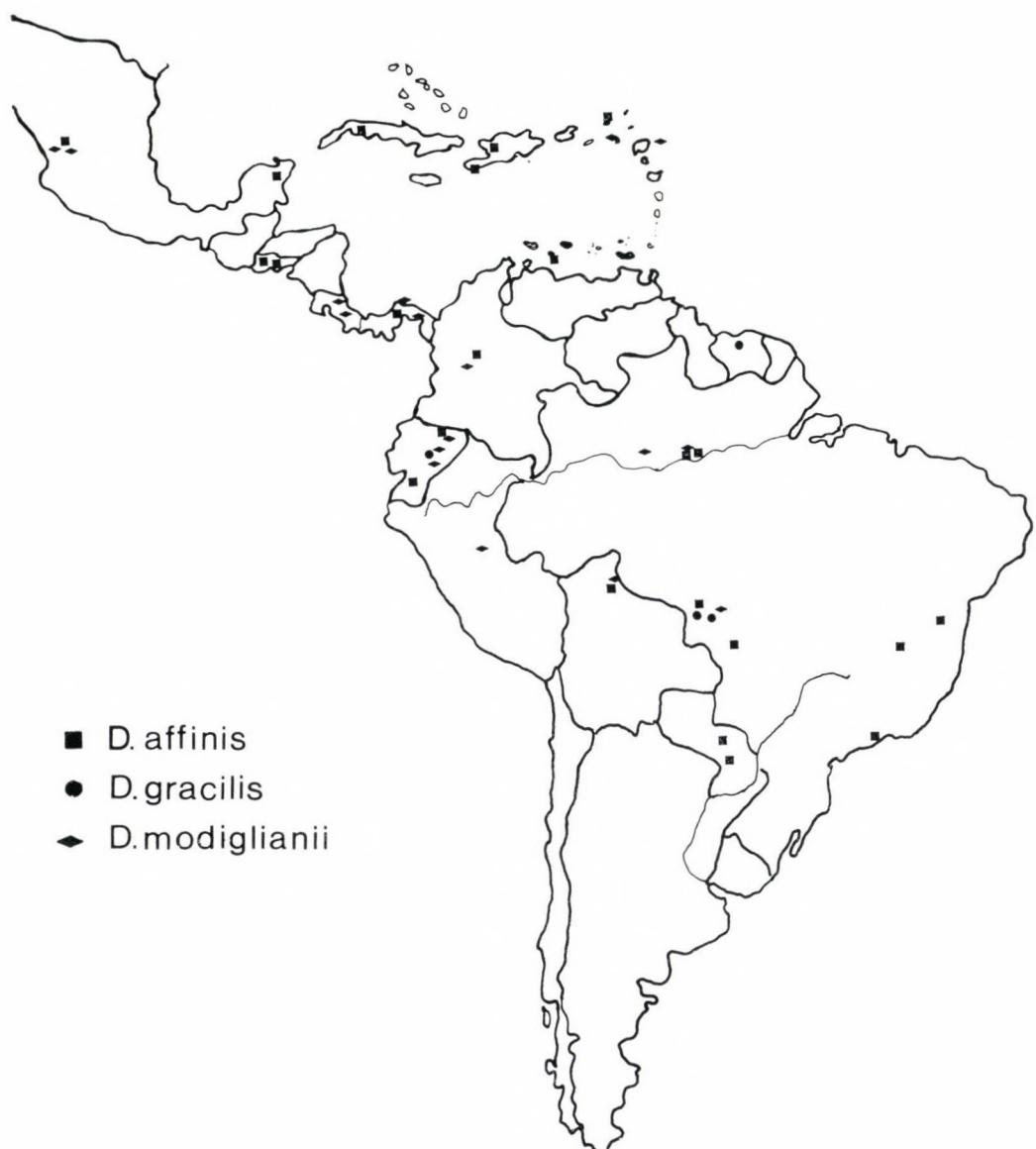


Abb. 2. Verbreitung der peregrinen *Dichogaster* Arten in Mittel- und Südamerika

zweigeteilt ist. Dem Ausführungsgang der Samentasche schliesst sich ein mehrkämmiges oder mehrere mehrkämmige Divertikel an (Omodeo 1958, viridis-Gruppe). Die Form der Divertikel erinnert an die der Gattung *Yagansia* MICHAELSEN, 1899. Bei einem Teil dieser Arten fehlen die für die Gattung *Dichogaster* so kennzeichnenden Penialborsten (Tabelle 1a).



Abb. 3. Verbreitung der peregrinen *Dichogaster* Arten in Mittel- und Südamerika

SIMS (1987) stellte fest, dass bei den Arten denen die Penialborsten fehlen vor dem verdoppeltem Muskelmagen noch ein schwach entwickelter muskulöser Vormagen zu erkennen ist. Diese Arten werden deswegen in die von ihm zurückgestellte Gattung *Eutrigaster* COGNETTI, 1904 eingereiht, da die Typusart der Gattung *E. oraedivitis* ebenfalls über dies Kennzeichen verfügt.

Bei den von uns eingesehenen Arten dieser Gruppe mit Penialborsten (Tabelle 1b) konnte ebenfalls ein Vormagen im 5. Segment erkannt werden, so dass ein Unterschied zwischen diesen beiden Gruppen nur im Vorhandensein oder Fehlen der Penialborsten besteht. Da uns dies als ein bedeutsames Kennzeichen erscheint, schliessen wir uns einerseits der Meinung von SIMS (1987) an, in dem wir die Rückstellung der COGNETTI'schen Gattung anerkennen, anderseits schlagen wir anhand des vorausgehend angeführten Unterschiedes vor die Gattung *Eutrigaster* in zwei Untergattungen zu teilen. Der Untergattung *Eutrigaster* gehören die Arten mit fehlenden Penialborsten, der Untergattung *Graffia* subgen. n. die mit vorhandenen Penialborsten an.

An dieser Stelle sei noch erwähnt, dass bei einem kleinen Teil der in Mittel- und Südamerika vorkommenden endemischen Arten, die die typischen Kennzeichen der Gattung *Dichogaster* aufweisen, die ersten Rückenporen auf Intersegmentalfurche 5/6 oder 6/7 beginnen (Tabelle 1c.).

Die Verbreitung der Endemismen und Kosmopoliten wird auf Abb. 1 bzw. 2 und 3 veranschaulicht. Die auf Abb. 1 angeführten Zahlen entsprechen der in Tabelle 1 zusammengefassten Numerierung der Arten.

Gattung ***Eutrigaster*** COGNETTI, 1904

emend. CSUZDI et ZICSI

Zwei Muskelmagen im 6. und 7. Segment, ein schach muskulöser Vormagen im 5. Segment. Lammellenförmige, paarige Kalkdrüsen im 15.—17. Segment Ausführungsgang der Samentaschen mit ein oder mehreren vielkämmrigen Divertikeln versehen. Typhlosolis vorhanden. Rückenporen vorhanden, im 10. Segment oder weiter hinten beginnend. Exkretionsorgan meronephridisch.

Typusart: *Eutrigaster oraedivitis* COGNETTI, 1904.

Subgenus *Eutrigaster* COGNETTI, 1904: Penialborsten fehlen.

Subgenus *Graffia* subgen. n.: Penialborsten vorhanden. — Typusart: *E. (Graffia) picadoi* (MICHAELSEN, 1912). — Die Untergattung *Graffia* wird zu Ehren von Herrn PROF. DR. OTTO GRAFF, dem bekannten Regenwurm-Ökologen benannt.

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7. Cuba, Umgebung von Habana 1983 und 1984, leg. C. RODRIGUEZ
8. Insel Curacao, 10. X. 1936—22. X. 1936, leg. W. HUMMELINCK
9. Insel La Desirade, 24. I. 1964, leg. W. HUMMELINCK

10. Ekuador, San Francisco de las Pampas (Prov. Cotopaxi), 8. II. 1986 leg. A. ZICSI et I. LOKSA
11. Ekuador, Puerto Quito (Prov. Pichincha) 20. II. 1986. leg. A. ZICSI et I. LOKSA
12. Ekuador, Santo Domingo (Prov. Pichincha), 20. II. 1986. leg. A. ZICSI et I. LOKSA
13. Ekuador, Cosanga (Pro. Napo), 10. IV. 1987. leg. A. ZICSI et I. LOKSA
14. Ekuador, San José de Minas (Prov. Imbabura), 21. IV. 1987. leg. A. ZICSI et I. LOKSA
15. Ekuador, zwischen Baeza und Cosanga (Prov. Napo), 10. IV. 1987. leg. A. ZICSI et I. LOKSA
16. Ekuador, nach Santa Isabel (Prov. Azuay), 2. V. 1988. leg. A. ZICSI et Cs. CSUZDI
17. Ekuador, Zamora (Prov. Zamora Chinchipe), 29. IV. 1988. leg. A. ZICSI et Cs. CSUZDI
18. Ekuador, zwischen Baeza und Lago Agrio 1000 m. (Prov. Napo), 9. V. 1988. leg. A. ZICSI et Cs. CSUZDI
19. Ekuador, Santa Rosa (Prov. El Oro), 2. V. 1988. leg. A. ZICSI et Cs. CSUZDI
20. Ekuador, zwischen Yangana und Vilcabamba, 1100 m. (Prov. Loja), 28. IV. 1988. leg. A. ZICSI et Cs. CSUZDI
21. Ekuador, Dureno, 200 m. (Prov. Napo), 10. V. 1988. leg. A. ZICSI et Cs. CSUZDI
22. Ekuador, Pichincha (Prov. Pichincha), I. 1985. leg. N. VABQUEZ
23. Ekuador, Tandapi (Prov. Pichincha), 16. I. 1988. leg. F. ULLOA
24. Ekuador, Santo Domingo 300 m. (Prov. Pichincha), 16. I. 1988. leg. P. CASOROS
25. Ekuador, Guayaquil (Prov. Guayas), 13. I. 1987. leg. M. E. MENO
26. Ekuador, El Carmen (Prov. Manabí), 27. XII. 1986. leg. G. ONORE
27. Ekuador, Coca (Prov. Napo), II. 1986. leg. G. ONORE
28. Ekuador, Esmeraldas (Prov. Esmeraldas), 18. I. 1984. leg. S. M. PAZ
29. Ekuador, Baeza (Prov. Napo) XI. 1985. leg. G. ONORE
30. Ekuador, Baeza 1800 m. (Prov. Napo), 16. XI. 1986. leg. C. QUINTANA
31. Ekuador, Baeza 1800 m. (Prov. Napo), I. XII. 1985. leg. X. IZORIETA
32. Ekuador, Archidona (Prov. Napo), XII. 1986. leg. J. NARANJA
33. Ekuador, Puerto Quito (Prov. Pichincha), XII. 1983. leg. O. PAZ et J. MINO
34. Ekuador, Puerto Quito (Prov. Pichincha), 19. XII. 1987. leg. A. M. VELAZCAO
35. Ekuador, Puerto Quito (Prov. Pichincha), 5. XII. 1983. leg. M. F. BORRALDO
36. Ekuador, Isabela Caldera S. Negra (Prov. Galapagos), 19. II. 1986. leg. G. ONORE
37. Insel Guadeloupe, La Madelein, 12. XI. 1987. leg. J. M. THIBAUD
38. Insel Margarita, 7. IV.—13. VII. 1936. leg. W. HUMMELINCK
39. Panama, Cristobal (Prov. Colon), 12. IX. 1965. leg. A. ZICSI
40. Paraguay, Asuncion, 2. I. 1966. leg. A. ZICSI
41. Insel Saba, 27. VII. 1949. leg. W. HUMMELINCK

BESCHREIBUNG DER ARDEN

Eutrigaster (Eutrigaster) franzii sp. n.

(Abb. 4—6)

H o l o t y p u s. Länge 132 mm, Dicke 6 mm, Segmentzahl 168. — Länge der praeadulten Paratypen 110—140 mm, Dicke 5—7 mm, Segmentzahl 165—170 mm.

Farbe bräunlichgrau. Kopflappen eingezogen, erstes Segment durch eine vertikale Furche 1/2—2/3 eingeschnitten. Borsten alle ventral gelegen, eng gepaart. Borstendistanz hinter dem Gürtel aa : ab : bc : cd : dd wie 16 : 4 : 16 : 4 : 180. Erster Rückenporus auf Intersegmentalfurche 12/13. Rückenporen auf Intersegmentalfurche 13/14—20/21 fehlen. Gürtel nicht vollkommen entwickelt, liegt auf dem 13.—20. Segment, sattelförmig ausgebildet. Weiblicher Porus auf dem 14. Segment, unpaarig ventralmedian gelegen. Zwei Paar Prostataporen auf dem 17. und 19. Segment. Die Poren werden senkrecht am

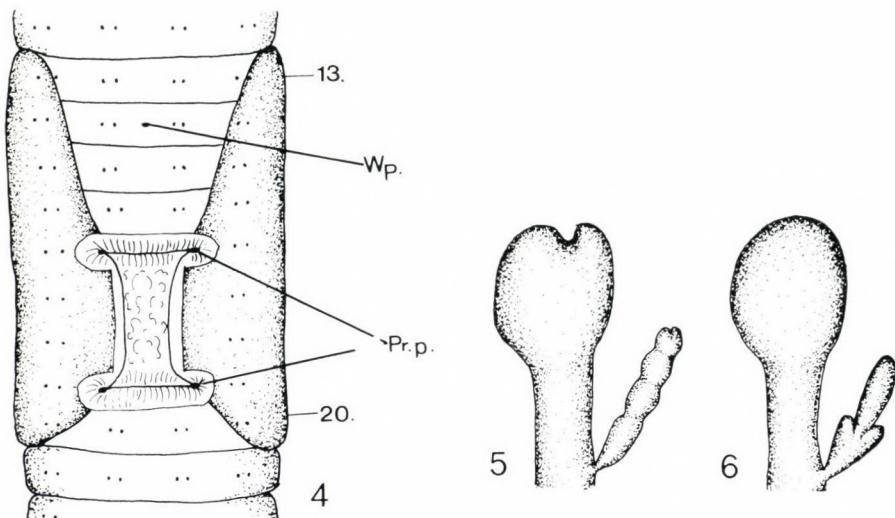


Abb. 4—6. *Eutrigaster (Eutrigaster) franzi* sp. n.: 4 = Ventralansicht mit den Gürtelorganen, Wp = Weibliche Poren, Pr. p. = Prostataporen; 5 und 6 = Samentaschen

Rande des Drüsengebietes durch Samenrinnen verbunden (Abb. 4). Männliche Poren von aussen nicht erkannt. Samentaschenporen auf Intersegmentalfurche 7/8, 8/9 in der Borstenlinie ab.

Innere Organisation. Erstes erkennbares Dissepiment in 7/8, Dissepimente 11/12—13/14 stark, 14/15—16/17 schwach verdickt. Zwei grosse muskulöse Muskelmagen im 6.—7. Segment, ein muskulöser Vormagen im 5. Segment. 3 Paar gleich grosse, nierenförmige Kalkdrüsen im 15—17. Segment. Letztes Paar Herzen im 12. Segment. Exkretionsorgan meronephridisch, beiderseits mit 9—10 Meronephridien. Typhlosolis im 25. Segment beginnend, bis zum 36. Segment beiderseits von einer kräftigen wellenförmigen Furche begleitet.

Geschlechtsorgane. Zwei Paar Hoden und Samenstrichter im 10. und 11. Segment, die des 10. Segmentes in suboesophageale, die des 11. Segmentes in perioesophageale Testikelblasen eingeschlossen. Zwei Paar grosse Samensäcke im 11. und 12. Segment. Ein Paar traubenförmige Ovarien im 13. Segment, ein kleiner Eitrichter im 14. Segment. Die Samenleiter sehr dick und münden im 18. Segment aus. 2 Paar Prostata im 17. und 19. Segment, sie sind sehr gross und gewunden, bestehen aus einem muskulösen Ausführungsgang und einem ungefähr 3 mal so langem aufgerollten drüsigem Gebilde. — Penialborsten fehlen.

Zwei Paar Samentaschen im 8. und 9. Segment. Runde Ampulle mit 2 mal längerem Ausführungsgang. Am Ausführungsgang geht ein fingerförmiges Divertikulum hervor, dies enthält kettenförmig hervorstehende Samen-

kämmerchen (Abb. 5—6). Vordere Samentaschenpaare etwas kleiner als die hinteren.

Die neue Art steht *E. (E.) montecyanensis* SIMS, 1987 am nächsten, unterscheidet sich jedoch von dieser durch den holoandrischen männlichen Geschlechtsapparat, durch die Zahl der Meronephridien und die Form der Samentaschen.

Fundort: Holotypus AF/1202 Jamaica Blue Mountains, 19.—23. IX. 1968, leg. H. Franz. — Paratypen AF/1203 3 Ex. Fundort wie beim Holotypus.

Die neue Art wird zu Ehren des Sammlers, nach Herrn PROF. DR. H. FRANZ (Wien) benannt.

Eutrigaster (Graffia) montana sp. n.
(Abb. 7—10)

Holotypus. Länge 70 mm, Dicke 4 mm, Segmentzahl 112. Farbe braun. Kopf eingezogen. Erstes Segment durch eine vertikale Furche gänzlich zweigeteilt. Vordere Segmente ungeringelt, vom 10. Segment 3—4 fach geringelt. Sämtliche Borsten ventral, eng gepaart. Borstendistanz hinter dem Gürtel aa : ab : bc : cd : dd = 8 : 3 : 5 : 10 : 4 : 100. Erster Rückenporus auf Intersegmentalfurche 11/12, Rückenporen vom 13/14—20/21 fehlen. Gürtel vom 13.—21. Segment, vom 14.—19. Segment ringförmig, auf dem 13. und 21. Segment weniger stark ausgebildet. Weibliche Poren auf dem 14. Segment, an der Basis der Borsten a, auf weisslichen Papillen. Zwei Paar Prostataporen auf dem 17. und 19. Segment in der Borstenlinie ab. Die Öffnungen der Poren werden durch je eine senkrechte Furche verbunden. Die Geschlechtsfurchen werden beiderseits von drüsigen Verdickungen verfolgt, sodass ein nahezu ziegelförmiges Geschlechtsfeld entsteht (Abb. 7). Zwei Paar Samentaschenporen auf Intersegmentalfurche 7/8 und 8/9 in der Borstenlinie b. Männliche Poren von aussen nicht erkannt.

Innere Organisation. Erstes erkennbare Dissepiment in 6/7. Dissepimente 10/11—13/14 stark verdickt. Ein etwas muskulöser Vormagen im 5. Segment, 2 grosse Muskelmagen im 6.—7. Segment. 3 Paar grosse nierenförmige Kalkdrüsen im 15.—17. Segment, von vorne nach hinten zu immer grösser werdend. Letzte Paar Herzen im 12. Segment. Exkretionsorgane meronephridisch, beiderseits mit 10—11. Meronephridien, die Ventromedian immer kleiner werden. Typhlosolis im 28. Segment beginnend, stark wellige Furche die bis zum 36. Segment beiderseits von Faltenbildung begleitet wird.

Geschlechtsorgane. Zwei Paar Hoden und Samenstrichter im 10. und 11. Segment, sie sind in Testikelblasen eingeschlossen. Zwei Paar traubenförmige Samensäcke im 11. und 12. Segment. Ein Paar grosse traubenförmige Ovarien im 13. Segment, kleine Eitrichter im 14. Segment ausmündend. Samenleiter dick, verlaufen gewunden bis ins 18. Segment. 2 Paar Prostata im

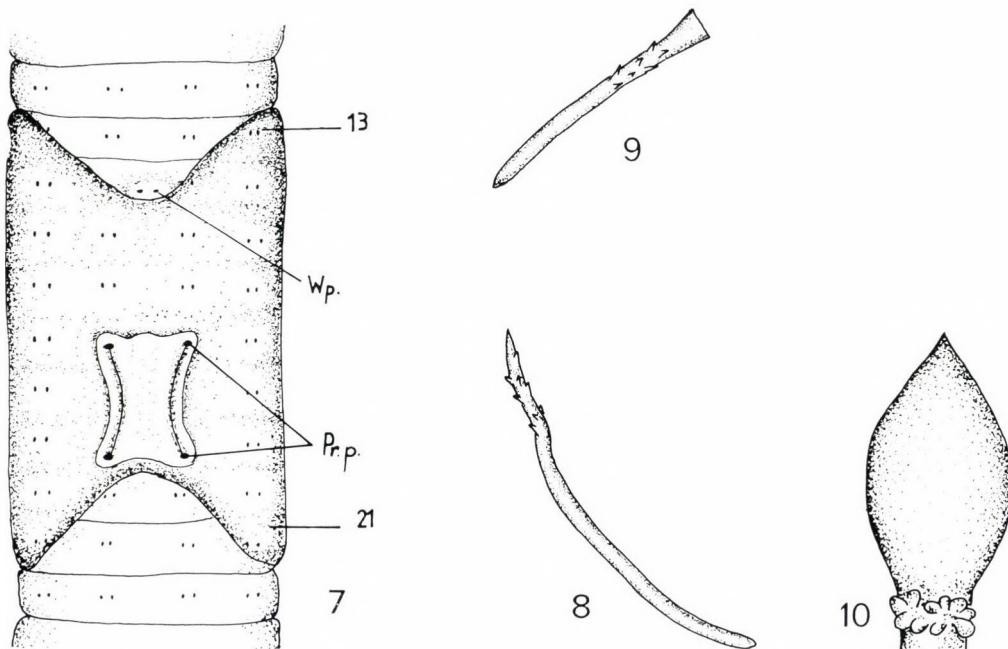


Abb. 7—10. *Eutrigaster (Graffia) montana* sp. n.: 7 = Ventralansicht mit den Gürtelorganen, Wp. = Weibliche Poren, Pr. p. = Prostata Poren; 8 = Grössere Penialborste, 9 = Kleinere Penialborste, 10 = Samentasche

17. und 19. Segment, sie sind gross und gewunden bestehen aus einem muskulösen Ausführungsgang und einem ungefähr viermal dickerem drüsigen Teil. Erste Prostatapaare bedeutend grösser als hintere. Zu jeder Prostata gehört je ein Penialborstensack in dem 2 adulte Borsten sitzen. Die kleinere Borste ist 0,75 mm lang, gerade, an der Spitze spatelförmig ausgebreitet, hier ungefähr 0,015 mm breit. Unterhalb der Spatula mit 0,01 mm grossen dreieck-förmigen Zähnchen ornamentiert (Abb. 8). Grössere Borste 1,1 mm sichelförmig lang, am Ende zugespitzt und mit dreieckförmigen Zähnen ornamentiert (Abb. 9).

Samentaschen im 8. und 9. Segment, sackförmige Ampulle mit halbsolagem Ausführungsgang. Vordere Ampulle etwas kleiner als hintere. Am Ausführungsgang stehen 6—8 verschiedengrosse, blasenförmige Samenkämmerchen hervor (Abb. 10).

Die neue Art steht *E. (G.) gagzoi* (MICHAELSEN, 1908) am nächsten. Unterscheidet sich jedoch von dieser durch die Form der Samentasche, in der Zahl der Meronephridien sowie in der Verschiedenheit der beiden Borsten.

Fundort: Jamaica, Blue Mountains, 19.—23. IX. 1968, leg. H. FRANZ, Holotypus AF/1204.

Eutrigaster (Graffia) michaelseniana sp. n.
 (Abb. 11—14)

In der Sammlung des Zoologischen Institut und Museum von Hamburg sind wir unter dem unbestimmten Regenwurm-Material auf diese Art gestossen, die von MICHAELSEN nur bis zur Gattung bestimmt wurde.

H o l o t y p u s: Länge 95 mm, Dicke 5 mm, Segmentzahl 171. — **P a - r a t y p u s:** Länge 90 mm, Dicke 5 mm, Segmentzahl 172. Farbe braun. Kopf eingezogen. Sämtliche Borsten ventral gelegen, eng gepaart, Borstendistanz hinter dem Gürtel aa : ab : bc : cd : dd = 13 : 4 : 12 : 4 : 120. Erster Rückenporus auf Intersegmentalfurche 11/12, Rückenporen auf Intersegmentalfurche 13/14—20/21 fehlen. Gürtel vom 12.—20. Segment ringförmig, auf dem 12. Segment nur schwach entwickelt. Weibliche Poren auf dem 14. Segment, median von den Borsten a. Männliche Poren in der Mitte des 18. Segmentes, auch von aussen zu erkennen, sie liegen in den Samenrinnen. Die Samenrinnen, die in Höhe der Borstenlinie a verlaufen, verbinden die Prostata-poren im 17. und 19. Segment. (Abb. 11). Zwei Paar Samentaschenporen auf Intersegmentalfurche 7/8 und 8/9 in Höhe der Borstenlinie a.

I n n e r e O r g a n i s a t i o n. Erstes sichtbares Dissepiment in 6/7. Dissepimente 9/10—10/11 schwach 11/12—12/13 stark verdickt. Schwach entwickelter muskulöser Vormagen im 5. Segment. Zwei gut entwickelte Muskelmagen im 6.—7. Segment. 3 Paar bohnenförmige Kalkdrüsen im 15.—17. Segment, ihre Grösse nimmt von vorne nach hinten zu ab. Exkretionsorgane meronephridisch, beiderseits mit 7—8 grösseren und 2—3 kleineren Meronephridien. Letzte Paar Herzen im 12. Segment. Typhlosolis im 26. Segment beginnend, einfach wellenförmig, beiderseits bis zum 31. Segment von Faltenbildungen begleitet.

G e s c h l e c h t s o r g a n e. Hoden und Samenstrichter im 10. und 11. Segment in suboesophageale Testikelblasen eingeschlossen. 2 Paar kleine Samensäcke im 11. und 12. Segment. Ein Paar grosse traubenförmige Ovarien im 13. Segment, ein Paar winzige Eitrichter im 14. Segment. Samenleiter verlaufen gemeinsam, sind gewunden und treten im 18. Segment aus. Zwei Paar Prostata im 17. und 19. Segment, sie bestehen aus einem muskulösen Ausführungsgang und aus einem etwas dickeren, zusammengerollten drüsigen Teil. Jede Prostata mit einem Penialsack versehen, in dem 2 adulte und 1—2 juvenile Borsten stecken. Die grössere Borste ist ungefähr 1,1 mm lang und ungefähr 0,01 mm breit. Vor der Spitze sind die Borsten S-förmig gebogen und im oberen Drittel mit kräftigen Zähnchen ornamentiert. Die kürzeren Borsten sind 0,65 mm lang und 0,01 mm breit, gerade, Spitze mit winzigen dreieckförmigen Zähnchen besetzt (Abb. 12 und 13).

Samentaschen im 8 und 9. Segment, hinteres Paar etwas grösser als vorheres Paar. Ampulle der Samentasche zweimal so gross als der Ausführungs-

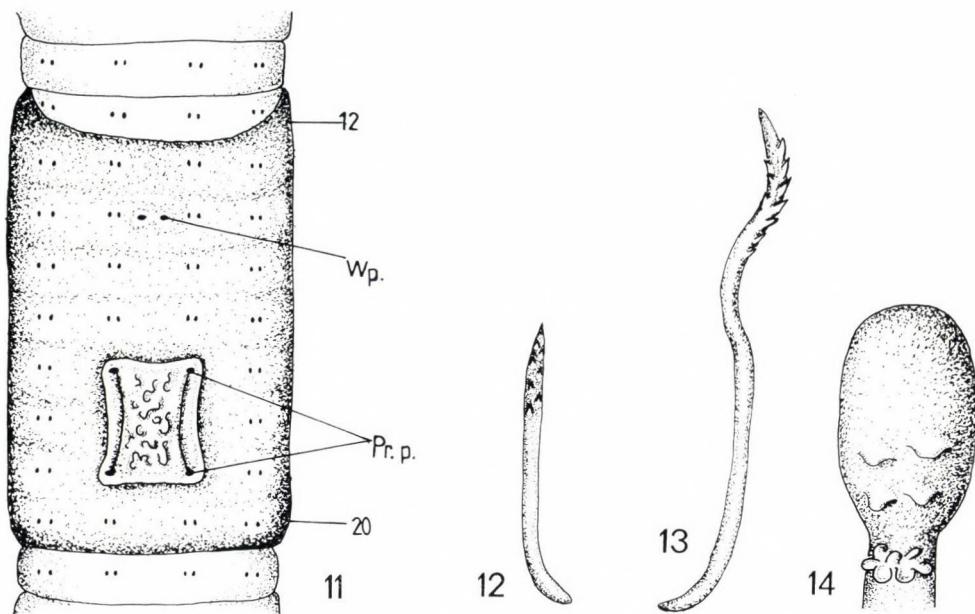


Abb. 11—14. *Eutrigaster (Graffia) michaelseniana* sp. n.: 11 = Ventralansicht mit den Gürtelorganen, Wp = Weibliche Poren, Pr. p. = Prostataporen; 12 = Kleinere Penialborste, 13 = Größere Penialborste, 14 = Samentasche

gang. Unterer Teil der Ampulle ausgebreitet. An der Basis des Ausführungs-
ganges in Richtung des Kopfes 6—7 Kammern bildende Divertikel vorhanden
(Abb. 14).

Die neue Art steht der (*E. (G.) eiseni* sp. n. am nächsten. Unterscheidet
sich jedoch von dieser in der Lage des Gürtels, in der Größe und Ornamentie-
rung der Penial-Borsten sowie durch das Fehlen des dritten Prostatapares.

Fundort: Holotypus V. 11884, Costa Rica, Farm Hamburg, in morschem Holz,
29. I. 1933, leg. F. NEVERMANN. — Paratypus AF/1256, 1 Ex., Fundort wie beim Holoty-
pus.

Holotypus wird in der Sammlung des Museums von Hamburg, Paratypus in der
Sammlung des Zoosystematischen und Ökologischen Instituts von Budapest aufbewahrt.

Die neue Art wird zum Andenken des berühmten Oligochaeten Fachmannes PROF.
DR. W. MICHAELSEN benannt.

***Eutrigaster (Graffia) eiseni* sp. n.**

Syn. *Benhamia viridis* EISEN, 1900 (partim).

Die Art *B. viridis* EISEN, 1900 wurde aufgrund von Exemplaren aus
Mexikostadt und Toluca beschrieben. In der Beschreibung wird erwähnt, dass
das Typenexemplar aus Toluca stammt (p. 214) und, dass das aus Mexikostadt

stammende Exemplar in einigen Kennzeichen Abweichungen zeigt. Auf der Ventralseite des 8. Segmentes befindet sich eine viereckige Geschlechtspapille, im 18. Segment das 3. Prostatapaar mit Penialborsten sowie bei denen im 17. und 19. Segment. Auf Tafel XIV werden die Samentaschen mit der Nummerierung 175 und 176 versehen, wobei in der Abbildungserklärung von Seite 276 erwähnt wird, dass Nummer 175 zu dem Exemplar aus Mexikostadt, die Nummer 176 zu dem Exemplar aus Morelos gehört. Der Fundort Morelos wird in der Beschreibung nicht erwähnt es ist anzunehmen, dass Morelos als Bundesstaatsnamen für Toluca angegeben wird.

MICHAELSEN (1910) beschrieb aus Manzanillo (Mexiko) eine neue Art: *D. paessleri* und erwähnt, dass diese mit dem Exemplar der Art *B. viridis* aus Morelos identisch ist. Da jedoch eben diese Exemplare von EISEN (1900) als Typenexemplare designiert wurden, muss *D. paessleri* Michaelsen, als Synonym von *E. (G.) viridis* betrachtet werden. Das aus Mexikostadt stammende Exemplar, das wesentlich vom designierten Typus abweicht, soll als neue Art unter der Benennung *E. (G.) eiseni* sp. n. beschrieben werden.

Äussere Kennzeichen: Erster Rückenporus auf Intersegmentalfurche 12/13. Gürtel nicht vollkommen entwickelt, erstreckt sich vom 14.—20. Segment. Auf dem 17.—19. Segment ein hervorstehendes, viereckiges drüsiges Geschlechtsfeld, in der Borstenlinie ab zieht sich beiderseits eine tiefe Samenrinne hin, die die Prostataöffnungen verbindet. Samentaschenporen auf Intersegmentalfurche 7/8 und 8/9, in der Borstenlinie a. Zwischen diesen auf dem 8. Segment eine viereckige Geschlechtspapille vorhanden.

Das Tier war in dorsolateraler Richtung aufgeschnitten. Von den inneren Organen waren die beiden Muskelmagen und der Vormagen im 5. Segment gut zu erkennen. Von den Samentaschen waren nur 2 vorhanden und diese sind mit der auf Abb. 175 p. 14 1900 von EISEN übereinstimmend. Die Hoden und Samentrichter des 10. und 11. Segmentes sowie die letzten Paar Herzen des 12. Segmentes waren ebenfalls vorhanden. Die gleichgrossen Kalkdrüsen im 15.—17. Segment konnten ebenfalls noch deutlich erkannt werden. Von den Prostata war auf der einen Seite die des 17. Segmentes, auf der anderen Seite die des 17. und 19. Segmentes zu erkennen. Die Prostata des 18. Segmentes sowie die Penialborsten sind nicht erkannt worden. Exkretionsorgane mero-nephridisch, beiderseits mit je 8 Meronephridien. Vom 21. Segment beginnend fehlte der hintere Körperteil des Tieres.

Die neue Art steht *E. (G.) michaelsoniana* sp. n. am nächsten. Unterscheidet sich von dieser in der Lage des Gürtels und der Geschlechtspapille auf dem 8. Segment.

Fundort: Holotypus V. 5149 Mexikostadt.

Die neue Art wird zu Ehren dem bekannten schwedischen Oligochaetenspezialisten G. EISEN benannt.

Dichogaster affinis (MICHAELSEN, 1890)

Fundorte: 1. AF/1188 1 Ex. — 5. AF/1217, AF/1221, AF/1226 12 Ex. 7. AF/1171 2 Ex. — 8. AF/1196, AF/1198 3 Ex. — 19. AF/1163 5 Ex. — 27. AF/1235 6 Ex. — 39. AF/1181 3 Ex. — AF/1212 1 Ex.

Diogaster andina CONETTI, 1904

Syn. n. *Dichogaster andina evae* RIGHI, AYRES et BITTENCOURT, 1978

Die Unterart unterscheidet sich von der Stammart dadurch, dass im Penialsack nur eine Borste vorhanden ist sowie dadurch, dass die Normalborsten weniger ornamentiert sind wie dies auf Abb. 13 von CONETTI (1905) ersichtlich ist. Bei unseren in Ekuador gesammelten Exemplaren liess sich nur bei den Borsten vom Gürtel eine solche Ornamentierung erkennen, die übrigen Borsten sind einfach, vollkommen glatt. Da die Tiere von CONETTI ebenfalls aus Ekuador stammen ist es anzunehmen, dass es sich um Geschlechtsborsten aus der Gürtelregion handelt. Der andere Unterschied, dass nur eine Penialborsten im Borstensack vorhanden ist, scheint ebenfalls kein stabiles Merkmal zu sein, da bei unseren Exemplaren die Zahl der Borsten zwischen einer oder zwei variierte. Wir sind der Meinung, dass die Unterart *evae* als Synonyme von *andina* zu betrachten ist.

Fundorte: 33. AF/559 1 Ex. — 4. AF/560 1 Ex. — 35. AF/561 2 Ex.

Dichogaster annae (HORST, 1893)

Bei den von uns untersuchten Exemplaren der Insel Guadeloupe besassen die Divertikel der Samentaschen 2—3 Holträume. Diese Beobachtung unterstützt die Annahme von RIGHI (1984), dass *D. silvestris cacaois* RIGHI, 1968 als Synonyme von *D. annae* betrachtet werden muss. Auch *D. servi* RIGHI et AYRES, 1975 steht der *D. annae* sehr nahe, doch ist das Vergleichsmaterial zu spärlich um sichere Stellung bezüglich einer Synonymisierung einzunehmen zu können.

Fundorte: 7. AF/1169 4 Ex. — 37. AF/1182 3 Ex.

Dichogaster bolaui (MICHAELSEN, 1891)

Fundorte: 1. AF/1191 1 Ex. — 2. AF/1192 5 Ex. — 3. AF/1200 1 Ex. — 4. AF/1184 1 Ex. — 5. AF/1210, AF/1214, AF/1218, AF/1219, AF/1222, AF/1225, AF/1227 51 Ex. — 6. AF/1187 3 Ex. — 7. AF/1168, AF/1170 6 Ex. — 8. AF/1197 1 Ex. — 10. AF/562 3 Ex. — 12. AF/556 2 Ex. — 16. AF/1161 4 Ex. — 17. AF/1174 9 Ex. — 18. AF/1177 1 Ex. — 23. AF/1157 3 Ex. — 25. AF/1160 1 Ex. — 26. AF/1172 1 Ex. — 27. AF/1136, AF/1138 2 Ex. — 28. AF/1240 2 Ex. — 38. AF/1186, AF/1185, AF/1194 5 Ex. — 39. AF/1180 49 Ex.

Dichogaster gracilis (MICHAELSEN, 1892)

Fundort: 10 AF/565 2 Ex.

Dichogaster ibaia RIGHI, AYRES et BITTENCOURT, 1978

Unsere Exemplare stimmen in der inneren Organisation vollkommen mit der Beschreibung von RIGHI et al. überein, allein sind bei unseren Tieren die Penialborsten etwas länger (0,5 mm). Das männliche Geschlechtsfeld zeigt einen gewissen Übergang bei unseren Tieren zu *D. badajos* RIGHI, AYRES et BITTENCOURT, 1978, von der sie sich jedoch in der Zahl Samentaschen unterscheidet.

Fundorte: 13. AF/1254 1 Ex. — 29. AF/1241 1 Ex. 30. AF/1242 1 Ex. — 31. AF/1243 2 Ex.

Dichogaster modiglianii (Rosa, 1896)

Fundorte: 2 AF/1193 1 Ex. — 5. AF/1220. AF/1223 3 Ex. — 9. AF/1199 1 Ex. — 19. AF/1164 2 Ex. — 27. AF/1237 17 Ex. — 39. AF/1179 10 Ex. — 41. AF/1195. 2 Ex.

Dichogaster saliens (BEDDARD, 1892)

Fundorte: 5. AF/1207, AF/1208, AF/1209, AF/1212, AF/1213, AF/1215, AF/1216, AF/1224, 120 Ex. — 10. AF/564 1 Ex. — 12. AF/1156 1 Ex. — 18. AF/1175, AF/1176 7 Ex. — 19. AF/1162, AF/1173 4 Ex. — 36. AF/567 1 Ex.

Dichogaster sporadonephra COGNETTI, 1905

Fundort: 11. AF/557 6 Ex.

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NEUE TAXA AUS DER GATTUNG ORTHOSIA
OCHSENHEIMER, 1816 (s. l.)
(LEPIDOPTERA, NOCTUIDAE)

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(Eingegangen 4ten November, 1990)

(New taxa of the genus *Orthosia* Ochsenheimer, 1816 s. l., Lepidoptera: Noctuidae.) Description of *Orthosia (Orthosia) ariuna* sp. n. and *O. (Semiophora) askoldensis turpika* ssp. n. Redescription of *Orthosia (O.) picata* sp. bona and stat. n. as well as discussion of nomenclature problems coherent with this taxon. Designation of lectotype of *O. (Semiophora) askoldensis* STAUDINGER, 1892. With 12 original photos and 19 original figures.

Einführung — Die Arten der *Orthosia* (s.l.) sind in der Holarktis verbreitet, und ihre grösste Artenzahl wird in der Südost-Paläarktis erreicht. Die Gattung wurde auf mehrere Subgenus verteilt (BERIO 1980). In den letzten Jahren wurden auch mehrere neue Arten von dieser Gruppe beschrieben (SUGI 1982, 1984, 1986; GYULAI im Druck). Wahrscheinlich werden sie weitere Publikationen folgen. Dazu gehört auch diese Publikation, worin die *incerta* (HUFNAGEL, 1766)-Artengruppe und das Subgenus *Semiophora* STEPHENS, 1829 behandelt wird.

DIE ORTHOSIA (S. STR.) INCERTA ARTENGRUPPE

Früher hat man *incerta* (HUFNAGEL, 1766), als einheitliche Art aufgefasst, die transpaläarktische verbreitet ist und deren grosse Variabilität bekannt war. Auf diesem Grund wurden mehrere Unterarten, Formen und Varietäten der Art beschrieben. Später wurden sie alle für das Synonym von *incerta* gehalten. In der Wirklichkeit ist aber die bisher für *incerta* gehaltene Art eine Gruppe verwandter Arten. Eine wurde davon schon früher beschrieben. Zum ersten Mal wurde sie unter dem Namen *Taeniocampa incerta* var. *pallida* STAUDINGER, 1888 publiziert. Diese Art ist aber das invalid hononym von *Noctua pallida* HAWORTH, 1809. Das Problem wurde von STAUDINGER bemerkt (1901) und er hat den Namen auf *Taeniocampa incerta* var. *pallidior* geändert. Der war aber das invalid hononym von *Taeniocampa gracilis* var. *pallidior* STAUDINGER, 1888. Die Art wurde zum dritten Mal als *Taeniocampa incerta* forma *picata* BANG-HAAS, 1912 beschrieben. Die neue Beschreibung dieser Art ist in der Kenntnis der Genitalien notwendig.

Im Frühling haben wir in der Mongolei mehrere Exemplare aus der *incerta*-Gruppe gesammelt. Nach der Genitaluntersuchungen konnten wir die Exemplaren auf zwei Arten teilen. Eine war davon die wirkliche *incerta*, die andere war eine noch nicht beschriebene Art. Nach der Untersuchung des Materials des Naturwissenschaftlichen Museums, Budapest wurde doch ein Exemplar von Ussurisk gefunden, die auch hierzu gehört. Auch zu dieser Art gehören die Exemplaren aus Daurien, die Frau DR. Z. F. KŁJUTSCHKO zur Bestimmung nach Budapest mitgebracht hat.

Die Taxa der *incerta* Artengruppe sind die Folgenden:

Orthosia (Orthosia) incerta (HUFNAGEL)

Phalaena incerta HUFNAGEL, 1766: Berlinisches Mag. 3 (3): 298 (Umgeb. Berlin)
Noctua instabilis (DENIS et SCHIFFERMÜLLER, 1775): Ank. eines syst. Werkes von dem Schmett.
 der Wienergegend.

Orthosia (Orthosia) picata BANG-HAAS stat. n.

Taeniocampa incerta var. *pallida* STAUDINGER, 1888: Stett e. Z. 32 (Kuldja und Alexandergerge-
 ¶ birge), invalid homonym von *Noctua pallida* HAWORTH, 1809.
Taeniocampa incerta var. *pallidior* STAUDINGER, 1901: Cat. Lep. Pal.: 201 (Fergana. Issyk-kul),
 invalid homonym von *Taeniocampa incerta* ver. *pallidior* STAUDINGER, 1888.
Taeniocampa incerta forma *picata* BANG-HAAS, 1912: Iris 26: 156. (Karagai-tau).

T y p e n m a t e r i a l — Die Typusexemplaren stimmen mit den Typusexemplaren überein, welche A. BANG-HAAS ausgewählt hat. (Genital-Präp., HREBLAY Nr. 2256).

B e s c h r e i b u n g — Diese Art ist die nächste Verwandte von *Orthosia incerta* HUFNAGEL. Die äusseren morphologischen Merkmale stimmen mit der Originalbeschreibung der "Form" *picata* überein, das wichtigste Merkmal ist die helle Hinterflügel, wo der Mondfleck zu sehen ist. Die Genitalien unterscheiden sich in artlichem Mass von *incerta*. Sie sind bei den Männchen die Folgenden (Abb. 2—3, 6—7):

- Uncus ist gegenüber *incerta* nicht flach ausgebreitet;
- Der distale Fortsatz von Harpe ist weniger entwickelt, etwa ein drittel von jenem der *incerta*;
- Die Fultura inferior ist schmäler;
- Der dornförmige Fortsatz von Carina ist kürzer und dünner.

Bei den Weibchen (Abb. 10):

- Ovipositor ist kürzer;
- Ductus bursae ist kürzer;
- Das Ostium ist grösser.

Orthosia (Orthosia) ariuna sp. n.

H o l o t y p u s ♂: "Mongolia, Bulgan aimak, 64 km W of Erdeneant, 1260 m, 104° 05'E, 47° 05'N, 23—34. 05. 1990, leg. GY. FÁBIÁN, M. HREBLAY, L. PEREGOVITS et. C. RONKAY" (coll. M. HREBLAY, Budapest Genital-Präp. HREBLAY Nr. 2050). — **P a r a t y p e n:** 2 ♂♂, 22 ♀♀ mit den gleichen Daten wie der Holotypus (Ungarischen Naturwissenschaftlichen Museum, Budapest, Genital-Präp. HREBLAY Nr. 2005, 2013, 2026, 2051, 2052), 1 ♂, N. Ussurisk, 21. VII. 15 leg. BIENER, (coll. UNWM, Budapest, Genital Präd. HREBLAY Nr. 2023); 10 ♂♂, 6 ♀♀, USSR, Dauria, F. Onon Nischnego Zasitscheja 13—21. V. 1990, leg. GOLOWUSCHKIN et KOSTJUK, (coll. S. KLJUTSCHKO Staatlichen Universität, Kiev; Gy. FÁBIÁN, L. PEREGOVITS, G. RONKAY, M. HREBLAY, Budapest; H. THÖNY, Ingolstadt Genital-Präp. HREBLAY Nr. 2259).

B e s c h r e i b u n g — Die neubeschriebene Art gehört zur engen Verwandtschaft von *incerta*. Die nächste Verwandte ist *Orthosia picata*. Sie steht weiter von *Orthosia populeti* (FABRICIUS, 1781), *Orthosia lizetta* BUTLER, 1878, *Orthosia evanida* (BUTLER, 1879). Arten, die auf Grund ihrer äusseren Morphologie auch zum *Orthosia* Subgenus gehören. Sie sind nach Genitalien gut trennbar.

Die Flügelspannweiter der Art: 32—37 mm ♂♂, 33—38 mm ♀♀. Die Art ist kleiner als *incerta* und *picata*. Die Variationsbreite ihrer Zeichnungen und Flügelfarbe sind der *incerta* ähnlich. Die Grundfarbe der Vorderflügel variiert sich von hellocker bis zu dunkelgrau, sie ist manchmal einfarbig, manchmal aber marmoriert oder die Zeichnungselemente haben scharfe Konturen. Die äusseren Querlinien sind oft hell, und an ihren inneren Seiten können — wie auch bei *populeti* oder *evanida* — dunklere Streifen von unterschiedlicher Dicke erscheinen. Die Hinterflügel sind grau, dunkler als bei *picata*. Die Mondflecke sind darin — im Gegensatz zu *picata* — nicht zu sehen. Die Aderfarben stimmen mit den Flügelfarben überein, die Fransen sind etwas heller. Die Körperfarbe stimmt mit Grundfarbe der Vordelflügel überein.

Die Genitalmorphologie stimmt in grossen Massen mit jener von *picata* überein. Die neue Art weicht von *incerta* in denjenigen Merkmalen ab, wie jene schon bei der Beschreibung von *picata* erwähnt wurden. Sie unterscheidet sich von *picata* in den folgenden Merkmalen (Abb. 4, 8):

- Der dornförmige Fortsatz von Carina überragt nicht die Drehung von Vesica;
- Vinculum ist mehr ausgedehnt;
- der Hals von Cucullus ist dicker.

Die Weibchen sind trennbar von *incerta* (Abb. 11):

- Ductus bursae ist kürzer;
- Apex bursae ist länger, gedreht, und weniger sklerotisiert;
- Die Signa sind kürzer.

Sie sind trennbar von *picata*:

- Das Ostium ist kleiner;
- Apex bursae ist länger, gedreht, und weniger sklerotisiert;
- Die Signa sind kürzer.

Die Art ist *Ariuna Ashiltschinü* gewidmet, die uns bei unserer mongolischen Expeditionen viel geholfen hat.

Subgenus *Semiophora* STEPHENS, 1829

Das *Semiophora* subgenus wurde bis zur letzten Jahren für monotypisch gehalten, als dessen Typusart die in transpaläarktisch verbreitete *Orthosia gothica* (LINNAEUS, 1758), gilt. Im Westen war sie der unter den Namen der nominotypischen *gothica gothica* (LINNAEUS, 1758), im Osten unter den Namen *gothica askoldensis* (STAUDINGER, 1892) bekannt. Die anderen beschriebenen Taxa wurden — abhängig von Fundorten — für ihre Synonyme gehalten. Die letzten Publikationen, die sich mit diesem Thema beschäftigen, behandeln *askoldensis* als eine selbstständige Art (KONONENKO, 1990). Aber in dieser Publikation wurde noch nicht erkannt, das Subgenus *Semiophora* nicht nur aus zwei allopatrischen Arten besteht, sondern beide sind im östlichen Teil der Paläarktis sympatrisch verbreitet. Das zeigte auch die Untersuchung des Lectotyps von *askoldensis* und mehrerer fernöstlichen *gothica* Exemplare. Ihre Genitalunterschiede bestehen meistens in der verschiedenen Struktur von *Fulitura inferior* und *superior* (Abb. 12—15). Die Tatsache, dass im östlichen Teil der Paläarktis beide Arten verkommen, wirft nomenklatorische Probleme auf. Wozu gehören die fernöstlichen Taxa, die früher als Synonyme von *askoldensis* gehalten wurden? Zur Entscheidung dieser Frage ist die Untersuchung der Typusexemplaren der beschriebenen Arten notwendig. Dazu hatte ich leider keine Möglichkeit, so werde ich den Namen der nach *askoldensis* erstbeschriebenen fernöstlichen *gothica*-Taxon *jezoensis* MATSUMURA, 1926, wieder zur Geltung bringen, solange die notwendigen Untersuchungen fertiggemacht werden.

Während unserer Mongolei-Expedition 1990 wurden auch einige Exemplare von *O. askoldensis* erbeutet, die zu einer neuen Subspezies der Art gehören, welche nachfolgend beschrieben wird.

Die Taxa des Subgenus *Semiophora* sind die Folgenden:

Orthosia (Semiophora) gothica (LINNAEUS)

Phalaena gothica LINNAEUS, 1758: Syst. Nat. ed. X. I. 516 (Europa).
Noctua nun-atrum (DENIS et SCHIFFERMÜLLER, 1775): Ank. eines syst. Werkes von den Schmett. der Wienergegend: 78 (Umg. Wien).
Orthosia gothicina HERRICH-SCHÄFFER: Syst. Bearb. Schmett. Eur. II. 196 (Lappland).

Orthosia (Semiphora) gothica ssp. *jezoensis* (MATSUMURA) stat. n.

Monima jezoensis MATSUMURA, 1926: Insect. Matsum. I. 11 (Japan. Hokkaido, Sapporo).
Monima gothica ssp. *yeterufica* BRYK, 1942: Deut. Ent. Zeit. Iris. 56 (USSR, Kurile Inseln, Yeterofu).

Orthosia (Semiophora) askoldensis (STAUDINGER)

Taeniocampa gothica var. *askoldensis* STAUDINGER, 1892: Mém. Lep. VI. 496 (USSR, SO Siberien. Insel Askold);
Orthosia askoldensis STAUDINGER, 1892: Tinea XIII. Supp. I. 24.

L e c t o t y p u s: ♂: von den ursprünglichen Syntypen von STAUDINGER (coll. Museum für Naturkunde an der Humboldt-Universität zu Berlin, Genital-Präp. HREBLAY Nr. 2255).

Orthosia (Semiophora) askoldensis turpika ssp. n.

Holotypus ♂: "Mongolia, Central aimak, Tsagaan Davaa, 1400→1600 m, 20 km NW of Bayan Tsadmani, 106° 05'E, 48° 17'N, 25—28. V. 1990. leg. Gy. FÁBIÁN, M. HREBLAY, L. PEREGOVITS, G. RONKAY", (coll: M. HREBLAY, Genital-Präp. HREBLAY Nr. 2028). — Paratypen: 11 ♂♂ mit den gleichen Daten wie der Holotypus (coll. Gy. FÁBIÁN, M. HREBLAY, L. PEREGOVITS, G. RONKAY, UNHM, Budapest Genital-Präp. HREBLAY Nr. 2001).

B e s c h r e i b u n g — Vorderflügel Spannweite: 33—37 mm. Auf Grund der äusseren morphologischem Merkmalen kann man von *askoldensis* zuverlässig nicht trennen. Die Zeichnungen der Flügel sind die Gleichen, die Grundfarbe ist wenig dunkler, mit mehr grau. Rötliche Exemplare sind bisher noch nicht zum Vorschein gekommen. Die Unterschiede in der Strukturen der Genitalien sind die Folgenden (Abb. 12—19):

- Die Spitze von Uncus ist ausgebuchtet;
- Die Form von Fultura inferior ist anders, mit den Transtilen sind stärker zusammengewachsen;
- Fultura superior ist stärker entwickelt, ist ebenfalls mit den Transtilen zusammengewachsen.

Das Weibchen der neuen Subspezies ist noch unbekannt.

V e r b r e i t u n g — Der einzige bekannte Fundort ist der Fundort von Typusexemplaren.

B i o l o g i e — Die Art lebt in der Waldzone und wurde am Ende Mai, in der Zeit der Knospung gefangen. Ihre Futterpflanze ist unbekannt.

* * *

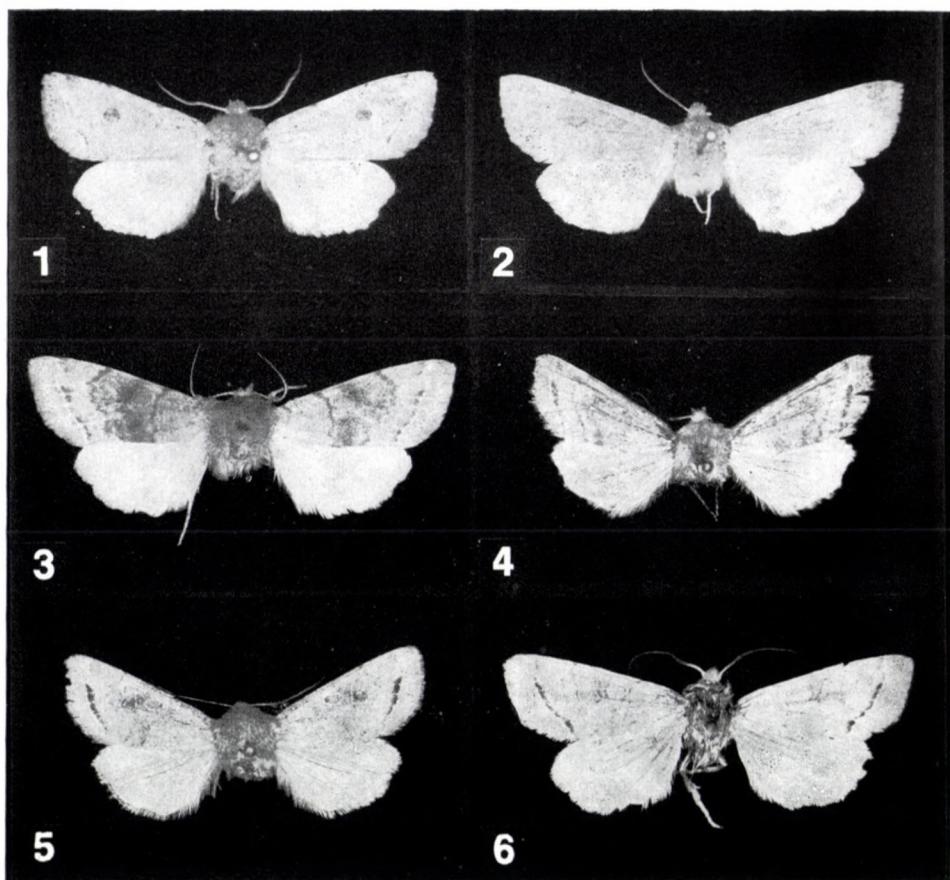
D a n k s a g a n g — Der Verfasser spricht seinen Dank Herrn DR W. MEY (Berlin), Herrn DR. W. DIERL, (München), Herrn H. THÖNY (Ingolstadt), Frau DR. S. F. KLUJTSCHKO (Kiev), Herrn DR. B. GUSTAFSSON (Stockholm), Herrn DR. A. VOJNITS (Budapest) aus, die die Typusexemplare und das Vergleichsmaterial zu seiner Verfügung gestellt haben, Herrn DR. L. RONKAY (Budapest) für im Thema geleistete Hilfe und Herrn P. KOZMA (Debrecen) für die Anfertigung der Fotos.

SCHRIFTTUM

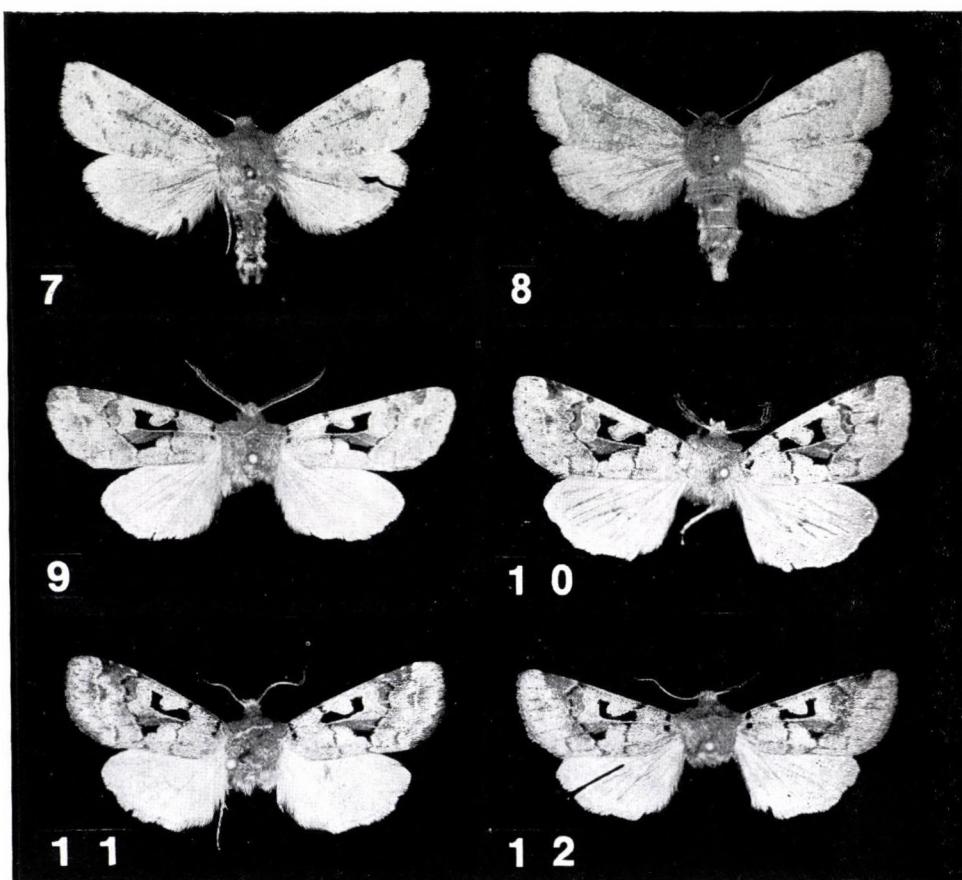
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Fototafel I



1. *Orthosia pallida* STAUDINGER: Syntypus, Kuldja. — 2—3. *Orthosia picata* BANG-HAAS stat. n.: 2 = Holotypus, Karagai-tau, 3 = Tadzhikistan, Chorog. — 4—6. *Orthosia ariuna* sp. n.: 4 = Holotypus, Mongolei, Bulgan aimak. 5 = Paratypus, Mongolei, Bulgan aimak, 6 = Paratype, USSR, Ussurisk

Fototafel II

7—8. *Orthosia ariuna* sp. n.: Paratype, USSR, Daurien. — 9. *Orthosia askoldensis* STAUDINGER: Lectotype, USSR, SO Siberien, Insel Askold. — 10. *Orthosia gothica jezoensis* MATSUMURA: Japan, Honschu. — 11—12. *Orthosia askoldensis turpika* ssp. n.: 11 = Holotype, Mongolei, Zentral aimak, 12 = Paratype, Mongolei, Zentral aimak

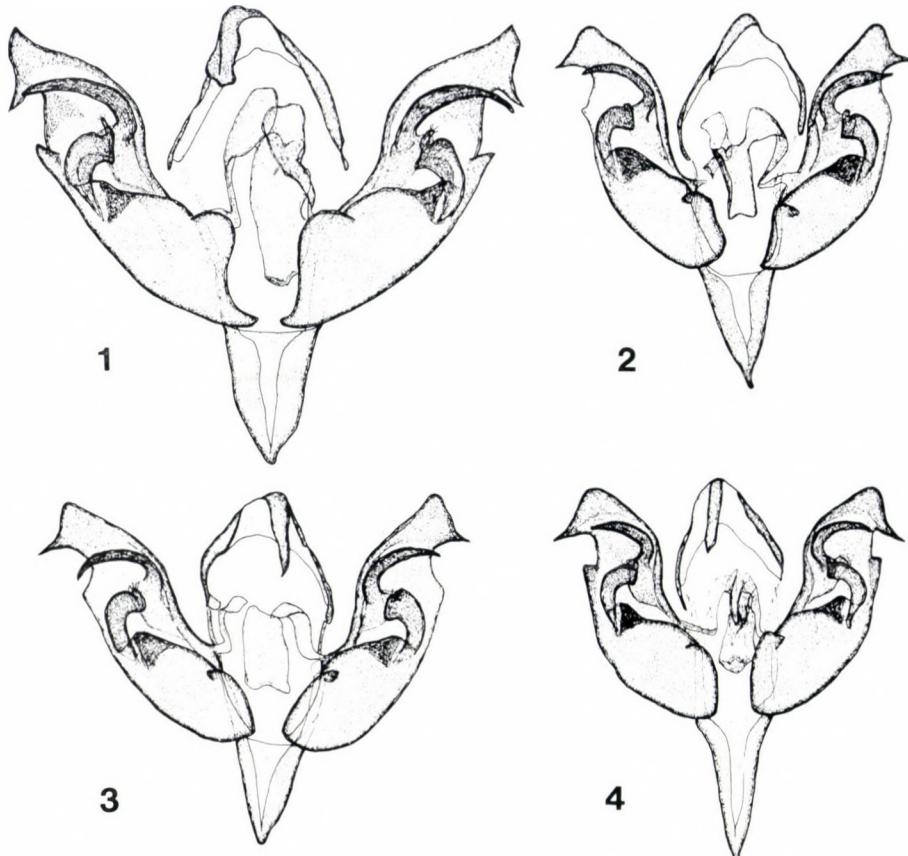


Abb. 1. *Orthosia incerta* HUFNAGEL: Ungarn, Budapest. — Abb. 2. *Orthosia picata* BANG-HAAS stat. n.: Holotypus, Karagai-tau. — Abb. 3. *Orthosia pallida* STAUDINGER: Syntypus, Kuldja. — Abb. 4. *Orthosia ariuna* sp. n.: Holotypus, Mongolei, Bulgan aimak

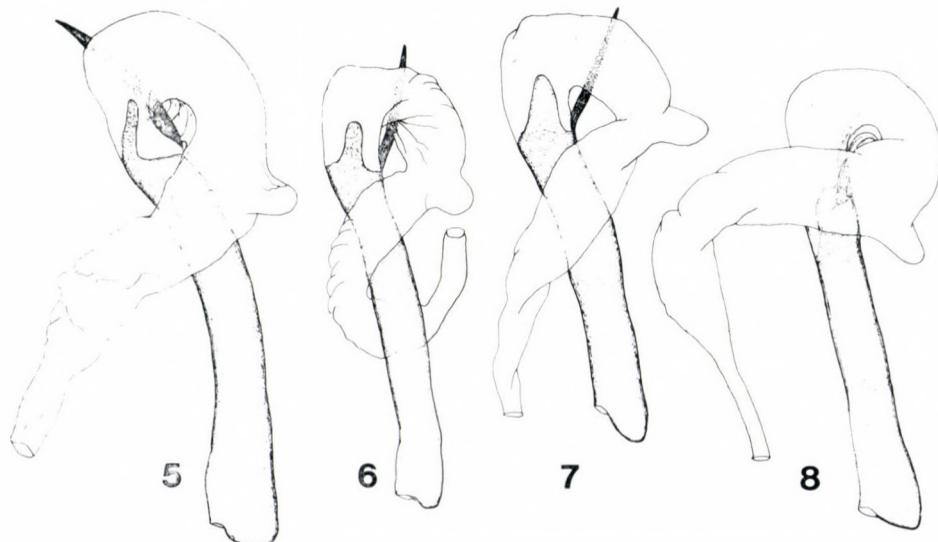


Abb. 5. *Orthosia incerta* HUFNAGEL: Ungarn, Budapest. — Abb. 6. *Orthosia picata* BANG-HAAS stat. n.: Holotypus, Karagai-tau. — Abb. 7. *Orthosia pallida* STAUDINGER: Syntypus, Kuldja. — Abb. 8. *Orthosia ariuna* sp. n.: Holotypus, Mongolei, Bulgan aimak

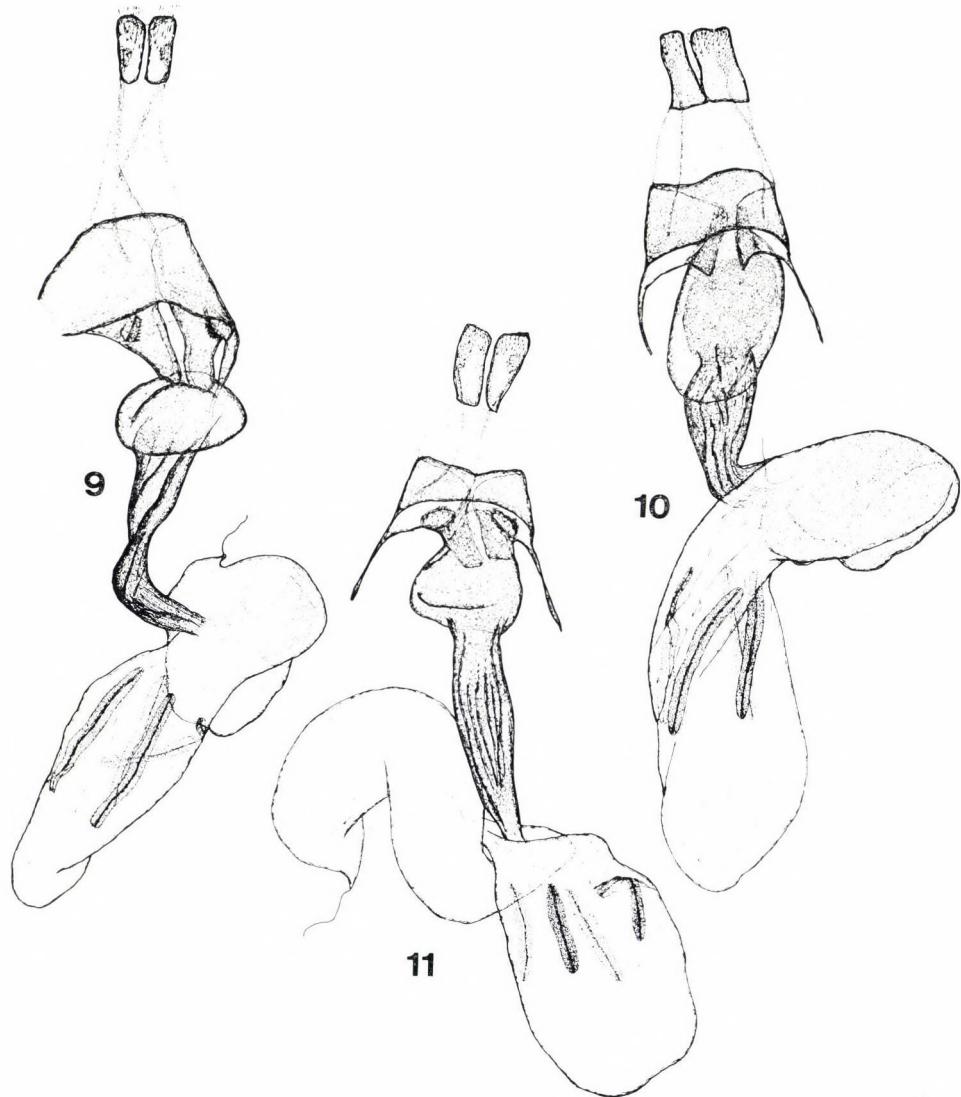


Abb. 9. *Orthosia incerta* HUFNAGEL: Ungarn, Budapest. — Abb. 10. *Orthosia picata* BANG-HAAS stat. n.: Kuldja. — Abb. 11. *Orthosia ariuna* sp. n.: Paratypus, Mengolei, Bulgan aimak

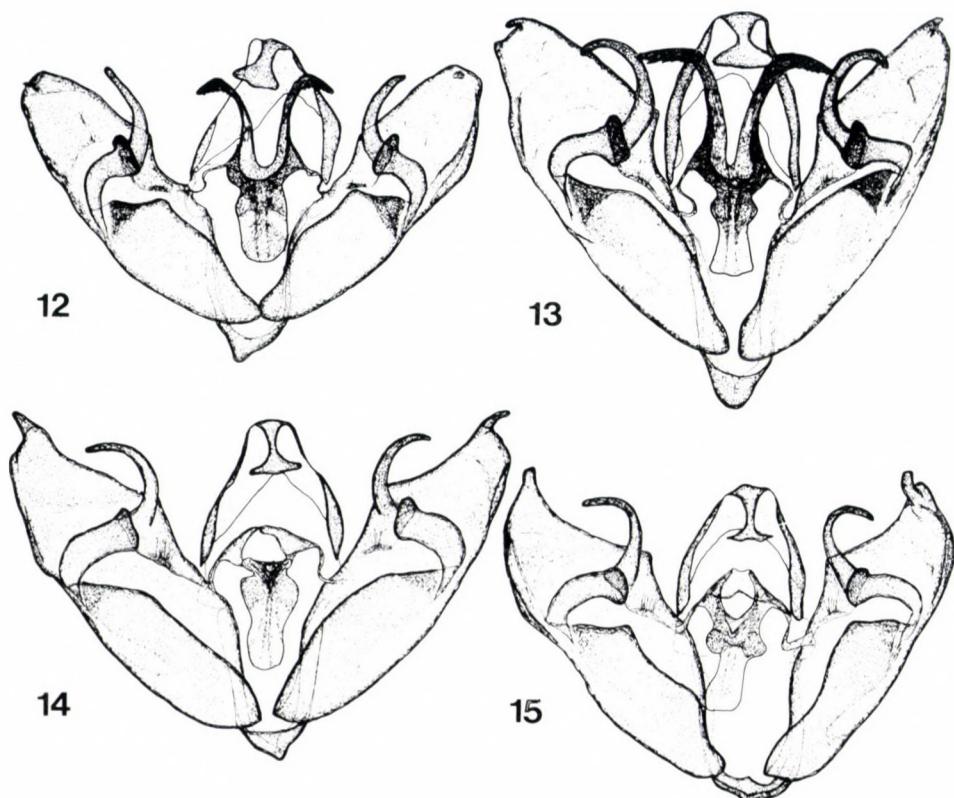


Abb. 12. *Orthosia gothica* LINNAEUS: Ungarn, Nagykovácsi. — Abb. 13. *Orthosia gothica jezoensis* MATSUMURA: Japan, Honschu. — Abb. 14. *Orthosia askoldensis* STAUDINGER: Lectotypus, USSR, SO Siberien, Insel Askold. — Abb. 15. *Orthosia askoldensis turpika* ssp. n.: Holotypus, Mongolei, Zentral aimak

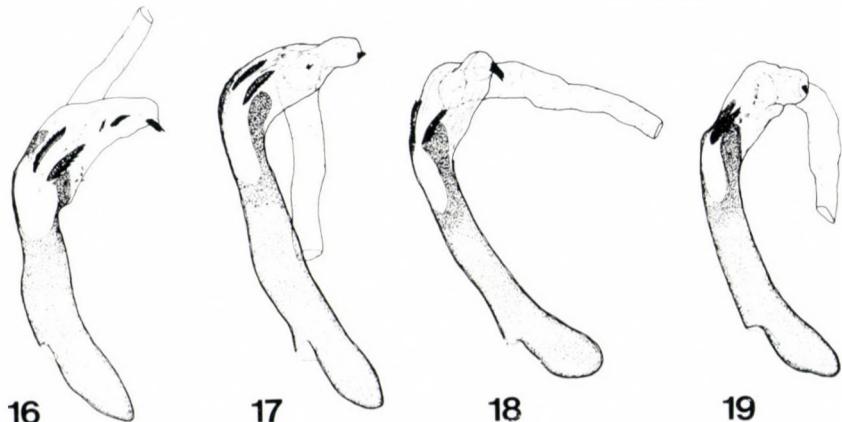


Abb. 16. *Orthosia gothica* LINNAEUS: Ungarn, Nagykovácsi. — Abb. 17. *Orthosia gothica jezoensis* MATSUMURA: Japan, Honschu. — Abb. 18. *Orthosia askoldensis* STAUDINGER: Lectotypus, USSR, SO Siberien, Insel Askold. — Abb. 19. *Orthosia askoldensis turpika* ssp. n.: Holotypus, Mongolei, Zentral aimak

TWO NEW EUPHTHIRACAROID SPECIES (ACARI, ORIBATIDA) FROM THE ORIENTAL REGION

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(Received 3rd November 1990)

Description of two new oribatid species from the Oriental Region: *Indotritia propinquua* sp. n. and *Austrotritia optabilis* sp. n. With 23 original figures.

PROF. DR. J. BALOGH (Budapest) sent me material containing two new species of Euphthiracaroidea (Acari, Oribatida). Herewith I wish to express my sincere appreciation for his kindness. Below I present the descriptions of the two mite species.

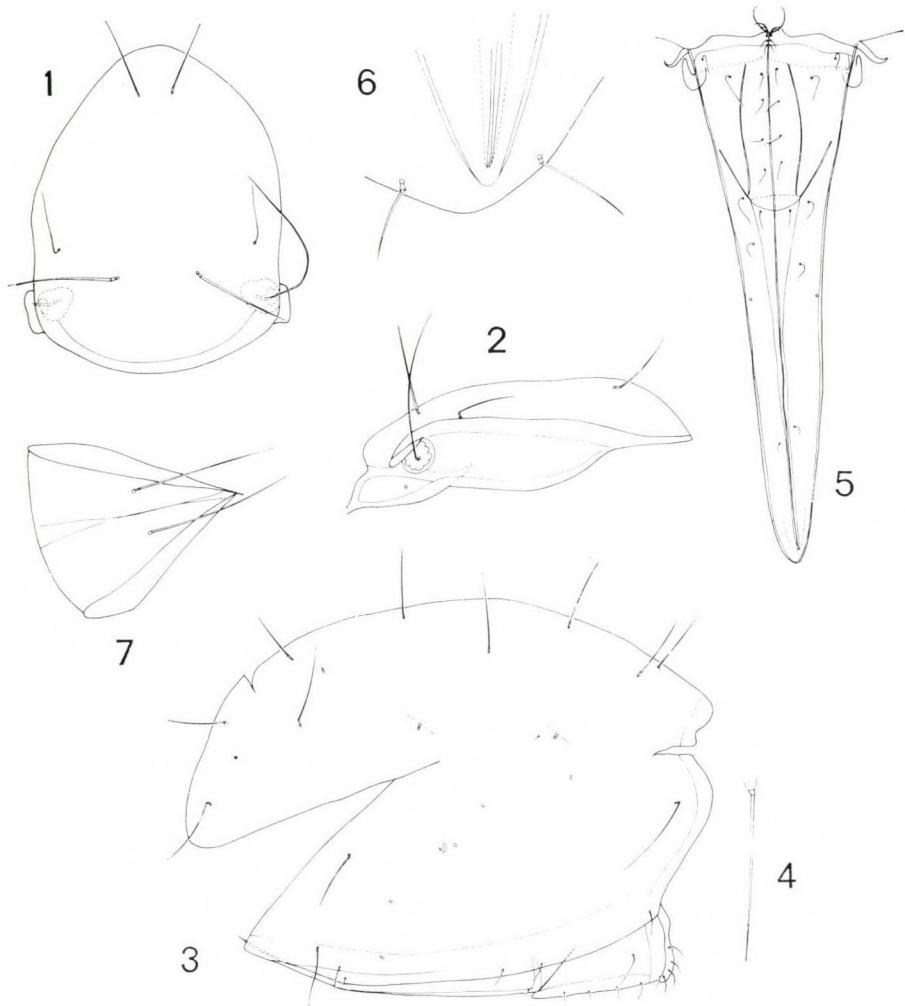
***Indotritia propinquua* sp. n.**

(Figs 1—14)

Measurements of holotype (in μm) — Prodorsum: length 369, width 252, height 116, sensillus 162, interlamellar seta 111, lamellar seta 65.6, rostral seta 80.8. Notogaster: length 697, height 511, seta *c1* 85.8, *h1* and *ps1* setae 90.9, genitoaggenital plate 117×70.7 , anoanal plate 369×50.5 .

Colour brightly yellow. Integument finely porose. Longitudinal stria-
tions present in front and laterally of rostral setae.

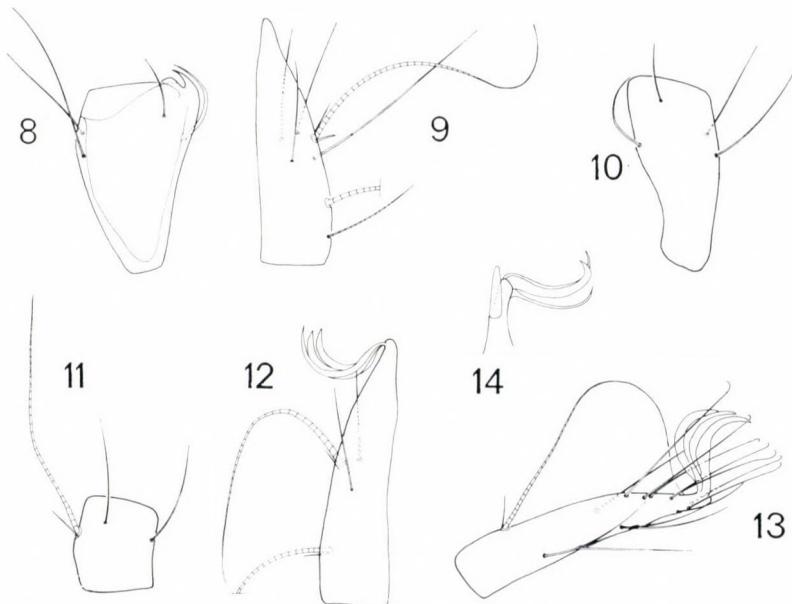
P r o d o r s u m. With two carinae, the upper one thicker, longer and reaches the end of the rostrum. Sensillus long, smooth and filiform. Bothridial scale dorsal to bothridium. Interlamellar setae strongly erect; rostral setae semi-erect and extend beyond the margin of the rostrum. Both are rugose. Lamellar setae are more delicate and procumbent. The exobothridial setae vestigial. — **N o t o g a s t e r.** There are 14 pairs of relatively strong and erect normal setae, poorly rugged ($C1/c1-d1 = 0.7$). Setae *c1* and *c2* far from the anterior margin of notogaster. Seta *c3* near the margin, longer and more slender. Lyrifissures *ia*, *im*, *ip*, *ips*, *ih* are present, as well as vestigial setae *f1* and *f2*. — **V e n t r a l r e g i o n.** Infracapitulum typically euphthiracaroid. Setae *h* of mentum very long. Setae *m* longer than setae *a*. Setae *o* positioned normally. — **A n t e r i o r c a r i n a** (kag) of ano-genital region well developed. Genital plates incompletely delimited antiaxially by a distinct, long suture. The oblique continuation of the ano-genital cleft (trv) long. There are nine pairs



Figs 1—7. *Indorititia propinqua* sp. n.: 1 = prodorsum, dorsal view, 2 = prodorsum, lateral view, 3 = notogaster, lateral view, 4 = seta *c 1*, 5 = genito-aggenital and ano-adanal regions, 6 = posterior part of ano-adanal region, 7 = mentum of infracapitulum

of genital setae arranged in two groups; the four posterior pairs longer. There are two pairs of aggenital setae. — A n a l p l a t e s discrete, each with one pair of setae. Among three pairs of anal setae *ad1* smaller than *ad2* and *ad3*, *ad3* positioned anteriorly, at the level of ano-genital cleft. Anal fissure *iad* posterior of seta *ad2*. Shallow sinus is present at the posterior end of the ventral plicature. Epimeral region with the following setal formulae: 3—0—2—2.

Palps and legs — Palps five-segmented with setal formula: 0—2—0—2—9 and one solenidion on the tarsus as in majority of Oribotri-



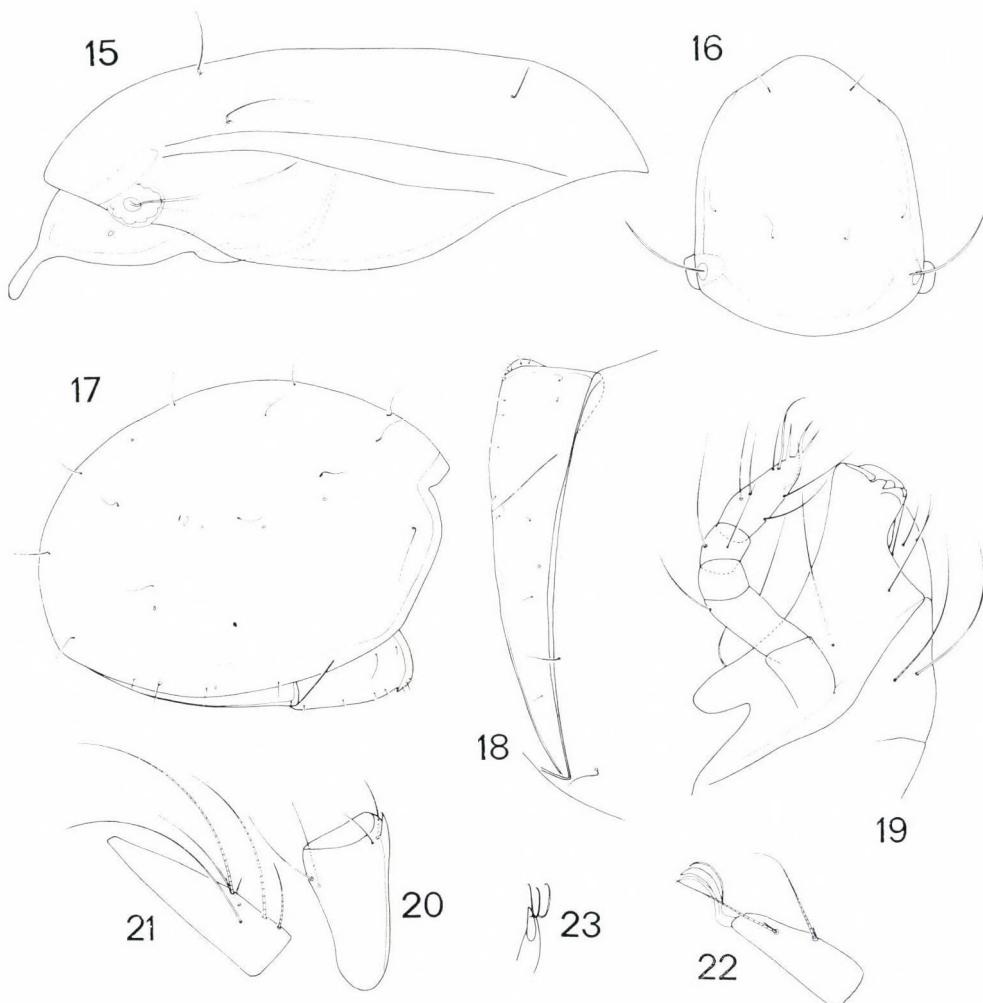
Figs 8—14. *Indotritia propinqua* sp. n.: 8 = femur of leg I, 9 = tarsus of leg I (partly), 10 = femur of leg II, 11 = tibia of leg II, 12 = tarsus of leg II (partly), 13 = tarsus of leg III, 14 = unguinal seta with claws on tarsus IV

tiidae. Legs heterotridactylous. The setal and solenidial formulae (without tarsi I and II) as follows: I: 1—4—5(2)—5(1), II: 1—4—4(1)—3(1), III: 3—2—3(1)—3(1)—13(1), IV: 3—2—2(1)—3(1)—11. All coupled setae short and do not have separate integumental insertions. Femur I hooked dorsodistally. Tarsus I with distal solenidion *w2* with distal coupled seta and famulus. On tarsus II both solenidia coupled with short setae (*ft*). On tarsus IV the paraxial unguinal seta thick and spiniform.

The new species may be distinguished from its congeners by the anterior position of adanal setae *ad2* and *ad3*, especially that of *ad3*. It is similar to *Indotritia javensis* SELLNICK sensu AOKI (1980), but has a setiform sensilus, a longer genito-aggenital suture reaching seta *g4*, seta *ad3* placed anteriorly, *trv* longer, and femur I hooked dorso-distally.

H o l o t y p e and 1 paratype: Sri Lanka, Akurella (Matara district), tropical rain forest, hanging moss, 3 VII 1968, leg. BALOGH et LOKSA (code CMB-B 75).

Holotype deposited in the Department of Systematic Zoology and Ecology of the Eötvös Loránd University, Budapest and one paratype in the Department of Animal Taxonomy and Ecology.



Figs 15—23. *Austrotritia optabilis* sp. n.: 15 = prodorsum, lateral view, 16 = prodorsum dorsal view, 17 = notogaster, lateral view, 18 = genito-agenital and ano-adanal regions, 19 = infracapitulum with palp, 20 = femur of leg I, 21 = tarsus of leg I (partly), 22 = tarsus of leg II (partly), 23 = unguinal seta with claws of tarsus IV

***Austrotritia optabilis* sp. n.**

(Figs 15—23)

M e a s u r e m e n t s o f h o l o t y p e: (in μm) — Prodorsum: length 303, width 232, height 101, sensillus 101, interlamellar seta 40.4, lamellar setae 45.4, rostral setae 25.2, Notogaster: length 571, width 434, height 409, *cl* seta 40.4, *hl* 48, *psl* 45.4, genito-agenital plate 151×85.8 , ano-adanal plate 303×63.1 .

Colour brightly yellow. Integument finely porose.

Prodorsum. Two lateral carinae present, lower one thinner and shorter than upper one. Bothridial scale well developed, dorsally and posteriorly to bothridium. Sensillus long, strong, smooth and tapered. Interlamellar and rostral setae erected rugose. Exobothridial setae vestigial. — **Notogaster.** Fourteen pairs of notogastral setae (not including vestigial setae *f1* and *f2*) of short length, thin and smooth. Setae *c1* and *c2* far from anterior margin of notogaster, seta *c3* longer and near to anterior margin. Seta *e2* placed very low. Lyrifissures *ia*, *im*, *ip*, *ips1*, *ih* present. Latero-opisthosomal gland (*gla*), lyrifissure *ip* and vestigial seta *f2* closely associated. Vestigial seta *f1* between setae *e1* and *h1*. — **Ventral region.** Epimeral setation: 3—0—2—2. The infracapitulum, palp and chelicera typical for the genus. Setae *a*, *m*, and *h* long and smooth, with $m > h > a$ in length. Palp five-segmented with setal formula: 0—2—0—2—9(1). Genital setae in two groups, *g1*—*g5* and *g6*—*g9*. The distances between the setae *g6*—*g9* unequal. Seta *g9* positioned at the posterior end of the plate. Two pairs of aggenital setae present, *ag2* longer than seta *ag1*. One pair of anal setae and three pairs of adanal setae present, *ad2* longer than *ad1* and *ad3*. Adanal fissure *iad* between *ad2* and *ad3*.

Legs. All tarsi tridactylous. Setal and solenidial formulae (without tarsi I and II) as follows: I: 1—4—5(2)—5(1), II: 1—4—4(1)—3(1), III: 3—2—3(1)—3(1)—3(1)—14, IV: 3—2—2(1)—3(1)1—11.

With the major exception of the ventral position of seta *e2* on the notogaster, *A. optabilis* sp. n. is most similar to *A. unicarinata* (AOKI, 1980), but it is easily distinguished by the two prodorsal carinae, the great distance between rostral setae and different setal formulae of legs.

Holotype and 1 paratype: Sri Lanka, Yala, 2 VII 1968, gallery forest, dry litter, 2 VII 1968, leg. BALOGH et LOKSA (code CMB-B 68).

Holotype is deposited in the Department of Systematic Zoology and Ecology of the Eötvös Loránd University, Budapest and one paratype in the Department of Animal Taxonomy and Ecology, Poznań.

REFERENCE

- AOKI, J. (1980): A revision of the oribatid mites of Japan, I. The families Phthiracaridae and Oribotritiidae. — *Bull. Ins. Envir. Sci. Tech.* (Yokohama) **6** (2): 1—88.

PHTHIRACAROIDEA (ACARI, ORIBATIDA) DE LA RÉGION ORIENTALE, II.

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(Arrivé 3 Novembre 1990)

(New Phthiracaroidea species from the Oriental Region II, Acari: Oribatida.)
Description of three new oribatid species from the Indo-Australian Region: *Phthiracarus paratubulus* sp. n., *Notophthiracarus turgidus* sp. n. and *N. unqus* sp. n. With 23 original figures.

Cet article concerne une description de trois espèces nouvelles des Phthiracaroidea. Deux espèces ont été collectées dans les échantillons provenant de Sri Lanka. Il est à noter que *Phthiracarus paratubulus* sp. n. a été accompagné de *Phthiracarus pygmaeus* BALOGH, 1958 et de *Plonaphacarus kugohi* (AOKI, 1959) tandis que *Notophthiracarus turgidus* sp. n. séjournait seul parmi d'autres Phthiracaroidea. Troisième espèce, *Notophthiracarus unqus* sp. n. a été trouvée dans un échantillon de Borneo avec *Phthiracarus opacus* NIEDBALA, 1986 et *Apoplophora ornatissima* MAHUNKA, 1988.

Ces échantillons m'ont été gracieusement fournis par Mme. Dr. V. BEHAN—PELLETIER (Ottawa) et PROF. J. BALOGH (Budapest), j'adresse donc mes sincères remerciements pour leur générosité.

Phthiracarus paratubulus sp. n.

(Fig. 1—6)

D i m e n s i o n — Prodorsum: longueur 162* largeur 129, hauteur 63.2, sensillus 86, poils: interlamellaires 58.2, lamellaires 25.3, rostraux 40.5, notogaster: longueur 306, largeur 210, hauteur 185, poils: *cl* 37.9, *hl* 40.5, *psl* 35.4, *cl/cl-dl* = 0,5, plaques: génito-aggénitale 75,9 × 78,4, plaque ano-adanale 147 × 93,6.

Couleur jaune, claire. La surface du prodorsum et de la plaque génito-aggénitale est couverte des concavites minces et la surface du notogaster et de la plaques ano-adanales est en forme de mosaïque distincte.

P r o d o r s u m avec des régions courtes et indistinctes. Carène latérale forte. Sensillus long et lancéolé. Poils interlamellaires longs couverts d'épines, poils rostraux et lamellaires lisses. La distance entre des poils interlamellaires n'est qu'un peu plus grande que celle des poils rostraux. Poils exobothridiques sont invisibles. — **N o t o g a s t e r** avec 15 paires de poils normaux, forts, barbelés. Poils *c1* et *c2* écartés du limbe antérieur, poil *c3* près du limbe. Poils vestigiaux *f1* situés au-niveau des poils *hl*. Poils vestigiaux *f2* et lyrifissures

* Toutes les dimensions sont en μm .

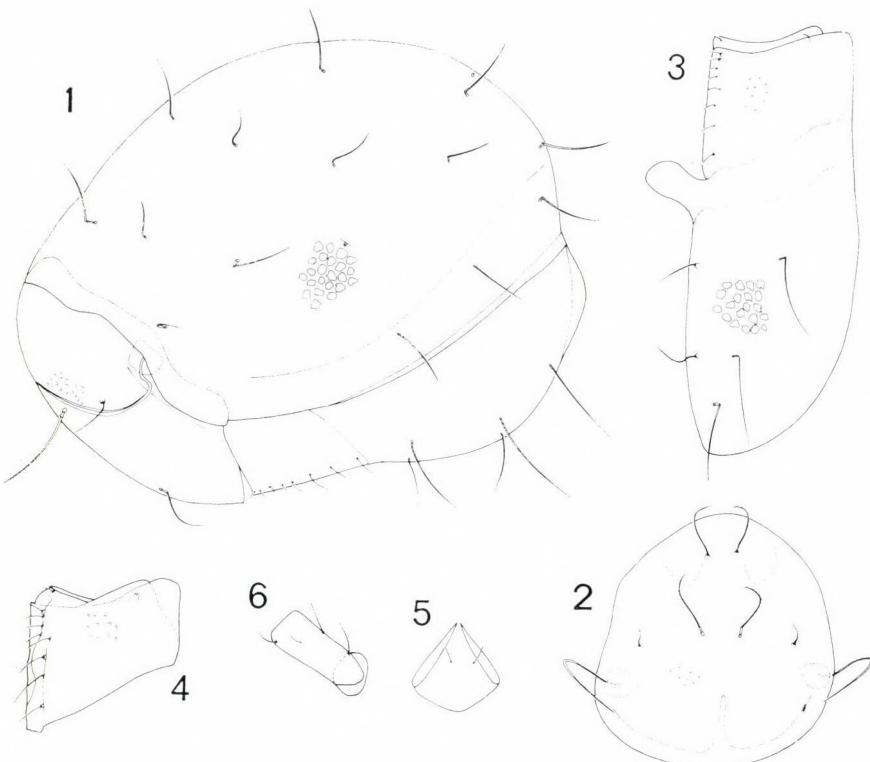


Fig. 1—6. *Phthiracarus paratubulus* sp. n.: 1 = corps, vue latérale, 2 = prodorsum, vue dorsale, 3 = plaques: génito-aggénitale et ano-adanale, 4 = plaque génito-aggénitale, 5 = menton de l'infracapitulum, 6 = trochanter et fémur de la patte I

ne sont pas discernables. — Région ventrale. La longueur des poils *h* du menton est égale à la distance entre eux. Sur la plaque génito-aggénitale il y a 9 poils génitaux et un poil aggénital. Poil *g1* est écarté du poil *g2*. Plaque ano-adanale avec 5 poils bien développés, poils anaux largement séparés. Poil *ad2* le plus longs, $ad2 > ad3 > ad1 > an$. — Pattes avec une chaetotaxis incomplète. Il manque des poils: *v'* sur le femur I, *s* sur le tarse I et *l* sur le génual IV.

Cette espèce est très proche au *P. tubulus* (HAMMER, 1972). Mais chez cette dernière les poils interlamellaires et gastronomiques sont plus fins, poil *c3* est éloigné du limbe antérieur, il n'y a pas de dessin de mosaïque sur le notogaster et sur la plaque ano-adanale. En plus l'arrangement et le nombre des poils génitaux est différent.

Holotype et 10 paratypes: Sri Lanka, Kalutara, marécage, littière, 19 VI 1968, leg. BALOGH (code CMB-B 14).

Holotype et 5 paratypes sont déposés au Department of Systematic Zoology and Ecology of the Eötvös Loránd University, Budapest; 5 paratypes au Department of Taxonomy and Ecology, A. Mickiewicz University, Poznań.

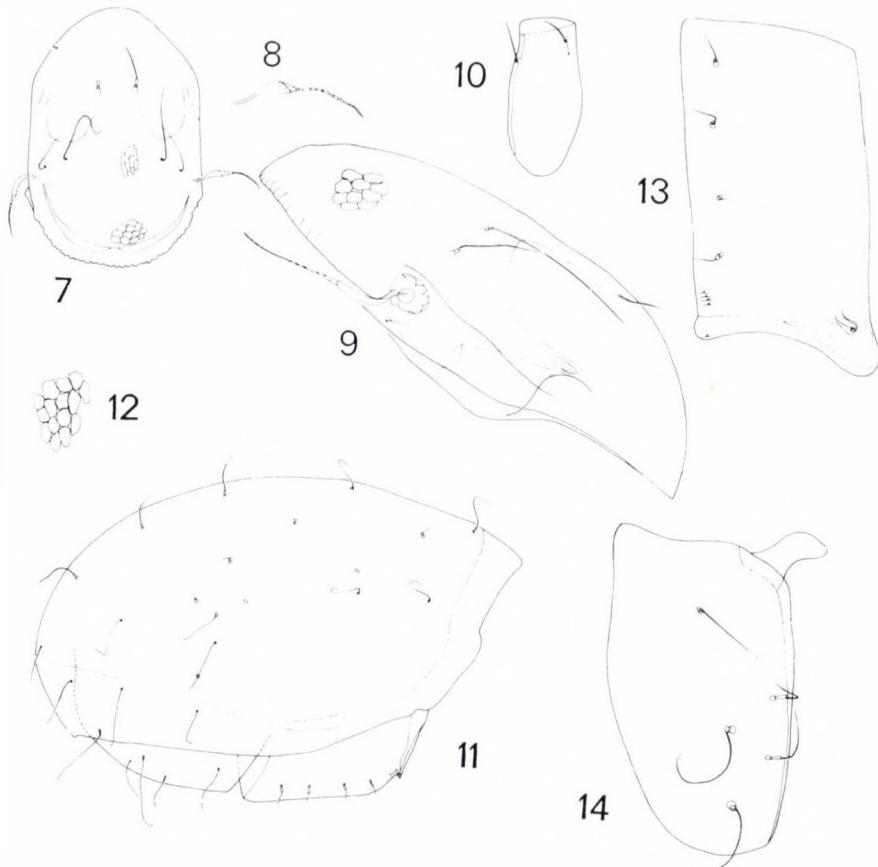


Fig. 7—14. *Notophthiracarus turgidus* sp. n.: 7 = prodorsum, vue dorsale, 8 = sensillus, vue dorsale, 9 = prodorsum, vue latérale, 10 = fémur de la patte I, 11 = notogaster, vue latérale, 12 = structure de la surface du notogaster, 13 = plaque génito-aggénitale, 14 = plaque ano-adanale

***Notophthiracarus turgidus* sp. n.**
(Fig. 7—14)

D i m e n s i o n s — Prodorsum: longueur 273, largeur 182, hauteur 106, sensillus 106, poils: interlamellaires 86, lamellaires 48,1, rostraux 30,4, exobothriques 12,6, notogaster: longueur 505, largeur 348, hauteur 293, poils c1 60,6, c1/c1-d1 0,43, plaques génito-aggénitales $159 \times 91,1$ ano-adanales $159 \times 88,5$.

Couleur rougeâtre. Surface du prodorsum est couverte en arrière de la mosaïque polygonale. Les plaquettes sont allongées vers l'avant et disparaissent près des poils rostraux. Surface du notogaster est couverte de la mosaïque polygonale.

P r o d o r s u m avec le bord postérieur ondulé, la forme normale mais courte. Carène latérale est distincte et terminée sur le sinus. Poils flagelliformes, fins, *in>le>ro>ex*. Poils rostraux écartés du bout du rostre. Sensillus long, enflé au milieux et se retrécit vers le bout distale, la partie distale est rugueuse. — **N o t o g a s t e r** avec 17 paires de poils flagelliformes. Poils *f1* et *f2* ne sont pas vestigiaux mais aussi flagelliformes. Poils *c1* et *c3* sont éloignés du limbe antérieur, poils *c2* sont loin du limbe. Quatre paires de lyrifissures *ia*, *im*, *ip*, *ips* sont présentes. — **R é g i o n v e n t r a l e:** Poils du menton sont un peu plus longs que la distance entre eux. Plaque génito-aggénitale avec 9 paires de poils d'après une formule 8: 1, poil *g1* écarté du poil *g2*. Un poil aggénital dans sa place normale. Plaque ano-adanale avec 5 poils bien développés, flagelliformes, *ad2>ad1>ad3>an*. — **P a t t e s** avec une chaetotaxie incomplète. Il manque du poil *v'* sur le fémur I et du poil *s* sur le tarse I.

Cette espèce est un peu semblable à *Hoplophorella armata* MAHUNKA 1986 par la forme du sensillus et la structure de la surface du corps, mais il y a beaucoup d'autres différences qui séparent ces deux espèces.

H o l o t y p e and 6 paratypes: Sri Lanka, Novara Elya, extracted from the humus under *Patna*-grass grown at the edge of a moss-forest, 23 June 1968, leg. J. BALOGH (code CMB-B29).

Holotype et 3 paratypes sont déposés au Department of Systematic Zoology and Ecology of the Eötvös Loránd, University, Budapest, 3 paratypes au Department of Taxonomy and Ecology, A. Mickiewicz University, Poznań.

Notophthiracarus unqus sp. n.

(Fig. 15—23)

D i m e n s i o n s — Prodorsum: longueur 303, largeur 217, hauteur 141, sensillus 40,4, poils; interlamellaires 116, lamellaires 15,1, rostraux 45,4; notogaster; longueur 577, hauteur 425; poils *c1* 121, *h1* 106, *psl* 126.

Couleur brune, foncée. Surface du corps est couverte des concavités profondes.

P r o d o r s u m. Région dorsale plus longue que les latérales. Sillons à l'arrière distincts. Carène latérale absente. Sensillus en forme de la massue. La tête ronde est couverte des épines fines. Poils interlamellaires robustes, épais, couverts d'épines dans la moitié distale. Poils rostraux épais, spiniformes, rugueux. Poils lamellaires minuscules, poils exobothridiques vestigiaux. — **N o t o g a s t e r** avec 15 paires de poils normaux, robustes, assez longs (*c1/c1-d1-0,89*). Poils *c3* près du limbe antérieur, poil *c1* un peu éloigné, poil *c2* loin du limbe. Poils vestigiaux *f1* situés au-dessous des poils *h1*. Trois paires de lyrifissures *ia*, *im*, *ip* bien visibles. — **R é g i o n v e n t r a l e:** Poils *h* du menton plus courts que la distance de ces poils. Plaque génito-aggénitale avec 9 poils génitaux et un poil aggénital. Formule des les poils génitaux est: (4 + 2): 3. Plaque ano-adanale avec 5 poils rugueux, poil *ad2* est le plus long et courbé

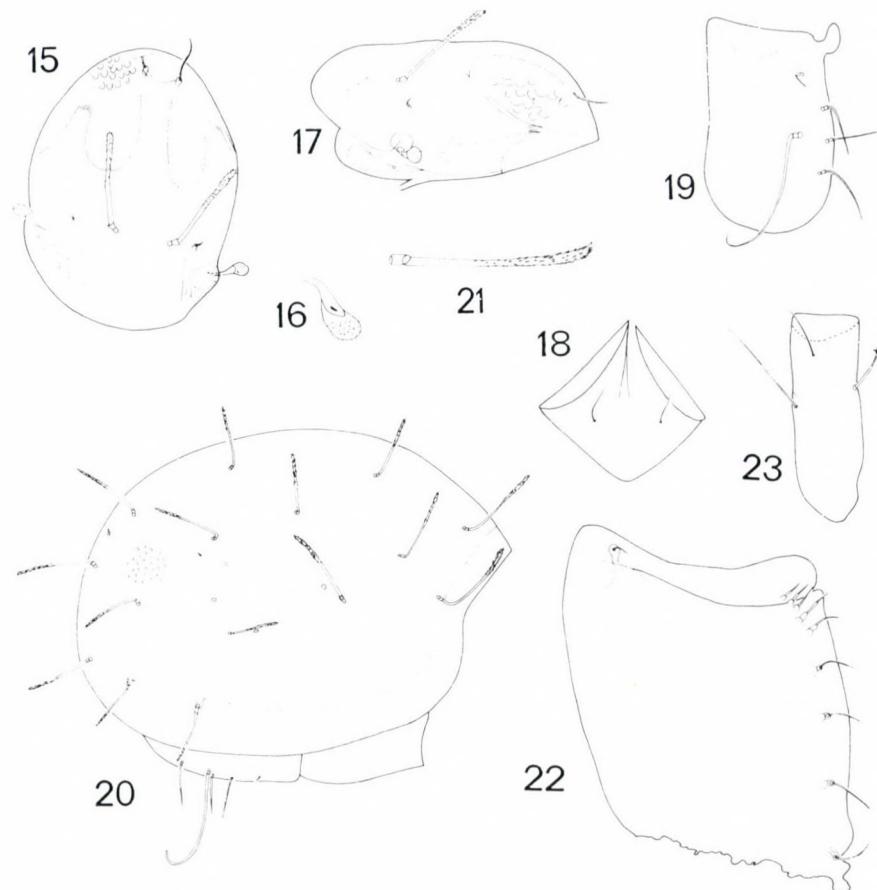


Fig. 15—23. *Notophthiracarus unqus* sp. n.: 15 = prodorsum, vue dorsale, 16 = sensillus, vue dorsale, 17 = prodorsum, vue latérale, 18 = menton de l'infracapitulum, 19 = plaque ano-adanale, 20 = notogaster, vue latérale, 21 = poil *c3*, 22 = plaque génito-aggnitale, 23 = fémur de la patte I

au bout distale, poil *ad1* un peu plus long que les poils anaux, poil *ad3* est minuscule. — P a t t e s avec une formule des poils complète. Poil *d* sur le fémur I est bifurqué au bout distal. Poils: *a''* sur le tarse I et *a''* et *ft''* sur le tarse II sont courbés au bout distal.

L'espèce nouvelle est apparentée aux *Notophthiracarus mahunkai* NIEDBALA, 1987 et *N. quietus* NIEDBALA, 1989 mais elle se distingue d'eux par la forme des poils rostraux, l'absence de la carène latérale du prodorsum, la forme des poils gastronotiques, trois paires de lyrifissures, l'arrangement des poils génitaux, la forme du poil *ad2* et enfin par la chaetotaxie complète des pattes.

H o l o t y p e: Borneo, Sabah Mt., Kinabalu N. P. Sumit Trail Pondok Ubah 2050 m 26 IV 1987, A. SMETANA.

Holotype est déposé à l'Institute de Recherche Biosystématique, Ottawa.

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BRACONIDAE (HYMENOPTERA) FROM MONGOLIA, XI.*

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(Received 13th November 1990)

Seventeen braconid species belonging to the subfamily Alysiinae are reported from Mongolia. Two species, *Alysia betela* sp. n. and *Alysia obasa* sp. n., proved to be new to science. Female sex of *Pentapleura nigripes* TOBIAS is described. Twelve species are new to the fauna of Mongolia. With 18 original figures.

1. List of the species

Seventeen species of the braconid subfamily Alysiinae (Alysiini) are listed from the Republic of Mongolia. In the subsequent faunistical enumeration both the genera and the species are arranged in alphabetical order and, furthermore, the number of the respective species within the genera are indicated in brackets: *Alysia* LATREILLE (9 species), *Anisocyrta* FÖRSTER (1 species), *Cratospila* FÖRSTER (1 species), *Dapsilarthra* FÖRSTER (1 species), *Idiasta* FÖRSTER (1 species), *Orthostigma* RATZEBURG (2 species) and *Pentapleura* FÖRSTER (2 species). Detailed collecting data are given for every species in an abbreviated form, i.e. only the collecting numbers ("No.") are indicated after the species names, the full collecting data (name of localities, dates, etc.) are listed separately before the faunistic enumeration. Where necessary, taxonomic, faunistic and zoogeographic notes are added. The braconid material was collected by the late DR. Z. KASZAB, well-known specialist of Tenebrionidae / Meloidae and ordinary member of the Hungarian Academy of Sciences; the braconid material is deposited in the Hungarian Natural History Museum, Budapest (see also KASZAB's six reports of his collecting trips to Mongolia in *Folia ent. hung.* 1963–1968 vols 16–21).

- No. 273. Central aimak: Ulan-Bator, Nucht im Bogdo ul, 12 km SO vom Zentrum, 1500 m, am Waldrande vom Unterholz und im Tale an der Steppenwiese von der Pflanzen gekötschert, 6. VII. 1964.
- No. 297a. Same as No. 273, 1600 m, 5 Bodenfallen mit Ethylenglykol an der steinigen, steppigen Bergseite südlicher Exposition, 22. VII.–27. VIII. 1965.
- No. 377. Suchebaator aimak: Fluss Bajan gol, 85 km NO von Somon Dariganga, 1100 m, im Tal von den feuchten Stellen gekötschert, 8. VIII. 1965.
- No. 504. Central aimak: Songino, 24 km SW von Ulan-Bator, 1300 m, im Galeriewald des Überschwemmungsgebietes gekötschert, 7. VI. 1966.

* Ergebnisse der zoologischen Forschungen von Dr. Z. KASZAB in der Mongolei, Nr. 500.

- No. 693. Gobi Altaj aimak: Chasat chajrchan ul Gebirge, cca 20 km S von Somon Žargalan, 2400 m, in einem nach W geöffneten Tal mit sehr üppiger Vegetation, blumenreichen Wiesen, vor allem in einem Wasserriss bis zur Waldgrenze, gekötschert, 15—16. VII. 1966.
- No. 746. Same as No. 273, 1800—2000 m, vom Gestreuch und von dem Unkraut gekötschert, 27. VII. 1966.
- No. 749. Central aimak: SO von Somon Bajanzogt, 1600 m, von der üppigen Vegetation am Talgrund und am Waldrand gekötschert, 27. VII. 1966.
- No. 751. Same as No. 749, 1600 m, sammeln nachts bei Lampenlicht (um 22^h: 12°; 3^h in der Nacht: 12°; früh morgens: 11°), morgens Regen, 27. VII. 1966.
- No. 771. Central aimak: 11 km S vom Pass Zosijn davaa, 90 km S von Ulan-Bator, 1650 m, an der Gebirgsteppe, vorwiegend neben den Wasserrissen, von Blumen (*Thermopsis*, *Rosa*, *Prunus*, usw.) gekötschert, 7. VI. 1967.
- No. 794. Südgobi aimak: Gurban Sajchan ul Gebirge, 15 km S von der Stadt Dalanzadgad, 1750 m, von *Amygdalus* geklopft, 13. VI. 1967.
- No. 926. Central aimak: Tosgoni ovoo, 5—10 km N von Ulan-Baator, 1500—1700 m, gekötschert, 19—20. und 23—24. VII. 1967.
- No. 926a. Same as No. 926, 1700—1900 m, gekötschert am Waldrand und in den Hochgebirgssteppen, 23—24. VII. 1967.
- No. 1082.Uvs aimak: 10 km NW von Somon Naranbulag, 1350 m, Sandhügeln auf mit Kiespanzer bedeckten Boden, am Sand mit blühenden Gräsern, der Kiespanzer mit ausserst spärlicher *Caragana*-Vegetation, sonst sehr öde. Gekötschert, 9. VII. 1968.
- No. 1135. Bulgan aimak: Namnan ul Gebirge, 23 km NW von Somon Chutag, 1150 m, an den Berghängen junger Nadelholzwald und Birkenwald, im letzteren mit alleinstehenden, sehr alten Birken- und sibirischen Zedern. Am Talgrund neben dem Bach Weidengebüsch und ausgedehnte Gebirgssteppe. In den Wasserrissen und an den Waldrändern sehr üppige Vegetation mit Doldenblüttern. Gekötschert, 21. VII. 1968.

ALYSIINAE

Alysia (Anarcha) atra HALIDAY, 1838 — Deviation from the redescription (WHARTON 1988: 23—25): (1) in lateral view ovipositor sheath about 0.6 times as long as mesosoma (and not “1.3—1.4 times”), i.e. about as long as hind tibia; (2) in dorsal view eye as long as temple. — Reported from Ireland, England, Norway, Switzerland in the Palaearctic Region and Iceland, (?) Canada (Yukon Territory) in the Nearctic Region. New to the fauna of Mongolia.

Locality — 1 ♀: No. 693.

Alysia (Alysia) betela sp. n.: description see p. 220.

Alysia (Alysia) frigida HALIDAY, 1838 — Widely distributed in the Nearctic Region, in the western Palaearctics known from Norway and Sweden. New to the fauna of Mongolia. Locality — 2 ♀♀: No. 926a.

Alysia (Alysia) lucia HALIDAY, 1838 — It seems a Holarctic species, this is the first report of its distribution in the eastern Palaearctic Region. New to the fauna of Mongolia.

Locality — 1 ♂: No. 1135.

Alysia (Alysia) luciella STELFOX, 1941 — Described from Ireland, reported from Sweden, European part of the USSR (Leningrad region, Ural Mts) as well as from Canada and U.S.A. New to the fauna of Mongolia.

Locality — 1 ♀: No. 749.

Alysia (Alysia) manducator (PANZER, 1799) — Reported from Mongolia by me (PAPP 1967).

Localities — 1 ♀: No. 273. 4 ♀♀: No. 297a.

Alysia (Anarcha) obasa sp. n.: description see p. 222.

Alysia (Anarcha) sophia HALIDAY, 1838 — Known in the northern half of Europe eastwards to European Russia. New to the fauna of Mongolia.

Locality — 1 ♀: No. 751.

Alysia (Anarcha) tipulae (SCOPOLI, 1763) — A Palaearctic and sporadic to frequent species. New to the fauna of Mongolia.

Locality — 1 ♂: No. 926.

Anisocyrta perdita (HALIDAY, 1838) — In Europe frequent, its Nearctic distribution needs a confirmation. New to the fauna of Mongolia.

Localities — 1 ♂: No. 746. 1 ♂: No. 926a.

Cratospila circce (HALIDAY, 1838) — Distributed in Europe; new to the fauna of Mongolia. Locality — 1 ♂: No. 926a.

Dapsilarthra rufiventris (NEES, 1814) — A western Palaearctic and rather frequent species. New to the fauna of Mongolia.

Locality — 1 ♂: No. 504.

Idiasta paramaritima KÖNIGSMANN, 1960 — Reported from Germany and the USSR (Ukraine). New to the fauna of Mongolia.

Locality — 1 ♂: No. 377.

Orthostigma breviradiale KÖNIGSMANN, 1969 — Rare species, hitherto known from Austria and Czechoslovakia. New to the fauna of Mongolia.

Locality — 1 ♂: No. 771.

Orthostigma pumillum (NEES, 1834) — Reported from Mongolia by me (PAPP 1967).

Locality — 2 ♀♀: No. 926a.

Pentapleura nigripes TOBIAS, 1975, ♀ new — The species was described by TOBIAS (1975) on the basis of four male specimens from Mongolia. Taking into consideration the description of the male sex the female differs in a few respects:

Females

1. Head in dorsal view 1.63—1.64 times as broad as long.
2. Antenna short, as long as head, mesosoma and tergites 1—2; with 21—22 antennomeres; first flagellomere three times and penultimate flagellomere 1.5 times as long as broad.
3. Pterostigma 4—5 times as long as wide, *rl* half as long as width of pterostigma.
4. Metasoma elongated, about one-fifth longer than head + mesosoma together, laterally compressed (Figs 1—2).
5. First tergite 2.6 times as long as broad at hind, hardly broadening posteriorly, pair of spiracles at its middle (Fig. 3). — Ovipositor sheath (with ovipositor) curving upwards, as long as hind tibia + basitarsus (Fig. 2).

Locality — 1 ♀: No. 926. 1 ♀: No. 1082.

Males

1. Head in dorsal view 1.5 times as broad as long.
2. Antenna long, longer than body, with 28—35 antennomeres; first flagellomere ? times and penultimate flagellomere twice as long as broad.
3. Pterostigma five times as long as wide; *rl* half as long as width of pterostigma.
4. Metasoma length and form not indicated in the original description.
5. "First tergite of metasoma twice shorter than broad at hind." (TOBIAS 1975: 309).

Pentapleura pumilio (NEES, 1812) — Reported from Mongolia by me (PAPP 1967). Localities — 1 ♀: No. 377. 1 ♀: No. 794. 1 ♀: No. 926a.

2. Description of the new species

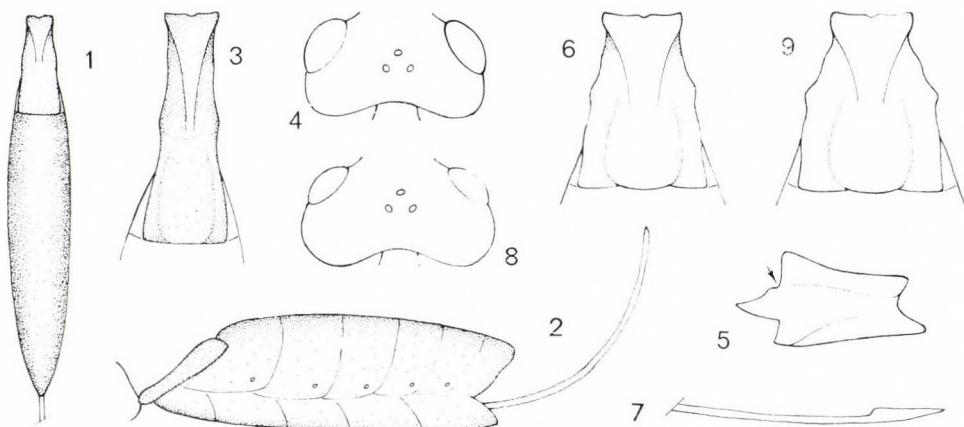
Two species are described as new to science, they are as follows: *Alysia* (*Alysia*) *betela* sp. n. and *Alysia* (*Anarcha*) *obasa* sp. n. The subgeneric arrangement is applied in the sense of WHARTON's (1988) assignment.

Alysia (Alysia) betela sp. n. ♀
 (Figs 4—6, 10)

D e s c r i p t i o n o f t h e h o l o t y p e ♀ — Body 3.8 mm long. Head in dorsal view transverse (Fig. 4), 1.88 times as broad as long, eye one-third longer than temple, latter rounded. Ocelli small, elliptic; distance between two ocelli just longer than greatest diameter of an ocellus; OOL distinctly three times as long as POL. In lateral view eye 1.38 times as high as wide and as wide as temple. Mandible 1.5 times as long as broad, moderately broadening distally, between teeth 1 and 2 faintly incised (Fig. 5 ↓). Head polished, face medially rugulose, laterally almost smooth, shiny. — Antenna short, as long as head, mesosoma and half metasoma, with 29 antennomeres. First flagellomere 2.66 times as long as broad, flagellomeres 2—10 subcubic (i.e. gradually shortening), further flagellomeres cubic; flagellum hairy, hairs about two-thirds as long as breadth of flagellomeres.

Mesosoma in lateral view 1.4 times as long as high. Notauli restricted to anterior declivous part of mesonotum, rugose. Midpit of mesonotum linear-form and reaching anteriorly up to imaginary transverse line between tegulae. Sternaulix long, crenulated. Mesosoma polished. Propodeum rugose with a transverse carina issuing anteriorly a medio-longitudinal (short) keel, spiracles small. — Fore femur four times, middle femur five times and hind femur 4.4 times as long as broad. Hind tibia somewhat longer than hind tarsus, hind basitarsus just shorter than tarsal segments 2—4.

Fore wing as long as body. Pterostigma (Fig. 10) 2.66 times as long as wide, issuing radial vein from its middle; r_1 long, half as long as r_2 , r_2 one-



Figs 1—3. *Pentapleura nigripes* TOBIAS ♀: 1 = metasoma in dorsal view, 2 = metasoma in lateral view, 3 = first tergite. — Figs 4—7. *Alysia (Alysia) betela* sp. n.: 4 = head in dorsal view, 5 = left mandible, 6 = first tergite, 7 = ovipositor. — Figs 8—9. *Alysia (Alysia) fuscipennis* HALIDAY: 8 = head in dorsal view, 9 = first tergite

fourth shorter than *cugul*, *r*₃ four times as long as *r*₂ and approaching tip of wing; *n. rec.* interstitial. Postnervellus faintly distinct.

Metasoma as long as head and mesosoma together. First tergite (Fig. 6) 1.33 times as long as broad at hind, evenly broadening from base to its hind end, pair of spiracles somewhat anteriorly from middle; pair of converging basal keels reaching hind half of tergite; surface of tergite with fine longitudinal striation, shiny. Further tergites polished. — Ovipositor sheath long, in lateral view almost as long as hind tarsus. Ovipositor apicodorsally with a notch (Fig. 7).

Body black. Mandible black, its middle tooth rusty. Palpi pale. Scape and pedicel blackish brown, flagellum blackish, legs brownish yellowish. Tegula brown, parategula brownish yellow. Wings subhyaline pterostigma and veins brown.

♂ and host unknown.

Type material — Holotype ♀: Mongolia, Central aimak: Ulan-Baator, Nucht in Bogdo ul, 1600—1700 m, Bodenfallen mit Ethylenglycol im Walde, auf der nördlichen Bergseite, 22 VII—27. VIII. 1965, leg. Z. KASZAB, No. 297b.

Eymology — The specific epithet "betela" is a phantasy name; gender feminine.

The new species, *Alysia (Alysia) betela* sp. n., is related to *A. brachycera* THOMSON, 1895 (Sweden, USSR: Leningrad region, Canada, USA) by its short antenna and to *A. fuscipennis* HALIDAY, 1838 (Europe) by its subhyaline to fumous wings and dark-coloured legs. The three species are differentiated with the following features:

A. betela sp. n.

1. Pterostigma issuing radial vein from its middle; *rl* long, half as long as *r*₂; *n. rec.* interstitial (Fig. 10).
2. Ovipositor sheath long, in lateral view almost as long as hind tarsus.
3. First tergite evenly broadening from its base to hind end (Fig. 6).
4. Between teeth 1 and 2 of mandible a faint though distinct incision (Fig. 5 ↓).
5. Mandible black, tooth 2 rusty; legs brownish yellowish.

A. betela sp. n.

1. Ovipositor before its apex with a dorsal notch (subgeneric distinction) (Fig. 7).
2. Antenna shorter than body; flagellomeres 2—10 subcubic, further ones cubic.

A. brachycera THOMSON

1. Pterostigma issuing radial vein distinctly distal from its middle; *rl* short, clearly less than half as long as *r*₂; *n. rec.* faintly postfurcal (Abb. 1 in FISCHER 1971: 28; Fig. 35 in WHARTON 1986: 464).
2. Ovipositor sheath short, about as long as hind basitarsus.
3. First tergite clearly broadening from its base to spiracles, beyond spiracles subparallel-sided (Fig. 44 in WHARTON 1986: 466).
4. Between teeth 1 and 2 of mandible without incision (Fig. 7 in WHARTON 1986: 458).
5. Mandible reddish yellow, tegulae and legs yellow.

A. fuscipennis HALIDAY

1. Ovipositor before its apex without a dorsal notch (Fig. 61 in Wharton 1988: 64).
2. Antenna at least as long as body; every flagellomere longer than broad, penultimate one 1.3—1.5 times as long as broad.

- 3. Pterostigma issuing radial vein from its middle; r_1 long, half as long as r_2 (Fig. 10).
- 4. In dorsal view temple not broadening behind eyes (Fig. 4).
- 5. First tergite evenly broadening from its base to hind end, pair of spiracles anteriorly from its middle (Fig. 6).
- 6. Wings rather subhyaline.
- 3. Pterostigma issuing radial vein distally from its middle; r_1 short, clearly less than half as long as r_2 (Abb. 1 in FISCHER 1. c.).
- 4. In dorsal view temple broadening behind eyes (Fig. 8).
- 5. First tergite broadening from its base to spiracles, beyond spiracles subparallel-sided, pair of spiracles about at its middle (Fig. 9).
- 6. Wings fumous.

Alysia (Anarcha) obasa sp. n. ♀
(Figs 11—14)

Description of the holotype ♀ — Body rather gracile, 2.5 mm long. Head in dorsal view (Fig. 11) transverse, 1.79 times as broad as long, eye just longer than temple, latter rounded (i.e. not broadening). Ocelli small and elliptic, distance between fore and a hind ocelli as long as greatest diameter of an ocellus; OOL almost three times as long as POL. In lateral view eye 1.53 times as high as wide, temple minutely wider than eye. Mandible 1.4 times as long as broad, moderately broadening distally, between teeth 1 and 2 no incision. Head polished, face almost smooth to smooth and shiny. — Antenna short, somewhat shorter than body, with 25 antenomeres. First flagellomere 3.6 times as long as broad, further flagellomeres gradually shortening so that penultimate one 1.5 times as long as broad. Flagellum hairy, hairs about half as long as breadth of flagellomeres.

Mesosoma in lateral view 1.5 times as long as high. Notauli restricted to declivous part of mesonotum, crenulated. Midpit of mesonotum deep linear-form, finely crenulated, reaching anteriorly up to imaginary transverse line between tegulae. Sternaulix short and rather wide, i.e. on fore half of mesopleuron, crenulo-rugulose. Propodeum rugose, spiracles small. — Fore femur four times, middle femur five times and hind femur also five times as long as broad. Hind tibia and tarsus equal in length, hind basitarsus slightly shorter than tarsal segments 2—3 together.

Fore wing somewhat longer than body. Pterostigma (Fig. 12) 3.6 times as long as wide, issuing radial vein from its distal third; r_1 half as long as width of pterostigma, r_2 three times as long as r_1 and as long as $cuqu_1$ and twice as long as $cuqu_2$, r_3 3.26 times as long as r_2 and reaching tip of wing; $n. rec.$ interstitial. Postnervellus distinct.

Metasoma as long as head and mesosoma together. First tergite (Fig. 13) 1.63 times as long as broad at hind; up to spiracles somewhat more beyond spiracles less broadening posteriorly, pair of spiracles before middle of tergite; pair of converging keels meeting about middle of tergite. Surface of tergite beyond spiracles finely and longitudinally striated. Further tergites

polished. Ovipositor sheath long, in lateral view as long as hind tibia; ovipositor apically pointed (Fig. 14).

Body black. Mandible brownish yellow. Palpi pale. Scape and pedicel brown, flagellum dark brown. Legs brownish, hind coxa with blackish tint basally. Tegulae yellow. Wings subhyaline, pterostigma and veins opaque brownish.

♂ and host unknown.

Type material — Holotype ♀: Mongolia, Chövsgöl aimak, 3 km SW von Somon Burenchan, 1650 m, Ethylenglycol-Bodenfallen, eingegraben in einem breiten, steinigen, öden Gebirgstal neben einem Wasserriss, 21. VI.—16. VII. 1968, leg. KASZAB, No. 993.

Etymology — The specific epithet "obasa" is a phantasy name, gender feminine.

The new species, *Alysia (Anarcha) obasa* sp. n., runs to *A. mandibulator* (NEES, 1812) (northern half of Europe) with the help of FISCHER's key to the European species of *Alysia* (FISCHER 1971), and to *A. similis* (NEES, 1814) (England, Germany) with TOBIAS's key to *Alysia* species of the European part of the USSR (TOBIAS 1986). Running over WHARTON's key (1988) the new species stands nearest both to *A. atra* HALIDAY, 1838 (Europe, ?Canada) and to *A. mandibulator* (NEES). The four species are distinguished by the features disclosed in a tabular form:

A. obasa sp. n.

1. Face smooth and glistening.
2. Antenna with 25 antennomeres.

A. mandibulator (NEES)

1. Face granular and matt.
2. Antenna with 31—36 antennomeres.

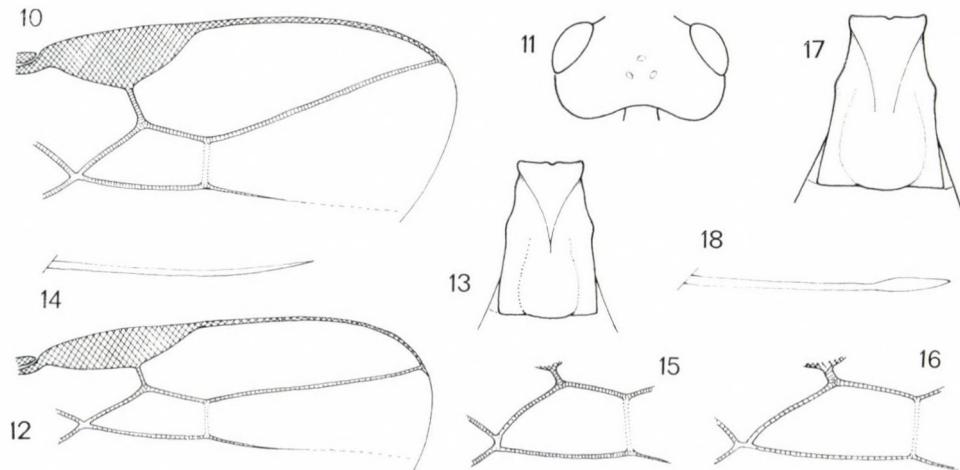


Fig. 10. *Alysia (Alysia) betela* sp. n.: distal part of right fore wing. — Figs 11—14. *Alysia (Anarcha) obasa* sp. n.: 11 = head in dorsal view, 12 = distal part of right fore wing, 13 = first tergite, 14 = ovipositor. — Fig. 15. *Alysia (Anarcha) mandibulator* (NEES): second cubital cell (Cu_2). — Figs 16—18. *Alysia (Anarcha) atra* HALIDAY: 16 = second cubital cell (Cu_2), 17 = first tergite, 18 = ovipositor

3. Cu_2 narrow, r_2 twice as long as c_{uqu2} (Fig. 12).
 4. Body rather gracile, 2.5 mm long.
3. Cu_2 wide, r_2 slightly longer than c_{uqu2} (Fig. 15).
 4. Body rather strong (but not robust), 3.5–5 mm long.

A. obasa sp. n.

1. Flagellomeres cylindric, clearly longer broad.
 2. Cu_2 long, r_2 twice as long as c_{uqu2} (Fig. 12).
 3. Ovipositor sheath almost as long as metasoma.

A. obasa sp. n.

1. Antenna with 25 antennomeres.
 2. Face smooth and shiny.
 3. Cu_2 relatively long, r_2 twice as long as c_{uqu2} (Fig. 12).
 4. First tergite 1.6 times as long as broad at hind (Fig. 13).
 5. Ovipositor more pointed apically (Fig. 14).

A. similis (NEES)

1. Flagellomeres cubic except proximal 3–4 ones.
 2. Cu_2 short, similar to that of *A. mandibulator* (cf. Fig. 15).
 3. Ovipositor sheath about half as long as metasoma.

A. atra HALIDAY

1. Antenna with 28–32 antennomeres.
 2. Face granular and matt.
 3. Cu_2 relatively less long, r_2 about 1.5 times as long as c_{uqu2} .
 4. First tergite 1.25–1.35 times as long as broad at hind (Fig. 17).
 5. Ovipositor less pointed apically (Fig. 18).

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ORIENTAL LIMOSININAE: NEW SPECIES AND RECORDS (DIPTERA, SPHAEROUCERIDAE)

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Seven new species of the subfamily Limosininae are described from the Oriental region: *Terrilimosina intricata* sp. n. (Pakistan, Nepal), *Aptilotus appendix* sp. n. (Nepal), *Paralimosina eximia* sp. n. (Indonesia, W. Flores), *Opalimosina stepheni* sp. n. (Nepal), *Opacifrons brevisecunda* sp. n. (Sri Lanka, India), *Opacifrons cederholmi* sp. n. (Sri Lanka) and *Leptocera* (*Leptocera*) *stenodisoidalis* sp. n. (Sri Lanka). New faunistic data for 31 known limosinine species are given. The genitalia of *Indiosina loebli* L. PAPP, 1981, “*Leptocera (Limosina)*” *monorbiseta* DEEMING, 1969 and *Opacifrons pseudimpudica* (DEEMING, 1969) were also studied and several drawings are given. A key is constructed to the identification of the Oriental species of genus *Opacifrons* DUDA. With 59 original figures.

In the sixties and seventies the approach that the progress in the science of insect taxonomy is far better served by revisory papers rather than those ones, which are published for faunistical lists (including descriptions of new species) of each “big” expeditions became more intensive also in dipterology as well. The “expedition” papers are inevitably less accurate (less comparative) in descriptions of new species and there is always a threat to misidentify “known” species from unknown faunas in lack of careful comparisons with type-specimens.

Through the kind assistance of PROF. DR. W. HACKMAN (Helsinki) the present author, who published individual papers on expedition materials from Mongolia and from Afghanistan as late as 1973 and 1978, received the unique material of more than 300 sphaerocerids of the “Lund University Ceylon Expedition” more than ten years ago. Those flies were studied, selected into genera, identified (with some exceptions), types were selected for the new species in 1980 but the descriptions of the new species and new distributional data have not been published for ten years. Another numerous material of the unnamed Oriental sphaerocerids preserved in the former Deutsches Entomologisches Institut (Eberswalde) was identified in the last years (incl. the flies named by PROF. DR. W. HENNIG from Taiwan (HENNIG 1941)).

Though the Oriental fauna of sphaerocerids are still rather little known, revisory papers published in the last decade (e.g. ROHÁČEK 1982–83, MARSHALL 1987, ROHÁČEK & MARSHALL 1988, ROHÁČEK & PAPP 1988, PAPP 1991

etc.) have made a new "expedition" paper even more anachronistic. However, the rich and well preserved limosinine material of the Geneva Museum and that of the author's collectings in India in 1989 have also facilitated the publication of such a paper against bad odds. Seven new species of six genera are described here and new faunistical data are given for other 31 limosinine species (nearly 750 specimens). It is hoped that by careful studies on all the necessary types and by the publication of rather numerous drawings, this paper will not make any confusion in the future studies on the Oriental Sphaeroceridae.

All the Sri Lanka sphaerocerid material of the "Lund University Ceylon Expedition" will be completed by this paper (some species were discussed in previous papers), except for some *L. (Rachispoda)* species (*fuscipennis* group etc.), the *Chaetopodella* species (2 new spp.) and two new species of another (? new) limosinine genus.

The deposition of the types are given by the acronyms of the institutions/museums as given below (incl. the Zoological Department, Hungarian Natural History Museum, HNHM).

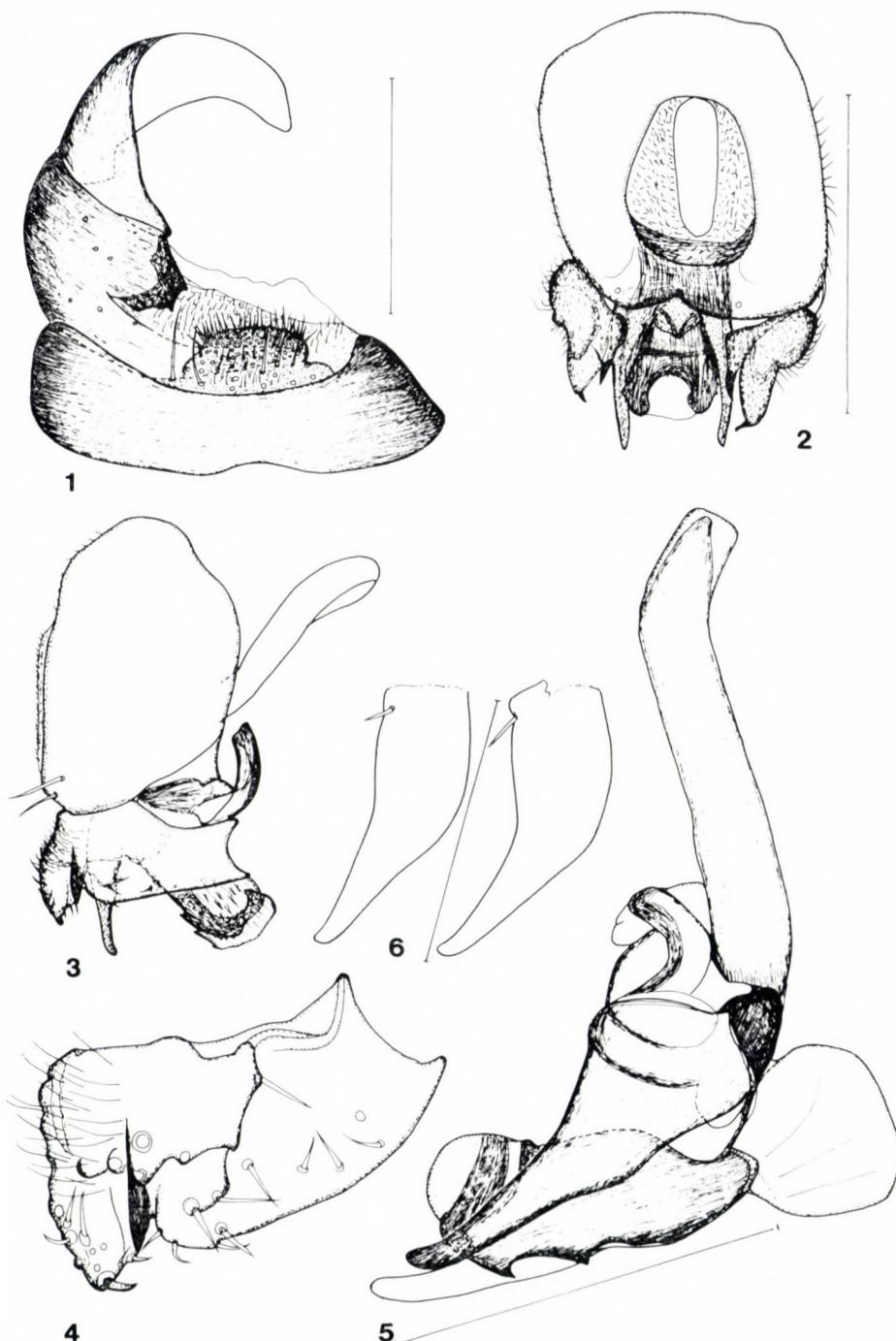
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Acknowledgement — I should like to express my gratitude and thanks to DR. ROY DANIELSSON (Dept. of Zoology, Zoological Museum Lund, Sweden, ZML) for the loan of the sphaerocerid material of the "Lund University Ceylon Expedition" and of other unnamed Oriental sphaerocerids, to DR. R. GAEDIKE (Institut für Pflanzenschutzforschung, Bereich Eberswalde, former Deutsches Entomologisches Institut, DEI), who kindly loaned me the unnamed sphaerocerid material of his institution from RENSCH's Sunda expedition and the named and unnamed material from Taiwan (Formosa). I thank DRs C. BESUCHET and I. LÖBL (Entomologie, Muséum d'Histoire Naturelle de Genève, MHNG) for the loan of study material and for their assistance and hospitality during my visit to their museum. I am grateful to DR. BRIAN R. PITKIN (Dept. of Entomology, British Museum Natural History, BMNH) for loans of some limosinine types. My special thanks are due to DR. S. A. MARSHALL (Dept. of Environmental Biology, Guelph University, Canada) for sending me specimens of the new *Opatolimosina* species he possessed (these types are in the Canadian National Collection, CNC). I am indebted to DR. J. ROHÁČEK (Slezské Muzeum Opava) for his useful comments.

Indiosina loebli L. PAPP, 1981

(Figs 1—6)

M a t e r i a l s t u d i e d: 2 ♂ 1 ♀ paratypes (HNHM); Nepal, leg. I. Löbl (MHNG, 10 ♂ 6 ♀ in HNHM); 1 ♀: Prov. Bagmati, Gul Bhanjyang, 2600 m, 6. IV. 1981 (No. 9); 1 ♀: Prov. Bagmati, Mere Dara, 3000 m, 7. IV. 1981 (No. 12); 2 ♀: Prov. Bagmati, Thare Pati, 3300 m, 9—13. IV. 1981 (Nos 17, 18b); 11 ♂ 1 ♀: Prov. Bagmati, Malemchi, 2900 m, 14. IV. 1981 (No. 23); 1 ♀: Pokhare, 3000 m, 7. V. 1981 (No. 62a); 1 ♂ 4 ♀: Distr. Kathmandou, Phulcoki, 2650 m, 13., 14. X. 1983 (Nos 34, 35); 1 ♂ 1 ♀: ibid., 2600 m, 16. X. 1983 (No. 37); 1 ♂ 1 ♀: ibid., 2550 m, 17. X. 1983, 29. IV. 1984 (No. 38, No. 43); 11 ♂ 9 ♀: ibid., 2500 m, 28—29. IV. 1984 (No. 41); 1 ♂ 1 ♀: prov. Kosi, Mangmaya, 2800 m, 7. IV. 1984 (No. 8b); 1 ♂: prov. Kosi, Mangsingma, 2800 m, 8. IV. 1984 (No. 10); 1 ♀: prov. Kosi, Goru Dzur Dara, 3350 m, 9. IV. 1984 (No. 12); 1 ♀: prov. Kosi, Induwa Kola, 2800 m, 15. IV. 1984 (No. 22). There is another specimen in the MHNG (1 ♀: prov. Kosi, Kuwapani, 2350 m, 5. IV. 1984 (No. 5)), which is a somewhat teneral specimen of *I. loebli* or belongs to another species.



Figs 1–6. *Indosina loebli* L. PAPP, male: 1 = sterna 5–7, 2 = epandrium and genitalia in caudal view, 3 = epandrium and genitalia in lateral view, 4 = surstylius (gonostylus) in widest extension, 5 = aedeagal complex in sublateral view, 6 = variation in the shape of postgonite, widest extension. — Scales: 0.2 mm for Figs 1–3, 0.1 mm for Figs 4–6

Its original description (PAPP 1981) is proper for body characteristics and some details of the female genitalia were also depicted. Unfortunately, that description lacks any information on the male inner genitalia. The material collected by DR. IVAN LÖBL facilitated a study of the male genitalia; some features are depicted and described below but a comparative analysis is still needed, which would take the genitalia of the possible sister-groups into consideration.

Male S5 strongly asymmetrical (Fig. 1), mediocaudal part weakly sclerotized with several bristles, more caudally a fleshy lobe present with short but rather thick hairs (this is horizontal when genitalia are at rest). Ventrocaudal part of S6 strongly sclerotized. Epandrium definitely asymmetrical (Fig. 2), subanal plate distinct but without any modification. Surstyli (Figs 2—4) rather asymmetrical, bilobed, medial lobe apically with a sharp thorn; lateral (larger) lobe ventrocaudally with a black thorn (Figs 3—4), cranially wide and concave (Fig. 4). Surstylus somewhat longer than epandrium in lateral view (Fig. 3). Hypandrium short, its apical (cranial) process (apodeme) dorsally curved (Fig. 3), aedeagal apodeme (Fig. 5) short but robust, directed to the left. Postgonites (Figs 5—6) slightly curved, blunt apically and rather wide basally. Distiphallus (Figs 3, 5) rather short, strongly sclerotized with apically directed short setulae, basiphallus comparatively large, semiglobular.

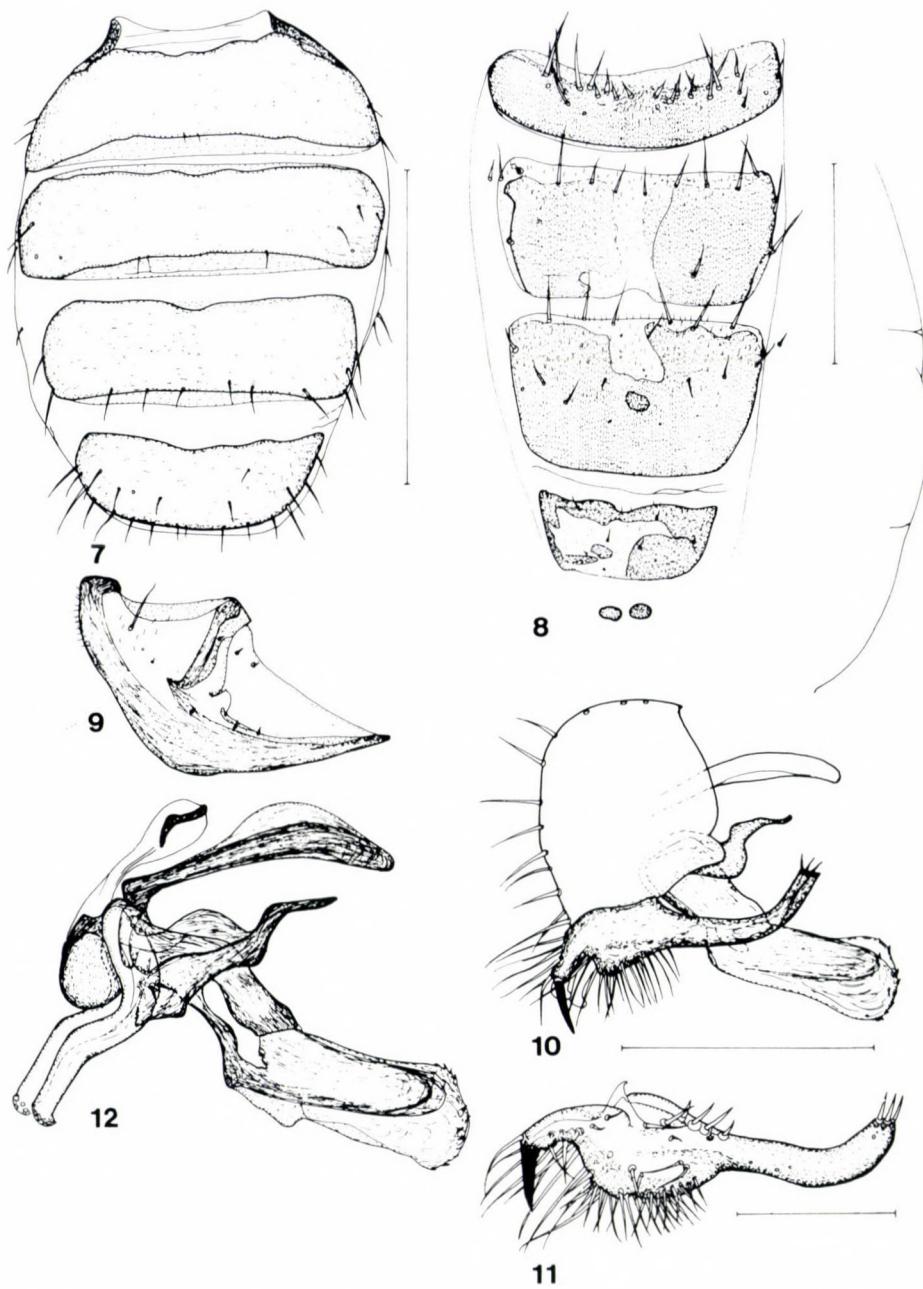
Leptocera (Limosina) monorbiseta DEEMING, 1969
(Figs 7—18)

H o l o t y p e f e m a l e: 1. [round red margined] Holotype; 2. E. NEPAL: Taplejung Distr., old mixed forest above Sangu, c. 6, 200 ft., 25—28. X. 1961, R. L. COE; 3. BRIT. Mus. East Nepal Exp. 1961—62., R. L. COE Coll. B. M. 1962—177; 4. "Leptocera ♀ (Limosina) monorbiseta HOLOTYPE sp. n. det. J. C. Deeming 1967". The holotype is double-mounted into a polyporus bricklet, its right wing is missing (kept separately, see Fig. 32 of DEEMING 1969).

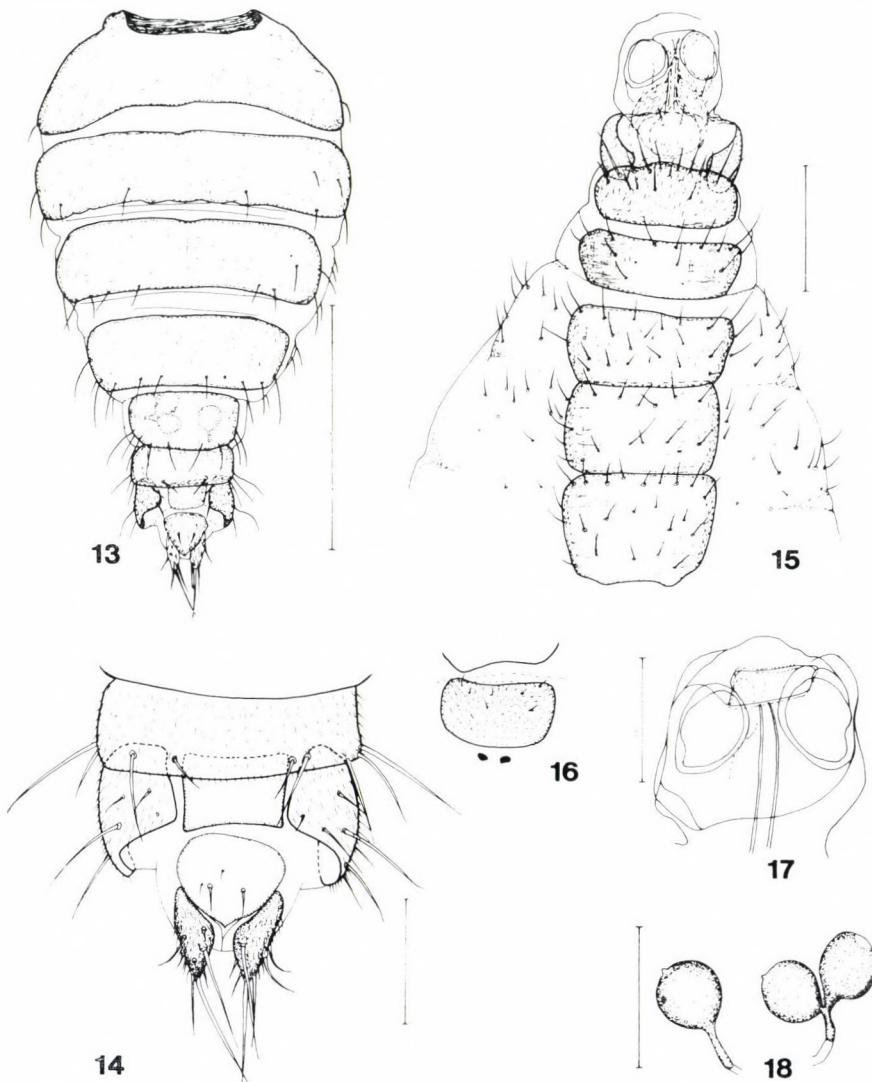
Measurements of holotype in mm: body length 1.63, wing length 1.54, wing width 0.77, cilia on flagellomere 0.025, arista 0.52 with cilia of 0.02, *ors* bristle 0.14, length of scutellum 0.21, apical scutellar bristle 0.41 (i.e. slightly less than twice longer), mg_2/mg_3 costal vein ration $0.50/0.612 = 0.817$, $ta\text{-}tp/tp$ ratio $0.148/0.103 = 1.44$.

Other specimens: 5 ♂ 5 ♀: India, Uttar Pradesh, leg. I. LÖBL, 1979 (MHNG, 2 ♂ 2 ♀ in HNHM); 1 ♂: Garhwal, 2 km E Dhanolti, 2250 m, 21. X. (No. 19: "près d'une source, tamisage de mousses et feuilles mortes sous les rhododendrons et les sapins"); 2 ♂ 1 ♀: Kumaon, Chaubatia, 12—13. X., ca 1800 m (No. 10: "tamisage dans la forêt, feuilles mortes, fougères et mousses"); 2 ♂ 4 ♀: Kumaon, Rangarh, env. 2000 m, 9. X. (No. 6: "ravin boisé"; a: sous des écorces et sur les troncs avec champignons, b: "tamisage des feuilles mortes").

This species was described from Nepal based on a single female. The body characteristics were faithfully described by DEEMING (1969) but the newly



Figs 7—12. "Leptocera (*Limosina*)" *monorbiseta* DEEMING, male: 7 = preabdomen in dorsal view, 8 = preabdominal sterna in ventral view, 9 = sterna 6—7, semiventral view, 10 = epandrium and genitalia in lateral view, 11 = surstylius (gonostyplus) in widest extension, i.e. in a subventral view, 12 = aedeagal complex in lateral view. — Scales: 0.5 mm for Fig. 7, 0.2 mm for Figs 8—10, 0.1 mm for Figs 11—12



Figs 13—18. "*Leptocera (Limosina)" monorbiseta* DEEMING, female: 13 = abdomen in dorsal view, 14 = postabdomen in dorsal view, 15 = abdomen in ventral view, 16 = sterna 1—2, 17 = spectacles-shaped sclerite, 18 = spermathecae. — Scales: 0.5 mm for Fig. 13, 0.2 mm for Figs 15—16, 0.1 mm for Figs 14, 17—18

collected material in the Geneva Museum provided an opportunity for me to study and depict the genitalia of both sexes as follows.

M a l e — Preabdominal terga weakly sclerotized, margins of terga uneven and not symmetrical (Fig. 7). S_1 present as a pair of small plates only, $S_2—4$ unevenly sclerotized (Fig. 8), $S_3—4$ with distinct marginal bristles. S_5 short and wide with several long and thick bristles (short thornlike setae me-

dially). S_6 — S_7 as in Fig. 9. Periandrium semiglobular (Fig. 10), hypandrium short. Surstylus (gonostylus) (Fig. 11) of a peculiar form: with a long curved proximal process and with a shorter, ventrally and laterally curved distal (caudal) process, the latter bears a long and thick spine; body of surstylus ventrally covered by numerous short to long bristles. Phallophore (basiphallus) comparatively large, rounded (Fig. 12), distiphallus large, robust, rather definitely sclerotized, apically with some scale-like spinules. Postgonite bisinuate, apex blunt, subbasally with two pairs of short bristles. A well discernible ejaculatory apodeme present.

F e m a l e — Preabdominal terga (Fig. 13) similar to those of the male with short bristles only. A quadrate plate present between the two parts of T_8 (Fig. 14), latter with long bristles. Epiproct with a short bristle pair. Cerci with two pairs of long stiff bristles and several shorter bristles (Fig. 14). Preabdominal sterna quadrate/subquadrate (Fig. 15), S_1 present as a pair of minute scales only (Fig. 16). S_7 with several comparatively long marginal bristles. Spectacles-shaped sclerite (Fig. 17) weakly sclerotized but distinct. Spermathecae (Fig. 18) globular without any surface modifications.

The name of this species is given in its original combination, since I do not want to pretend as if I know anything about its phylogenetic relations. First I thought it may be related to *Paralimosina* but there is no true synapomorphy for them. So I simply publish these drawings in order to inform colleagues on the peculiar features of *monorbiseta* and to facilitate good proposals for its relegation.

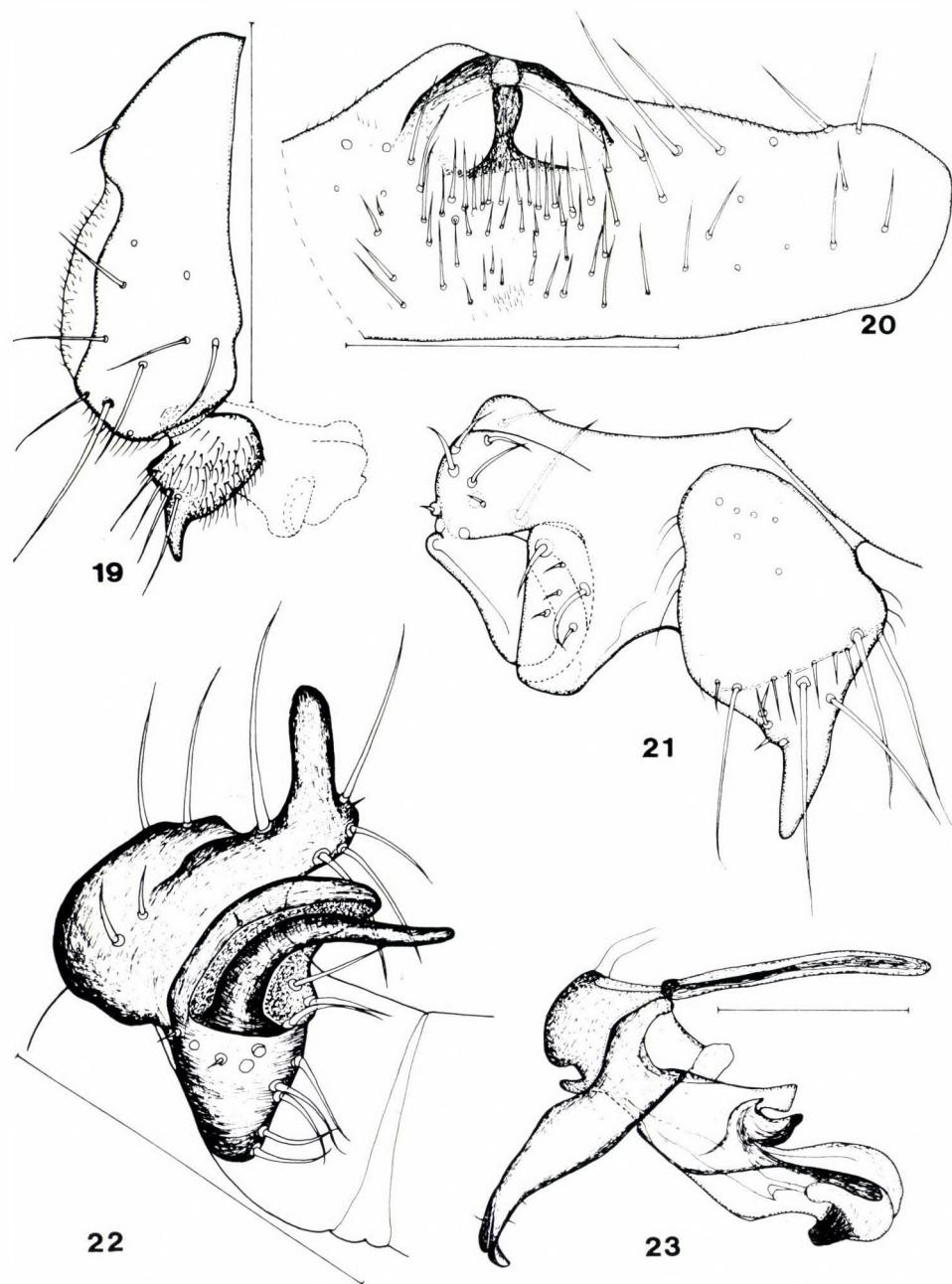
***Terrilimosina intricata* sp. n.**
(Figs 19—23)

Measurements in mm: body length 1.92 (holotype), 2.25—2.49 (paratypes), wing length 1.82 (holotype), 1.92—2.00, wing width 0.76 (holotype), 0.79—0.88.

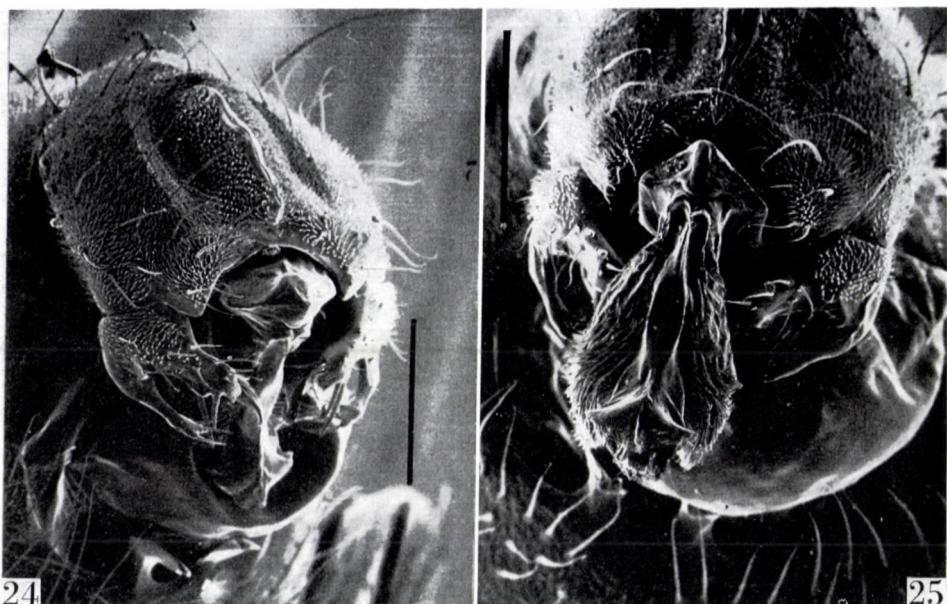
Dark brown (only palpi and pleural sutures paler), mesonotum dull, microtomentose, cephalic and thoracic bristles rather thick.

Cephalic bristles as in *T. racovitzai*, 4 pairs of medium long *ifr*. No genal bristle, i.e. genal bristles thin and not longer than genal width. Longitudinal axis of eye 0.285 mm, genal width at narrowest 0.12 mm, ratio 2.36. Aristal cilia medium long only (slightly longer than 0.02 mm).

Two *dc* pairs. Wings light brownish, dark brown on a diffuse patch below apex of R_1 , veins brown, C somewhat darker, alula comparatively large, rounded. Halteres with knob dark brown, stalk ochreous. Apical half of $R_4 + 5$ nearly straight, discal cell rounded without any vein appendages. Base of C with a pair of comparatively long bristles, mg_1 bristles rather long. mg_2/mg_3



Figs 19—23. *Terrilimosina intricata* sp. n., paratype male: 19 = periandrium (epandrium) and surstyli in lateral view (anterior part of surstyli contoured only), 20 = sternum 5 in ventral view, 21 = surstyli (gonostyli) in lateral view, 22 = surstyli in an anterior view with a part of subanal plate, 23 = aedeagal complex, lateral view. — Scales 0.2 mm for Figs 19—20, 0.1 mm for Figs 21—23.



Figs 24—25. *Terrimosina racovitzai* (BREZZI), male: 24 = epandrium, genitalia and S5 in subventral view, 25 = genitalia in ventral view. — Bars: 0.1 mm; SEM photos by H. PLACHTER, Germany

0.569 mm/0.621 mm = 0.916 (holotype), 0.655 mm/0.698 mm = 0.938 (paratype ♀). *ta-tp/tp* = 3.45 (holotype), 3.31 (paratype ♀). Legs all dark brown, incl. tarsi. Mid tibia without mid ventral bristle, *va* rather long, mid tibia with long paired *ad* and *pd* setae at basal 1/3 and distal 3/4 and with a strong dorsal bristle distally to the latters. Mid femur anteriorly with a row of rather long and thick spine-like setae. Male hind tibia with a short *va* spur.

Abdominal terga *T1* and *T2* rather distinct with a pale (not sclerotized) area medially, *T1* + 2 ca. 1.5 times as long as *T3*. Male *S5* (Fig. 20) with a rounded, rather small mediocaudal process, much different from that of *T. racovitzai* (Fig. 24), bristles behind this process only moderately long. Periandrium short (Fig. 19) with several medium long bristles. Surstylus (Figs 19, 21) bipartite, proximal part with a ventrally directed digitiform process; distal part of an intricate form: apically with a long blunt process emerging from a lobe, which bears long bristles (Fig. 22) medially with an excavated lobe, its cavity embracing a long curved horn-like but not pointed process. Subanal plate simple. Postgonite (Fig. 23) long, apex proclinate and plough-shaped; basiphallus short with a distally directed ventral process, distiphallus rather membranous. Female epiproct with a pair of minute bristles.

H o l o t y p e male (MHNG): Pakistan: Swat, Malam Jabba, 2500—2600 m, 18. V. 1983, leg. C. BESUCHET et I. LÖBL (No. 17b: "tamisage de feuilles mortes et de mousses dans la foret de sapins"). — **P a r a t y p e s**: 2♀ (MHNG, HNHM): same data; 2♀ (MHNG, HNHM):

Pakistan: Swat, Miandam, 2400—2500 m, 17. V. 1983, leg. C. BESUCHET et I. LÖBL (No. 15b: “tamisage de feuilles mortes et de mousses”); 1 ♂ (HNHM); Nepal: Prov. Kosi, Induwa Kola, 2000 m, 16. IV. 1984, leg. I. LÖBL (No. 24a: “tamisage mousses, branches et feuilles mortes, assez sec”). The holotype and the topotypic paratypes are somewhat damaged, some thoracic bristle are broken off. The holotype and all but one paratypes are preserved in alcohol, the male paratype is in canada balsam prepared between two pieces of cover glass (abdomen in a plastic microvial).

Terrilimosina intricata sp. n. keys to *T. racovitzai* (DUDA) in MARSHALL's (1987) key (mid tibia lacking a mid ventral bristle). However, the eyes of *intricata* are normal (reduced in *racovitzai*) and the male genitalia are completely different: male S5 of *racovitzai* with a forked process (Fig. 24), surstylus is much shorter (Fig. 25) both its proximal and caudal processes long. — The name of the new species is derived after its intricated form of surstyli.

Aptilotus appendix sp. n.

(Figs 26—29)

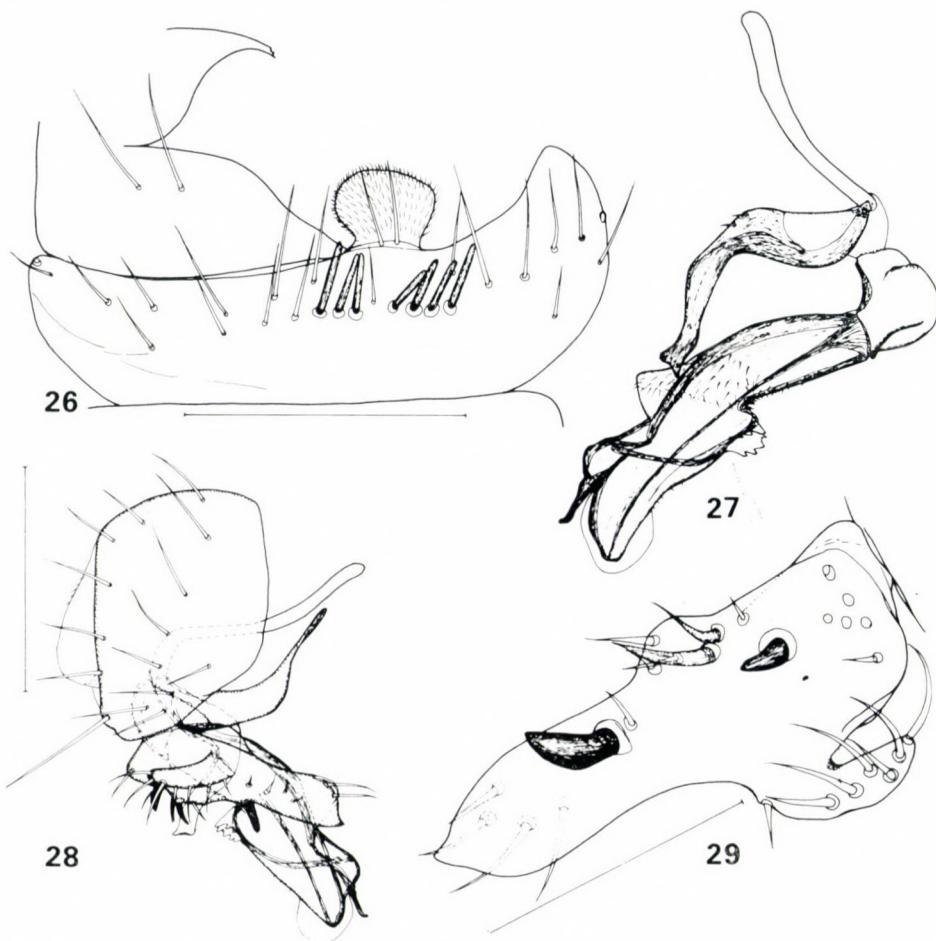
Measurements in mm (holotype ♂): body length 2.17, wings 2.00 × 0.79. ♂. Dark brown, resembling *A. paradoxus*. Aristal cilia moderately long (ca. 0.02 mm).

Two *dc* pairs. Wings light brownish, veins yellowish brown incl. second costal section. Costal vein surpassing *R4 + 5* apex, distal half of *R4 + 5* slightly upcurved. *mg2/mg3* 0.552 mm and 0.724 mm, ratio 0.76. Discal cell rounded, i.e. *tp* not well defined, ca. 0.12 mm, *ta-tp* 0.30 mm, ratio 2.50. No mid ventral on mid tibia, *va* small. Mid femur with a row of ventral bristles.

Preabdomen as in *paradoxus*. Male S5 (Fig. 26) with a hairy (microtrichose) rounded mediocaudal process, one pair of long and thin bristles behind this process and seven (? four pairs) of rather long, thick but blunt spines medially and well proximally on S5. Periandrium (Fig. 28) rather long with numerous moderately long bristles and with a pair of long ventrocaudal setae. Surstylus (gonostylus) long, subbasally with a reclinate strong process; this process bears ca. 6—7 strong bristles (Fig. 29). Apex of surstylus sharp, its ventral side with a spine at basal quarter and with a large thick spine in apical third. Aedeagal apodeme rather small (Fig. 27), postgonite (paramere) very characteristic: recurved with two apices. Basiphallus (Fig. 27) short and compact, distiphallus rather long (cf. MARSHALL & SMITH 1990) with a short apical process.

Female unknown.

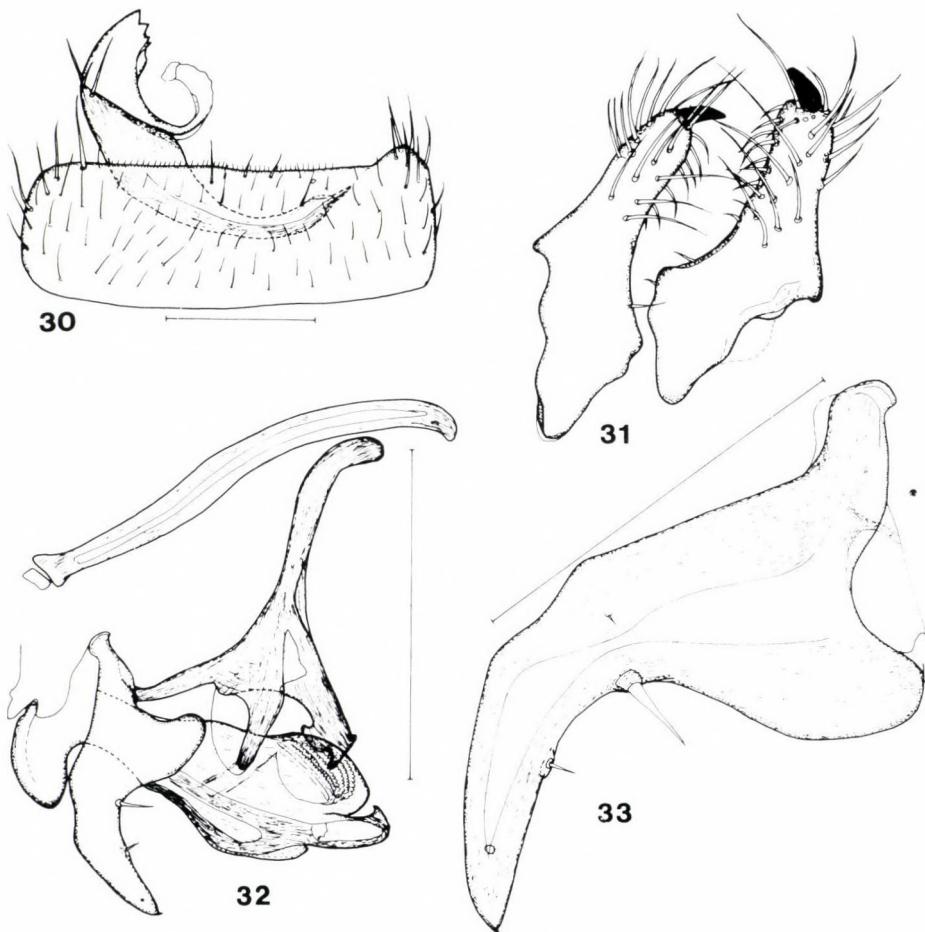
H o l o t y p e male (MHNG): Népal: Goropani, 2750 m, 5. X. 1983 leg. I. LÖBL (No. 27: “clairière dans la forêt, tamisage de bois pourri et de feuilles le long d'un tronc (chêne) mort”). The holotype was preserved in alcohol; during study it was removed into canada balsam (prepared on a cover glass on a holed card an covered with another piece of cover glass), its abdomen with genitalia is preserved in a plastic microvial with glycerin.



Figs 26—29. *Aptilotus appendix* sp. n., holotype male: 26 = sterna 5 and 6, ventral view, 27 = aedeagal complex in lateral view, 28 = perianthrium (epandrium) and genitalia in lateral view, 29 = surstyli (gonostyli) in ventral view. — Scales: 0.2 mm for Figs 26—28, 0.1 mm for Fig. 29

Derivation nominis: the new species is named partly after its recurved subbasal process on its surstyli, partly since its description is only an appendix to the revision of *Aptilotus* by MARSHALL & SMITH (1990).

A. appendix sp. n. keys *glabrifrons* MARSHALL et SMITH, 1990 or to *binotatus* MARSHALL et SMITH, 1990. The male S5 of *glabrifrons* resembles to that of the new species (Fig. 26, cf. MARSHALL et SMITH 1990: Fig. 20), however, the surstyli (gonostyli) and postgonite are different (Figs 27, 29; cf. MARSHALL et SMITH 1990: Figs 22—24). As far as I was able to judge on the single specimen, which was preserved in alcohol for seven years, halteres are mostly brown.



Figs 30—33. *Paralimosina eximia* sp. n., paratype male: 30 = sterna 5 and 6 in ventral view, 31 = surstyli in largest extension (ventral view), 32 = aedeagal complex laterally (aedeagal apodeme somewhat removed, hypandrial arm broken), 33 = postgonite. — Scales: 0.2 mm for Figs 30—32, 0.1 mm for Fig. 33

Paralimosina eximia sp. n.
(Figs 30—33)

Measurements in mm: body length 1.62 (holotype), 1.41—1.47 (paratypes), wing length 1.55, 1.40—1.50, wing width 0.74, 0.71—0.74.

Brown, frons, face and antennae red, legs reddish brown. Frons without M-shaped mark. Hind part of frons brownish on the holotype. Pleurae partly reddish.

Three pairs of *ifr* (longest one on holotype 0.11 mm), if 4 pairs, anterior pair very short. *pvt* minute, 2 pairs of moderately long *ors*.

Only one *dc* pair. Scutellum short, length/width ratio 0.59 on holotype, 0.56 on one paratype, scutellars long. Wings rather broad, brownish, veins light brown, costal vein darker. Vein $R4 + 5$ sinuate and slightly arched apically, *C* not surpassing apex of $R4 + 5$, discal cell rather long (*ta-tp/tpl* ratio 3.22), no $M3 + 4$ extension (cell apex there rounded). Costal vein ratio $mg2/mg3$ 1.00 (0.48 mm both) on holotype, 1.10 on a paratype male. Alula small and very narrow. Mid tibia with a short mid ventral bristle, *va* long. Armature of mid tibia: *ad-s*: at 9/32 (short), 1/2, 25/32, a medium long *d* at 23/32, *pd-s*: at 9/32, 18/32, 22/32 (short bristles), a long at 11/32, a very long at 25/32. Male fore and hind femora not much thickened.

Abdomen as in *P. brevis*. Male *S5* (Fig. 30) simple, ventral stripe-like part of male *S6* without any processes or sclerotized lobes. Subanal plate without scale-like ventral setae. Surstylus (gonostylus) (Fig. 31) not distinctly divided into two lobes with a ventrally directed wide lobe, which bears a robust though not long apical spine. Postgonite (paramere) (Fig. 33) much different from that of the known Oriental species: its base wide, postgonite curved in its whole length and rather sharp apically. Phallophore (basiphallus) (Fig. 32) short, robust but blunt ventrally, distuphallus without distinct teeth. Female cerci with 3 pairs of long sinuate hairs.

Holotype male (DEI): Sunda-Exped. Rensch, Badjawa, W. Flores, 1200 m, 17. VI. [19] 27. — Paratypes: 2 ♂ 1 ♀ (DEI, 1 ♂ HNHM); same data. The type series is a little damaged: wings wrinkled, some parts of legs are lost.

Derivatio nominis: from the Latin word: 'eximus': = exceptional, uncommon, extraordinary.

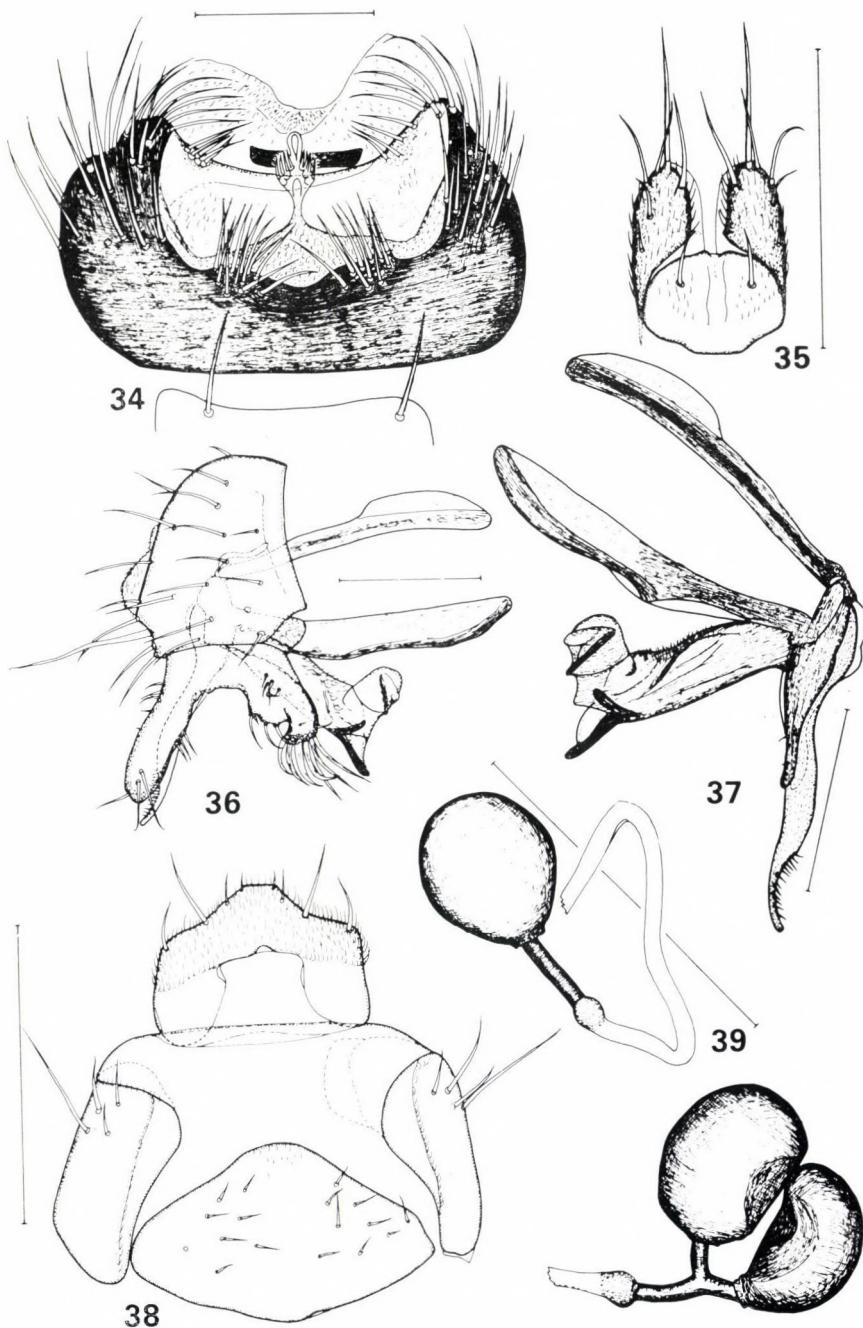
Paralimosina eximia sp. n. is hardly to be placed in the key of ROHÁČEK & PAPP (1988), which was given for the Palaearetic and Oriental species: there is not an M-shaped mark on frons but its fore tarsi are unicolorous. It belongs to the smallest species and it is not closely related to any of the known species. Its robust and much curved postgonite (Fig. 33) and its comparatively simple gonostylus with an apical (caudal) spine are the most characteristic features.

Opalimosina stepheni sp. n. (Figs 34—39)

Measurements in mm: body length 1.77 (holotype), 1.90—1.95 (paratypes), wing length 1.92—1.96 (paratypes, not measurable on holotype), wing width 0.69 and 0.71—0.79.

Body and legs dull brown, tarsi, parts of coxae and trochanters reddish or ochreous.

Three pairs of strong *ifr* bristles preceded by a shorter pair in most specimens. Palpi brown with a short apical bristle. Genal bristle small, *vi* long,



Figs 34—39. *Opalimosina stepheni* sp. n., paratypes: 34 = male sternita 5 and 6 in ventral view, 35 = female cerci in dorsal view, 36 = male perianthrum and genitalia laterally, 37 = aedeagal complex laterally, 38 = female postabdomen, ventral view, 39 = spermathecae. — Scales: 0.1 mm (all)

eyes small and flat, gena below eyes (at narrowest) 0.112 mm, longitudinal axis of eye 0.206 mm, ratio 1.846. Arista three times as long as antenna.

Two pairs of *dc*, anterior pair short; prescutellar acrostichals long, ca. half length of prescutellar *dc*, or even longer. *acmi* in 6 rows, 1 *stpl* (anterior one minute). Wings brownish, veins brown. C overrunning apex of *R4 + 5*, *R4 + 5* upcurving in its distal half. Discal cell long, *ta-tp/tp* = 2.54 (paratype ♀), 2.33 (paratype ♂), 2.69 (paratype ♂). Costal vein ratio *mg2/mg3*: 0.595 mm/0.578 mm = 1.03 (paratype ♂). Alula small and narrow. Mid *av* and a long *va* on mid tibia; *ad-s*: at 9/24, 14/24, a very strong nearly dorsal at 5/6, a long *pd* at 19/24. Hind tibia without any long ventral spur.

Abdomen normal. No long bristle on periandrium (Fig. 36) i.e. its ventral bristle pair much shorter than in some *Opalimosina* species. Male *S5* and *S6* of an intricate form, medially with a deep impression (Fig. 34), long latero-caudal bristles and two groups of bristles centrally (proximally to the impression), a funny process mediocaudally bearing 4 pairs of short setae. Surstylus (Fig. 36) widely bipartite, proximal lobe with several curved bristles. Epiphallus (Fig. 37) very long, tapering in its apical quarter (there with a row of caudally directed hairs). Postgonite (paramere) rather thin with some weak hairs only. Distiphallus long and swelling apically with a definite ventroapical process. Female *S8* comparatively large, subtriangular, *T8* seems bipartite (dorsal part short, narrow and very weakly sclerotized), hypoproct with two pairs of bristles (Fig. 38). Epiproct with a pair of moderately long bristles; cerci with two pairs of moderately long but rather thin bristles and with some short bristle pairs (Fig. 35). Spermathecae (Fig. 39) globular without modifications, Y-shaped duct of paired spermathecae short forked.

H o l o t y p e male (CNC): Nepal: btwn Ghopte and Thare Pati, 3200 m, 23—26. IV. 85, F[light] I[ntercept] T[rap], A. SMETANA (the genitalia of the holotype are well visible in situ, i.e. not prepared). — **P a r a t y p e s**: 1 ♂ 1 ♀ (CNC, HNHM); same data; 2 ♂ (MHNG, HNHM): Nepal: Prov. Kosi, Induwa Kola, 2800 m, 15. IV. 84, leg. I. LÖBL (No. 22: “tamisage feuilles mortes des rhododendrons et bambous au pied roches”).

D e r i v a t i o n o f n o m i n i s: This species is dedicated to DR. STEPHEN A. MARSHALL (Guelph University) in recognition of his contribution to the species of Limosininae, including the Oriental fauna.

Opalimosina stepheni sp. n. is not fit well into the key of ROHÁČEK (1983) for *Opalimosina* species. It is tentatively put in the subgenus *Opalimosina* s. str. It has no ventral spur on hind tibia (contrarily to *O. mirabilis* (COLLIN) and *O. pseudomirabilis* HAYASHI, 1990). The shape and armature of male *S5* are the most unique features to define this species, although some other characteristics of the male genitalia (e.g. the long epiphallus) are also remarkable.

Opacifrons brevisecunda sp. n.
 (Figs 40—45)

Measurements in mm: body length 1.09 (holotype), 1.05—1.40 (paratypes), wing length 1.06, 1.02—1.33, wing width 0.45, 0.43—0.55.

Dark greyish brown, mesonotum subshining, legs also dark brown, coxae, trochanters and narrow stripes along pleural sutures reddish to reddish yellow.

Three pairs of very long *ifr* (longer than longest seta on scapus) preceded by a short fourth pair. Aristal cilia moderately long. Eyes large, gena less wide than mid tibia.

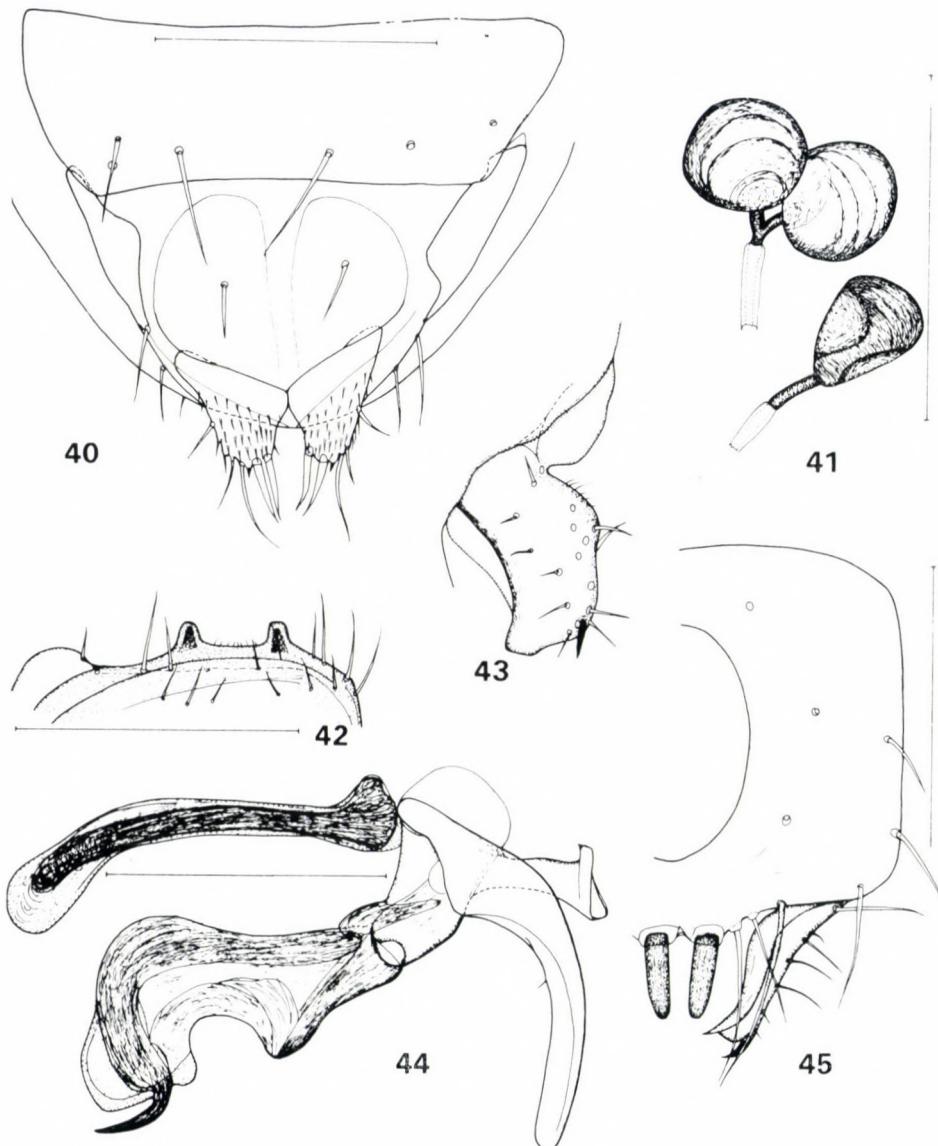
0 + 2 *dc* pairs. Armature of mid tibia: *ad-s* at 7/20, 14/20, a strong bristle (nearly *d*) at 16/20, *pd* at 14/20. Ventral bristle of mid basitarsus small, subbasal, male mid tibia ventrally with a row of short dentiform setae. Wings light greyish brown, veins light brown. Discal cell rounded or edged with a minute *M3 + 4* appendage. Ratio of the second and third costal section 0.236 mm/0.393 mm = 0.60 (holotype), 0.59—0.65 (paratypes). *ta-tp/tp* = 2.33. Alula narrow. Knob of halteres yellow (ochreous), stalk light brown.

Distal margin of male *S5* more strongly sclerotized with a pair of rather distant blunt caudal processes (Fig. 42). Subanal plate (Fig. 45) with some long bristles and a pair of long thick and blunt thorns. Surstylus (gonostylus) medially curved (Fig. 45), bilobed, caudal lobe with short bristles and with a caudal blunt apex (Fig. 43). Aedeagal apodeme rather short (Fig. 44), postgonite, long and curved in its entire length with blunt apex; basiphallus with a large, apically extended epiphallus, distiphallus hump-backed in lateral view with a distinct dorsally curved apical process (Fig. 44). Female *T8* in two lateral parts (Fig. 40), cerci short with two pairs of thick but pointed short bristles apically. Spermathecae (Fig. 41) globular, Y-shaped duct of the paired spermathecae very short.

H o l o t y p e male (ZML): N. Centr. Prov., 3 mls S. Minneriya, 11. II. 62, Loc. 67 — Swept in the veg. small stream — Lund University Ceylon Expedition 1962, BRINCK—ANDERSSON—CEDERHOLM. — **P a r a t y p e s**: Sri Lanka: 12 ♂ 13 ♀ (ZML, 8 ex. in HNHM): Lund University Ceylon Expedition 1962, BRINCK, ANDERSSON et CEDERHOLM: 1 ♀: data same as for holotype; N. Centr. Prov.: 1 ♂: Wilpattu N. P., Maradan, Maduwa, 23 mls W Anuradhapura, 2. II., Loc. 48; E. Prov.: 1 ♂ 4 ♀: Rambukkan Oya, 25 mls NE Bibile, 8. III., Loc. 125; 7 ♂ 4 ♀: stream, 15 mls SSW Batticalava, 8. III., Loc. 123: Sabaragamuwa Prov.: 1 ♂ 2 ♀: Walawe Ganga, 34 mls SE Ratnapura, 23. III., Loc. 172; 1 ♀ Allerton, 1 mile SW Rakwana, 28. II., Loc. 105; W. Prov.: 1 ♀: Yakkala, 18 mls NE Colombo, 15—31. I., Loc. 11; 1 ♂: Eduragalla, 5.5 mls W Horana, 17 mls WNW Ratnapura, 17. II., Loc. 89; NW. Prov.: 1 ♂: Bangadeniya, 4 mls NNE Chilaw, 1. II., Loc. 39. India: 4 ♂ 5 ♀ (HNHM): Rajasthan, Bharatpur, Keoladeo Bird Sanctuary, swept and singled in the fringe of swamps, 24. XI. 1989, leg. L. PAPP; 2 ♂ (HNHM): Uttar Pradesh, Keetham Lake, 20 km N of Agra, swept on lake-shore mud, 27. XI. 1989, leg. L. PAPP; 1 ♂ (HNHM): id., 24 km N of Agra, 28. XI. 1989, swept on watering canal shores; 1 ♀ (HNHM): Agra, Shan Jehan Gardens, 25. XI. 1989, leg. L. PAPP. There are 30 other specimens from Vietnam and India in the collection of the HNHM.

D e r i v a t i o n o m i n i s: This new species is named after its very short second costal section.

The differentiating characteristics are summarized in the key below.



Figs 40—45. *Opacifrons brevisecunda* sp. n., paratypes. 40 = female postabdomen, dorsal view, 41 = female, spermathecae (the unpaired one collapsed in glycerin), 42 = male sternum 5, ventral view, 43 = surstylius (gonostylus) in largest extension (in a subventral view), 44 = aedeagal complex laterally, 45 = epandrium and surstylius in caudal view. — Scales: 0.2 mm for Fig. 42, 0.1 mm for Figs 40—41, 43—45

Opacifrons cederholmi sp. n.
 (Figs 46—49)

Measurements in mm (holotype male): body length 1.43, wing length 1.29, wing width 0.53.

Brown, mesonotum dull, fore coxae reddish yellow, legs reddish light brown.

Aristal cilia though long (0.02 mm), shorter than in *dupliciseta*; 4 *ifr* pairs, shorter than setae on scapus. Legs short and robust. Fore coxa with a wreath of long apical hairs. Male mid tibia curved, ventrally with a complete row of short thick setae (from basal 1/3 to apex); one paired *ad* and *pd* at proximal third, a smaller *ad* at distal fourth (3/4), a very long *d* at distal sixth (5/6) and a long *pd* at distal fourth (3/4). Ventral bristle of mid basitarsus rather long and subbasal, mid basitarsus rather short. Hind tibia with short bristles only. Hind basitarsus wider than tibia but only slightly longer than half of 2nd tarsomere. Wings dark brownish, veins brown. Bristles on first costal section no long, i.e. only twice as long as setae on second section. mg_2/mg_3 ratio: 0.393 mm/0.416 mm = 0.946 (holotype).

Male S5 (Fig. 46) caudoventrally with a large wide emargination, caudal edges of this emargination with strongly sclerotized processes, medial area weakly sclerotized with a long triangular hairy caudal process. Surstyli (*gostyli*) medially curved (Figs 47, 48), only a small part visible in profile, surstylus (Fig. 48) bilobed, caudal (posterior) process very long, special in shape with two long and some short thick bristles and with a small apical tooth. Aedeagal apodeme very long (Figs 47, 49), postgonite of an intricate form (Fig. 49) with a lateral lobe, epiphallus very long and extended apically. Distiphallus short and thick apically.

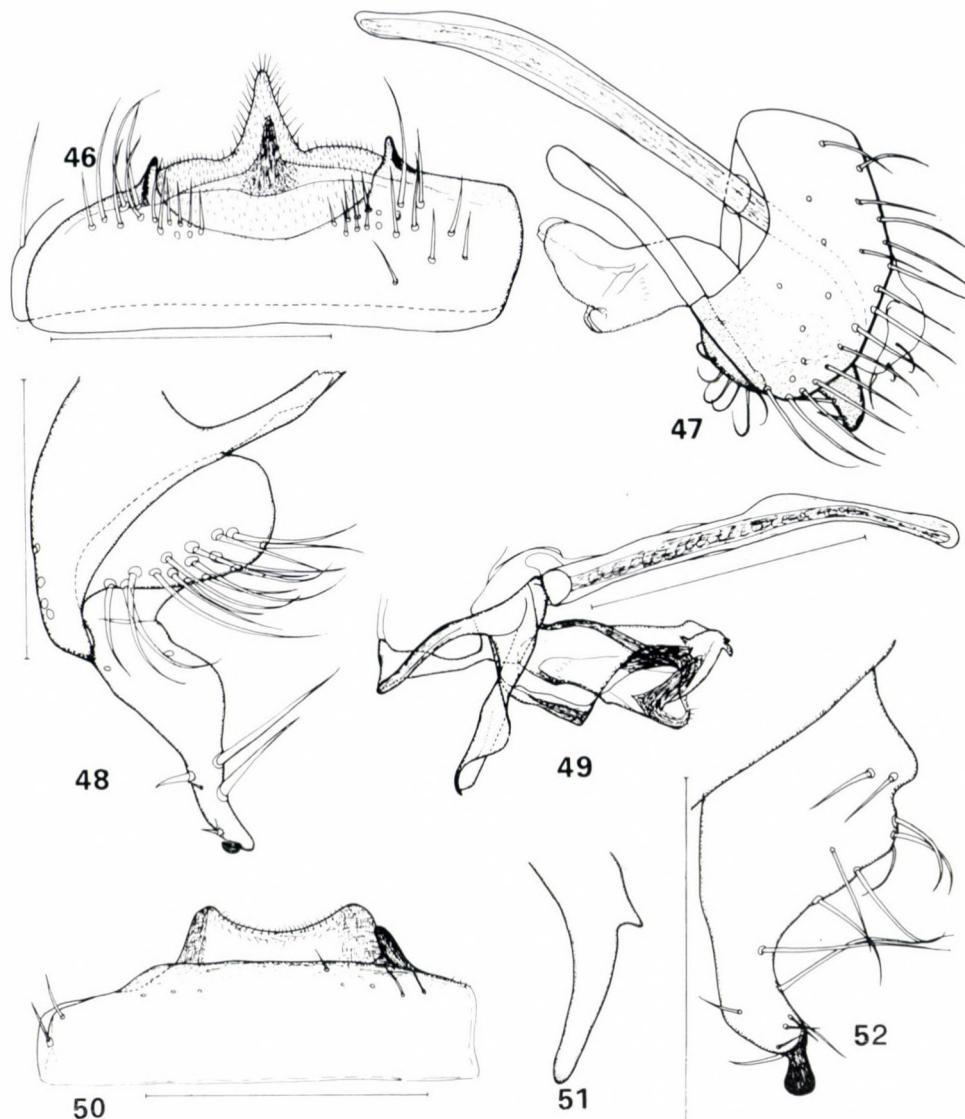
H o l o t y p e male (ZML): Sabaragamuwa Prov., Malwala, 3 mls NW Ratnapura, 20. II. 62, Loc. 92 — On boulders in stream — Lund University Ceylon Expedition 1962, BRINCK, ANDERSSON et CEDERHOLM. — Paratypes: Sri Lanka: 1 ♀ (ZML): Prov. of Uva, Stream, Alt. 3600 ft, 2 mls W Haldummulla, 2. III., Loc. 111, swept in the veg. small stream; 1 ♂ (HNHM): Centr. Prov., Kandy, 12. I., Loc. 9, swept on scrubs in jungle. The male paratype is in a poor state of preservation; head and all legs but left mid leg are glued under the specimen on minuton on the mounting card, thoracic bristles are all broken. The genitalia and the abdomen of the ♂ paratype are kept in a plastic microvial with glycerin.

D e r i v a t i o n o m i n i s: This new species is named after DR. LENNART CEDERHOLM, one of the collectors of the Lund University Ceylon Expedition in 1962.

Opacifrons cederholmi sp. n. is related to *O. dupliciseta* (DUDA, 1925); for identification see the key below.

Opacifrons dupliciseta (DUDA, 1925)

H o l o t y p e male (HNHM): Formosa, SAUTER — Taihorin, 1911. VII. — “*Opacifrons dupliciseta* ♂ n. sp.” Det. DR. O. DUDA. 1 ♀ (HNHM): Formosa, SAUTER — Takao, 1907, XII. 13. — “*O. dupliciseta* ♀” Det. Dr. O. DUDA; 1 ♂ (HNHM): Vietnam, O-qui-ho, 26. IX. 1963, leg. T. Pócs; 1 ♀ (HNHM): Vietnam, Sa-pa, fényre repült [on light], 1963. IX. 22., leg. T. Pócs.



Figs 46–52. 46–49 = *Opacifrons cederholmi* sp. n., paratype male: 46 = sternum 5 in ventral view, 47 = epandrium and genitalia laterally, 48 = surstylius (gonostylus) in ventral view, 49 = aedeagal complex laterally; 50–52 = *Opacifrons pseudimpudica* (DEEMING), male: 50 = sternum 5 in ventral view, 51 = postgonite laterally, 52 = surstylius in its largest extension. — Scales: 0.2 mm for Figs 46–47, 49–50, 0.1 mm for Figs 48 and 51–52

Ifr bristles longer than setae on scapus, arista with very long cilia. Fore coxae usually brown, no long hairs apically on fore coxae. $mg2/mg3$ ratio usually a little more than 1.0. No mediocaudal process on male S5. Other features as in its original description.

Known from Taiwan (Formosa), new to Vietnam.

Opacifrons pseudimpudica (DEEMING, 1969)
(Figs 50—52)

Leptocera (Opacifrons) pseudimpudica DEEMING, 1969: 57.

Type material: holotype male (BMNH) (double mounted in a polyporus bricklet): 1) [round red margined] Holo-type; 2) Taplejung Distr., River banks below Tamrang Bridge, c. 5500' x-xi. 1961.; 3) Brit. Mus. East Nepal Exp. 1961—62. R. L. Coe Coll., B. M. 1962—177; 4) "Leptocera (Opacifrons) pseudimpudica sp. nov. HOLOTYPE ♂" det. J. C. DEEMING 1967. — Paratypes (BMNH): 2 ♂: same data; 1 ♂: id., above Sangu, c. 6500'. Evergreen scrub, 5—13. x. 1961. The Sangu paratype is possibly not conspecific with the holotype.

Measurements in mm: body length 1.12 (holotype), 1.26—1.41 (paratypes), wing length 1.83, 1.67—1.95, wing width 0.69, 0.68—0.70.

Body characteristics as given in its original description. One anterior short and 3 long pairs of *ifr* (0.09 mm). Aristal cilia long, 0.035 mm. Marginal bristles on first costal section not long, 0.052 mm, max. 0.086 mm. 0 + 2 *dc*. Second and third costal sections subequal, 0.577 mm and 0.603 mm, ratio 0.957 (holotype; or 1.00 in one specimen from Sri Lanka). Male mid tibia curved apically, ventroapically with a comb of short bristles, ventral bristle at proximal third of mid basitarsus.

Male *S5* without long bristles and with a subquadrate flat mediocandala plate (Fig. 50): lateral margins strongly sclerotized; right side of this plate with a narrow sclerotized adjoining process. Surstylus (gonostylus) (Fig. 52) with several long and moderately long bristles, its ventromedially directed process with a wide rounded spine apically. Postgonite (Fig. 51) narrow, proclinate, apically rounded and characteristic with its ventral(medial) dentiform process.

Material studied (other than types): Sri Lanka: 11 ♂ 9 ♀ (ZML, 7 ex. in HNHM); Lund University Ceylon Expedition 1962, BRINCK, ANDERSSON et CEDERHOLM; Central Prov.: 3 ♂ 1 ♀; Harasbedda, 9 mls NE Nuwara-Eliya, 15. III., Loc. 146; 2 ♂ 1 ♀; Pidurutalagala, 2 mls NW Nuwara-Eliya, 4. III., Loc. 116; 1 ♂; Hakgala, 5 mls SE Nuwara-Eliya, 3. III., Loc. 114; 1 ♂; Horton Plains, Alt. 7000 ft, 12 mls SSE Nuwara-Eliya, 19. III., Loc. 163; 1 ♂; Mudduk, Alt. 5500 ft, 5 mls NW Nuwara-Eliya, 4. III., Loc. 117; 3 ♂ 3 ♀; Piyagama East of, 6000 ft, 9 mls SSE Nuwara-Eliya, 19. III., Loc. 161; 1 ♀; Menickwala Ela, 4 mls NW Hatton, 18. III., Loc. 154; 1 ♀; Rangala, Knuckle Mnts., 2 mls ENE Kandy, 11 III., Loc. 130; South Prov.: 1 ♀; Hiniduma, 20 mls NNE Galle, 27. I., Loc. 29; Prov. of Uva: 1 ♀; stream Alt. 3600 ft, 2 mls NW Haldummulla, 2. III., Loc. 111. (specimens collected as "Swept on veg. at stream in tea plantation, "Ravine with small stream", "Swept on scrub in jungle", "Swept above surface of small stream", "in light trap".) India: 16 ♂ 15 ♀: Uttar Pradesh, Nainital, Governor's House Park, ca. 2050 m, singled with aspirator on soil, from under stones and on fallen leaves, 3. XII. 1989, leg. L. PAPP; 1 ♂: id., Sleepy Hollow, ca. 2080 m, swept on grassy places.

The differentiating features of this species are given in the key below.

Distribution: Nepal (HACKMAN 1977), India (new), Sri Lanka (new); it seems a widespread Oriental species.

**KEY TO THE IDENTIFICATION OF THE ORIENTAL SPECIES OF
OPACIFRONS DUDA, 1918**

- 1 (4) Mid tibia with a proximal posterodorsal bristle, i.e. paired bristles also in proximal third of mid tibia (cf. ROHÁČEK 1982: Fig. 1). Aristal cilia long to very long. mg_2/mg_3 costal vein ratio 1.0 or nearly so.
 - 2 (3) Aristal cilia very long, *ifr* bristles longer than setae on scapus. Fore coxa usually brown, apically without long hairs. Male S5 without a long mediocaudal process
 - dupliciseta* (DUDA, 1925)**
 - 3 (2) Aristal cilia shorter (0.02 mm), *ifr* bristles shorter than setae on scapus. Fore coxa reddish yellow with a wreath of long apical hairs. Male S5 (Fig. 46) with a long medio-caudal process
 - cederholmi* sp. n.**
 - 4 (1) Mid tibia without a proximal posterodorsal bristle, i.e. paired bristles in distal third of mid tibia only. Aristal cilia shorter. mg_2/mg_3 ratio variable.
 - 5 (8) mg_2/mg_3 costal ratio 1.0 or nearly so. Wing length more than 1.50 mm. Female cerci with 2 pairs of long or short spines.
 - 6 (7) Male S5 with a small pale membranous mediocaudal area, postgonite more curved and without a ventral medial dentiform projection. Female cerci with two pairs of long spines. (Reported also from the Oriental region but no reliably identified specimens hitherto)

[*coxata* (STENHAMMAR, 1854)]

 - 7 (6) Male S5 with a subquadrate flat mediocaudal plate and an adjoining short process on its right side (Fig. 50), postgonite less curved with a dentiform ventral projection (Fig. 51). Female cerci with two pairs of short spines
 - pseudimpudica* (DEEMING, 1969)**
 - 8 (5) mg_2/mg_3 costal ratio much less than 1.0. Wing length less than 1.50 mm. Female cerci only with short though thick bristles.
 - 9 (10) A very small species, body length only 0.75 mm. Only 1 *dc* pairs and only 2 *ifr* (Java, not seen)
 - niveohalterata* (DUDA, 1925)**
 - 10 (9) Bigger species, body length 1.0–1.4 mm. Two *dc* pairs and four pairs of *ifr*. Male subanal plate (Fig. 45) with a pair of long thick but blunt thorns. mg_2/mg_3 ratio only 0.59–0.65
 - brevisecunda* sp. n.**

Leptocera (Leptocera) stenodiscoidalis sp. n.
(Figs 53—58)

Measurements in mm: body length 1.91 (holotype), 1.72–2.38 (paratypes), wing length 1.77, 1.70–2.38, wing width 0.77, 0.70–0.87.

Face, genae and fore coxae ochreous, pleurae partly reddish mesonotum dull black with dense grey microtrichia; legs ochreous, dorsal side of femora with some diffuse light brown hue.

Aristal cilia very long, max. 0.042 mm. Flagellomere with dense fine, 0.025 mm long cilia. Antennae and palpi dark brown. Interfrontal stripe reddish. 3—(4) *ifr* pairs (the most anterior pair usually missing).

$0 + 4$ dc pairs, 4 sc pairs (short-long-short-long). Medial acrostichals only slightly longer than other *acmi*. 2 stpl pairs. Wings brownish, veins ochreous. Costal vein very thick, 0.035 mm distally to *RI*; first section with long bristles, costa not surpassing apex of *R4 + 5*. *R4 + 5* arcuately upcurving in its entire length. Hind crossvein very short, 0.06 mm only, *ta-tp/tp* ratio 4.0 (paratype ♂) or 5.0 (paratype ♀). Third costal section short: *mg2/mg3* =

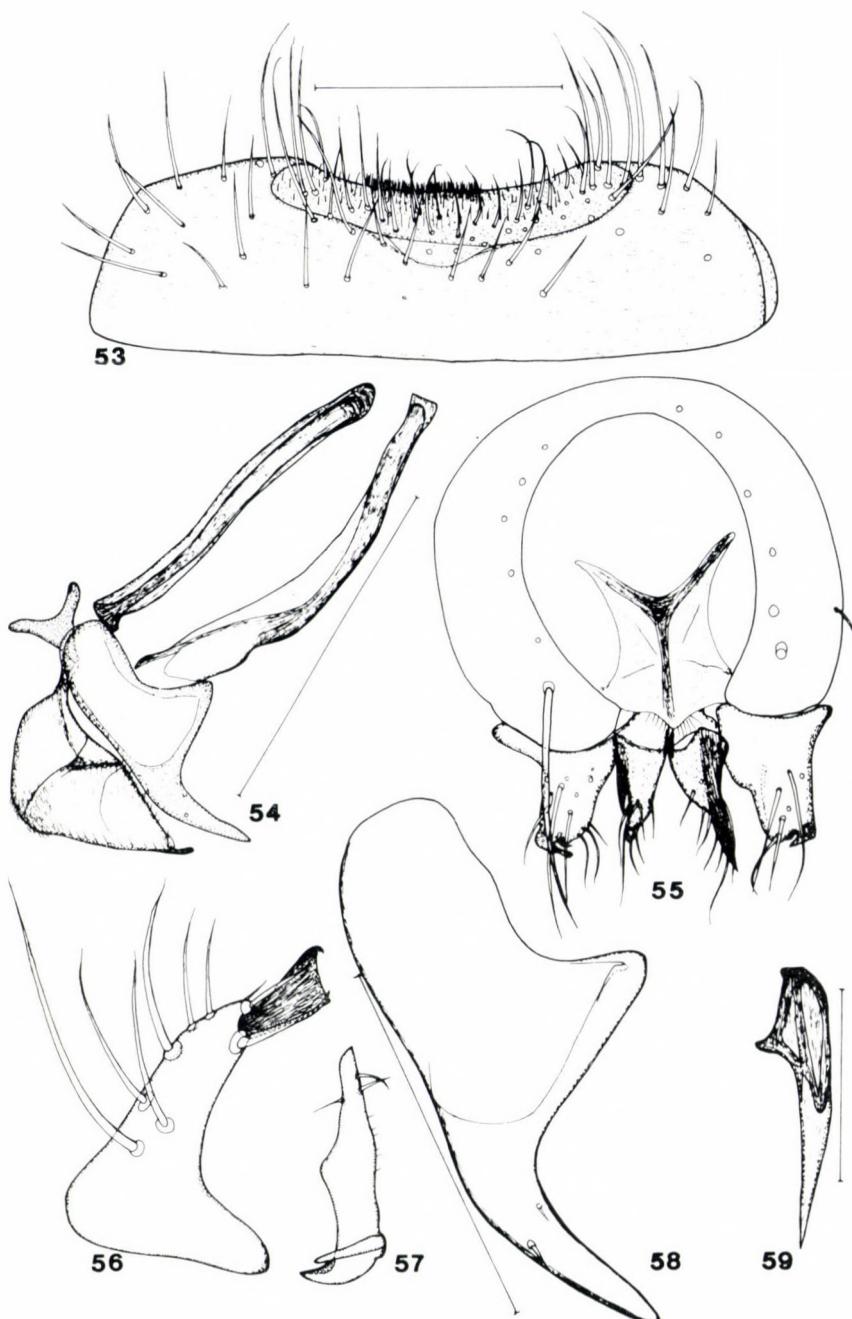
0.577 mm/0.387 mm = 1.49 (paratype ♂). Armature of mid tibia: *pd-s*: at 6/31 (small), 10/31, 19/31, a very long and thick *d* at 21/31, *ad-s*: 7/62 (small), 6/31, 9/31 (thick and long), 19/31 (thick and very long); ventral preapical long (0.13 mm) and thick, mid ventral small. Ventral bristle on mid basitarsus long (0.12 mm) and thick at 5/17 of basitarsus. Posterior apical pair short, not reaching base of basitarsal bristle. Dorsal side of hind tibia with some long hairs (longer than 0.10 mm).

T1 + 2 medially with a large pale (weakly sclerotized) area; marginal bristles of tergites moderately long. Male S5 (Fig. 53) rather short, medio-caudally with a short but wide pale (weakly sclerotized) emargination; bristles on S5 rather long, incl. bristles emerging from pale area, pale area also with short hairs, the latter being very dense mediocaudally. Subanal plate not developed, medioventral edges of periandrium with a pair of rather large flat blunt processes (?pseudocerci) (Fig. 55), far larger than in *nigrolimbata*. Genitalia definitely asymmetrical (Fig. 55): base of posterior part of right surstylos (telomere) medially bears an extremely long thornlike process (as long as posterior part itself), left surstylos with a much shorter and thinner thorn. Posterior part (Fig. 56) apically with a flat shovel-shaped process, anterior part widest apically, its apical part with a digitiform dorsal process (Fig. 57). Hypandrium very long (Fig. 54) aedeagal apodeme nearly as long. Postgonite (Fig. 58) peculiar: basal part large and wide, apical part narrow and nearly straight. Distiphallus short and wide as in several species of *Leptocera*. Female cerci fused with *T9* and very short haired.

H o l o t y p e male (ZML): Ceylon, NW Prov., Andapolakanda, 3 mls NE Melsiripura, 7. II. 62., Loc. 53, ravine with small stream, Lund University Ceylon Expedition 1962, BRINCK, ANDERSSON et CEDERHOLM. — **P a r a t y p e s**: Sri Lanka, Lund University Ceylon Expedition 1962, BRINCK, ANDERSSON et CEDERHOLM; 5 ♂ 5 ♀: data same as for holotype; 1 ♀: W. Prov., Yakkala, 18 mls NE Colombo, 15—31. I., Loc. 10; 1 ♀: S. Prov., Udugama, 15 mls NNE Galle, 27. I., Loc. 27; II: Sabaragamuwa Prov.: 1 ♂: Deerwood, Kuruwita, 6 mls NNW Ratnapura, 18—21. II., Loc. 90; III: 3 ♀: Carney, Alt. 1000 ft, 8 mls NE Ratnapura, 20. II., Loc. 94; 1 ♀: stream at 2500 ft, 5 mls NNW Balangoda, 22. II., Loc. 96; 1 ♂: stream from Mantalawa Mnt. 9 mls NNE Belihul-Oya, Alt. 2700 ft, I. III., Loc. 107; Central Prov.: 1 ♂: Piduratalagala, Alt. 6400 ft, 2 mls NW Nuwara-Eliya, 4. III., Loc. 116; III: 1 ♂: Mudduk, Alt. 5500 ft, 5 mls NW Nuwara-Eliya, 4. III., Loc. 117; 1 ♂ 3 ♀: Ramboda, 7 mls NW Nuwara-Eliya, 4. III., Loc. 118; 1 ♂ 1 ♀: Harasbedda, 9 mls NE Nuwara-Eliya, 15. III., Loc. 146; Prov. of Uva: 2 ♂ 3 ♀: Yalakumbura, Alt. 1300 ft, 5 mls SSW Bibile, 13. III., Loc. 140; 1 ♀: Central Prov., Udawela near Teldeniya, 8 mls E Kandy at 1500 ft, 11. III., Loc. 128; 1 ♀: N. Central. Prov., Ritigala Nat. Reserve, 8 mls NW Habarana. The paratypes are deposited in the collection of the Zoological Museum, Lund; four male and six female paratypes are in the HNHM. The type specimens were collected in “Ravine with small stream”, “Swept above surface of small stream”, “Swept on veg. at streams in tea plantation”, “Swept on grass in forest”, “Swept along roads in paddy field distr.”.

D e r i v a t i o n o m i n i s: this new species is named after its very narrow discal cell (very short hind crossvein).

L. (Leptocera) stenodiscoidalis sp. n. is not closely related to any known species. Its most astonishing feature is the asymmetry in the male genitalia. The shape of wing venation and its light ochreous legs make it easily identi-



Figs 53—59. 53—58. = *L. (Leptocera) stenodiscoidalis* sp. n., paratype male: 53 = sternum 5, ventral view, 54 = aedeagal complex laterally, 55 = epandrium (periandrium) and genitalia in caudal view, 56 = posterior part of surstyli (telomere) laterally, 57 = apical part of anterior telomere in dorsal (!) view, 58 = postgonite laterally; 59 = *L. (Leptocera) salatigae* (DE MEIJERE), postgonite laterally. — Scales: 0.2 mm for Figs 53—55, 0.1 mm for Figs 56—59

fiable. There are two Oriental species which are similar in size, *L. (L.) nigrolimbata* (DUDA) and *paranigrolimbata* (DUDA); both species have several enlarged acmi contrarily to stenodiscoidal. *L. (L.) nigrolimbata* has a larger, semicircular pale mediocaudal area on male S5, bristles are shorter there than in *stenodiscoidal*. Posterior part of the surstylos of *nigrolimbata* is with a very long and thick thorn apically (not basally as in the new species), postgonite of *nigrolimbata* is long and narrow.

NEW FAUNISTICAL RECORDS

Ceroptera equitans (COLLIN, 1910) — Sri Lanka: 1 ♂ (ZML): E. Prov., Kuchchaveli, 20 mls NW Trincomalee, 9—10. II., Loc. 60, swept on dry grassland, Lund University Ceylon Expedition 1962, BRINCK, ANDERSSON et CEDERHOLM. Described from Sri Lanka, known also from India.

Leptocera (Leptocera) salatigae (DE MEIJERE, 1914) (Fig. 59) — Pakistan: Leg. C. Besuchet et I. Löbl, 1983 (MHNG): 1 ♂: Mardan, Dargai, 8. V. (No. 1); 1 ♀: Malam Jabba, 2300 m, 9. V. (No. 4c); 1 ♂: Swat, Kalam, 2100 m, 12. V. (No. 9b); 1 ♀: Swat, Karakar, 1300 m, 19. V. (No. 18b); 1 ♀: Dir, Lawarai Pass, 2700 m, 21. V. (No. 21b); 2 ♀: Hazara, Naran, 2500 m, 31. V. (No. 32a); 1 ♀: id., 2600 m, 1. VI. (No. 33d). India: Kashmir, leg. I. Säveland, 1979 (ZML): 6♂ 5♀: Gulmarg, 27.6., Alt. 2700 m; 1 ♂: Sonmarg, 1.7., Alt. 3000 m. Nepal: leg. I. LöBL et A. SMETANA (MHNG): 1 ♂ 1 ♀: Godavari, 1600 m, 31. III. 1984 (No. 1c); 1 ♀: Kuwapani, 2350 m, 5. IV. 1984 (No. 5); 1 ♂: Phulcooki, 2500 m, 28. IV. 84 (No. 41); 1 ♂: Goru Dzure Dara, 3600 m, 9. IV. 1981 (No. 11); leg. U. GÄRDENFORS, 1983 (ZML, HNHM): 6 ♂: 24 km NW Pokhara, 2 km NE Ghorapani, 6.4., grassy glades, Oak-Rhododendron-forest, 2500 m; 6 ♂: 19 NW Pokhara Gandrung, 7.4., 2000 m, grassy meadow. — Sri Lanka: Lund University Ceylon Expedition 1962, BRINCK, ANDERSSON et CEDERHOLM (ZML): Prov of Uva: 1 ♀: stream, Alt. 3600 ft, 2 mls NW Haldummulla, 2. III., Loc. 111; 1 ♂ 2 ♀: Bibile, Alt. 800 ft, 12—13. III., Loc. 137; 1 ♂: Beauvais, 5 mls WNW Hatupale, Alt 4500 ft, 3. III., Loc. 112; 1 ♀: Kudu Oya, river, 15 mls S Wellawaya, 22. III., Loc. 168; NW Prov.: 3 ♂ 1 ♀: 7 mls NE Pattalam, 1. II., Loc. 43; 1 ♂: Andapolakanda, 3 mls NE Melsiripura, 7. II., Loc. 53; 1 ♂ 1 ♀: Dedura Oya, 5 mls Kurunegala, 7. II., Loc. 52; N. Prov.: 1 ♀: small stream 2 mls E Mankulam, 14. II., Loc. 75; 1 ♀: Matiyamadu 26 mls SW Mulliatteva, 14. II., Loc. 80; Central Prov.: 1 ♂ 1 ♀: Wilpattu, N. P. Maradan, Maduwa, 23 mls W Anuradhapura, 2. II., Loc. 48; 1 ♂ 1 ♀: Maskeliya Oya, 6 mls SW Hatton, 18. III., Loc. 156; 1 ♂: 3 mls S Minneriya, 11. II., Loc. 67; Sabaragamuwa Prov.: 4 ♂ 1 ♀: Walawe Ganga, 34 mls SE Ratnapura, 23. III., Loc. 172. — Taiwan (Formosa): coll. H. Sauter (DEI): 5 ♂ 9 ♀: Tainan, or, Pilam (identified as *L. (Rachispoda) sauteri* by W. HENNIG in 1939); 17 ♂ 14 ♀: Taihoku, or Chipun/Pilam/Maruyma/Kankau (identified as *L. curvinervis* STENH. by W. HENNIG in 1939). — Indonesia: Sunda-Exped. RENSCH, 1927 (129 ex. DEI, 8 ex. HNHM): 22 ♂ 31 ♀: Badjawa, W. Flores, 1200 m, 17. VI.; 5 ♂ 4 ♀: Rana Mésé, W. Flores, 20—30. VI.; 1 ♂ 1 ♀: Batoe Doelang, W. Soembawa, 10—15. V.; 56 ♂ 17 ♀: Gili Metoe, O. Flores, 14—20. VII. A very widespread species.

Leptocera (Leptocera) sterniloba ROHÁČEK, 1983 — Nepal: leg. U. GÄRDENFORS, 1983 (59 ex. ZML, 11 ex. HNHM): 50 ♂ 11 ♀: 24 km NW Pokhara, 2 km NE Gorapani, 6.4., grassy glades, Oak-Rhododendron-forest, 2500 m; 6 ♂ 2 ♀: 19 km NW Pokhara, Gandrung, 7.4., 2000 m, grassy meadow; 1 ♂ (MHNG): Prov. Bagmati, Mere Dara, 3000 m, 7. IV. 1981, leg. I. LöBL et A. SMETANA (No. 12). — Thailand: 2 ♂ (MHNG): Prov. Chiang Mai, Doi Suthep, 1150 m, 4. XI. 1985, leg. D.H. BURCKHARDT et I. LöBL (No. 9). — A recently described species new to Thailand.

Leptocera (Rachispoda) micropygia L. PAPP, 1978 — Sri Lanka: Lund University Ceylon Expedition 1962, BRINCK, ANDERSSON et CEDERHOLM: 2 ♂ 2 ♀ (ZML, HNHM): S. Prov., Yoda Wewa at Tissamaharama, 22. III., Loc. 169. — Described from E Afghanistan, new to Sri Lanka.

Leptocera (Rachispoda) filiforceps (DUDA, 1925) — Taiwan (Formosa) 3♂ 2♀: (DEI): Kankau (Koshun), IX. 1912, H. SAUTER, det. W. HENNIG 1939. — Sri Lanka: Lund University Ceylon Expedition 1962, BRINCK, ANDERSSON et CEDERHOLM (7 ex. ZML,

2 ex HNHM): Prov. of Uva: 1 ♂ 1 ♀: Heda Oya, 29 mls SE Bibile, 7. III., Loc. 120; 2 ♂: Monaragala Mnt. Alt. 500 ft, 2 mls E Badulla, 7. III., Loc. 121; I; N. Centr. Prov.: 2 ♂: Wilpattu N. P. Maradan, Maduwa, 23 mls W Anuradhapura, 2. II., Loc. 48; 1 ♂: Kahatagasgiliya, 20 mls ENE Anuradhapura, 10. II., Loc. 65; W. Prov.: 1 ♂: Alawala, 26 mls NE Colombo, 17. I., Loc. 13; II; Sabaragamuwa Prov.: 1 ♂: Ambepussa, 30 mls NE Colombo, 15. III., Loc. 151. — A widespread Oriental species new to Sri Lanka.

Leptocera (Rachispoda) pseudoctisetosa (DUDA, 1925) — T ai w a n (Formosa): 16 ♂ 41 ♀ (DEI): Tainan, H. SAUTER, II. 09. (1 ♂ identified as "Rachispoda sauteri" by W. HENNIG, the others, except for two needles, lack any identification label). — S ri L a n k a: Lund University Ceylon Expedition 1962, BRINCK, ANDERSSON et CEDERHOLM (ZML): Prov. of Uva: 1 ♂ 2 ♀; Mahaveli Ganga at Alutnuwara, 24 mls E Kandy, 12. III., Loc. 136; S. Prov.: 2 ♂ 1 ♀: Yoda Wewa at Tissamaharama, 22. III., Loc. 169; E. Prov.: 1 ♀: stream, 15 mls SSW Batticalva, 8. III., Loc. 123. — Widespread on all the Old World tropics, new to Sri Lanka.

Leptocera (Rachispoda) subtinctipennis (BRUNETTI, 1913) — T ai w a n (Formosa): 7 ♂ 6 ♀ (DEI, most specimens with the identification label of W. HENNIG): H. SAUTER, Taihoku /Tainan/Kankau/Pilam/Anping. — S ri L a n k a: Lund University Ceylon Expedition 1962, BRINCK, ANDERSSON et CEDERHOLM: (33 ex. ZML, 6 ex. HNHM): Central Prov.: 3 mls S Minneriya; Kandy; Udawela nr Teldeniya, 8 mls E Kandy at 1500 ft; Ramboda, 7 mls NW Nuwara-Eliya; Yan Oya, 24 mls W Trincomale; W. Prov.: Yangamulla, 3 mls E Yakkala, 18 mls NE Colombo; Edurugalla, 5.5 mls W Harana, 17 mls WNW Ratnapura; Yakkala, 18 mls NE Colombo; Labugama, 24 mls ESE Colombo; Prov. of Uva: Beauvais, 5 mls WNW Haputala, Alt. 4500 ft; Mahaveli Ganga at Alutnuwara, 24 mls E Kandy; stream, Alt. 3600 ft, 2 mls NW Haldummulla; S. Prov.: Udugama, 15 mls NNE Galle; E. Prov.: Rambukkan Oya, 25 mls NE Bibile; Sabaragamuwa Prov.: Ambepussa, 30 mls NE Colombo; Walawe Ganga, 34 mls SE Ratnapura; 7. I. — 23. III., Locs 4, 9, 10, 17:VII, 27:II, 64, 67, 89, 111, 112, 118, 125, 128, 136, 151, 172. — P hilippines: 7 ♂ 6 ♀ (ZML): Nord-Luzon, Patiquian 3. 1918, BOETSCHER.

Coproica ferruginata (STENHAMMAR, 1854) — I nd i a: 1 ♂ (HNHM): Uttar Pradesh, Nainital, Governor's House Park, ca. 2050 m, 7. XII. 1989, leg. L. PAPP. — S ri L a n k a: Lund University Ceylon Expedition 1962, BRINCK, ANDERSSON et CEDERHOLM: Central Prov.: 1 ♂ (ZML): Diyagama West at 4800 ft, 8 mls S Nuwara-Eliya, 19. III. Loc. 160; 1 ♀ (ZML): Katumana, 3 mls SE Nuwara-Eliya, 21. III., Loc. 164. — I nd o n e s i a: Sunda-Exped. Rensch 1927: 5 ♂ (DEI, HNHM): Bajawa, W. Flores, 1200 m, 17. VI.; 1 ♀ (DEI): Soembawa-Besár, W. Soembawa, 24. IV.—2. V.

Coproica hirtula (RONDANI, 1880) — S ri L a n k a: Lund University Ceylon Expedition 1962, BRINCK, ANDERSSON et CEDERHOLM: 1 ♂ 1 ♀ (ZML): W. Prov., Colombo, Colpetty, 5—13. I., Loc. 2. Taiwan (Formosa): H. SAUTER, 1912: 7 ♂ 12 ♀ (DEI): Anping/Taihoku/Paroe, nördl. Paiwan, V./VIII./7. XI. — A cosmopolitan coprophagous species new to Sri Lanka.

Coproica lugubris (HALIDAY, 1836) — I nd i a: 1 ♀ (HNHM): Uttar Pradesh, Keetham Lake, 20 km N of Agra, 28. XI. 1989 leg. L. PAPP (swept on lake-shore plants and mud). — A common Palaearctic species, recorded from the Oriental region quite recently (Taiwan and Hong Kong: Hayashi 1989: Jpn. J. Sanit. Zool. 40: 30). New for the fauna of India.

Coproica vagans (HALIDAY, 1833) — T ai w a n (Formosa): H. SAUTER, 1912: 4 ♀ (DEI): Anping/Taihoku, V./7. XI., det. W. HENNIG 1939.

Trachyopella leucoptera (HALIDAY, 1836) — S ri L a n k a: Lund University Ceylon Expedition 1962, BRINCK, ANDERSSON et CEDERHOLM: 1 ♂ (ZML): S. Prov., Hemmeliya, 2 mls E Baddegama, 10 mls N Galle, 27. I. Loc. 26. — New to Sri Lanka.

Poecilosomella longinervis (DUDA, 1925) — I nd i a: 1 ♂ (HNHM): Uttar Pradesh, Nainital, near Tiffin Top, 2100 m, 5. XII. 1989, leg. L. PAPP. — A widespread but uncommon species (HACKMAN 1977).

Poecilosomella punctipennis (WIEDEMANN, 1824) — I nd i a: 1 ♂ (HNHM): Uttar Pradesh, Agra, Shah Jehan Gardens, 23. XI. 1989, leg. L. PAPP; 2 ♂ (HNHM): id., 25. XI. 1989.

Poecilosomella varians (DUDA, 1925) — S ri L a n k a: Lund University Ceylon Expedition 1962, BRINCK, ANDERSSON et CEDERHOLM: Sabaragamuwa Prov.: 1 ♂ (ZML): stream at 2500 ft, 5 mls NNW Balangoda, 22. II., Loc. 96; NW Prov.: 1 ♀ (ZML): Dedura Oya, 5 mls NE Kurunegala, 7. II., Loc. 52. — A widespread though not abundant Oriental species, new to Sri Lanka.

Terrilimosina deemangi MARSHALL, 1987 — N e p a l: 1 ♀ (MHNG): Prov. Bagmati, Thare Pati, 3300 m, 10. IV. 1981, I. LöBL et A. SMETANA (No. 18b). This specimen is practically from the type-locality (double mounted from alcohol during study).

Terrilimosina longipexa MARSHALL, 1987 — India: 1 ♂ (HNHM): Uttar Pradesh, Nainital, Sleepy Hollow, ca. 2080 m, shifted and singled from under stones, 4. XII. 1989, leg. L. PAPP. Described from Japan and Nepal, new for the fauna of India.

Terrilimosina smetanai MARSHALL, 1987 — Nepal: 1 ♀ (MHNG): Prov. Kosi, Kuwapani, 2250 m, I. Löbl (No. 6). — Pakistan: leg. C. BESUCHET et I. Löbl, 1983: 1 ♂ 1 ♀ (MHNG): Swat, Marghuzar, 1300 m, 8. V. (No. 2b); 1 ♂ (MHNG): Swat, Malam Jabba, 2500—2600 m, 18. V. (No. 17a); 1 ♀ (MHNG): Punjab, Murree, 2100 m, 5. VI. (No. 40). These five specimens were found in the unsorted material of the Geneva Museum in 1986 and they were included in the type-series at my request (see MARSHALL 1987).

Spelobia (Eulimosina) ochripes (MEIGEN, 1830) — Pakistan: 1 ♀ (MHNG): Dir, Lawarai Pass, tamisage d'herbes à 3000 m, 21. V. 1983, C. BESUCHET et I. Löbl (No. 21c). New for the fauna of Pakistan, previously not recorded from the Oriental region.

Spelobia (Bifronsina) bifrons (STENHAMMAR, 1854) — Taiwan (Formosa): 1 ♀ (DEI): H. SAUTER, 1912, Taihoku, 7. XI., "Opacifrons coxata Stenh. det. Dr. W. HENNIG 1939". — India: 1 ♂ (HNHM): Uttar Pradesh, Agra, Shah Jehan Gardens, 23. XI. 1989, leg. L. PAPP; 2 ♂ (HNHM): Rajasthan, Bharatpur, Keoladeo Bird Sanctuary, 24. XI. 1989, leg. L. PAPP. — A very widespread species distributed by animal husbandry. HACKMAN (1977) reported from the Oriental region from the Philippines only.

Spelobia (Spelobia) lutea (RICHARDS, 1963) — 1 ♂ (DEI): Tainan, Formosa, V. 12. H. SAUTER, "Limosina spec. (n. ?)" det. W. HENNIG, 1939. The yellow-bodied species of the *Spelobia dudu-lutea*-species-group badly need revision (specimens seen from Sri Lanka, India and Vietnam). HACKMAN (1977) reported *lutea* from Sri Lanka, Nepal and from the Philippines.

Spinilimosina brevicostata (DUDA, 1918) — Nepal: 1 ♂ (CNC): Katmandu, Godavari, 5000', 12. VIII. 1967, Can. Nepal Exped. — Sri Lanka: Lund University Ceylon Expedition 1962, BRINCK, ANDERSSON et CEDERHOLM: 1 ♂ (ZML): Sabaragamuwa Prov., Walawe Ganga, 34 mls SE Ratnapura, 23. III., Loc. 172; 2 ♂ 1 ♀ (ZML, HNFM): W. Prov., Colombo, Colpetty, 5—13. I., Loc. 2. For comments see under *rufifrons*.

Spinilimosina rufifrons (DUDA, 1925) — Indonesia: Sunda-Exped. Rensch, 1927: 1 ♂ 2 ♀ (DEI): Badjawa, W. Flores, 1200 m, 17. VI.; 2 ♀ (DEI): Batoe Doelang, W. Soembawa, 10—15. V.; 1 ♀ (DEI): Semongkat, W. Soembawa, 10—15. V. — Taiwan (Formosa): 1 ♂ (DEI): Taihoku, 7. XI. 1912, H. SAUTER; 2 ♀ (DEI): Macuyama, V.—VI. 1914, H. SAUTER. The latter three specimens were identified as "Opacifrons coxata Stenh." by W. HENNIG in 1939. In the last decade I studied and identified specimens of *Spinilimosina* ROHÁČEK, 1983 from tropical areas as "brevicostata" or "rufifrons" depending on my feeling whether they belong to two species or to a single one. A revision based on material from every major tropical area is needed to clear up this problem.

Opalimosina mirabilis (COLLIN, 1902) — Pakistan: leg. C. BESUCHET et I. Löbl, 1983: 3 ♂ 1 ♀ (MHNG): Hazara, Malkandi, 1500 m, 3. VI. (No. 36); 1 ♂ 1 ♀ (MHNG): Swat, Marghuzar, 1200 m, 11. V. (No. 7b); 2 ♂ 6 ♀ (MHNG): ibid., 8. V. (No. 2a, b). — Nepal: 1 ♂ (MHNG): Godawari, 1600 m, 31. III. 1984, I. Löbl (No. 1c); 1 ♂ (ZML): 19 km NW Pokhara, Gandrung, 7. 4. 1983, 2000 m, grassy meadow, Ulf GÄRDENFORS. — Spread by human activity; HACKMAN (1977) recorded also from Nepal.

Opalimosina pseudomirabilis HAYASHI, 1990 — Nepal: 1 ♀ (CNC): Katmandu, Godawari, 6000', 13. Aug. 1967, Can. Nepal Exped. It has been most recently described from Pakistan. It is closely related to *mirabilis*, indeed, so I cannot exclude now that at least a part of the specimens identified earlier as *mirabilis* is not belonging to *pseudomirabilis*.

Halidayina spinipennis (HALIDAY, 1836) — Pakistan: leg. C. BESUCHET et I. Löbl, 1983: 1 ♂ (MHNG): Swat, Kalam, 2100 m, 12. V. (No. 9b); 1 ♂ 1 ♀ (MHNG): Chitral, Madaglasht, 2700 m, 26. V. (No. 27b). A widespread coprophagous Holarctic species, new for the fauna of Pakistan and new to the Oriental region.

Kimosina rufa (DUDA, 1925) — Taiwan (Formosa): 1 ♂ 1 ♀ (DEI): Tainan, V. 12. H. SAUTER, "Limosina rufa Duda" det. W. HENNIG, 1939. It was described from Takao, Taiwan. The holotype female is in the collection of the HNFM, Budapest. This is surely not a species of *Spelobia* (i.e. not related to the yellow-bodied *lutea*), fits better to *Kimosina*. In the collection of the HNFM there are specimens of this species (or species-group) from Vietnam.

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DREI NEUE TAXA DER GATTUNG
OCTAVIUS FAUVEL
(COLEOPTERA, STAPHYLINIDAE)*

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(Eingegangen am 9ten November 1990)

(Three new taxa of the genus *Octavius* Fauvel, Coleoptera: Staphylinidae.)
Description of *Octavius kenyamontis* sp. n. (Kenya), *O. indicus goanus* ssp. n. (India: Goa) and *O. baloghianus* sp. n. (New Guinea). With 4 original figures.

DR. O. MERKL hat mich freundlicherweise mit weiterem Euaesthetinen-material aus dem Ungarischen Naturwissenschaftlichen Museum versorgt, worunter sich zwei neue *Octavius* befanden, die ich hier, zusammen mit einer weiteren neuen Art bekannt mache.

***Octavius kenyamontis* sp. n.**
(Abb. 1—3)

Dieser neue *Octavius* gehört in die Grossgruppe des *O. flavescens* (KISTNER) und hier in die Nähe des *O. brevipennis* (KISTNER); er dürfte die Schwesterart des *O. kaboboensis* (KISTNER) sein: den beiden letztgenannten Spezies sieht er derart ähnlich, dass eine ausführliche Bechreibung weitgehend wiederholenden Charakter hätte, weshalb ich mich kurz fasse.

Makrophthalm, brachypter, einfarbig rötlichbraun, Kopf und Pronotum vollständig matt, Elytren gekörnt und am Grund glänzend, Abdomen glänzend. — 1,7—2,0 mm.

♂ — Holotypus und 4 ♂♂ — Paratypen: Kenya: Mount Kenya, Met. Station Q 3050 m, 22. IX. 1976, N. SANFILIPPO leg. — Holotypus im Museo Civico di Storia Naturale "Giacomo Doria" Genua. Paratypen ebendort und in meiner Sammlung.

Proportionsmasse des Holotypus: Kopfbreite: 47; Augenabstand: 41; Augenlänge: 8; Schläfenlänge: 14; Pronotumbreite: 57; Pronotumlänge: 45; grösste Elytrenbreite: 67; grösste Elytrenlänge: 38; Nahtlänge: 29. — Vorderkörperlänge: ca. 1 mm.

* 67. Beitrag zur Kenntnis der Euaesthetinen.

Männchen: 3. und 4. Tergit mit basalem Quereindruck. 8. Sternit (Abb. 2). 9. Sternit (Abb. 3). Aedoeagus (Abb. 1), denen der beiden oben genannten Arten prinzipiell ähnlich, der Apikalteil des Medianlobus aber viel weniger über die Paramerenspitzen hinausreichend. — Oberflächenskulptur wie bei den Nahverwandten: vgl. Skulpturbeschreibung des *O. kenyanus* PUTHZ (PUTHZ 1984).

Octavius kenyamontis sp. n. unterscheidet sich von *O. brevipennis* (KISTNER) und *O. kaboboensis* (KISTNER) durch einfarbig rötlichbraune Oberseite, bedeutendere Grösse und die Sexualcharaktere (flacher ausgerandetes 8. Sternit des Männchens und im Verhältnis zu den Parameren kürzeren Medianlobus), von *O. kenyanus* PUTHZ und *O. leleupi* (KISTNER) ebenfalls durch bedeutendere Grösse, weitläufigere Abdominalpunktierung und die Sexualcharaktere: von *O. kenyanus* durch längeren, schmäleren Medianlobus, von *O. leleupi* durch vorn spitzwinkligen Medianlobus und drei apikale Paramerenborsten (*O. leleupi* besitzt nur zwei). — In meiner Bestimmungstabelle der afrikanischen Arten (PUTHZ 1986) muss diese neue Art bei Leitziffer 32 (35) eingefügt werden.

***Octavius indicus goanus* ssp. n.**

Dieser neue *Octavius* gehört ebenfalls in die Grossgruppe des *O. flavesiens* und sieht hier prinzipiell dem *O. indicus* so ähnlich, dass ich in ihm keine eigene Spezies, sondern eine Rasse der genannten Art sehen möchte. Die Unterschiede zu den aus Südindien (Kerala) beschriebenen *O. indicus* sind aber doch so auffällig, dass es mir beim gegenwärtigen Kenntnisstand nicht möglich erscheint, sie in die Variationsbreite der genannten Art zu stellen. Ich sehe in den Stücken von Goa (gut 700 km nördlich von den Palghat- und den Cardamom Hills, Kerala) vorerst eine Subspezies, was anhand weiteren Materials verifiziert werden muss. Die Beschreibung kann kurz gehalten werden, weil es sich hier um eine äusserlich einförmige Artengruppe handelt. Es gilt die Unterschiede hervorzuheben.

Makrophthalm, makropter, rötlichbraun, das hintere Elytrendrittel geschwärzt, matt, sehr dicht und mässig grob skulptiert, dicht und kurz borstet. Fühler, Taster und Beine gelblich. — Länge: 1,4 — (ausgezogen) 1,9 mm.

♂ — Holotypus und 1 ♀ — Paratypus; Indien: Goa: Molem. extracted from wet mosses, near brook, 19.—22. V. 1980, G. TOPÁL leg. (zusammen mit mehreren *O. flavesiens*). — Holotypus im Ungarischen Naturwissenschaftlichen Museum, Budapest; Paratypus in meiner Sammlung.

Proportionsmasse des Holotypus: Kopfbreite: 41, Augenabstand: 33, Augenlänge: 12, Schläfenlänge: 4, Pronotumbreite: 50, Pronotumlänge: 33,

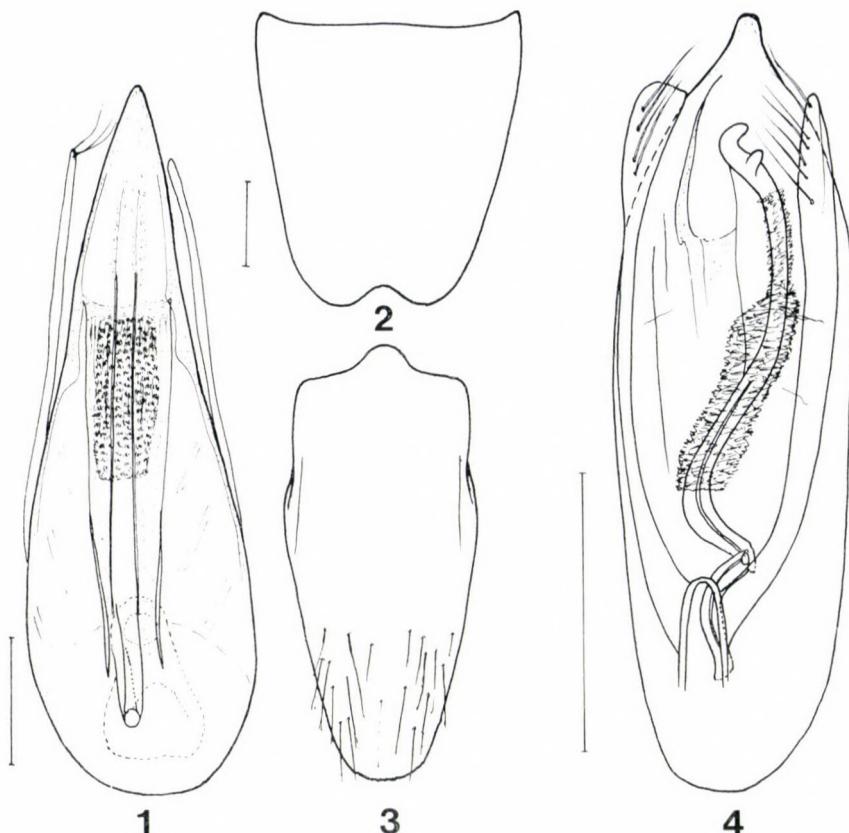


Abb. 1—3. *Octavius kenyamontis* sp. n. (Paratypus): 1 = Ventralansicht des Aedoeagus
2 = 8. Sternit, 3 = 9. Sternit. — Abb. 4. *Octavius baloghianus* sp. n. (Holotypus): Dorsalan-
sicht des Aedoeagus. — Mass-Stab = 0,1 mm

grösste Elytrenbreite: 53, grösste Elytrenlänge: 41, Nahtlänge: 30. — Vor-
derkörperlänge: 0,8—0,9 mm.

Männchen: 8. Sternit am Hinterrand sehr flach ausgerandet. 9.
Sternit apikal lang-konkav zugespitzt. Aedoeagus prinzipiell wie bei *O. indicus*
(vgl. Abb. 1 bei PUTHZ 1980), die Apikalpartie des Medianlobus ebenfalls
nach konkavem Bogen vorn rundlich erweitert und mit einem Ventralzahne,
die apikale Verbreiterung aber erheblich schmäler, weniger als 1/4 so breit wie
der Medianlobus an seiner breitesten Stelle (bei *O. indicus* etwa 40% so breit)
und auch viel schmäler abgesetzt.

Äusserlich ähnelt die neue Subspezies ihrer Nominatform sehr, die Augen
sind aber ein wenig länger, die Elytren deutlich länger. — In meiner Bestim-
mungstabelle der indischen und himalayischen *Octavius* (PUTHZ 1985) muss die
neue Rasse hinter Leitziffer 10 (11) eingefügt werden.

Octavius baloghanus sp. n.
 (Abb. 4)

Diese neue Art ist die Schwesterart des *O. solomonensis* PUTHZ, dem sie auch zum Verwechseln ähnlich sieht.

Geflügelt. Augen wenig gross, rötlichbraun, mässig glänzend. Kopf fein und dicht punktiert, die übrige Oberseite sehr fein und dicht punktiert bzw. genetzt, dicht und fein beborstet. — Länge: 1,0—1,2 mm.

♂ — Holotypus: New Guinea NE: Angoram, 13.—16. VIII. 1969. No. NGA-B. 59. J. BALOGH leg. — Holotypus im Ungarischen Naturwissenschaftlichen Museum. Budapest.

Proportionsmasse des Holotypus: Kopfbreite: 23,8; Augenabstand: 19,5; Augenlänge: 6; Schläfenlänge: 6,5; Pronotumbreite: 21,8; Pronotumlänge: 22,5; grösste Elytrenbreite: 25,8; grösste Elytrenlänge: 25,5; Nahtlänge: 21. — Vorderkörperlänge: 0,6 mm.

Männchen: 8. Sternit mit etwa spitzwinkligem Ausschnitt im hinteren Viertel. Aedoeagus (Abb. 4). dem des *O. solomonensis* sehr ähnlich (vgl. Abb. 3. PUTHZ 1977). Innenbau und Paramerenbeborstung aber abweichend.

Äusserlich lassen sich beide Arten nur schwer unterscheiden, die Proportionen sind etwas anders: die Augen etwas länger, das Pronotum ist etwas schmäler, die Elytren sind etwas länger als bei *O. solomonensis*: die Mittelfurche des Pronotums ist weniger deutlich eingeschnitten und der ganze Körper etwas tiefer skulptiert. — In dieser Artengruppe kann eine sichere Trennung meist nur mit Hilfe der Aedeoagusuntersuchung durchgeführt werden.

Ich dediziere diese Art ihrem verdienstvollen Sammler, dem bekannten Bodenzoologen DR. JÁNOS BALOGH.

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DESCRIPTION OF OGMOCOTYLE AFRICANUM
SP. N. (TREMATODA, NOTOCOTYLIDAE)
FROM THE HIPPOPOTAMUS AND A REVIEW
OF THE GENUS OGMOCOTYLE
SKRJABIN ET SCHULZ, 1933

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Ogmocotyle africanum sp. n. is described and illustrated from specimens collected from the hippopotamus in the Republic of Chad. It is distinguished from all species of the genus by the number and arrangement of the vitelline follicles and the longitudinal position of the cirrus pouch. With 1 original figure.

I ntroduction — During examination of the amphistome material collected by one of us (M. G.) in the Republic of Chad specimens of flukes were found to belong to the genus *Ogmocotyle*. These specimens represented an undescribed species besides the other known species.

M aterials and methods — Ten specimens of the species were collected in the small intestine of a male hippopotamus dissected in Dougia, Republic of Chad. Nine specimens were prepared as stained whole mounts. Median sagittal sections were prepared from one specimen; sections were stained with haematoxylin and eosin. The description and illustrations were based on the mounted and sectioned specimens.

Ogmocotyle africanum sp. n.
(Fig. 1)

D escription — Body small, pear-shaped, 1.40—1.50 mm long by 0.70—0.80 mm wide beyond its middle. Lateral sides of the body curved ventrally. Cutic smooth, with ripples. Oral sucker terminal, 0.17—0.20 by 0.15—0.20 mm. Pharynx absent. Eosphagus slender, measuring 0.15—0.35 mm in length. Caeca running along both sides of the body and ending near the middle of the testes. Testes lying symmetrically in front of posterior extremity, close to lateral sides of the body, ovoid, lobed. Right testis 0.25—0.35 by 0.25—0.35 mm in size, left testis 0.25—0.30 by 0.25—0.30 mm in size. Vas deferens running medially. Cirrus pouch well developed, longitudinal in position in the middle or somewhat posterior to middle of the body, 0.55—0.70 by 0.15—0.30 mm in size. It contains oval seminal vesicle, pars prostatica

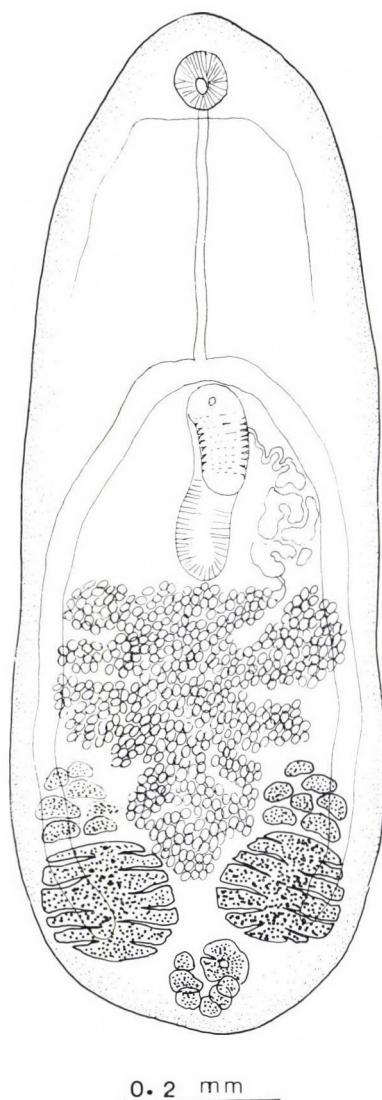


Fig. 1. *Ogmocotyle africanum* sp. n.

with many prostatic cells, ductus ejaculatorius and cirrus. Everted cirrus elliptical, 0.20—0.25 by 0.15 mm with 19 to 22 concentric rows of cirrus papillae. Cirrus opening together with metraterm, the joint opening is situated almost equatorial, to the left of the middle line, 0.70—0.90 mm from the anterior extremity. Ovary lying at posterior extremity of the body, 0.18—0.20 by 0.12—0.15 mm, consisting of 4 to 6 lobuli. Shell gland-complex oval, immediately preovarian, about 0.07—0.12 mm in size. Uterus looped transversally,

extending between shell gland-complex and posterior end of the cirrus pouch. Metraterm curved, well developed, opening close to the left of cirrus opening. Vitellaria relatively small, consisting of 7 to 12 follicles, situated in a single group at the anterior pore of the testes. Uterine eggs oval 14—20 by 8—10 μm , mature eggs with a short filament (12—16 μm) at opercular pole and a long filament (22—25 μm) at abopercular pole. Excretory vesicle bifurcating into two arms between ovary and posterior edge of vitellaria.

Type-host: *Hippopotamus amphibius*. — Habitat: Small intestine.

Locality: Republic of Chad.

Type specimens are deposited in the Department of Zoology, University of Agricultural Science, Keszthely, Hungary.

D i s c u s s i o n — The genus *Ogmocotyle* was established by SKRJABIN & SCHULZ (1933) for the species *O. pygargi* which had been collected from the small intestine of *Capreolus pygargus bedfordi* in Siberia. In the same year YAMAGUTI (1933) proposed the genus *Cymbiforma* for the species *C. sikae* which had been found in the small intestine of *Sika nippon* in Japan. PRICE (1954, 1960) described the species *Ogmocotyle ailuri* from the intestine of the lesser panda (*Ailurus fulgens*) died in the National Zoological Park, Washington, D. C. Further species were *O. capricorni* MACHIDA, 1970, found in the small intestine of *Capricornis crispus* in Japan; *O. macacae* OSHMARIN et DEMSHIN, 1972, found in the intestine of *Macacus rhesus* in Vietnam; *O. ratti* FISCHTHAL et KUNTZ, 1975, discovered in the small intestine of *Rattus culturatus* in Taiwan, *O. fujianensis* WANG, 1983, found in the intestine of *Macaca mulatta* in China and *Ogmocotyle* sp. McCULLY et al. 1967, found in the small intestine of *Hippopotamus amphibius* in South Africa.

SKRJABIN & SCHULZ (1933) regarded *O. sikae* as a synonym of *O. pygargi* whereas WEI (1965) was on the opinion that the former species was valid. ECKERT (1961) placed *O. ailuri* in synonymy with *O. indica*. YOSHIMURA et al. (1969) reexamined *O. ailuri* found in the Taiwanese monkey, *Macaca cyclopis* and they found that: 1) the cirrus pouch of *O. indica* was consistently transverse and not longitudinal as depicted by BHALERAO (1942), 2) the cirrus bears papillae and is not unarmed as stated by PRICE (1960) and 3) the operculated end of the egg usually has only one filament, occasionally two as it was mentioned by PRICE (1960). Zoogeographically, all the species of *Ogmocotyle* have Asian distribution except for *Ogmocotyle* sp. and *Ogmocotyle africanum* sp. n. which have African distribution.

Before analysing the validity of the species described up to now or the correctness of the synonymization of the species in question it seems reasonable to analyze the specific characters of species of the genus *Ogmocotyle*. Of the specific characters the form and measurements of the cirrus pouch should be mentioned firstly. As to its form, it may be arcuate, transverse and longitudinal. The number of rows of papillae of the cirrus pouch were studied in some

species (*O. ailuri* (YOSHIMURA et al. 1969), *O. capricorni* (FISCHTHALE et KUNTZ, 1975). *O. africanum* sp. n. but they did not prove to be strictly specific (see *O. ailuri* and *O. capricorni* = *O. indica*). Furthermore the structure of the genital organs (mainly testes and vitelline follicles) as well as the measurement of the body length are considered as principal specific states. Taking these characters into consideration *O. pygargi* (syn. *O. sikae* YAMAGUTI, 1933), *O. indica* (syn. *O. capricorni* MACHIDA, 1970), *O. ailuri* (syn. *O. macacae* OSHMARIN et DEMSHIN, 1972), *O. ratti*, *O. fujianensis* are regarded as valid.

O. sikae was regarded as a synonym of *O. pygargi* by SKRJABIN & SCHULZ (1933). This action seems to be correct due to the insufficient differences between these two species. *O. capricorni* is identical with *O. indica*. MACHIDA did seemingly not consult with SHARMA DEORANI's (1966) paper in which SHARMA DEORANI described two distinct variations in shape of cirrus pouch. These variations include the position of *O. capricorni* as it was indicated by MACHIDA (1970). OSHMARIN & DEMSHIN (1972) did not consult with PRICE's (1954, 1960) papers in which *O. ailuri* was described. These two species *O. ailuri* and *O. macacae* are identical with each other in principal specific characters.

The first report on the presence of ogmocotylid flukes (*Ogmocotyle* sp.) in Africa was published by McCULLY et al. (1967). They were found in a hippopotamus shot in the Kruger National Park (South Africa). It was indicated as "a hitherto undescribed *Ogmocotyle* sp." without species designation and description. Our ogmocotylid material which was tentatively identified as *O. indica* (SEY et GRABER, 1979) was also originated from the same host. Closer examinations, however, revealed that it is a new, undescribed species and named *Ogmocotyle africanum* sp. n., referring to the locality of the test material.

Ogmocotyle africanum sp. n. has two specific characters (position of the cirrus pouch and vitelline follicles). The cirrus pouch has a longitudinal position and its everted cirrus is armed with spines situated in 19 to 22 rows. It is a unique feature of this species that the vitelline follicles (6 to 7 in each) are concentrated at the anterior parts of the testes and they do not form an arch beginning from the right to the left sides as it is characteristic of each species of the genus. Moreover its host and its geographical distribution can also add to the specific characters.

KEY TO THE SPECIES OF OGMOCOTYLE

1. Cirrus pouch longitudinal or transversal	2
Cirrus pouch horizontal, arcuate	4
2. Vitelline follicles forming an arch	3
Vitelline follicles in a group at anterior parts of testes	<i>O. africanum</i>
3. Cirrus pouch in middle-third of body	<i>O. indica</i>
Cirrus pouch in anterior half of body	<i>O. pygargi</i>
4. Body length bigger than 1 mm	5
Body length smaller than 1 mm	<i>O. ratti</i>
5. Testes entire	<i>O. fujianensis</i>
Testes lobed	<i>O. ailuri</i>

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TAXONOMIC STUDIES ON THE PALAEARCTIC NOCTUIDAE (LEPIDOPTERA)

I. NEW TAXA FROM ASIA

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One new genus, *Nezonycta* gen. n.; 19 new species, *Aedophron eos* sp. n. (Mongolia), *Eugnorisma glareomima* sp. n. (Afghanistan), *Thargelia leucostigma* sp. n. (Mongolia), *T. haloxyleti* sp. n. (Mongolia), *Odontelia regina* sp. n. (Afghanistan), *Nezonycta obtusa* sp. n. (Turkey), *Perigrapha annau* sp. n. (Turkmenia), *Bryomima nuristana* sp. n. (Afghanistan), *Ostheladera kondara* sp. n. (Tadzhikistan), *Agrochola dubatolovi* sp. n. (Turkmenia), *Pseudopeustis argylostigma* sp. n. (USSR, W Siberia), *Maraschia hissarensis* sp. n. (Tadzhikistan), *Marsipiophora calopepla* sp. n. (Mongolia), *Hydraecia terminata* sp. n. (Mongolia), *Eremodrina leptodactyla* sp. n. (Tadzhikistan, Afghanistan), *E. falcinula* sp. n. (Afghanistan), *E. monssacralis* sp. n. (Mongolia), *Victrix frigidalis* sp. n. (Mongolia), *Desertoplusia colornata* sp. n. (Turkey) and 3 new subspecies, *Cardiastes gobideserti mandalgori* ssp. n. (Mongolia), *Auchmis detersina sericea* ssp. n. (Afghanistan, Ladakh), and *Platyperigea grisea fuscifusa* ssp. n. (Mongolia) are described. The taxonomy of some genera is discussed and new combinations are given. With 3 original photoplates and 113 original figures.

Introduction — During the last years we examined vast materials from various regions of Asia, e.g. Asia Minor, Transcaucasia and Turkmenia, Afghanistan, the Tien Shan chain and Mongolia. Parts of the results were published in comprehensive revisional works. Numerous taxonomic novelties, however, could not be included into these publications, hence we are going to describe the new taxa and taxonomic changes as preliminary studies for a general systematic survey of the Holarctic Noctuidae. The present paper is the first item of this series.

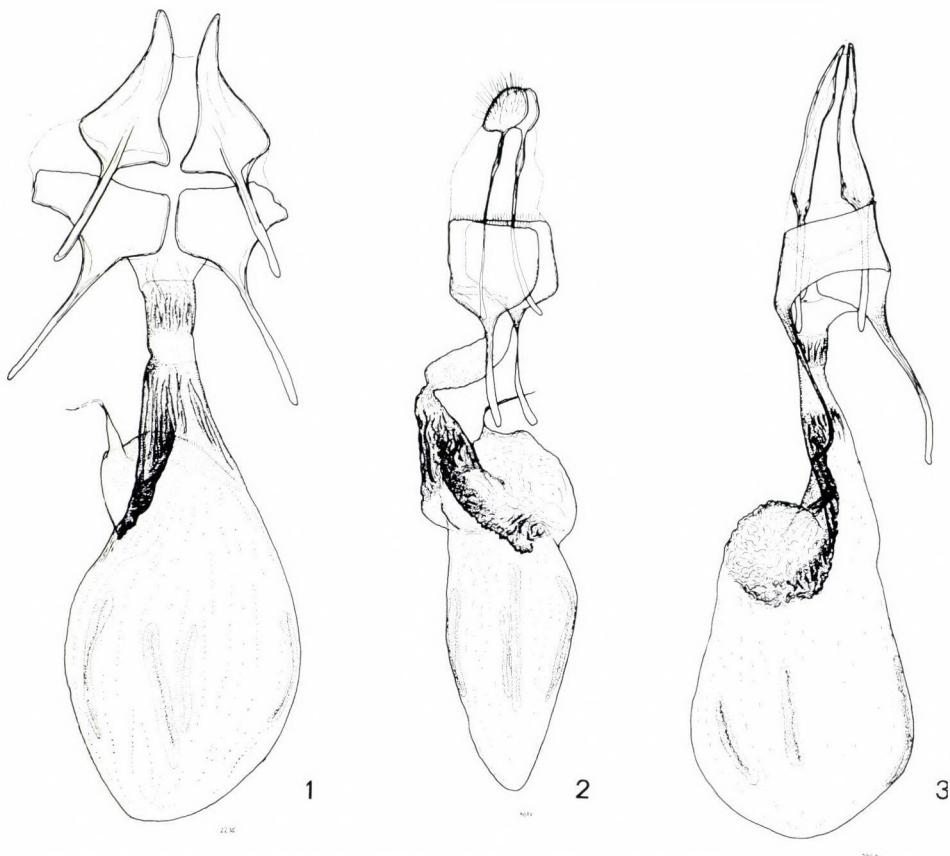
Abbreviations:

- HNHM = Hungarian Natural History Museum, Budapest
BIN = Biological Institute, Novosibirsk
ZSM = Zoologische Staatssammlung, München

DESCRIPTIONS OF THE NEW TAXA

***Aedophron eos* sp. n. (Plate I: 1)**

Holotype: female, Mongolia, Chovd aimak, Dzungar Gobi, 40 km W Bulgan sum, 06.08.1986, leg. Z. VARGA, coll. HNHM Budapest. Slide No. 4015 VARGA.



Figs 1–3. 1 = *Aedophron venosa* CHRISTOPH, USSR, Turkmenia. 2 = *Aedophron eos* sp. n. holotype, Mongolia, Chovd. 3 = *Aedophron rhodites* EVERSMANN, Turkey, Akshehir

Description: wingspan 30 mm, length of forewing 14 mm. Head and thorax light pinkish, abdomen light whitish-grey with some pink hairs. Shape of forewings elongated triangular with acute apex. Ground colour vivid pink, costal margin, inner part of cell and some quadrangular patches of marginal field light ochreous. Transverse lines and stigmata absent except large, more or less triangular, dark pink spot of reniform. Terminal line obsolescent, cilia ochreous. Hindwing white with some ochreous shine and few greyish suffusion on some veins in marginal field. Terminal line reduced, cilia pure white. Underside unicolorous white with milky-ochreous shine, ghost of reniform light grey.

Female genitalia (Fig. 2): ovipositor long and narrow, posterior gonapophyses small, rounded, weakly sclerotized; gonapophyses long. Ostium narrow, membranous, ductus bursae elongated, posterior half membranous

with a slightly granulose part, anterior half sclerotized and rugulose, with a long, sclerotized ribbon running from ductus bursae to caudal end of cervix bursae. Bursa copulatrix membranous, cervix bursae semiglobular, corpus bursae elliptical with four long, ribbon-like signa.

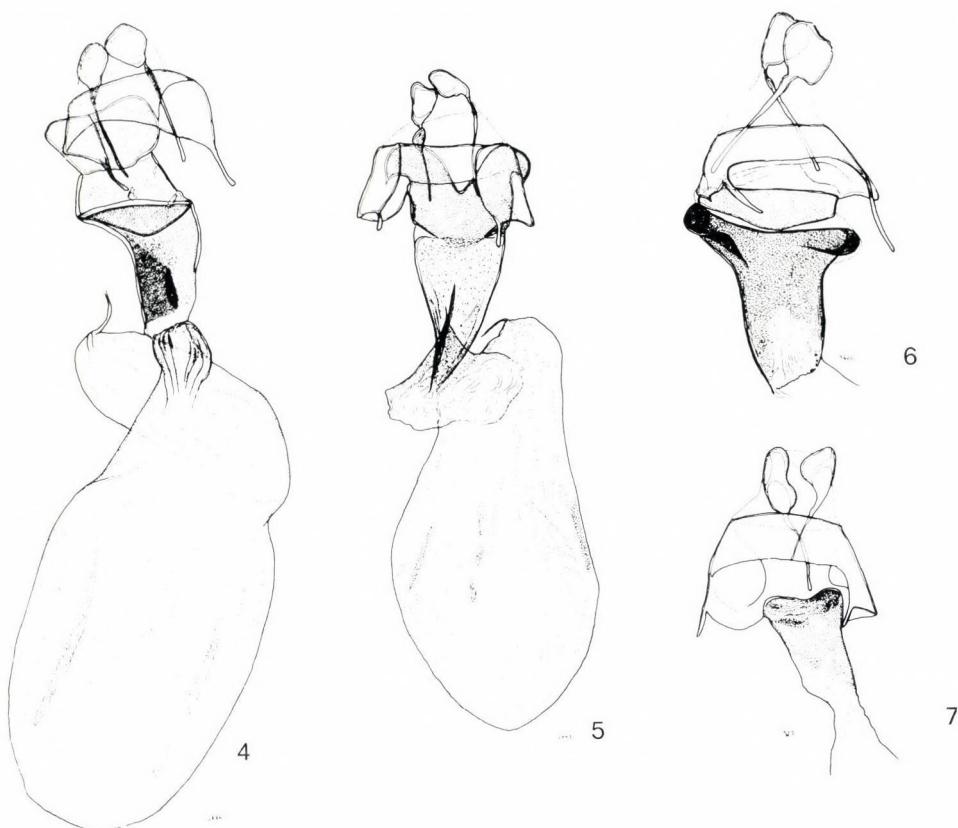
The new species represents the easternmost member of this small, generally W Asian genus containing xerophilous species of stenochorous distribution. It differs externally from *rhodites* (Eversmann, 1851) by its more elongated shape of the forewings, the white hindwing and the more expressed ochreous pattern of forewing; the other taxa of the genus have yellowish-ochreous ground colour of the forewings. Surprisingly, the vivid pinkish colouration of the holotype specimen of *eos* faded during the exsiccatting process and remained as a light brownish-buff colour.

The configuration of the female genitalia of the new species differs from all the congeners by its small and weak, rounded posterior papillae anales. The other parts of the female copulatory organ are similar to those of *venosa* (Christoph, 1887) (Fig. 1) but the ductus bursae is longer with less sclerotized posterior and stronger anterior parts, sclerotized ribbon longer and more rugulose. The female genitalia of *rhodites* (Fig. 3) is larger and more robust than those of the two other mentioned species, the sclerotization of the ductus is significantly stronger and longer than in case of *eos*.

Eugnorisma glareomima sp. n. (Plate I: 4)

H o l o t y p e: female, "O-Afghanistan, Pr. Kunar, Nuristan, unt. Lindai-Sin-Tal, 18 km westl. Kamu, 1500 m, 20.10.70, leg. C. NAUMANN, coll. Nr. ZMK 110". Slide No. 5743 VARGA (coll. NAUMANN, Bonn).

D e s c r i p t i o n: wingspan 34 mm, length of forewing 16 mm. Head and thorax light grey, palpi narrow, short, laterally dark grey. Forewings wide triangular, light grey with some fine bluish shade and slight brownish irroration in medial and marginal fields. Transverse lines pale, subbasal line consists of two blackish spots, antemedial line oblique and straight, costal part defined by blackish patches extending to orbicular spot in cell. Postmedial line arcuate around cell, below straight and oblique, marked with brown spots. Median area truncated triangular, orbicular and reniform stigmata large, incompletely encircled with dark brown and whitish and filled with ground colour; with a triangular, blackish-brown spot between the two stigmata. Subterminal line sinuous, dark brown, terminal line pale brownish. Hindwing whitish, veins and marginal field scarcely covered with brown scales; cilia whitish. Underside of wings shiny whitish, forewing suffused with some brown-grey; shadows of pattern of upperside slightly visible.



Figs 4—7. 4 = *Eugnorisma eucratides* BOURSIN, Afghanistan. 5 = *Eugnorisma glareomima* sp. n., holotype, Afghanistan, Nuristan. 6 = *Eugnorisma fuscisignata* HAMPSON, Kashmir.
7 = *Paramathes glareosa* ESPER, Germany

F e m a l e g e n i t a l i a (Fig. 5): ovipositor short and weakly sclerotized, gonapophyses short. Ostium huge and strong, with two lateral arches and a deep posterior incision. Ductus bursae wide, proximally tapering and twisted. Caudal part smooth, granulately sclerotized, medial part with a sclerotized ventral fold, anterior part rounded, gelatinose. Cervix bursae small, membranous, corpus bursae large, elliptical, with three weak, ribbon-like signs, one of them interrupted.

The new species resembles externally to *Paramathes glareosa* (ESPER, 1789), differs from it by larger size, broader forewings and sinuous subterminal line. The other similar species, *Eugnorisma eucratides* (BOURSIN, 1957) have darker colouration and different blackish patches in the cell of the forewing.

The configuration of the female genitalia displays the relationship with the species of the *eucratides*-group (VARGA, RONKAY & YELA 1990, in press)

(see Figs 4—6), the most characteristic differences are the lyriform posterior lobes of the ostium and the twisted anterior part of ductus bursae. This latter feature is common with the species of the *trigonica*-group (see VARGA & RONKAY 1987). (The clasping apparatus of *Eugnorisma fuscisignata* (HAMPSON, 1903) displays also some similarities with the mentioned group. Its phylogenetic consequences, however, can be discussed in a later work.)

The area of the *eucratides*-group extends from E Afghanistan to the SW Himalaya, *glareomima* seems to have a medial range in it.

THE THARGELIA-ODONTELIA PROBLEM

The genus *Thargelia* was erected by PÜNGELER in 1900 for two "Scotochrosta" species described by CHRISTOPH from the Achal-Tekke region, but he did not designate the generotype of *Thargelia*. In the monography of the Noctuidae Hadeninae, HAMPSON designated *distincta* CHRISTOPH, 1884 as generotype of *Thargelia* and created an other genus, *Odontelia* for the second species, *fissilis* CHRISTOPH, 1884. In his early works, on the basis of the significant dyssymmetry of the male genitalia, BOURSIN mentioned the *Thargelia* species as *Hadula*. SHTSHETKIN (1965) stated that the generic characters, mentioned by PÜNGELER, fit more to *fissilis* than to *distincta*. He negligated the designation of HAMPSON and considered *fissilis* as the generotype of *Thargelia*.

SUKHAREVA (1970) gave the correction of SHTSHETKIN'S mistake and fixed that the taxa, being congeneric with *distincta*, must be relegated as the members of *Thargelia*. She studied the syntypes of *distincta*, preserved in the collection of the Zoological Institute, Leningrad and pointed out that they are conspecific with "Hadula" *megastigma* WARREN, 1909 (sensu REISSE 1958).

Unfortunately, she did not designate the lectotype of *distincta*, only stated the synonymy of *distincta* and *megastigma*. This fact raises some problems in the definitive interpretation of *Thargelia*, as an other syntype, dissected and labelled by BOURSIN as "type" (slide No. MB 254 BOURSIN) coll. STAUDINGER, ZMHU Berlin) is an *Odontelia* species, very probably identical with *arenicola* SHTSHETKIN, 1965. (BOURSIN had not published either a figure or photo of his slide or the designation of the lectotype of *distincta*.) So the question is open: What is in fact the type species of *Thargelia* from biological sense? (nomenclaturally, of course, *distincta*).

We propose hereby, to avoid further complications, to consider one of the male syntypes of the collection of the ZIN Leningrad as the lectotype of *distincta*. In this case the two genera, *Thargelia* and *Odontelia*, will not be synonymous and the creation of a new genus will be unnecessary.

The taxon, mentioned in some recent papers as *Thargelia pusilla* PÜNGELER, 1900 — on the basis of the original description of PÜNGELER — together

with its sibling species, *obtusa* sp. n. (described below) belong to a distinct, new genus, related to *Hada* BILLBERG, 1820 (*Nezonycta* gen. n.).

In the following part the descriptions of new species and subspecies of *Thargelia*, *Odontelia*, *Cardiestra* and *Nezonycta* are given. It should be noted that genus *Odontelia* contains more undescribed taxa related to *fissilis*. They represent a complex of closely related and often partly sympatric species; the full revision of the genus is needed.

The genera *Thargelia*, *Odontelia* and *Cardiestra*, together with *Hadula* STAUDINGER, 1899, form a very compact monophyletic group in the subfamily Hadeninae. As the most important synapomorphy of this unit is the tubular vesica terminated in small cornutus, since the ductus ejaculatorius is originated from the basal part of vesica and directed backwards. Fascia of cornuti — which is characteristic of the other, related groups of Hadeninae (e.g. *Saragossa*, *Sideridis*, *Conisania*, *Hada*, *Nezonycta* etc.) — is never present.

The conspicuous biogeographical feature of this group is the specialization to the eremic habitats; only *Hadula sabulorum* (ALPHERAKY, 1889) expanded to the montane steppe zone.

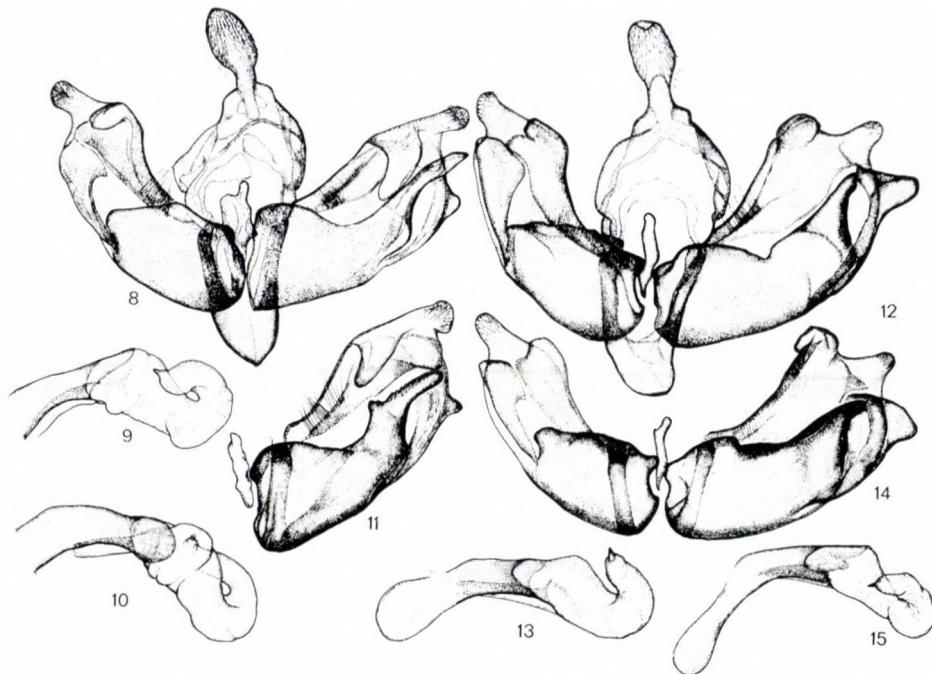
CHECKLIST OF THE FOUR GENERA

<i>Thargelia</i> PÜNGELER, [1900] 1899	<i>arbuseulae</i> SUKHAREVA, 1970
<i>distincta</i> (CHRISTOPH, 1884) (type species)	<i>arenicola</i> (SHTSHETKIN, 1965)
(= <i>megastigma</i> WARREN, 1909)	<i>fissilis</i> (CHRISTOPH, 1884)
<i>orbona</i> (BANG-HAAS, 1912), comb. n.	
<i>tranquilla</i> SUKHAREVA, 1970	<i>Cardiestra</i> BOURSIN, 1963
<i>ochreæ</i> WARREN, 1909, comb. n.	<i>eremistis</i> (PÜNGELER, 1904) (type species)
<i>leucostigma</i> sp. n.	<i>vassilinini</i> (BANG-HAAS, 1927)
<i>gigantea</i> REBEL, 1909	<i>vaciva</i> (PÜNGELER, 1906)
<i>spinipes</i> SUKHAREVA, 1970	<i>gobideserti</i> VARGA, 1973
<i>haloxyleti</i> sp. n.	<i>gobideserti</i> mandalgovii ssp. n.
<i>Odontelia</i> HAMPSON, 1905	
<i>regina</i> sp. n.	<i>Nezonycta</i> gen. n.
<i>sitiens</i> (PÜNGELER, 1914)	<i>pusilla</i> (PÜNGELER, 1900) (type species)
<i>margiana</i> (PÜNGELER, 1901) (type species)	<i>obtusa</i> sp. n.

Thargelia leucostigma sp. n. (Plate I: 5—6)

H o l o t y p e: male, "Mongolia, Ömnögovi aimak, Naran Bulag, 1500 m, 99° 53'E, 43° 47'N, 14.05.1990. leg. G.Y. FÁBIÁN, M. HREBLAY, L. PEREGOVITS et G. RONKAY (coll. HNHM). — **P a r a t y p e s:** 4 males from the same locality and data. Slide No. 3639 RONKAY.

D e s c r i p t i o n: wingspan 41—45 mm, length of forewing 19—20 mm. Head small, palpi short and porrect, laterally dark grey, frons with rounded prominence. Head and thorax ochreous slate-grey, collar and tegulae with dark brown-grey lines. Forelegs without strong spines. Abdomen similarly



Figs 8—15. 8—9 = *Thargelia leucostigma* sp. n., holotype, Mongolia, Naran Bulag. 10—11 = *Thargelia tranquilla* SUKHAREVA, USSR, Syr-Darya. 12—15 = *Thargelia haloxyleti* sp. n., paratypes (12—13 = Mongolia, Naran Bulag, 14—15 = Mongolia, Alag)

ochreous-greyish, anal tuft strong. Forewing narrow and long, apex acute. Ground colour milky whitish-ochreous with more or less intensive light brownish-greyish irroration in medial and marginal fields. Wing pattern sharp, blackish, reduced to outlines of stigmata, streak of submedian fold and arrowheads of subterminal line. Stigmata sharp, encircled with blackish and filled with milk-white. Orbicular very long and flattened, claviform big and clear whitish, streak of submedian fold does not reach it. Reniform usually very large with long outer peaks. Terminal line sharp and fine, blackish; cilia white, spotted with brown. Hindwing small and rounded, its ground colour similar to that of forewing. Inner and anal parts slightly suffused with light brownish scales, veins finely covered with brown. Cellular lunule present, diffuse, transverse line usually visible as a row of spots. Marginal suffusion absent or pale, terminal line brown; cilia white. Underside of wings shiny milk-white, cellular lunules and transverse lines present but diffuse and usually pale brownish.

Male genitalia (Figs 8—9): uncus large, spoon-like, tegumen moderately high. Fultura a narrow, asymmetric shield with granulose apical part. Vinculum very strong. Valvae large, asymmetric, left valva with nearly

parallel margins, right valva distally strongly dilated. Sacculus strong, clavus slightly asymmetric, more or less quadrangular, with a depression on ventral surface. Saccular extensions very different: small and short triangular on left side, very long and sward-like on right side. Harpe also asymmetric, left one narrower and apically rounded, right one distally very strongly widened and rounded, with a small, triangular lateral processus. Digitus small and rounded on left valva, large, recurved and pointed on right side. Cucullus very small, corona reduced. Aedeagus cylindrical, big and thick, carina with elongated, sclerotized dorsal part. Vesica tubular, distally recurved, terminated in a small but strong cornutus; ductus ejaculatorius originated from basal part of vesica.

The new species is close to *tranquilla*, *ochrea* and *gigantea*, differs externally from the former two by lighter, whitish-ochreous ground colour, sharper pattern and whitish fillings of stigmata. The latter species has narrower and longer forewings and different shape of stigmata.

The male genitalia is similar to that of *tranquilla* but differs from it in a series of characteristics as follows: the uncus is much wider, the right saccular extension is essentially longer and stronger, its basal part is different in shape (see Figs 10–11), the digitus is longer on right side, the fultura inferior is wider, the right cucullus is longer and narrower and the right clavus is more quadrangular. In the male genitalia of *gigantea* the cucullus is very long on both sides, the left harpe is long and huge, spatulate and more or less rounded. The right digitus and the saccular extension are similar to those of *leucostigma*, the right harpe is wide-based and relatively long, distally slightly curved and the dorsal surface is very strongly dentated with small teeth.

The new species is the easternmost member of this line of development (*gigantea*: N African deserts, *distincta*: Transcaspia and Iran, *tranquilla*: the Syr-Darya range, *ochrea*: Chinese Turkestan, *leucostigma*: S Mongolia). It occurs sympatrically with *haloxyleti* sp. n., the member of the *spinipes*-line. The early stages are unknown, but it seems to be connected to the *Haloxylon* deserts, the specimens are on wing in the late night in the middle of May, the early spring period in the Southern Govi.

Thargelia haloxyleti sp. n. (Plate I: 8—10)

H o l o t y p e: male, "Mongolia, Ömnögovi aimak, Gurvantös, 1300 m, 101° 30'E, 43° 24'N, 12–14. 05. 1990. leg. Gy. FÁBIÁN, M. HREBLAY, L. PEREGOVITS et G. RONKAY (coll. HNHM). — **P a r a t y p e s:** 42 males, 4 females from the same locality and data; 9 males and 1 female, Mongolia, Ömnögovi aimak, 30 km E of Gurvantös, 1600 m, 101° 31'E, 43° 25'N; 14 males, Mongolia, Govi Altay aimak, NW of Mts. Adz Bogd, basin of lake Alag, 1250 m, 94° 40'E, 45° 18'N, 18. 05. 1990; 4 males, Mongolia, Ömnögovi aimak, Naran Bulag, 1500 m, 99° 53'E, 43° 47'N, 14. 05. 1990. All the paratypes were collected by GY. FÁBIÁN, M. HREBLAY, L. PEREGOVITS et G. RONKAY (coll. the collectors, HNHM Budapest and Z. VARGA, Debrecen). Slides Nos 3637, 3638, 3640, 3641, 3648 RONKAY (males), 3709 RONKAY (female).

D e s c r i p t i o n: wingspan 39—42 mm, length of forewing 18—21 mm. Head small, eyes large, palpi short and porrect, laterally dark, antennae of males ciliate. Forelegs with a pair of strong spines on tibiae. Ground colour of head, thorax and forewings variable, ochreous-brown or greyish, sometimes clean grey; collar and tegulae with dark lines. Forewing narrow and elongated with acute apex; markings dark brown or grey and whitish. Transverse lines obsolescent or reduced except arrowheads of subterminal line. Orbicular and claviform stigmata narrow and elongated, flattened, filled with light. Streak of submedian fold long, expanded into middle of claviform. Reniform large, encircled with blackish, upper part narrow, lower part strongly dilated, with dentiform extensions on both sides. Marginal field spotted with brown and/or grey, veins darker, terminal line fine. Cilia whitish, spotted with ground colour. Hindwing small and rounded, whitish with more or less strong ochreous-brownish suffusion in anal area; veins covered with brown. Cellular lunule present but diffuse, transversal line absent or reduced to stronger spots on veins. Marginal suffusion slight or deleted, terminal line dark brown; cilia white. Underside ochreous-white, basal and medial parts of forewing suffused with brown, other parts scarcely irrorated with grey-brown scales. Cellular lunules and transverse lines present on both wings, wide and diffuse.

M a l e g e n i t a l i a (Figs 12—15): uncus large, lapathiform, densely setose, tegumen moderately high. Fultura inferior a strong, narrow, asymmetric, apically granulose plate. Valvae large and asymmetric, right valva distally strongly dilated. Cucullus narrow and small, corona reduced. Sacculus strong, clavi slightly asymmetric, big, sclerotized and granulose, with deep depression on ventral surface. Saccular extensions strongly asymmetric, small and rounded on left side, long and pointed on right side basis of latter wide and round, apically strongly tapering and weaker, its surface finely dentated. Harpe similarly asymmetric, big and flattened, apically rounded on left side, huge and broad, laterally with a large, triangular extension on right side. Digitus small and nearly equal on both valvae. Aedeagus cylindrical, large and thick, carina dorsally elongated and sclerotized. Vesica tubular, everted forward and recurved laterally, with a small, strong cornutus laterad. Ductus ejaculatorius opening from basal part of vesica.

F e m a l e g e n i t a l i a (Fig. 39): ovipositor wide but weakly sclerotized, gonapophyses thick, short. Ostium bursae a sclerotized, quadrangular plate with stronger edges, ductus bursae wide, flattened, with long, sclerotized erest. Cervix bursae more or less quadrangular, flattened, weakly sclerotized, with hyaline apical part. Corpus bursae long and narrow, membranous, with two small, rounded signa.

The new species is the eastern, allopatric sibling of *T. spinipes*, separable mainly by the features of the male genitalia. The uncus of *haloxyleti* is signifi-

cantly wider and rounded, the lateral processus of the right harpe is narrower than the diameter of the uncus (cf. the Figs 2—3 in SUKHAREVA 1970). The surface of the right saccular extension is finely dentated. The configuration of the female genitalia of the two species is very similar, only the sclerotization of the ostium is stronger in *haloxyleti*.

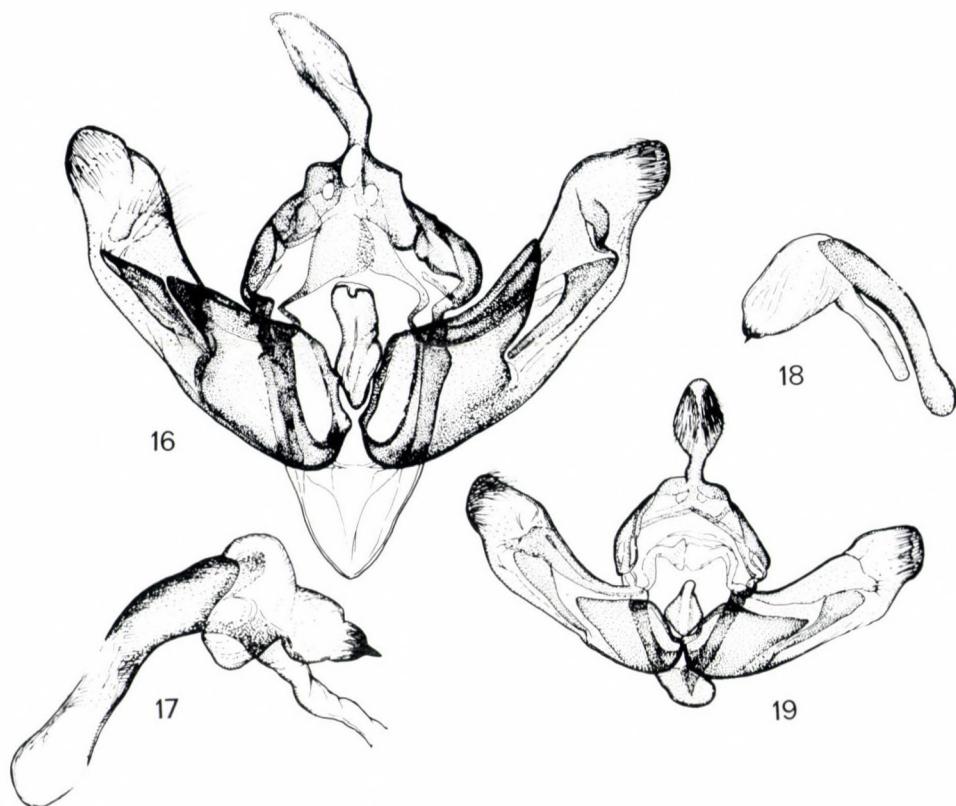
The new species has two, externally different populations, one of them has generally larger size and more ochreous-brownish ground colour of the forewings. This population lives in the southern Govi, in the basin between the E Govi Altay chain and the Noyon Mts (vicinity of Gurvantös, Naranbulag). The second one is smaller in size, the wings are narrower and the colouration is conspicuously darker grey or greyish. This population occurs at the border of the Dzhungar Govi, in the basin of the Lake Alag. These populations probably represents two isolated geographic subspecies but more collectings are necessary to explore the real distribution of this species in the deserts of Mongolia.

The species was found only in sandy (or sandy-clay) desert habitats where *Haloxylon* grows. Although the foodplant of the species is unknown but the species is connected either to *Haloxylon* or to the plant communities associated with *Haloxylon*. The females of the species fly relatively early in the evening, the males in the late night period.

Odontelia regina sp. n. (Plate I: 11)

H o l o t y p e: male, "S Afghanistan, Pr. Helmand, Registan, 50 km sdl Dishu, *Haloxylon*-Steppe, 18. 1. 1971, alt 1000 Meter, leg. C. NAUMANN, coll.-Nr. ZMK", slide No. 4674 VARGA (coll. NAUMANN, Bonn). — P a r a t y p e s: 2 males from the same locality and data coll. NAUMANN.

D e s c r i p t i o n: wingspan 53 mm, length of forewing 23 mm. Head and thorax covered with rough scales, palpi short and porrect, antennae strongly bipectinate. Head and thorax shiny, light metallic grey, collar with whitish-ochreous base and orange-yellow tip, tegulae with blackish margins. Forewing elongated and high triangular with pointed apex. Ground colour light slate-grey with ochreous shade, parts of median and marginal fields suffused with bluish metallic grey; veins covered with grey; veins covered with grey-brown. Ante- and postmedial lines reduced, subterminal line a row of orange-brownish and blackish arrowheads defined by whitish triangular patches. Streak of submedian fold short and wide, claviform spot long and strong, encircled with blackish-brown and filled with whitish-ochreous. Orbicular less defined, oblique and flattened, reniform very large and sharp, filled with whitish. Terminal line diffuse, orange-yellow, cilia whitish, spotted with grey and brown. Hindwing rounded, matt greyish-white with scarce brownish irration, veins covered with dark scales, anal area suffused with brown. Terminal line interrupted, brown, cilia white. Underside shiny milk-whitish, inner



Figs 16—19. 16—17 = *Odontelia regina* sp. n., holotype, Afghanistan, Registan. 18—19 = *Odontelia sitiens* Püngeler, holotype, USSR, Syr-Darya

parts of wings with more or less strong dark brown irroration. Cellular lunules present, narrow and curved, filled with whitish. Transverse lines diffuse and wide, stronger on veins; cilia as on upperside.

M a l e g e n i t a l i a (Figs 16—17): uncus strong and wide, setose, tegumen wide and relatively low. Fultura inferior a slightly asymmetric, long and narrow plate with strong basal triangle; vinculum very strong, V-shaped. Valvae narrow and elongated, slightly S-shaped. Sacculi strong, saccular extensions large and strongly asymmetric, essentially larger and elongated on right valva. Clavus small, sclerotized, densely setose. Harpae symmetric, long and strong, arrow-shaped. Digitus present as a relatively weak, elongated protuberance. Cucullus small and narrow, hairy, corona reduced. Aedeagus cylindrical, thick, carina dorsally elongated and sclerotized. Vesica everted forward and ventrally, short and small. It consists of a semiglobular basal sac bearing a lateral diverticulum and a small, elongated one terminated in a big, pointed and bulbed cornutus.

Regina is the largest *Odontelia* species, displaying some transitional features to the species of the genus *Thargelia*. The wing pattern, the strongly asymmetric saccular extensions, the structure of the fultura inferior and the relatively well-developed digitus are unique in the genus. Its closest relative is *sitiens*, their synapomorphies are the very long pectination of the antennae of the males and the strong, bulbed cornutus of vesica. These two species differ, besides the features mentioned above, by the size of the copulatory organ (*regina* has about two times larger valvae than *sitiens*), the shape of the valvae and the configuration of the vesica (Figs 18—19).

The species under discussion is highly important from a taxonomic point of view, representing an intermediate stage between the *Cardiestra-Odontelia* and the *Hadula-Thargelia* lines. Its life history is very poorly known but it was found also in a desert *Haloxyletum*, being typical for the *Thargelia* and *Odontelia* species. The flying period is very early, *T. gigantea* has only such winter data. The newly described species has the southernmost distribution within the genus.

Cardiestra gobideserti mandalgori ssp. n. (Plate I: 13—14)

Holo type: male, "Mongolia, Dundgovi aimak, 4 km NE of Mandalgori, 106°20'E, 45° 48'N, 20. 07. 1986, leg. Gy. FÁBIÁN, M. HREBLAY, L. PEREGOVITS et G. RONKAY (coll. HNHM Budapest). — Paratypes: 3 males from same locality and data. Slides Nos 2004, 2005 RONKAY.

Description: wingspan 31—33 mm, length of forewing 13—14 mm. The C Mongolian race is similar in size and wing pattern to the nominate, S Mongolian *gobideserti*, but the shape of the forewings is more elongated and narrower, the ground colour is grey-brown with some ochreous irroration. The wing pattern of the ssp. *mandalgori* is less sharp, the filling of the stigmata is lighter and the hindwings are darker, nearly unicolorous brown-grey. The underside of the new race is light ochreous-grey with stronger grey suffusion but without reddish shade.

The configuration of the male genitalia, as compared with the nominate subspecies, does not show significant differences (cf. VARGA 1973).

The northern subspecies of the south Govi species was found in a short-grass steppe in the central part of the lowland zone of Mongolia. Three further specimens were collected NE from Arvayheer, which are similar to the ssp. *mandalgori* in the majority of the external characteristics, only the ground colour is somewhat lighter ochreous-brown.

Nezonycta gen. n.

type species: *Thargelia pusilla* PÜNGELER, 1900

The type species of the genus was described as *Thargelia* because some external features are superficially similar to the members of this genus (e.g. the elongated forewings with pointed apex, the "scratchy" marking of the forewings and the relatively early flying period). The wingshape of the second species of *Nezonycta* and the genital features of both sexes indicate a completely other relationship. In his unpublished checklist of the Palearctic Noctuidae, BOURSIN mentioned it as *Lasionycta pusilla* which seems to be more correct since he did not separate HADA BILLBERG, 1820 (type species: *nana* HUFNAGEL, 1766) from *Lasionycta AURIVILLIUS*, 1892 (type species: *skraelingia* HERRICH-SCHAEFFER, 1849). In our opinion, the closest relative of the new genus is *Hada*, especially the taxa of the *extrita* STAUDINGER, 1888 group.

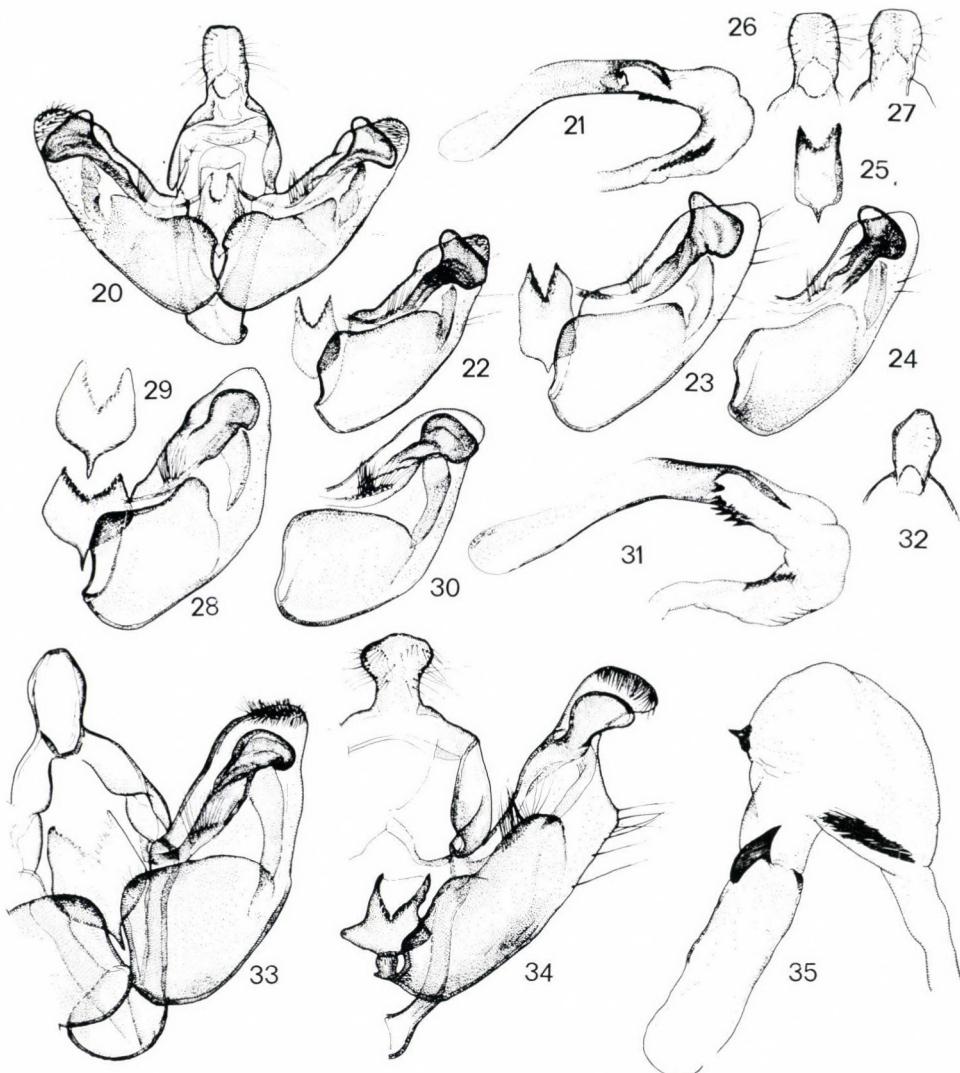
The characteristic features of the new genus in the male genitalia are the short and wide uncus, the broad and rounded fultura inferior with setose apical edges, the short and robust valvae without cucullus and corona, the heavily sclerotized costal plate with a flattened, ear-like digitus and the symmetric and rounded saccular processi. Aedeagus is slender with a dentated carina and a tubular, recurved vesica bearing a fascia of short, tooth-like cornuti. In the female genitalia the ovipositor is very broad and short, the ductus bursae is flattened with sclerotized margins and granulose posterior part; the cervix bursae is membranous and directed caudally, the corpus bursae is small and rounded, bearing a single, large signum.

The main differences in the male genitalia between *Nezonycta* and *Hada* are illustrated in Figs 20—35.

Nezonycta obtusa sp. n. (Plate II: 16—17)

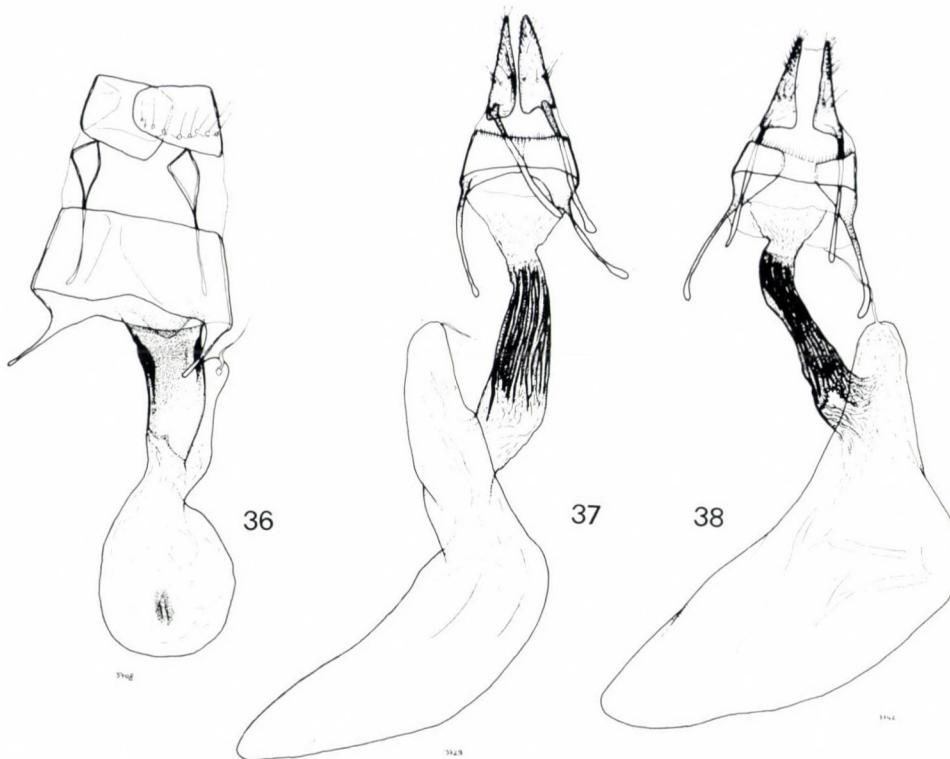
H o l o t y p e: male, *Turkey, Prov. Sivas, Gürün, 1500 m, 37° 12'E, 38° 45'N, 25. IV. 1989, leg. Gy. FÁBIÁN, G., et L. RONKAY (coll. HNHM Budapest). — **P a r a t y p e s:** 117 males and females from the same locality, end of IV and of V. 1989, (coll. HNHM Budapest, Gy. FÁBIÁN, M. HREBLAY, P. GYULAI, G. PASTORALIS, G. RONKAY, Cs. SZABÓKY et Z. VARGA); 4 males, 2 females, Turkey, Prov. Sivas, Ziyaret Gecidi, 2100 m, 5. 06. 1989, leg. FÁBIÁN, RONKAY et RONKAY (coll. the collectors and HNHM); 2 males, Turkey, Prov. Erzurum, Kop Dagi Gecidi, 2400 m, 5. 07. 1986, leg. PAVLAS (coll. GYULAI); Turkey, Prov. Agri, Tahir Gecidi, Toytaci, 7—8. 07. 1986, leg. PAVLAS & WEIGERT (coll. GYULAI, HNHM, WEIGERT and HACKER), 15—16. 06. 1991, leg. HREBLAY (coll. HREBLAY and HNHM), 2 males, Turkey, Prov. Van, Kayabogaz, 02. 06. 1989, leg. PODLUSSÁNY (coll. HNHM and G. RONKAY); 2 males, Turkey, Hakkari, Yüksekovala, 14—20. 06. 1981, leg. de FREINA (coll. HACKER and PLANTE). Slides Nos 3691, 3745, 3752, 3753 RONKAY, 5404, 5413, 5444, 5445, 5461 HACKER (males), 3708 RONKAY (female).

D e s c r i p t i o n: wingspan 38—46 mm, length of forewing 15—18 mm. Head, thorax and forewings light brown, abdomen with ochreous hairs. Palpi short, slightly upturned, antennae of males shortly bipectinate. Collar and tegulae with darker brown lines. Forewing triangular, apex finely pointed.



Figs 20—35. 20—27 = *Nezonycta obtusa* sp. n., paratypes, Turkey, Gürün. 28—33 = *Nezonycta pusilla* PÜNGELER, USSR, Turkmenia, Kopet-Dagh; USSR, Pamir Mts. 34—35 = *Hada extrita* STAUDINGER, Nepal

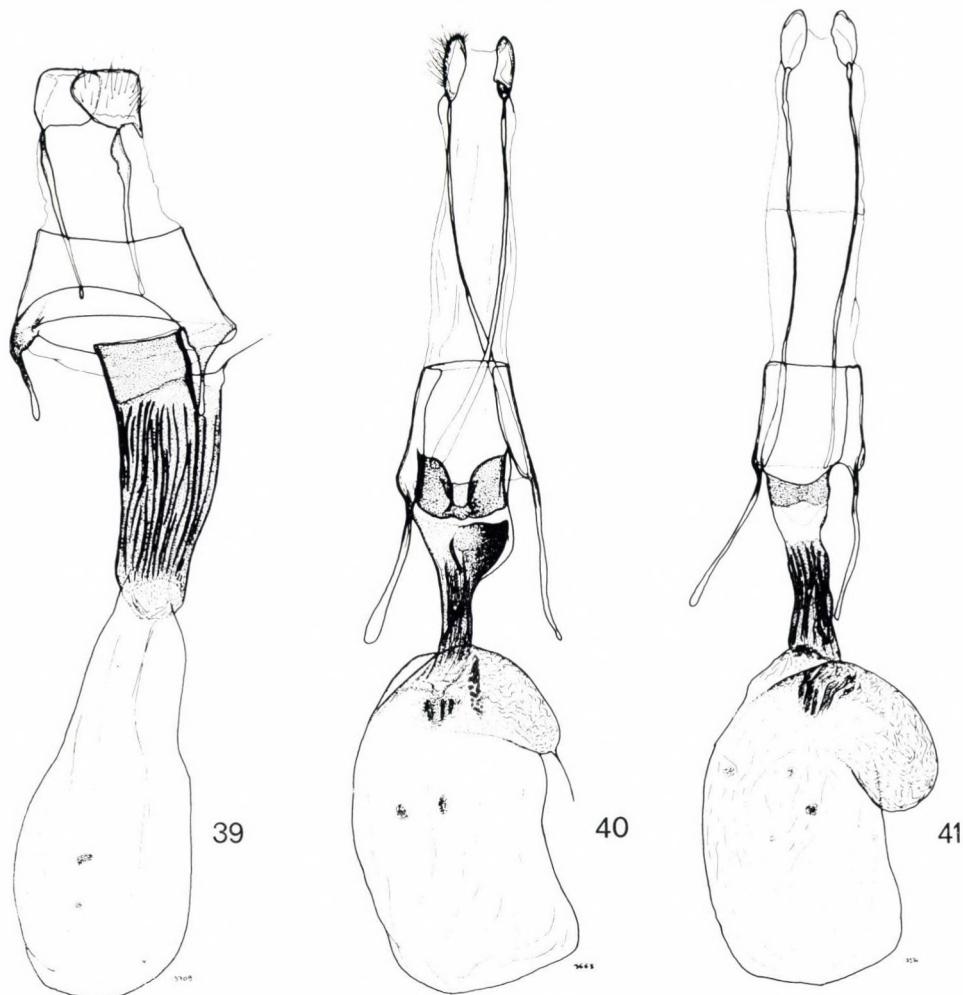
Wing pattern difficult, stigmata and transverse lines present. Subbasal, ante- and postmedial lines sinuous, double, brown filled with whitish or ochreous, orbicular and reniform stigmata encircled with dark brown and whitish. Claviform elongated, blackish filled with dark brown, usually with a dark line from its tip to postmedial line. Subterminal line whitish, waved, bordered with a row of dark, long arrowheads. Terminal line a row of brown arches, cilia ochreous with two interrupted, brown medial lines. Hindwing small, in males



Figs 36—38. 36 = *Nezonycta obtusa* sp. n., paratype, Turkey, Gürün. 37 = *Desertoplusia colorata* sp. n., paratype, Turkey, Tahir Gecidi. 38 = *Desertoplusia bella* CHRISTOPH, USSR, Turkmenia, Kopet-Dagh

light ochreous with slight grey-brown irroration, a pale cellular lunule and a narrow submarginal suffusion. Terminal line brown, cilia ochreous with slight brownish spots. Hindwings of females with stronger dark brown suffusion and more expressed dark transverse line. Underside of wings ochreous, more or less intensively covered with brownish, transverse lines and cellular lunules present.

M a l e g e n i t a l i a (Figs 20—27): uncus short, wide, quadrangular, tegumen narrow and low, fultura inferior shield-like with serrated apical arms, vinculum strong, wide, V-shaped. Valvae wide, apically slightly tapering, cucullus rounded, densely hairy, corona reduced. Sacculus large and strong, with a flattened, triangular extension; clavus formed as a rounded, setose surface. Harpe short, flattened, pulvillus sclerotized, long, costal processus ("digitus") large, fan-shaped, heavily sclerotized and flattened. Aedeagus cylindrical, arcuate, carina with a postero-lateral tooth, a smooth dorsal and a dentated ventral ribbon continuing on the surfaces of vesica. Vesica everted forward and recurved ventrally, tubular, with a slender, dentated lamina in distal part.



Figs 39—41. 39 = *Thargelia haloxyleti* sp. n., paratype, Mongolia, Gurvantös. 40 = *Maraschia hissarensis* sp. n., holotype, USSR, Tadzhikistan, Hissar Mts. 41 = *Maraschia grisescens* OSTHELDER, allotype, Turkey, Marash

F e m a l e g e n i t a l i a (Fig. 36): ovipositor moderately long, wide, gonapophyses short. Ostium bursae a weak, narrow ring, with a rounded triangular dorsal extension. Ductus bursae wide, distally slightly dilated, posterior part granulosely sclerotized, edges with strong crests. Cervix bursae conical, membranous, corpus bursae small, globular, with a single, short signum.

The new species differs externally from its allopatric sibling, *pusilla* PÜNGELER, by broader and less acute forewings, lighter and less uniform colouration and lighter hindwings. In the male genitalia *obtusa* has significantly

narrower and more arcuate valvae, much narrower and higher fultura inferior and more asymmetric shape of digitus; the lateral tooth of carina is larger and the ventral dentated lamina of vesica has smaller and more equal teeth than in case of *pusilla* (Figs 28—33).

The taxa of the genus *Nezonycta* has a relatively small area from C Anatolia throughout Iran and the Kopet-Dagh to the Soviet and Afghan Pamir. *N. pusilla* occurs in the Turkmenian Kopet-Dagh, the NW and S Iranian populations also belong to this species, however, the specimens have sharper pattern of forewing and a bit lighter hindwing, than in case of the unicolorous and dark *pusilla* of the Kopet-Dagh.

The Pamirian population, suggested by BOURSIN as a distinct species (slide No. Hein. 8. BOURSIN), cannot be distinguished from *pusilla* (cf. Plate, Figs). The specimens are similar to the S Iranian ones but larger in size and darker in colouration, the configuration of the male genitalia within *pusilla* shows only small and mainly individual differences.

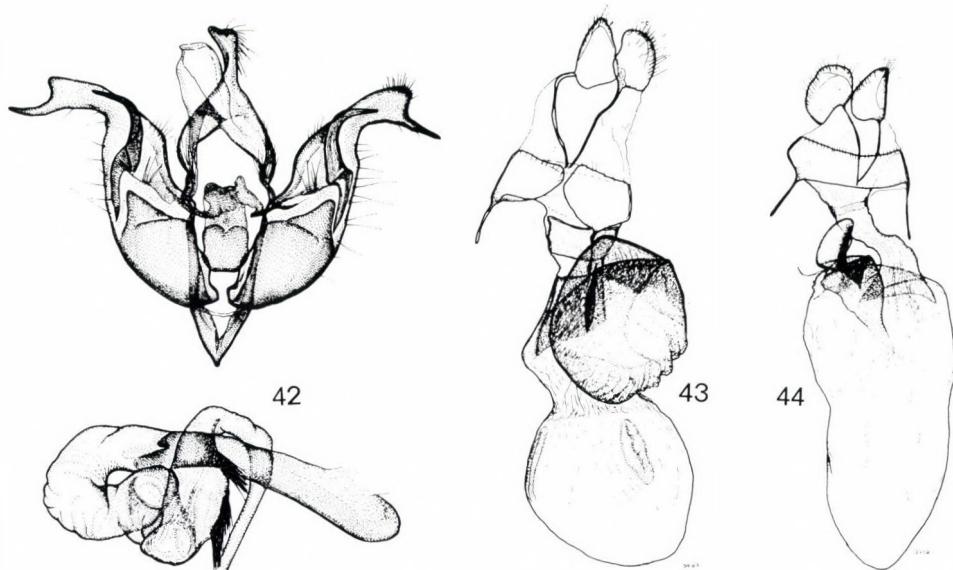
The range of the new species extends from C Anatolia (Ziyaret Gecidi, Gürün) to NE (Erzurum, Agri) and SE Turkey (vicinity of the Lake Van). The SE Turkish specimens are externally quite similar to the C Turkish ones since the specimens from Tahir Gecidi (NE Turkey) are darker and resemble somewhat to *pusilla*. Their genitalia, however, display the characteristic features of the new species.

The flying period of *obtusa* is the mid-spring, depending on the elevation of the mountain habitats: in C Anatolia the majority of the specimens fly from the end of April to the Middle of May, in NE Turkey old specimens can also be found at the beginning of July. Their main habitats are more or less open, rocky montane steppes between 1500—2800 m altitude.

Perigrapha annau sp. n. (Plate II: 20)

H o l o t y p e: male, "USSR, Turkmenian SSR, Kopet-Dagh Mts., Annau, 2100 m, 5. 04. 1987, leg. DUBATOLOV et RUSANOV", coll. BIN Novosibirsk. Slide No. 3692 RONKAY.

D e s c r i p t i o n: wingspan 36 mm, length of forewing 16.5 mm. Head small, frons large and smooth, whitish. Palpi slender, relatively short, with long brown hairs. Antennae widely bipectinate. Collar large, dark rosy-brown, with two whitish stripes. Thorax robust, dark brown, tegulae with ochreous hairs and a blackish medial stripe, metathoracic tuft large; abdomen brown. Forewing elongated, narrow triangular with acute apex, ground colour light sepia-brown with fine rosy-brown and grey irroration. Subbasal line black, short, streak of submedian fold short, blackish. Ante- and postmedial lines double: inner line blackish, outer one rosy brown; conjoined below vein r_5 . Median area dark brown, cell somewhat lighter. Orbicular small, rounded,



Figs 42—44. 42 = *Perigrapha annau* sp. n., holotype, USSR, Turkmenia, Kopet-Dagh. 43 = *Criophasia kalchbergi* STAUDINGER, Haifa. 44 = *Bryomima nuristana* sp. n., paratype, Afghanistan, Nuristan

reniform large narrow and bilobate with serrated outer edges; conjoined with a large, rounded patch below cell. This complex marking encircled with blackish and filled with light ochreous. Subterminal line dark brown, arcuate and not waved, defined by a narrow ochreous zone at inner side. Terminal line black, sharp, inner half of cilia ochreous, outer pinkish. Hindwing narrow and elongated, whitish with rosy shine and strong, dark brown suffusion. Cellular lunule an obsolescent spot, transverse line a diffuse stripe, marginal suffusion somewhat darker. Terminal line dark brown, cilia pinkish-ochreous. Underside of wings whitish, strongly covered with grey-brown. Cellular lunules small, transverse lines dark, wide and diffuse.

M a l e g e n i t a l i a (Fig. 42): uncus short and apically minutely bifurcate, tegumen narrow and less high. Fultura inferior a quadrangular plate, vinculum short and strong, V-shaped. Valvae symmetric, elongated, distally constricted, forming a narrow neck of cucullus. Sacculus strong with a less sclerotized, triangular and flattened extension, clavus reduced. Pulvillus small, harpe falcate, strong and pointed, its basis long, finely curved. Cucullus small, pointed, pollex very long and sclerotized, corona. Aedeagus cylindrical, moderately long, carina without teeth or appendages. Vesica everted forward and ventro-laterally, helicoid, bearing a small, digitiform diverticulum at its medial part. Distal part of vesica slightly dilated, with some parallel crests and a long bundle of spiculiform cornuti.

The new species resembles externally to *Perigrapha nyctotimia* BOURSIN, 1969 but differs from the latter by its larger size, different shape of wings, more brownish colouration and different orbicular and reniform stigmata. The configuration of the male genitalia displays the general characteristics of the genus *Perigrapha* (see BOURSIN 1969, VARGA 1990 in press).

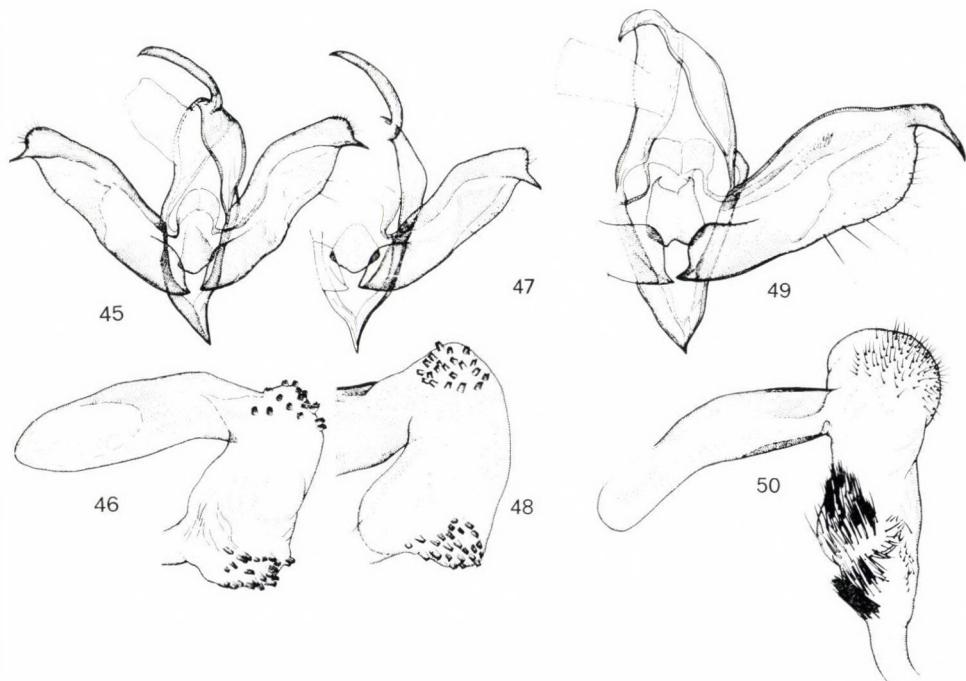
The other species, similar externally to *annau*, is "Ulochlaena" (in POOLE 1989 mentioned as "Lasianobia comb. n.") *superba* ALPHERAKY, 1892, from the Nan Shan, differs from *annau* by the different submedian streak and the absence of the whitish patch below cell but it may be identical with that of *nyctotimia*. The eyes of *superba* are, however, nude (ALPHERAKY pointed out this feature in the redescription given in ROMANOFF IX, 1897), while all the known *Perigrapha* have hairy eyes. The correct generic relegation of *superba* can be given after the study of the type specimen.

The life history of the species of this group in *Perigrapha* is unknown, both *nyctotimia* and *annau* are known by their unique type specimens.

Bryomima nuristana sp. n. (Plate II: 21, 24)

H o l o t y p e : male, "O-Afghanistan, Pr. Kunar, Nuristan, ob. Lindai-Sin-Tal, vic. Barg-e-Matal, Dándízenor Mts., 3100 m, 13—14. 7. 70, leg. NAUMANN, Coll.- Nr. ZMK 93". (coll. NAUMANN, Bonn). — **P a r a t y p e s :** 16 males and females from the same locality and data; 1 male, Pr. Kunar, Nuristan, ob. Lindai-Sin-Tal, vic. Barg-e-Matal, Flussaue, 2200 m, 3. 07. 1970, leg. NAUMANN; the paratypes are in the coll. NAUMANN, HNHM Budapest and Z. VARGA (Debrecen). Slides Nos 2959 RONKAY, 4608, 4611 VARGA (male), 3706 RONKAY (female).

D e s c r i p t i o n : wingspan 26—27 mm, length of forewing 12—13 mm. Head small, palpi slender, slightly upturned, antennae filiform. Collar light grey-brown, large and high, thorax dark brown. Abdomen grey with some brown hairs, dorsal crest represented by a single brown tuft on first segment. Forewing narrow, apex finely pointed. Ground colour light grey-brown, covered with darker chocolate-brown in parts of basal and medial fields. Subbasal streak long and wide, blackish-brown, ante- and postmedial lines fine and less visible, dark brown. Medial field narrow, orbicular and reniform stigmata narrow and flattened, filled with light grey and connected by a dark brown patch. Subterminal line less visible, with two dark streaks on inner side; veins covered with brown in marginal field. Terminal line a row of blackish arrowheads, cilia brown spotted with whitish. Hindwing shiny whitish, covered with some brownish in basal area and on veins. Marginal suffusion narrow, dark brown, terminal line interrupted, brown, cilia whitish with some brownish scales. Underside of wings whitish, forewing suffused with grey-brown, cellular lunule and transverse line of hindwing usually present but short. Male genitalia (Figs 45—48): uncus long and slender, arcuate, tegumen high and narrow. Fultura inferior weak, subtriangular, vineulum gracile, V-shaped. Valvae elong-



Figs 45—50. 45—48 = *Bryomima nuristana* sp. n., paratypes, Afghanistan, Nuristan. 49—50 = *Bryomima luteosordida* OSTHELDER, paratype, Turkey, Marash

gated, distally slightly dilated. Sacculus small and rounded, clavus reduced to a finely setose surface. Harpe a slender, flattened bar, ampulla a flattened and finely sclerotized, triangular plate with sensory setae; pulvillus less developed. Cucullus small, rounded, corona reduced, costal processus long and strong, acute. Aedeagus short and thick, laminae of carina weakly sclerotized. Vesica a short and broad sac, recurved ventro-laterally. It has two small, rounded diverticula bearing groups of small, truncated cornuti, one of them in basal, other one in terminal position.

F e m a l e g e n i t a l i a (Fig. 44): ovipositor short and weak, gonapophyses short. Ostium bursae membranous with a narrow, finely sclerotized lamina. Ductus bursae long, membranous, anterior part rugulose. Cervix bursae a tapering helicoid, some parts of it heavily sclerotized, ductus seminalis situated terminally. Corpus bursae long, elliptical, membranous, signa absent.

The new species resembles externally to a small *Lithophasia venosula* (STAUDINGER, 1891) specimen or a modified *Lophoterges* HAMPSON, 1905, but the very characteristic configuration of the male genitalia shows that *nuristana* is a true *Bryomima* STAUDINGER, 1900. It differs from the known species of the genus by the very typical structure of the truncated cornuti and the significantly larger cucullus and longer uncus.

List of the species of the genus *Bryomima*:

- carducha STAUDINGER, 1900 (type species)
- dilutior SCHWINGENSCHUSS, 1937 bona sp.
- dilutior rosea BRANDT, 1941 comb. n.
- defreinai HACKER, 1987
- hakkariensis HACKER et DEFREINA, 1985
- luteosordida OSTHELDER, 1933
- nuristana sp. n.

The other species, mentioned as the members of this genus, *johanna* STAUDINGER, 1900; *codeti* OBERTHÜR, 1881; *sinaica* WILTSHERE, 1948 and *kalchbergi* STAUDINGER, 1897 cannot belong to *Bryomima*. The correct place of *johanna* is discussed in RONKAY & VARGA (1990), the other combinations are as follows:

Criophasia kalchbergi (STAUDINGER, 1897) comb. n. (Figs) (and not *Antitype*, as cited by POOLE, 1989, p. 99).

Calophasia (s. l.) *codeti* (OBERTHÜR, 1881) comb. n. (Figs).

Calophasia (s. l.) *sinaica* (WILTSHERE, 1948) comb. n.

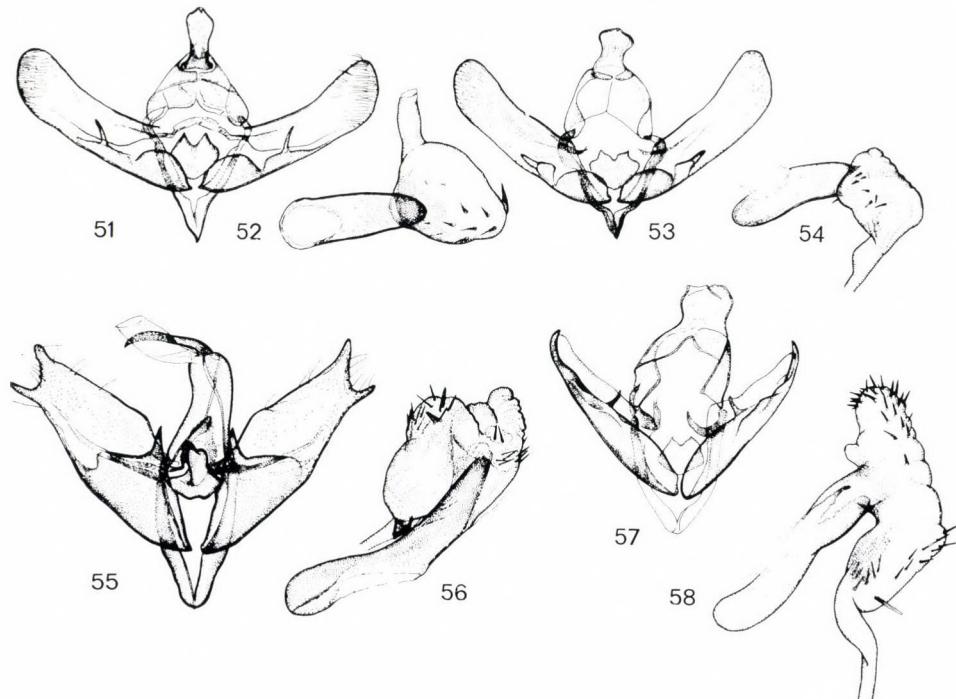
The taxonomic relegations of the latter three species are very important from a phylogenetic point of view. The male genitalia of *Criophasia kalchbergi* STAUDINGER, 1897 display the very close relationship with the type species of *Criophasia* HAMPSON, 1906 (*albolineata* (BLACHIER, 1905)) since the structure of the body and the wings and the wing pattern is *Metopoceras-Recoropha*-like. The existence of this transitional form in the tribe Oncocnemini suggests the phyletic line from the *Criophasia*-like ancient taxa (living mainly in xerophilous habitats of the SW part of S America) to the N African and W Palearctic, principally eremic genera as *Metopoceras*, *Harpagophana*, *Recoropha*, *Metapho*, etc.

The species *C. codeti* and *C. sinaica* represent two specialized side-arms of the evolution of the genus *Calophasia*, displaying some interesting autapomorphies. Both of them are referable very probably to two subgenera, different from *Calophasia* s. str., but, before the entire revision of the genus (including the neotropic taxa) we desist to define supraspecific categories. As the type species of *Ammetopa* HAMPSON, 1906 is the *codeti*, this moment it should be considered as a junior synonym of *Calophasia* STEPHENS, 1829 but it is applicable as a subgenus for *codeti*.

Ostheldera kondara sp. n.

H o l o t y p e: male, "18. ix. 1979, Tadzhikistan, Gissarskiy hr., ush. Kondara" (in Russian); slide No. 3430 RONKAY. — **P a r a t y p e:** female from the same locality and data, slide No. 3437 RONKAY. The types are deposited in coll. BIN Novosibirsk.

D e s c r i p t i o n: Male: wingspan 31 mm, length of forewing 16,5 mm. Head spready hairy, antennae strongly bipectinate. Head, thorax and fore-



Figs 51—58. 51—52 = *Ostheldera kondara* sp. n., holotype, USSR, Tadzhikistan, Hissa r Mts
 53—54 = *Ostheldera gracilis* OSTHELDER, Turkey, Malatya. 55—56 = *Criophasia kalchbergi*
 STAUDINGER, Haifa. 57—58 = *Calophasia codeti* OBERTHÜR, Algeria

wings pale brownish-grey with fine, reticulate brown irroration. Transverse lines reduced with exception of strongly sinuous, diffuse, reddish-brown subterminal, defined by fine dark arrowheads and/or lines on veins. Orbicular flattened, narrow, incompletely encircled, filled with pale orange-yellow. Reniform large, outline blackish, filled with brown-grey and a narrow, ochreous inner line. Triangular spot of costa at subterminal line pale, grey-brown. Terminal line whitish, cilia brown-grey, finely spotted with whitish at veins. Hindwing whitish, scarcely irrorated with brown, marginal suffusion darker but pale, veins covered with brownish. Underside of forewing unicolorous greyish, hindwing much lighter, whitish with poor darker suffusion. Female: wingspan 27 mm, length of forewing 15 mm. Forewings acute and very narrow, dark brownish-grey with reduced pattern (outlines of orbicular and reniform stigmata can be only seen) hindwing small and rounded, whitish. Underside of wings as in male but with somewhat darker colouration.

M a l e g e n i t a l i a (Figs 51—52): uncus short, distally widened and finely pointed, tegumen wide and low, fultura inferior shield-like, vinculum strong, V-shaped. Valvae elongated, narrow with weakly widened apical part,

cucullus rounded, corona reduced to a densely hairy field. Sacculus small and rounded, clavus absent. Harpe fine, spiniform with acute apex, originated close of ventral margin. Aedeagus short and thick, dorsal edge of carina forms a sclerotized arch. Vesica globular, membranous, with about a dozen of small, pointed cornuti and a relatively larger distal one.

F e m a l e g e n i t a l i a (Fig. 70): ovipositor long but relatively weak, posterior papillae anales triangular; gonapophyses long. Ostium bursae membranous with a small, sclerotized ventral lamina. Ductus bursae short, narrow, membranous, cervix bursae elliptical, partly granulose, having a gelatinose zone. Corpus bursae membranous-hyaline, long and narrow. Caudal part slightly dilated forming a globular terminal part, with two small signa.

The male genitalia of *kondara* is very similar to those of *O. gracilis* (OSTHELDER, 1933) but the harpe of the former is conspicuously longer and more acute, the cornuti of vesica are longer and more pointed, especially in case of the distal one which is usually absent in *gracilis*.

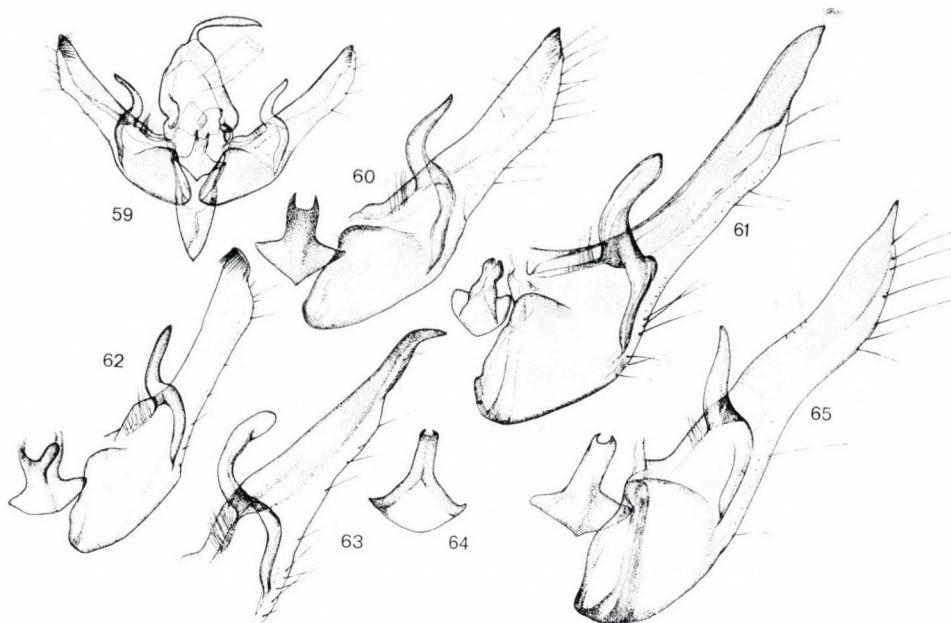
The new species is known from the Hissar Mts, but its occurrence in the NE part of Afghanistan is probable. On the other hand, we had opportunity to study a male *Ostheldera* specimen from the Paghman Mts. (coll. ZSM) which was dissected and identified as *O. gracilis*. Unfortunately the slide of this specimen is absent from the collection of the Zoologische Staatssammlung Munich (possibly remained at BOURSIN and preserved in the Landesmuseum für Naturkunde Karlsruhe this time), but this specimen resembles externally rather to *gracilis* than to *kondara*.

The male genitalia of both known *Ostheldera* species display a very conspicuous similarity with those of *Asteroescopus* BOISDUVAL, 1829 species (cf. Figs 6—25 in RONKAY and VARGA 1986).

Agrochola (Alpichola) dubatolovi sp. n.

H o l o t y p e: male, "C Kopetdag, 15 km Z Firuzi, gora Dushak, 26—27. IX. 1988, V. V. DUBATOLOV" (in Russian) (coll. BIN Novosibirsk). — **P a r a t y p e s:** 2 males from the same locality, 17. X. 1988, leg. ZINCHENKO (coll. BIN Novosibirsk and HNHM Budapest). Slides Nos 3444, 3456 RONKAY.

D e s c r i p t i o n: wingspan 29—30 mm, length of forewing 14—15 mm. Head small, palpi short, antennae of males finely bipectinate. Ground colour of head, thorax and forewing light ash-grey with darker grey suffusion, especially in marginal area. Ante- and postmedial lines obsolescent, medial line a diffuse grey stripe. Subterminal line double and interrupted, a whitish line and stronger dark grey spots inwards; inner part of marginal area dark, darkest part of wing. Orbicular small or obsolescent, reniform narrow, filled with dark grey, inner part of median area and irrorated with brownish-grey terminal line

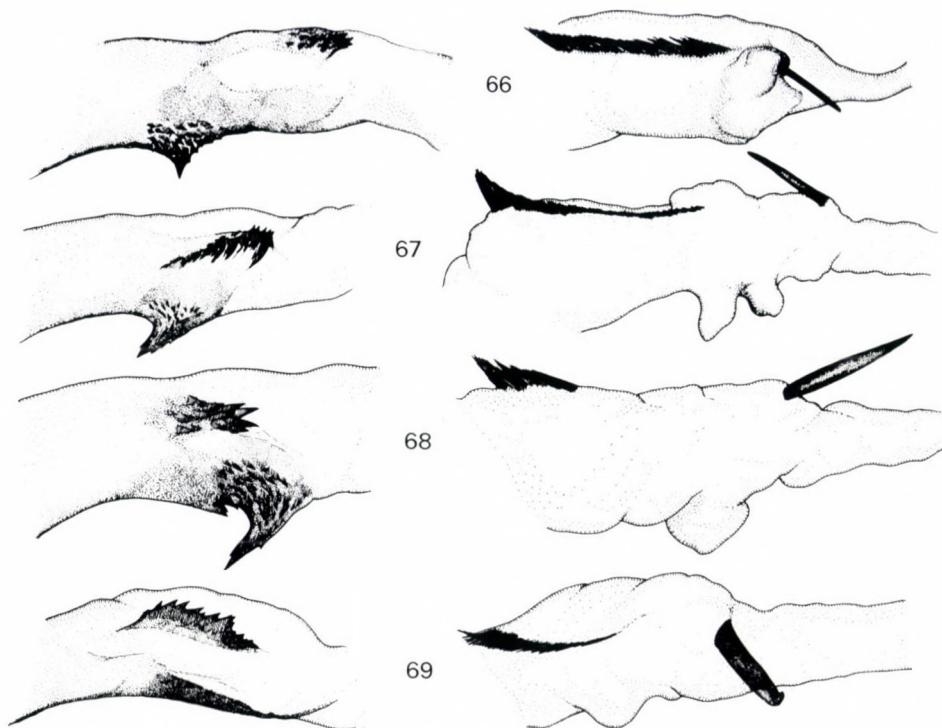


Figs 59—65. 59—60 = *Agrochola dubatolovi* sp. n., paratypes, USSR, Turkmenia, Kopet-Dagh. 61 = *Agrochola janhillmanni* HACKER et MOBERG, Turkey, Malatya. 62 = *Agrochola egorovi* BANG-HAAS, Turkey, Gürün. 63—64 = *Agrochola lactiflora wautieri* DUFAY, Yugoslavia, Macedonia. 65 = *Agrochola lactiflora* DRAUDT, Turkey, Malatya

a row of dark spots, cilia grey with darker grey scales. Hindwing small, rounded, whitish, suffused with grey, veins covered with brownish. Cellular lunule small, obsolescent, terminal line dark grey, cilia ochreous-whitish. Underside of wings whitish, covered with light, smoky grey, cellular lunules diffuse but visible.

M a l e g e n i t a l i a (Figs 59—60, 66): uncus short and slender, tegumen weak and relatively high. Fultura inferior deltoidal, without apical processus, vinculum long, V-shaped. Valvae elongated, narrow, sacculus short and strong, clavus reduced. Harpe strong, thick, arcuate, pulvillus well-developed. Cucullus acute, corona weak and short. Aedeagus cylindrical, carina with a strong, dentated ventral tooth and a long and strong, dentated dorsal lamina. Vesica everted forward and recurved ventrally, basal part with a large and curved, membranous diverticulum. Distal part with a ribbon-like field of short spinules, a small, granulose diverticulum and a short, spiculiform terminal cornutus.

The new species is closely allied to the other species of the subgenus *Alpichola* RONKAY, 1984, but differs from all the relatives by its greyish ground colour and the opposite position of the two sclerotized parts of the carina. The elements of the wing pattern is similar to that of *egorovi* (BANG-HAAS, 1934),



Figs 66—69. 66 = *Agrochola dubatolovi* sp. n., paratype, USSR, Turkmenia, Kopet-Dagh. 67 = *Agrochola egorovi* BANG-HAAS, Turkey, Gürün. 68 = *Agrochola janhillmanni* HACKER et MOBERG, Turkey, Malatya. 69 = *Agrochola lactiflora* DRAUDT, Turkey, Malatya

but the subterminal line is more conspicuous and the hindwings are darker. In the male genitalia the apical processus of the fultura inferior — typical for *egorovi* — is absent and the terminal cornutus is more gracile. The other related taxa (*lactiflora* (DRAUDT, 1934) and *janhillmanni* HACKER et MOBERG, 1989) have longer valvae, different shape of fultura inferior, additional diverticula of vesica and terminal cornutus (see Figs 61—65, 67—69).

The new species represents the easternmost known member of this subgenus.

Maraschia hissarensis sp. n. (Plate II: 22)

H o l o t y p e: female, "20. IX. 1979. Tadzhikistan, Gissarskiy hr., us. Kondara" (in Russian) (= Hissar chain, Kondara valley), coll. BIN Novosibirsk. Slide No. 3668 RONKAY. — Paratypes: 1♂, Hissar Mts., 18. 08. 1980, leg. DANILEVSKY (coll. THÖNY), 2♂♂, Hissar Mts., Ramit, 08—21. 08. 1980, leg. & coll. NEKRASOV. Slide Nos 474 NEKRASOV, 376 THÖNY.

D e s c r i p t i o n: wingspan 40 mm, length of forewing 19 mm. Head, thorax and forewing ochreous-grey with reddish-brownish shade. Forewing broad and elongated, apex pointed. Wing pattern reduced to outlines of or-

bicular and reniform stigmata and some dark spots of subterminal line. Stigmata large, encircled with light ochreous and partly with brown, reniform filled with dark grey. Hindwing rounded, whitish with diffuse brownish marginal suffusion. Underside of wings shiny ochreous, cellular lunules present on both wings, greyish, arcuate and less sharp.

F e m a l e g e n i t a l i a (Fig. 40): ovipositor and gonapophyses very long, papillae anales elongated and narrow. Ostium large, sclerotized, dorsal lamina with two rounded lateral lobes, ventral surface calycular. Ductus bursae partly twisted, with sclerotized crests and a large, flattened, sclerotized appendage. Cervix bursae rugulose and slightly sclerotized, corpus bursae membranous, quadrangular, with three small, ovoid signa.

The new species differs from the two other species of the genus, *grisescens* OSTHELDER, 1933 (Fig. 41) and *secunda* HACKER, 1990 by its strong, sclerotized ostium bursae and the sclerotized lateral appendage of ductus bursae; the size and shape of signa are also different.

THE PSEUDOPSEUSTIS-JAXARTIA PROBLEM

The study of the type material of *Jaxartia elinguis* PÜNGELER, 1914 and the described taxa of the genus *Pseudopseustis* HAMPSON, 1910 revealed that these species are congeneric. As the former is the type species of the genus *Jaxartia* PÜNGELER, 1914, *Jaxartia* is a secondary synonym of *Pseudopseustis* (type: *tellieri* LUCAS, 1907); on the contrary, "Pseudopseustis" *crassicornis* BOURSIN, 1940 is not a *Pseudopseustis* but related to "Eremophysa" *discordans* BOURSIN, 1940. From phylogenetic point of view the genus is the member of the *Polymixis-Eremophysa-Pseudohadena-Mniotype-Apamea* complex.

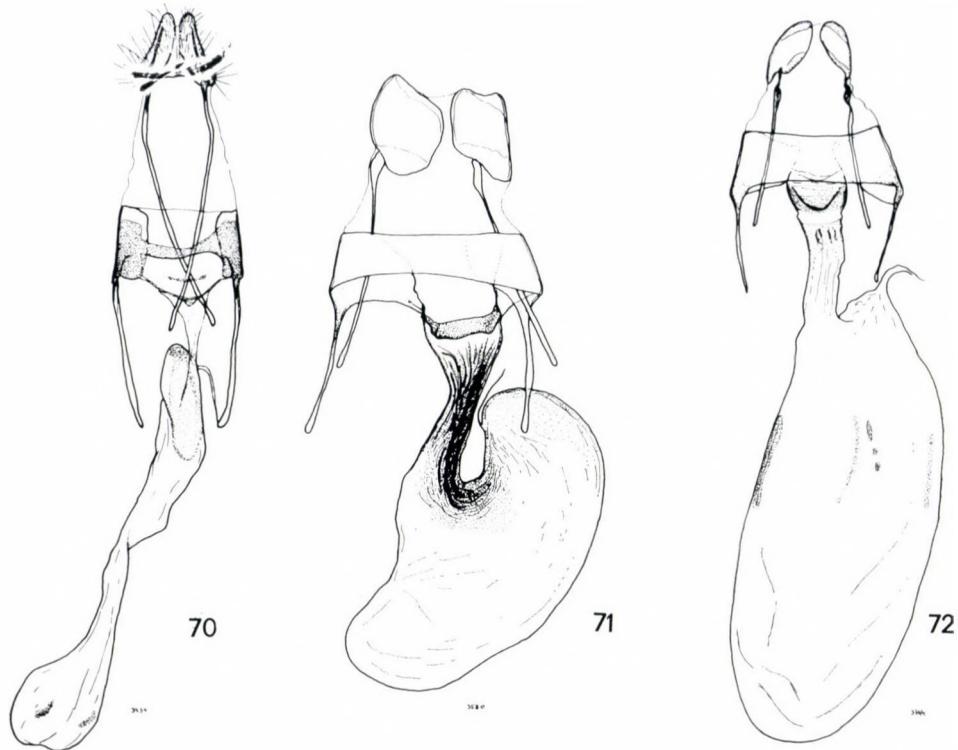
During the studies mentioned above, a new *Pseudopseustis* species was found from W Siberia, which is described below. The checklist of the taxa of the genus is as follows:

<i>Pseudopseustis</i> HAMPSON, 1910 (<i>= Jaxartia</i> PÜNGELER, 1914)	<i>argyllostigma</i> sp. n.
<i>tellieri</i> (LUCAS, 1907) (type species)	<i>pseudamoena</i> BOURSIN, 1943
<i>jordana</i> (STAUDINGER, 1900)	<i>cymatodes</i> BOURSIN, 1954 <i>elinguis</i> (PÜNGELER, 1914)

Pseudopseustis argyllostigma sp. n. (Plate II: 25—25)

H o l o t y p e: male, USSR, W Siberia, vic. Lake Krotovaia Lyaga, 13 km W of Karasuk, 8—9. 09. 1981, leg. DUBATOLOV, slide No. 3693 RONKAY; coll. BIN Novosibirsk. — **P a r a t y p e s:** two females from the same locality and data, slides Nos 3680, 3744 RONKAY, coll. BIN Novosibirsk and HNHM Budapest.

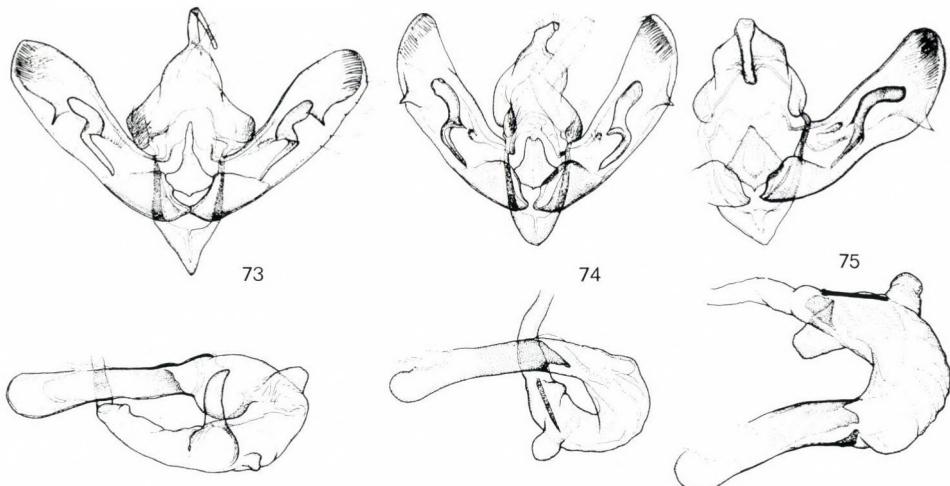
D e s c r i p t i o n: wingspan 38—40 mm, length of forewing 17—18 mm. Head small, palpi short and porrect, antennae of males biserrate. Ground colour of head, thorax and forewing light ochreous-brown or ochreous-grey,



Figs 70—72. 70 = *Ostheldera kondara* sp. n., paratype, USSR, Tadzhikistan, Hissar Mts. 71 = *Pseudopseustis elinguis* PÜNGELER, paratype, USSR, Syr-Darya. 7 = *Pseudopseustis argyllostigma* sp. n., paratype, USSR, W Siberia, Karasuk

with some reddish or greyish shade. Transverse lines present, double and sinuous, filled with whitish; subterminal line interrupted, defined by diffuse red-brown triangles. Orbicular large and quadrangular, its outline obsolescent, filled with whitish-ochreous. Reniform partly encircled with brown and whitish, filled with ochreous-whitish and a plumb-grey spot in lower part. Terminal line a row of dark brown spots, cilia reddish-brown with brown medial line. Hindwing whitish, transverse line a strongly sinuous, diffuse stripe; marginal suffusion wide, dark brown. Terminal line brown, cilia white. Underside whitish, irrorated with brownish scales, inner area of forewing slight, suffused with greyish. Cellular lunules absent, ghosts of subterminal line of forewing and transverse line of hindwing darker brown.

M a l e g e n i t a l i a (Fig. 73): uncus long and slender, apically rounded. Tegumen broad with well-developed, hairy penicular lobes. Fultura inferior small, basal plate rounded and bilobated, with long apical processus; vinculum strong, V-shaped. Valvae elongated and narrow, cucullus somewhat wider, apex rounded. Sacculus short but strong, clavus a small, setose surface.



Figs 73—75. 73 = *Pseudopseustis argylostigma* sp. n., holotype, USSR, W Siberia, Karasuk. 74 = *Pseudopseustis elinguis* PÜNGELER, paratype, USSR, Syr-Darya. 75 = *Pseudopseustis jordana* STAUDINGER, Iraq

Pulvillus long, sclerotized, harpe thick, flattened and medially curved, relatively short. Costal processus short, triangular, apically pointed, corona present. Aedeagus cylindrical, thick, carina with two narrow, sclerotized laminae. Vesica everted forward and recurved ventro-laterally, basal part globular, medial part with a semiglobular, dorsal diverticulum. Distal part tubular, with a minute and a wide-based, long and pointed, membranous diverticula.

Female genitalia (Fig. 72): ovipositor wide, papillae anales weakly sclerotized, gonapophyses relatively long. Ostium bursae smoothly sclerotized, dorsal lamina calycular, significantly larger than narrow, quadrangular ventral plate. Ductus bursae short and slender, rugulose, posterior quarter with stronger crests. Cervix bursae small, conical, corpus bursae long, sacciform, with four narrow, partly interrupted ribbon-like signa.

The new species is closely allied to the other species of the genus, except *pseudamoena*. It is similar externally to *jordana* but differs from it by narrower wings, darker, generally brownish-greyish ground colour of forewings and darker hindwings. The two eastern species of the genus, *cymatodes* and *elinguis*, displaying similar colouration, have significantly wider pectination of antennae and more acute forewings. The general configuration of the clasping apparatus of the male genitalia is the same as in the other species of the genus but the shape and size of the uncus, the harpe and the fultura inferior show good distinctive features (Figs 73—75). The lack of the terminal cornutus in the vesica is unique in the genus.

The newly described species has the easternmost distribution within the range of the genus.



Figs 76—78. 76 = *Auchmis detersina detersina* STAUDINGER, China, Urumchi. 77 = *Auchmis detersina sericea* ssp. n., holotype, Afghanistan. 78 = *Auchmis curva* STAUDINGER, China, Aksu

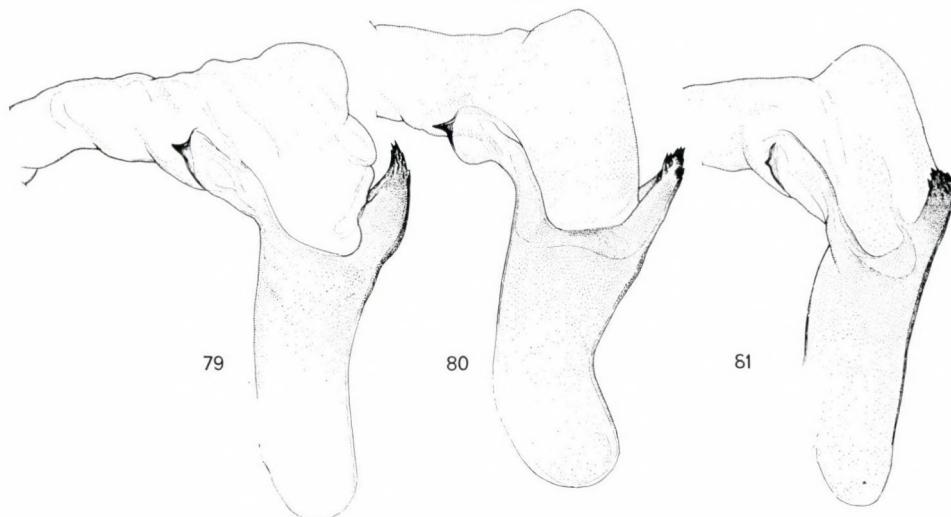
***Auchmis detersina sericea* ssp. n. (Plate III: 34—35)**

H o l o t y p e: male, Afghanistan, Prov. Badakhshan (Darwaz), Darrah-e-Kuf, 2400—2500 m, 16—20. 07. 1972, leg. BRADE et NAUMANN, slide No. 2512 RONKAY (coll. NAUMANN). — **P a r a t y p e s:** 3 males 1 female, Afghanistan, Wakhan valley, 3450 m, Darrah-e-Shaur, 25. 07. 1971, leg. EBERT et NAUMANN (coll. NAUMANN and HNHM); 3 males, Afghanistan, Wakhan valley, 3400 m, Kotal-e-Dalez, 27. 07. 1971, leg. EBERT et NAUMANN (coll. NAUMANN); 1 male, Afghanistan, Badakhshan, Bela Kuran 2900 m, 12—29. 07. 1963, leg. OMOTO (coll. ZSM); 1 male, India, Jammu and Kashmir, Ladakh, Lotsun, 3000 m, 25. 07. 1987, leg. THOMAS (coll. HNHM); 1 female, Kashmir, Zogi La Pass, 4000 m, 31. 07. 1981, leg. THOMAS (coll. PLANTE). Slides Nos 2500, 3122 RONKAY (males).

The southern race differs externally relatively strongly from the nominate race, occurring from the C Tien Shan to SW Mongolia, the main differences are as follows:

- ground colour much lighter and more unicolorous grey with fine bluish shade and light reddish-brown suffusion in medial area,
- transverse lines reduced or very pale,
- stigmata less defined, with whitish outlines,
- dark patches on outer side of subterminal line less sharp,
- elements of dark pattern have a bronze brilliance.

The genital configuration of the sympatric sibling species, *detersina* (STAUDINGER, 1897) and *curva* (STAUDINGER, 1889) is very similar (see Figs 76—81), the specific differences, in spite of the different external appearance,



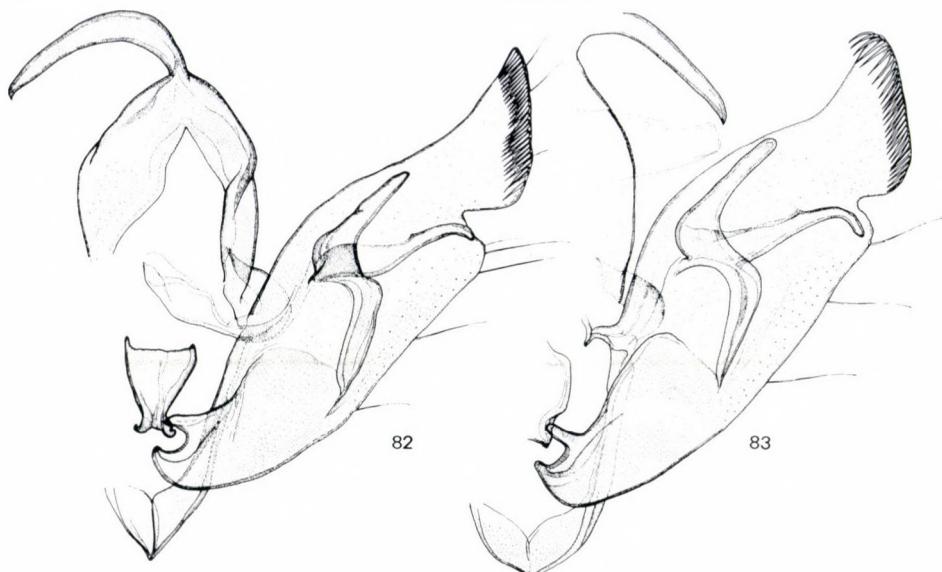
Figs 79—81. 79 = *Auchmis detersina detersina* STAUDINGER, China, Urumchi. 80 = *Auchmis detersina sericea* ssp. n., holotype, Afghanistan. 81 = *Auchmis curva* STAUDINGER, China, Aksu

are slight (in the shape of harpe and ampulla and the dentation of the extension of the carina). As *detersina detersina* and *detersina sericea* seem clearly allopatric, the small genital differences give no evidence to separate them on specific level.

Marsipiophora calopepla sp. n. (Plate II: 28—29)

H o l o t y p e: male, "Mongolia, Govi Altay aimak, NW of Mts. Adz Bogd, basin of lake Alag, 1250 m, 94° 40'E, 45° 18'N, 18. 05. 1990, leg. GY. FÁBIÁN, M. HREBLAY, L. PEREGOVITS et G. RONKAY". — P a r a t y p e s: 6 males from the same locality and data, coll. the collectors and HNHM Budapest.—Slide No. 3617 L. RONKAY.

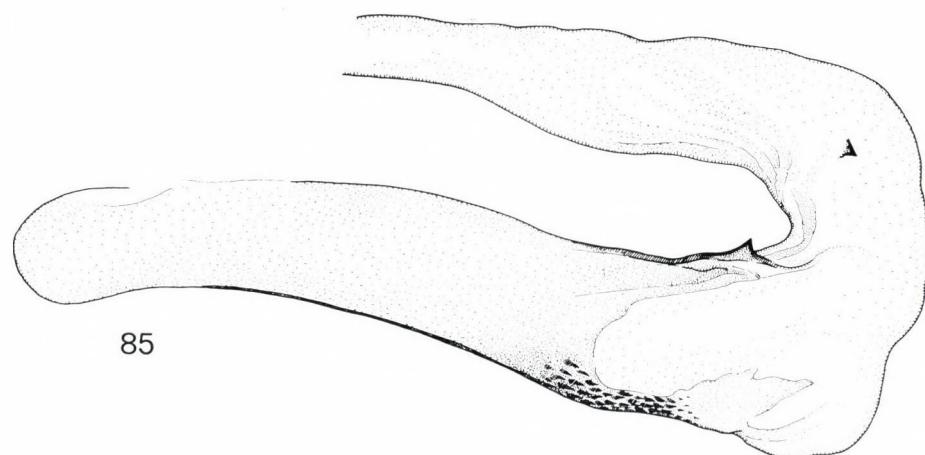
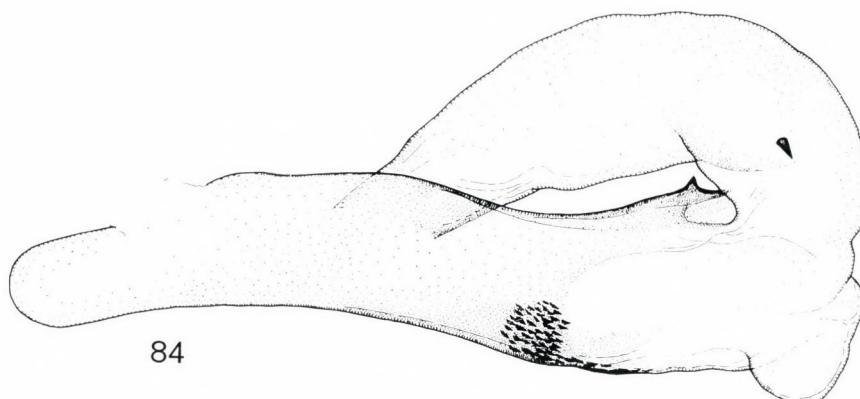
D e s c r i p t i o n: wingspan 31—39 mm, length of forewing 14—18 mm. Head and thorax milk-white with ochreous-pinkish shade, collar and tegulae with dark blackish-grey margins, metathoracic tuft large. Antennae of males finely ciliate, palpi very short, laterally blackish, frons with large, rounded and smooth protuberance. Abdomen ochreous with greyish and whitish hairs. Forewing narrow, elongated, apex pointed, outer margin strongly convex. Ground colour ochreous milk-white with fine pinkish-buff suffusion and pinkish-brown irroration in pastel shade. Subbasal line short, blackish, other transverse lines represented only by their short, blackish-grey costal streaks. Subterminal line sometimes appears as a short row of blackish triangles at tornus. Apex with a strong, straight and oblique blackish streak to vein m_1 , continuing below as a diffuse, light plumb-grey and/or grey-brown zone to vein cu_2 . Orbicular and



Figs 82—83. *Auchmis incognita* RONKAY et VARGA, paratypes (82 = China, Aksu, 83 = Pakistan, Kaghan valley)

reniform stigmata present, encircled incompletely with blackish and filled with white. Claviform a small blackish arrowhead at its tip. Terminal line fine but sharp, a row of black arches, cilia as ground colour, spotted with blackish-grey in outer half. Hindwing small and rounded, ochreous-white with rosy shine. Marginal suffusion wide but relatively pale, fumous-grey, veins covered with grey. Transverse line absent, cellular lunule large, elliptical. Terminal line grey-brown, cilia milk-white. Underside of wings clear milk-white, suffused slightly with grey in median area of forewing. Transverse lines absent, cellular lunules large and dark on both wings. Shadow of apical streak of forewing and spotting of cilia more or less visible.

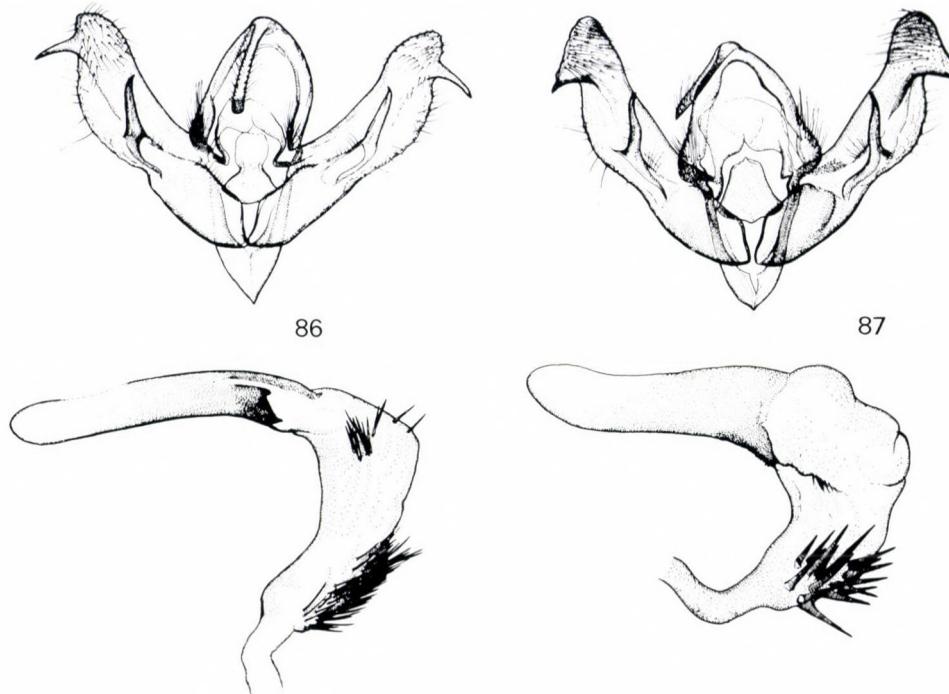
Male genitalia (Fig. 86): uncus long and slender with rounded apex, tegumen narrow and high, fultura inferior more or less deltoidal with membranous apical part, vinculum strong, V-shaped. Valvae elongated, finely arcuate, distal part ventrally dilated with a rounded, membranous lobe. Sacculus strong, clavus more or less rounded and hairy. Harpe sclerotized, straight, thorn-like with acute apex. Pulvillus long, cucullus pointed, setose, corona absent. Costal processus very long and sclerotized, terminal part of valva resembles to head of a long-billed bird. Aedeagus strong, cylindrical, carina with a weaker dorsal and a stronger ventral plate. Vesica everted forward and recurved ventrally, basal part semiglobular, bearing long, spiniform cornuti. Distal part sacculiform, tapering terminad, with a large bundle of long and fine cornuti.



Figs 84—85. *Auchmis incognita* RONKAY et VARGA, paratypes (84 = China, Aksu, 85 = Pakistan, Kaghan valley)

The genus was described by JOHN (1909) — as a monotypic one — for a species being typical for eremic, especially saline eremic habitats, *Calophasia cristophi* ERSHOV, 1874. The newly discovered species, in spite of their different external appearance, is closely related to *cristophi* and its habitat is also a highly saline desert. The genus is related to the similarly eremic genera *Scotocampa* STAUDINGER, 1888 and *Heterographa* STAUDINGER, 1877.

The male genitalia of *calopepla* and *cristophi* (Fig. 87) are surprisingly very similar, the new species has longer and narrower costal processus, more straight harpe, smaller and narrower fultura inferior and less robust cornuti in the distal part of vesica; the group of cornuti at the basal part of vesica is absent in *cristophi*.



Figs 86—87. 86 = *Marsipiophora calopepla* sp. n., paratype, Mongolia, Alag. 87 = *Marsiophora christophi* ERSOV, USSR, Turkmenia

Hydraecia terminata sp. n. (Plate III: 33)

H o l o t y p e: male, "Mongolia, Chentej aimak, 150 km ONO v. Öndörchaan, 10 km S vom Kerulen, 1000 m, exp. Dr. Z. KASZAB, 1965", "Nr. 333, 30. VII. 1965.", "H. mongoliensis ♂, det. E. URBAHN", "Paratype" (red label), "1996 ♂, gen. prep. No. det. L. RONKAY", "Holotypus *Hydraecia terminata* RONKAY et VARGA det. L. RONKAY, 1990".

D e s c r i p t i o n: wingspan 35 mm, length of forewing 15 mm. Head, thorax pinkish-brown, thoracic tufts large, antennae whitish, finely ciliate. Forewing short and wide triangular with acute apex. Ground color light ochreous-grey, medial and terminal fields suffused with pinkish-brown and some olive; costal margin rosy-pinkish. Subbasal line absent, antemedial line brown, sinuous, postmedial line single, slightly arcuate. Orbicular and reniform stigmata less conspicuous, large, encircled with fine brown lines. Subterminal line waved, ochreous, defined with a diffuse and interrupted rosy-brown stripe. Terminal line sharp, dark brown, cilia pinkish-brown. Hindwing shiny ochreous, strongly suffused with brown, cellular lunule obsolescent, transverse line narrow, brown, marginal area darker brownish. Terminal line fine, brown, cilia ochreous. Underside of wings ochreous with intensive greasy shine, irrorated



Figs 88—90. 88 = *Hydraecia terminata* sp. n., holotype, Mongolia, Öndörchaan. 89 = *Hydraecia mongoliensis* URBAHN, paratype, Mongolia. 90 = *Hydraecia nordstroemi* HORKE, Sweden

with pinkish, inner half of forewing suffused with brownish. Cellular lunules minute, transverse lines diffuse and sinuous; ghost of subterminal line slightly visible.

Male genitalia (Fig. 88): Uncus slender, regular, tegumen wide with well-developed penicular lobes. Fultura inferior shield-like with wider basis, vinculum very long and strong; V-shaped. Valvae elongated, distally tapering. Cucullus small, triangular, ventrally elongated and pointed; corona with long setae. Sacculus short, ampulla long and weak, harpe a flattened bar. Costal processus spine-like, sclerotized. Aedeagus cylindrical, long, vesica tubular without distal dilatation; everted forward and curved ventrally. Basal part with a long and pointed, nail-shaped cornutus, medial part without sclerotized crests.

The new species is very similar to a small specimen of *H. mongoliensis* URBAHN, 1967, and differs externally only by broader and less elongated forewings. Probably this great similarity was the reason to involve the holotype specimen of *terminata* into the type series of *mongoliensis*. During the studies on the externally different Mongolian populations this specimen was dissected — as the easternmost known one from Mongolia — and to our great surprise, the configuration of the vesica proved very different from that of *mongoliensis*.

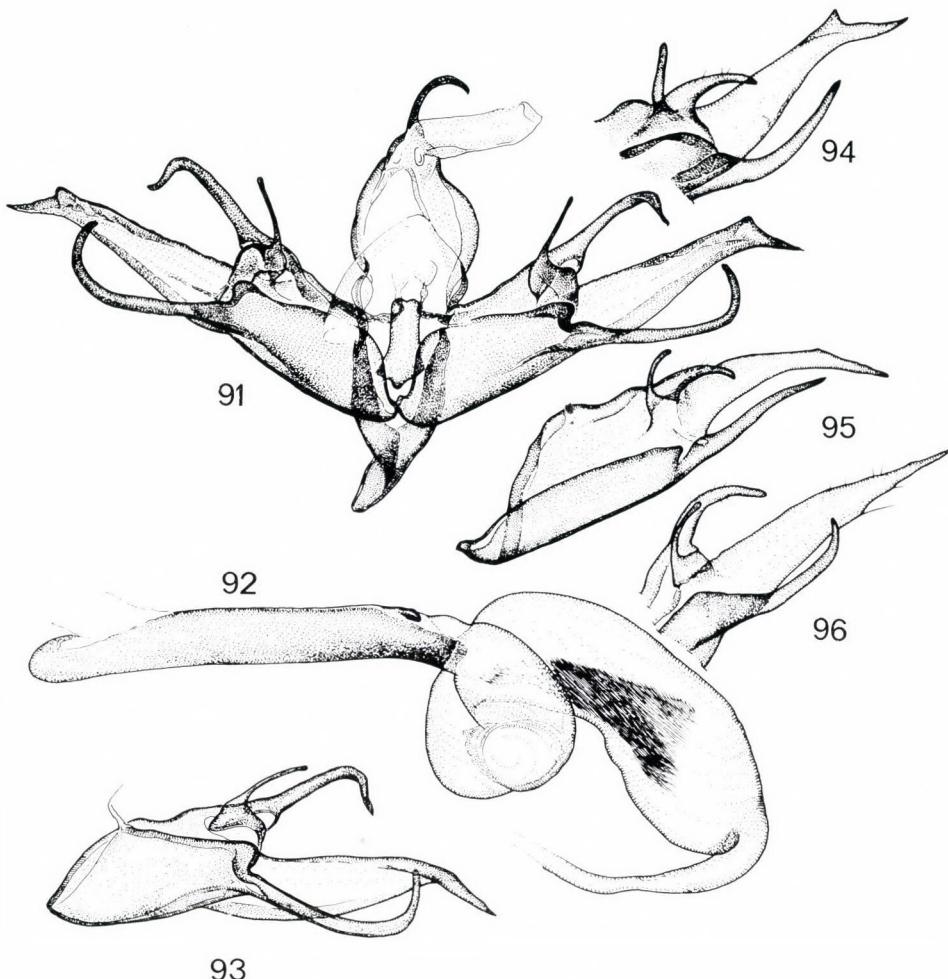
(and also of *nordstroemi* HORKE, 1952 und *ultima* HOLST, 1967) (Figs 89—90). Later the true *mongoliensis* was also discovered in the vicinity of Öndörchaan, therefore the two species are sympatric in E Mongolia. On the other hand, *nordstroemi* and *mongoliensis* have no regions of overlap.

Eremodrina leptodactyla sp. n. (Plate III: 40—41)

H o l o t y p e : "Gissarsk. hr., Ramit, 18.8.84, K. SMOLYAROV" (in Russian) (coll. BIN Novosibirsk). — **P a r a t y p e s :** 3 males, 2 females from the same loc. and data, coll. ZIN Novosibirsk and HNHM Budapest; 1 male, 5 females, NE Afghanistan, Prov. Badakhshan, Wakhan valley, Darrah-e-Shaur, W of Barak, 3300 m, 1.09.1972, leg. BRADE et NAUMANN (coll. NAUMANN and HNHM Budapest and VARGA). Slides Nos 3434, 3711 RONKAY (males), 3705, 3712, 3754 RONKAY (females).

D e s c r i p t i o n: wingspan 26—29 mm, length of forewing 14—15 mm. Head, thorax and forewings monotonous ochreous-greyish, termen and marginal area suffused slightly with darker grey-brown; scales of forewing less shiny. Markings less expressed, basal area with a costal spot and a pale line, antemedial line dark brown, fine, single, oblique and slightly sinuous, with a strong costal spot. Medial line a very pale shadow, orbicular and claviform stigmata absent, reniform spot narrow, encircled with darker grey and filled with lighter ochreous-greyish. Postmedial line double, pale, sinuous, subterminal line waved, light ochreous with some minute arrowheads. Terminal line very fine, blackish, cilia grey(ish), shiny. Hindwings brilliant whitish with narrow, denticulated, brownish marginal suffusion on veins. Terminal line brown, cilia whitish with ochreous hairs and brownish medial line. Underside of wings light, shiny whitish, forewings finely irrorated with grey, apical part dark, blackish-brown. Cilia and hindwings as on upperside.

M a l e g e n i t a l i a (Figs 91—93): uncus very short and slender, tegumen narrow and weak. Fultura inferior elongated, shield-like, vinculum wide, V-shaped. Valvae very long, symmetric, apically strongly tapering. Sacculus wide, extended to middle of valva, dorsal edge a strongly sclerotized, globular protuberance, ventral extension very long, arcuate, sword-like. Costal processus sclerotized, long and recurved in upper third. Harpe wide-based long and gracile, oblique and straight, apical part of valva acute and finely twisted. (A small, triangular subapical emergence may present). Aedeagus long, tubular, carina with a small dorsal tooth and a wider ventral lamina. Vesica tubular everted forward and ventrally, basal part with a small, conical lateral diverticulum, medial part recurved dorsally, broader, distal third wide, constricted at ductus ejaculatorius. Medial part of vesica with a long, triangular zone of fine spinules. Female genitalia (Fig. 101): ovipositor short and weak, ostium huge, quadrangular, flattened, with long, twisted apical arms. Ductus bursae



Figs 91—96. 91—93 = *Eremodrina leptodactyla* sp. n. (91—92 = holotype, USSR, Tadzhikistan, Hissar Mts., 93 = paratype, Afghanistan, Wakhan). 94 = *Eremodrina draudti* BOURSIN, Turkey, lake Van. 95 = *Eremodrina pseudopertinax* BOURSIN, Iran. 96 = *Eremodrina agenjoi* BOURSIN, Turkey

flattened, ribbon-like, sclerotized, folded posteriorly and at middle, twisted in anterior third. Cervix bursae large, rugulose and partly finely sclerotized. Corpus bursae membranous, short, globular.

The new species displays transitional features between the *pseudopertinax* (BOURSIN, 1939) — *draudti* (BOURSIN, 1936) — *hypocnephas* BOURSIN, 1968 and the *nadir* (BOURSIN, 1957)-*stilpna* (BOURSIN, 1957) groups. The general shape of the long valvae with the long and curved saccular extension is similar to those of the members of the former group, especially to *draudti* (Fig. 94) but

the costal processus is essentially stronger, longer and hooked as in the taxa of the *nadir*-group (see BOURSIN 1969).

The species is distributed from the Soviet Hissar Mts. to the E Afghan Wakhan area; its flying period is the late summer.

Eremodrina monssacralis sp. n. (Plate III: 36)

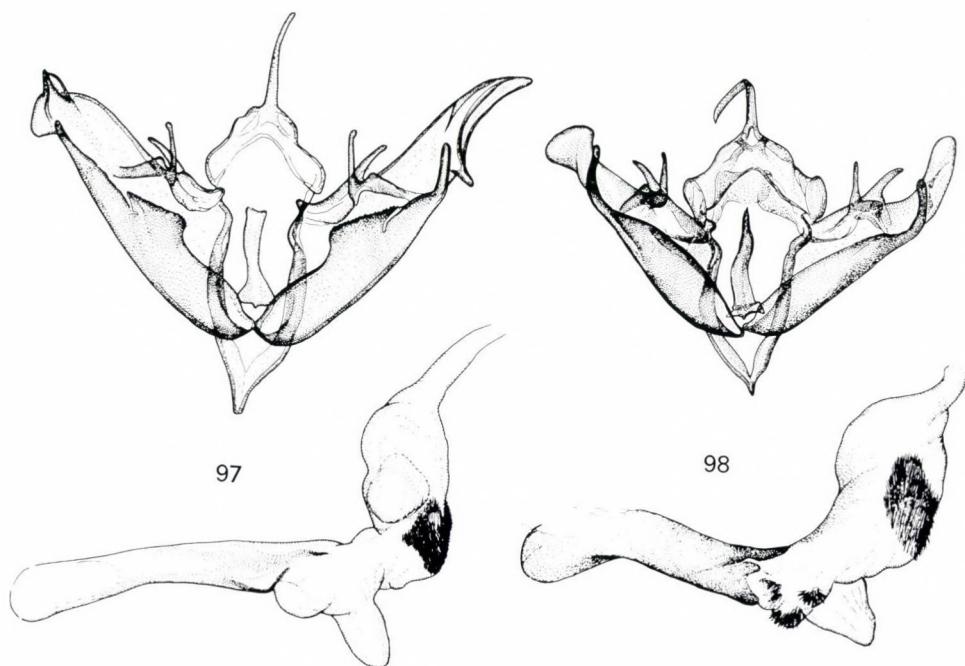
H o l o t y p e : male, „Mongolia, Govi Altay aimak, Mts. Govi Altay, 6 km N of Tögrög, 1750 m, 94° 45' E, 45° 51' N, 6. 08. 1988, leg. L. PEREGOVITS et Z. VARGA. (coll). Slide No. 3399 RONKAY. — Paratypes: 5 males, 4 females from the same locality and data, coll. the collectors and HNHM Budapest.

D e s c r i p t i o n : wingspan 32—35 mm, length of forewing 15,5—17 mm. Head and thorax brown-grey, frons rounded, whitish, palpi laterally dark brown; antennae filiform. Abdomen light grey with whitish hairs. Forewing narrow triangular with pointed apex. Ground colour light brownish-grey, irrorated with ochreous and some dark grey, especially in marginal field. Ante- and postmedial lines dark grey, double and sinuous, filled with ground colour, medial line a diffuse, darker stripe, subterminal line interrupted, ochreous. Orbicular a small, rounded dark spot, reniform narrow, dark grey. Terminal line chreous, cilia shiny grey. Hindwing diaphanous white, veins covered with brown, marginal suffusion narrow, reduced to darker patches at veins. Terminal line ochreous, cilia white. Underside shiny whitish, forewing suffused with grey, apical part dark grey. Ghost of reniform and transverse line visible, hindwing with some dark grey scales at costal and apical parts.

M a l e g e n i t a l i a (Fig. 98): uncus slender, curved, tegumen wide and low, penicular lobes big and rounded. Fultura inferior narrow and high, vinculum short, V-shaped. Valvae elongated, distally tapering, cuculli asymmetric. Sacculus long and narrow, saccular extension long and arcuate. Costal processus and harpe nearly equal, short, former oblique, latter straight. Left cucullus small and round, right one elongated with upturned ventral part. Aedeagus short and thick, cylindrical, dorsal extension of carina sclerotized. Vesica everted forward and upturned dorsally, basal part with a long zone of short and strong, spine-like cornuti and a semiglobular diverticulum. Medial part tubular, distal third broad, bearing a large, rounded zone of short spinules.

F e m a l e g e n i t a l i a (Fig. 103): Ovipositor weak and relatively wide, ostium a wide, sclerotized ring. Posterior part of ductus bursae wide, flattened, finely sclerotized, anterior part strongly rugulose with a more sclerotized, rugulose ribbon running to cervix bursae. Cervix bursae small, rugulose and slightly sclerotized, corpus bursae more or less triangular.

The new species belongs to the *turatii* (BOURSIN, 1936) — *kashmiriana* BOURSIN, 1968 — *bactriana* BOURSIN, 1968 group, forming, together with some further species a monophyletic unit within *Eremodrina*. Its closest species is



Figs 97—98. 97 = *Eremodrina bactriana* BOURSIN, Afghanistan, Wakhan. 98 = *Eremodrina monssacralis* sp. n., holotype, Mongolia, Tögrög

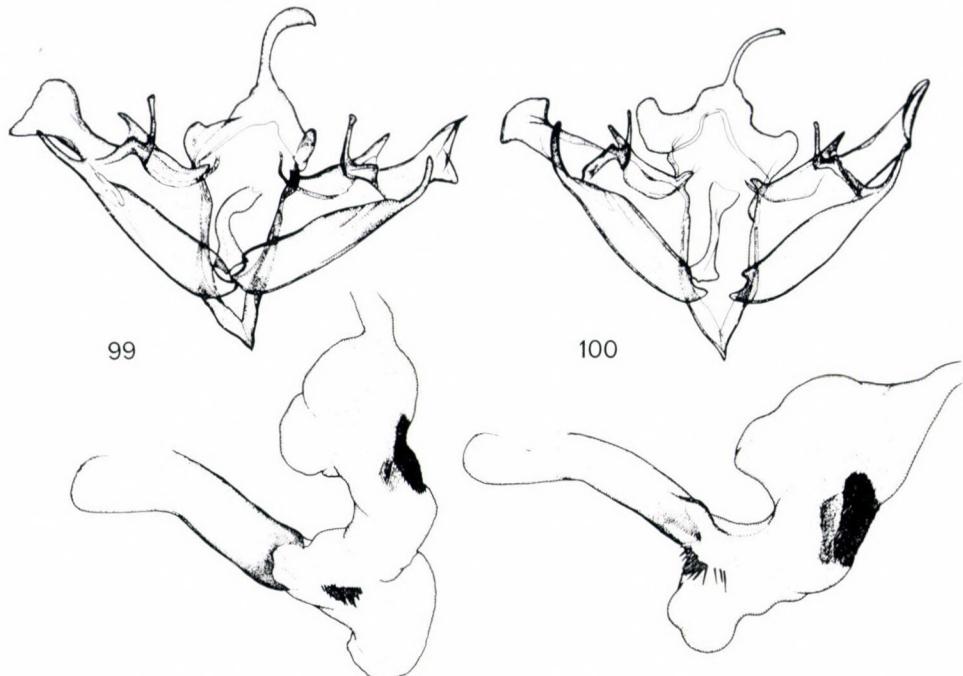
turatii, differs from the latter by its different colouration and the configuration of the vesica: in the place of the basal bundle of long, spiniform cornuti, appearing generally in this group, a longer, narrow field of short and strong cornuti can be found. The cucullus of the right valva and the shape and size of the harpae are also slightly different.

Monssacralis is the easternmost member of the genus, inhabiting the W part of the Govi Altay. Its habitats are xerophilous, rocky steppes.

***Eremodrina falcicuncula* sp. n.**

H o l o t y p e: male, "NO-Afghanistan, Wakhan-Tal, 3400 m, Kotal-e-Dalez, W-Seite, 28. 7. 71, EBERT et NAUMANN, UV-Li./coll. Nr. 271", slide No. 3713 RONKAY (coll. NAUMANN). — **P a r a t y p e s:** 2 males from the same locality and data; 1 male, 1 female, NE Afghanistan, Wakhan valley, 3300 m, Zemestani Baharak, 23—24. 07. 1971, leg. EBERT et NAUMANN, coll. NAUMANN, HNHM Bp. and VARGA; a short series, USSR, Tadzhikistan, Pamir Mts., Horog, 12. 08. 1981, leg. K. & L. KRUSEK (coll. KRUSEK and THÖNY). Slides Nos 3749, 3755, 3755, 3757 RONKAY (males), 3756 RONKAY (female).

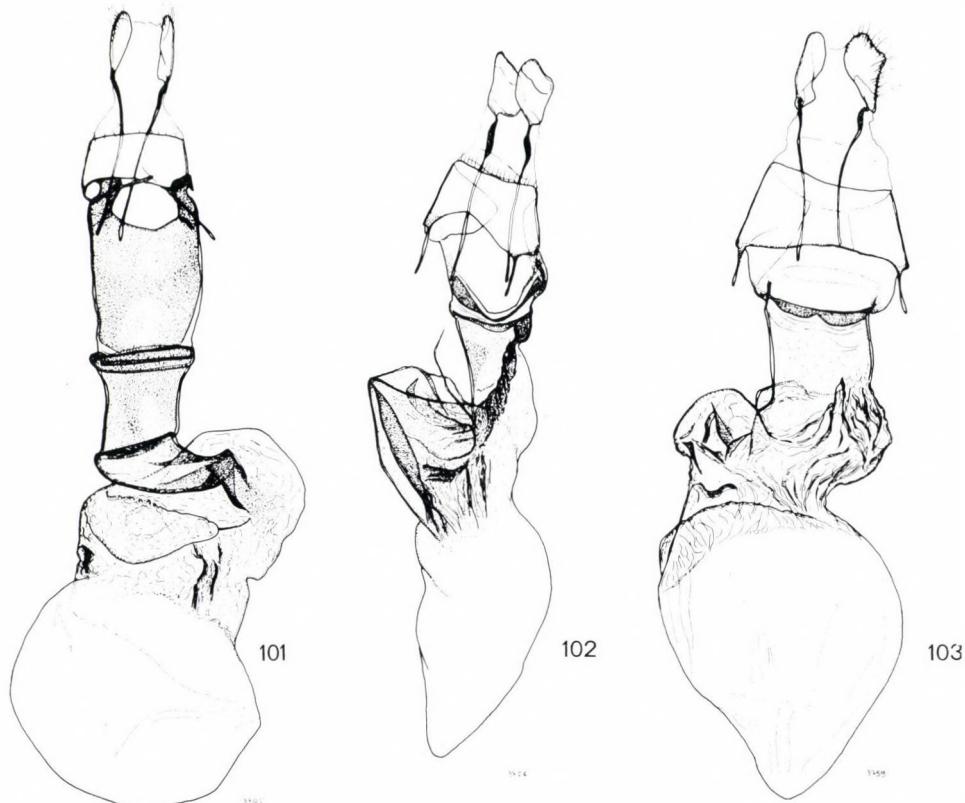
D e s c r i p t i o n: wingspan 32—37 mm, length of forewing 16—18 mm. Head and thorax light ochreous-grey, palpi laterally shiny brown, antennae filiformes. Abdomen light grey with some ochreous hairs at first segments, anal



Figs 99—100. 99 = *Eremodrina falcicula* sp. n., holotype, Afghanistan, Wakhan. 100 = *Eremodrina* sp., Afghanistan, Wakhan

tuft ochreous. Forewing triangular with pointed apex; ground colour ochreous-grey with some greyish suffusion, mainly in basal and marginal fields. Ante- and postmedial lines wide, double, greyish, filled with ochreous, medial line a wide, diffuse stripe. Orbicular and reniform stigmata relatively large and filled with dark grey; claviform absent. Subterminal line ochreous, strongly waved, terminal line a row of ochreous spots; cilia chiny grey with some ochreous hair-scales. Hindwing shiny and slightly translucent whitish, marginal suffusion narrow, veins covered with brownish at marginal field. Terminal line brown, cilia whitish. Underside of wings very shiny whitish, apical part of forewing suffused with grey, ghosts of stigmata and costal parts of postmedial and sub-terminal lines present. Hindwing with some darker scales in marginal and apical parts.

M a l e g e n i t a l i a (Fig. 99): uncus weakly sclerotized, falciform, tegumen low and wide with well-developed penicular lobes. Fultura inferior narrow and high, twisted, vinculum short, V-shaped. Valvae relatively short, distally strongly tapering, cuculli asymmetric. Sacculus long and narrow, clavus reduced. Costa strong, costal processus short and oblique, harpe wide-based, more or less straight, longer than costal processus. Saccular extension long, arcuate. Right cucullus bilobated, lobes upturned ventrally; left cucullus bird-



Figs 101—103. 101 = *Eremodrina leptodactyla* sp. n., paratype, Afghanistan, Wakhan. 102 = *Eremodrina falcuncula* sp. n., paratype, Afghanistan, Wakhan. 103 = *Eremodrina mons-sacralis* sp. n., paratype, Mongolia, Tögrög

head-like: dorsal edge rounded, ventral side triangular, pointed. Aedeagus cylindrical, relatively short and thick. Vesica everted forward and upturned dorsally. Basal part with a bundle of long, spiniform cornuti and a ventral, rounded diverticulum, medial part a wide tube, distal third strongly dilated, bearing a big zone of short spinules.

F e m a l e g e n i t a l i a (Fig. 102): ovipositor weak, distal gonapophyses relatively long. Ostium bursae with a folded, sclerotized ribbon. Posterior part of ductus bursae flattened and sclerotized, anterior part rugulose and membranous; with a long, folded and rugulose, partly sclerotized ribbon from postero-lateral edge to cervix bursae. Cervix bursae large, laterally folded and sclerotized, anterior part rugulose. Corpus bursae small, membranous, more or less triangular.

The new species resembles externally to large specimens of *E. bactriana* BOURSIN, 1968, but it has more expressed sinuous subterminal line, more

conspicuous dark filling of stigmata and darker marginal suffusion on the underside of forewings. They are separable very easily by the features of the male genitalia (see Figs 97—99): the apical parts of valvae of the two species have different shape and size and the uncus of *falcuncula* is conspicuously dilated distally (falciform, cf. the derivation of the specific name). The valval characteristics of *falcuncula* are more similar to *monssacralis* and *turatii* but the left cucullus of the former has a triangular ventral processus, being typical for this taxon and the unci of the former two taxa are regular, slender.

Falcuncula occurs nearly sympatrically with *bactriana* and a further closely related species (Fig. 100) in the Wakhan valley (NE Afghanistan).

Platyperigea grisea fuscifusa ssp. n.

H o l o t y p e: male, Mongolia, Ömnögovi aimak, Govi Altay Mts., Gurvan Sayhan Mts., valley Yulin-am, 2050 m, 104° 03'E, 43° 27'N, 25—28. 07. 1988, leg. Cs. SZABÓKY (coll. HNMH Budapest).

P a r a t y p e s: 103 specimens from the same locality, end of July 1986, 1987 and 1988 leg. FÁBIÁN, HREBLAY, PEREGOVITS, RONKAY, SZABÓKY et VARGA; 8 specimens, Mongolia, Govi Altay aimak, Mts. Govi Altay, 6 km N of Tögrög, 1750 m, 94° 45'E, 45° 51'N, 6. 08. 1988, leg. L. PEREGOVITS et Z. VARGA; 1 female, Mongolia, Central aimak, 1400—1600 m, Tsagaan Davaa, 20 km NW of Bayan Tsadmani, 106° 05'E, 48° 17'N, 11—14. 08. 1988, leg. PEREGOVITS et VARGA; 1 male, Mongolia, Övörhangay aimak, Harhorin, 2100 m, 30. 07. 1988, leg. SZABÓKY; 2 males, Mongolia, Ömnögovi aimak, Mts. Ih Bogd, 1800—2400 m, 24—26. 07. 1987, leg. HREBLAY, PEREGOVITS et STÉGER; 1 female, Mongolia, Övörhangay aimak, 110 km NW of Arvayheer, 1400 m, 23. 07. 1987, leg. HREBLAY, PEREGOVITS et STÉGER; 2 males, Mongolia, Central aimak, 11 km S from Pass Zosiyn Davaa, 90 km S of Ulaanbaatar, 15. 07. 1965, leg. Z. KASZAB. — The paratypes are deposited in coll. HNMH Budapest and the collectors.

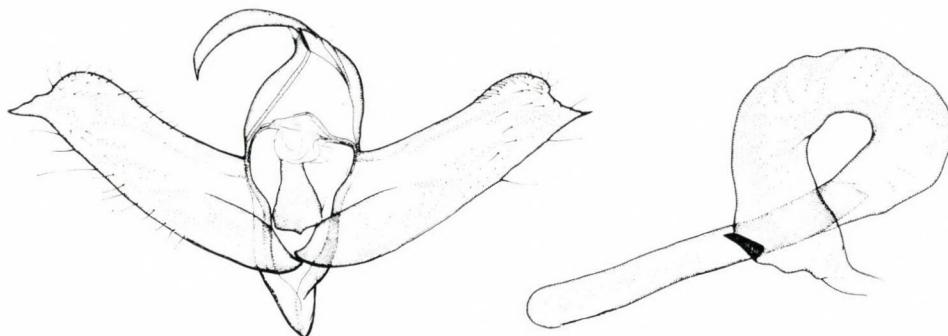
D e s c r i p t i o n: wingspan 27—31 mm, length of forewing 13—15 mm. The new subspecies is easily separable from the nominate *grisea* (EVERSMANN, 1848) by its sandy ochreous-brown ground colour and more diffuse dark pattern of the forewings and the ochreous-greyish hindwings.

The S Russian-Siberian populations have grey forewings with some brownish at costal part, they resemble rather to the lighter *P. montana apatetica* (PÜNGELER, 1914) specimens than to the Mongolian ones.

The configuration of the male genitalia of *grisea* is illustrated in VARGA (1982, Figs 27—28), the specimens reported in this paper belong to the new subspecies.

Victrix (Poliobrya) frigidalis sp. n. (Plate III: 37—39)

H o l o t y p e: male, "Mongolia, Ömnögovi aimak, Mts. Noyon, 22 km SE of Gurvantös, 1800 m, 101° 47'E, 43° 14'N, 13. 05. 1990, leg. Gy. FÁBIÁN, M. HREBLAY, L. PEREGOVITS et G. RONKAY" (coll.). — **P a r a t y p e s:** 63 male specimens from the same locality and data, coll. the collectors, HNMH Budapest and Z. VARGA (Debrecen). Slide No 3618 RONKAY.



104

105

Figs 104—105. *Victrix frigidalis* sp. n., paratype, Mongolia, Noyon Mts.

Description: Male: wingspan 31—35 mm, length of forewings 15—16 mm. Head small and rounded. Palpi very short, proboscis nearly entirely reduced. Head and thorax dark blackish-grey, abdomen somewhat lighter. Forewings shiny, fumous blackish-grey, finely and reticulately irrorated with ochreous-grey scales. Wing pattern usually pale and diffuse, consisting of outlines of orbicular and reniform stigmata, subbasal, ante- and postmedial lines; parts of these markings may be obsolete, forewings sometimes patternless blackish-grey. Cilia dark grey, spotted with some ochreous in outer half. Hindwing unicolorous, slightly translucent smoky grey with ochreous shine, cellular lunule a diffuse ghost, transverse line usually less visible, a sinuous shadow. Terminal line wide, dark grey, cilia bright ochreous-grey. Underside of wings unicolorous dark grey, hindwings somewhat — but not strongly — lighter; margins of wings with some ochreous irroration. Cellular lunules and transverse lines often present on both wings but pale and diffuse. — Female unknown but possibly wingless.

Male genitalia (Figs 104—105): uncus strong, curved, medially widened, tegumen slender and relatively high. Fultura inferior a drop-like plate, vinculum short, V-shaped. Valva wide, its shape typical for *Poliobrya* Hampson, 1908, apical processus long and wide. Aedeagus tubular, long, vesica tubular, recurved, with a small, pointed terminal cornutus sitting on a broad, flattened semiglobular diverticulum.

Frigidalis represents an other, highly isolated member of this very compact group of taxa. The subgenus contains four species, *umovii* (Eversmann, 1846), *fabiani* VARGA et RONKAY, 1989, *patula* (Püngeler, 1907) and *frigidalis* sp. n.; these taxa have significantly different external appearance but highly similar configuration of the male genitalia, displaying slight differences in the shape of valvae and the structure of vesica (see VARGA & RONKAY 1989).

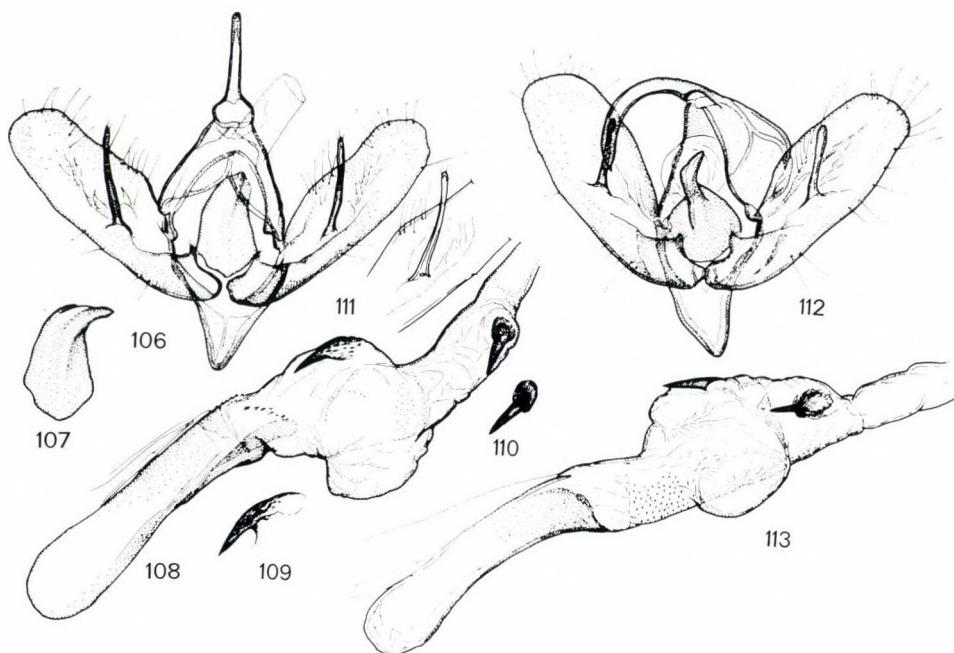
The new species strikingly differs from all other known members of the genus *Victrix* s. l. — except the NW African *V. microglossa* "ssp." *maurorum* RUNGS, 1945 and *V. tristis* RUNGS by its extremely early flying period. It was collected in masses in early spring in an insular desert mountain of the Southern Govi area, by extremely low night temperatures (cf. the name of the species).

Desertoplusia colornata sp. n. (Plate III: 42—43)

H o l o t y p e: male, "Turkey, Prov. Agri, 7 km W of Aydintepe, 2200 m, 43° 30'E, 39° 49'N, 20—22. VII. 1990, leg. Gy. LÁSZLÓ et G. RONKAY (coll. G. RONKAY). — **P a r a - t y p e s:** 2 males, 2 females from the same locality and data (coll. the collectors and the HNHM Budapest); 3 females from the same localita, 6—7. 08. 1988, leg. GYULAI, HREBLAY, RONKAY et RONKAY (coll. P. GYULAI, G. RONKAY et HNHM Budapest); a short series from NE Turkey, Prov. Agri, Tahir Gecidi, 2700 m, leg. & coll. H. HACKER; 32 males, 18 females, Turkey, Prov. Van, Güseldere Gecidi, 2700—2900 m, VI—VII of 1984, 1985 and 1986, leg. H. HACKER, K. HUBER, H. THÖNY et W. WOLF (coll. the collectors, HNHM Budapest, BEHOUNEK, P. GYULAI, B. HERCZIG et G. RONKAY); 1 male, Turkey, Prov. Hakkari, Süüstü, 1900 m, 18. 06. 1985 (leg. & coll. HUBER); 1 female, Turkey, Prov. Hakkari, Süvarihalil Gecidi, 2700 m, 4. 07. 1984 (leg. & coll. HUBER), 1 female, Palandöken Dagh, 6—11. 07. 1982, leg. THOMAS (coll. PEKS); 1 male, Hakkari, Yüksekovala, 01. 07. 1983, leg. THOMAS (coll. PEKS), 1 male, Hakkari, Tanin Tanin Pass, 25. 06. 1983, leg. SCHACHT (coll. BEHOUNEK), 1 male, Antalya, Dösemealtı, 420 m, 14. 05. 1978, leg. DEFREINA (coll. BEHOUNEK). Iran, Strasse Chiraz-Kazeroun, Fort Sine-Sefid, 2200 m, leg. BRANDT (coll. PEKS); 1 female Khorassan, Abassabad, 1200 m, 12. 05. leg. DEFREINA (coll. BEHOUNEK). Slides Nos 3710, 3720 (males), 3729 (female) RONKAY, 0143 BEHOUNEK (female).

D e s c r i p t i o n: wingspan 26—28 mm, length of forewing 12—13 mm. Head small, palpi long and slender, upturned, antennae filiform. Collar and thorax light ochreous-brown with darker brown and whitish lines, thoracic tufts large. Abdomen grey-brown with a big dorsal and a light anal tuft. Forewing short and wide triangular with acute apex and slightly concave outer margin. Ground colour light ochreous-grey, medial area strongly suffused with brown; some parts of wing with intensive golden-bronze brilliance. Transverse lines strong, double, filled with whitish-ochreous, basal field light ochreous-brown with metallic shine and some dark blackish-brown spots. Medial area brown, darkest part of wing, its golden-brown shine very conspicuous. Orbicular and reniform stigmata small, encircled with white, claviform absent. Stigma brilliant white, a short and thick Y-mark. Subterminal line strongly sinuous, whitish, inner part of marginal field dark ash-grey with a long whitish streak, outer part light, shiny ochreous-brown. Terminal line double, grey and white, cilia white, spotted with brown. Hindwing small, rounded, light cupreous-brown with wide dark marginal field and a diffuse, straight transverse line. Cilia white, spotted with brown. Underside of wings whitish-ochreous, forewing covered with grey-brown, ghosts of stigma and transverse lines whitish. Hindwing with more or less intensive brownish irroration, transverse line and submarginal suffusion wide and diffuse.

M a l e g e n i t a l i a (Figs 106—111): uncus strong, curved, tegumen wide and less high, fultura inferior a wide and high shield with finely pointed,



Figs 106—113. 106—111 = *Desertoplusia colornata* sp. n., paratypes, Turkey, Güseldere Gecidi. 112—113 = *Desertoplusia bella* CHRISTOPH, USSR, Turkmenia, Kopet-Dagh

bill-like apical part; vinculum V-shaped. Valvae more or less elongated, narrow with rounded apex. Sacculus small and weak, clavus short, conical, sensory setae relatively short. Ampulla very long and slender, straight. Aedeagus moderately long and thick, cylindrical, carina finely granulose. Vesica everted forward, basal part slightly dilated, bearing a basally serrate, curved cornutus on dorsal side and a semiglobular, membranous diverticulum on ventral side. Distal part tubular, with a large, nail-shaped, pointed cornutus.

F e m a l e g e n i t a l i a (Fig. 37) Ovipositor short but strong, distal papillae anales strong, conical. Ostium bursae membranous, Ductus bursae tubular, proximally dilated, surfaces with longitudinal, sclerotized crests and a small, rugulose dorsal protuberance. Its junction with bursa copulatrix membranous; cervix bursae small, conical, corpus bursae long, sac-like.

The new species is closely related to *Desertoplusia bella* (CHRISTOPH, 1887), but differs from it by much intensive and more colourful pattern and golden-bronze brilliance since *bella* is more or less unicolorous brown-grey with fine silvery-white markings. *Colornata* has lighter ochreous-bronze brown ground colour with ochreous or reddish irroration and much more extensive whitish markings, especially the stigma is significantly thicker and wider. The valvae of *colornata* are narrower, the ampulla is longer and more gracile, the

cornuti of vesica are significantly longer and the basal part of the distal cornutus has different structure (see Figs 106—113). In case of *colornata* the spine of the cornutus originates from the centre of the basal plate and is not connected with the other part of the lamina (similarly to the majority of the *Euchalcia* species) since in *bella* the spine is erected from the proximal edge of the plate. The ductus bursae of *colornata* is wider and shorter having shorter sclerotized crests and the anterior part of ductus is without sclerotized edges, which can be found in *bella* (Fig. 38).

* * *

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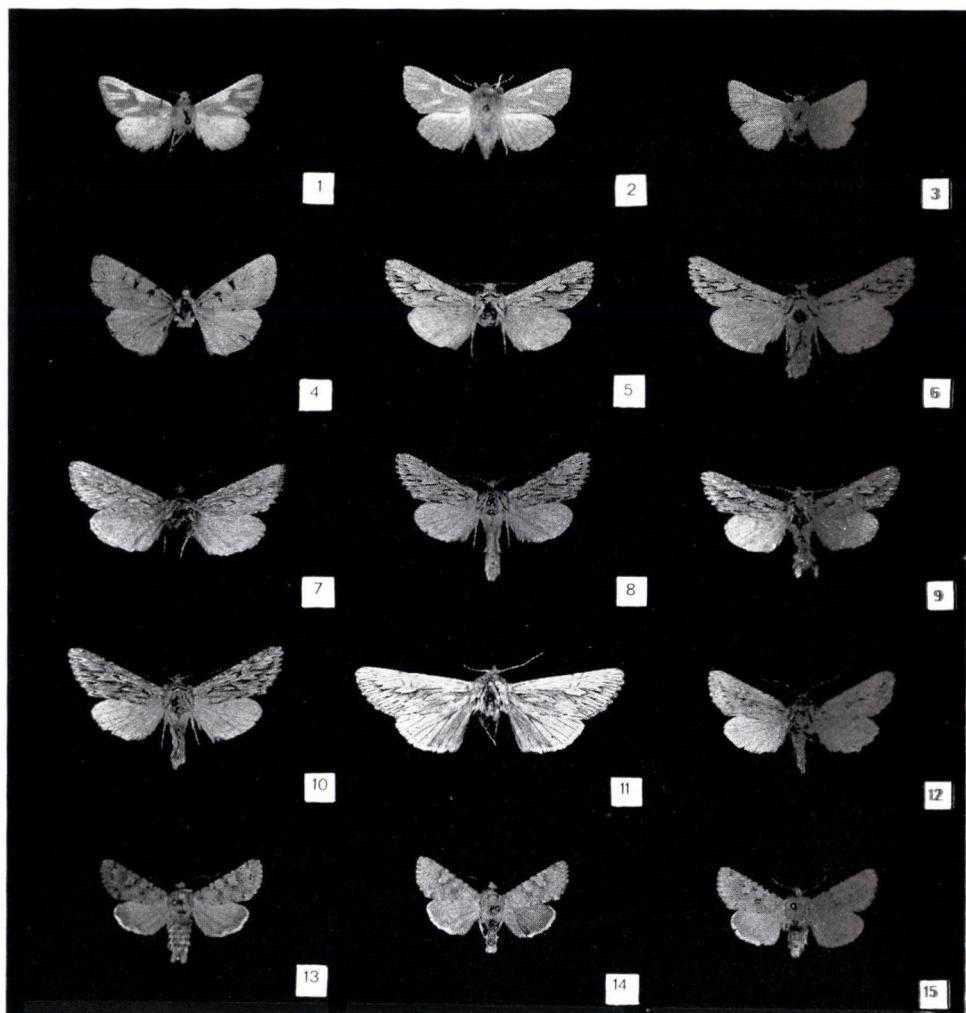
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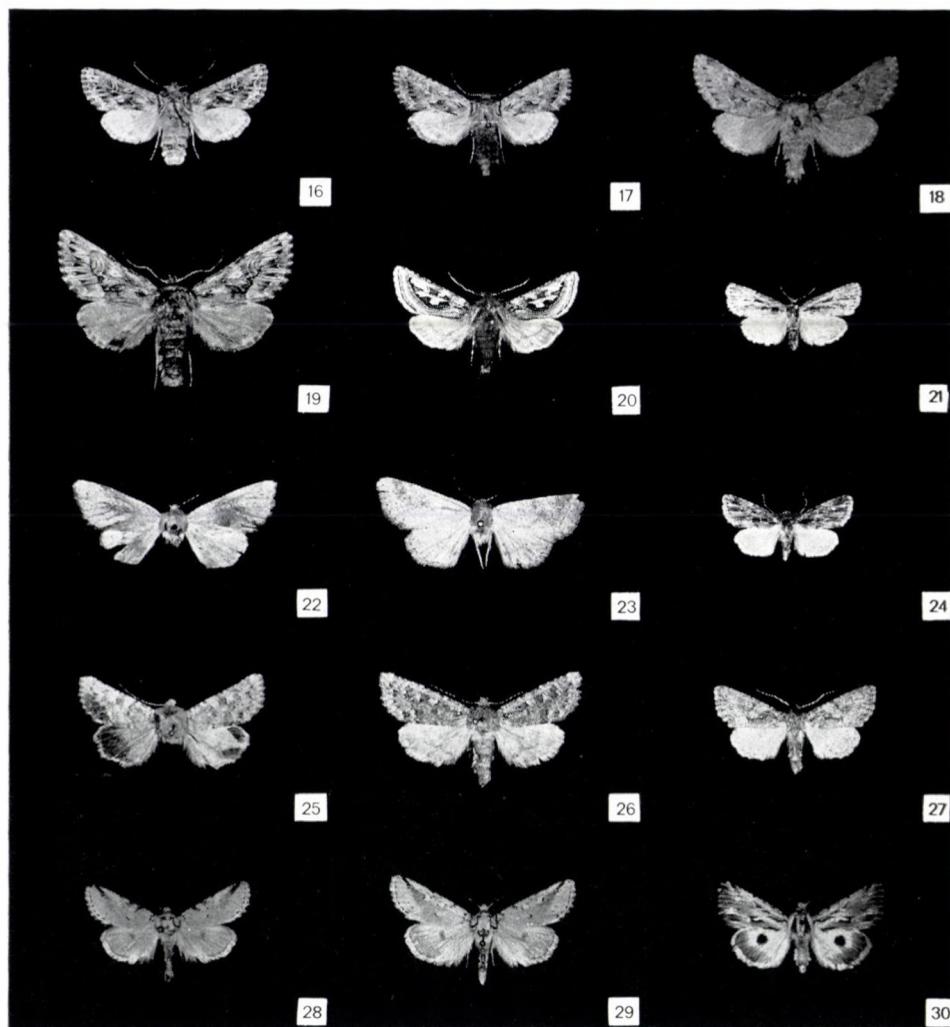
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Plate I



1 = *Aedophron eos* sp. n., Holotype: Mongolia, Chovd aimak. — 2 = *Aedophron rhodites* EVERSMANN, Turkey, Akshehir. — 3 = *Aedophron renosa* CHRISTOPH, USSR, Turkmenia. — 4 = *Eugnorisma glareomima* sp. n., Holotype: Afghanistan, Nuristan. — 5 = *Thargelia leucostigma* sp. n., Holotype: Mongolia, Naran Bulag. — 6 = *Thargelia leucostigma* sp. n., Paratype: Mongolia, Naran Bulag. — 7 = *Thargelia tranquilla* SUKHAREVA, USSR, Syr-Darya. — 8—10. *Thargelia haloxyleti* sp. n., 8 = Holotype: Mongolia, Gurvantöös; 9 = Paratype: Mongolia, Alag; 10 = Paratype: Mongolia, Gurvantöös. — 11 = *Odontelia regina* sp. n., Holotype: Afghanistan, Registan. — 12 = *Odontelia sitiens* PÜNGELER, Holotype: USSR, Syr-Darya. — 13—14. *Cardiistra gobideserti mandalgobi* ssp. n., 13 = Holotype: Mongolia, Mandalgovi; 14 = Paratype: Mongolia, Mandalgovi. — 15 = *Cardiistra gobideserti gobideserti* VARGA, Paratype: Mongolia, Dalandzadgad

Plate II



16—17. *Nezonycta obtusa* sp. n., 16 = Holotype: Turkey, Gürün; 17 = Paratype: Turkey, Gürün. 18—19. *Nezonycta pusilla* PÜNGELER, 18 = USSR, Turkmenia, Kopet-Dagh; 19 = USSR, Turkmenia, Kopet-Dagh. 20 = *Perigrapha annau* sp. n., Holotype: USSR, Turkmenia, Kopet-Dagh. 21 = *Bryomima nuristana* sp. n., Holotype: Afghanistan, Nuristan. 22 = *Maraschia hissarensis* sp. n., Holotype: USSR, Hissar Mts. 23 = *Maraschia grisescens* Osthelder, Allotype: Turkey, Marasch. 24 = *Bryomima nuristana* sp. n., Paratype: Afghanistan, Nuristan. 25—26. *Pseudopseustis argylostigma* sp. n., Holotype, USSR, W Siberia; 26 = Paratype, USSR, W Siberia. 27 = *Mniotype timida* STAUDINGER, Afghanistan, Badakhshan. 28—29. *Marsipiophora calopepla* sp. n., Holotype: Mongolia, Alag. 29 = Paratype: Mongolia, Alag. 30 = *Marsipiophora christophi* ERSHOV, USSR, Turkmenia, Kara-Kala

Plate III



31—32. *Hydraecia mongoliensis* URBAHN, 31 = Paratype: Mongolia; 32 = Mongolia, Gurvan Sayhan Mts. 33 = *Hydraecia terminata* sp. n., Holotype: Mongolia, Öndörchaan. 34—35. *Auchmis detersina sericea* ssp. n., 34 = Holotype: Afghanistan, Badakhshan; 35 = Paratype: India, Ladakh. 36 = *Eremodrina monssacralis* sp. n., Holotype: Mongolia, Tögrög. 37—39. *Victrix frigidalis* sp. n., 37 = Holotype: Mongolia, Noyon Mts; 38 = Paratype: Mongolia, Noyon Mts; 39 = Paratype: Mongolia, Noyon Mts. 40—41. *Eremodrina leptodactyla* sp. n., 40 = Paratype: USSR, Hissar Mts; 41 = Paratype: USSR, Hissar Mts. 42—43. *Desertoplusia colornata* sp. n., 42 = Holotype, NE Turkey; 43 = Paratype: NE Turkey. 44—45. *Desertoplusia bella* CHRISTOPH, USSR, Turkmenia, Kopet-Dagh.

GUILD STRUCTURE OF BEETLE COMMUNITIES IN THREE STAGES OF VEGETATIONAL SUCCESSION

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Guild dominance, guild diversity and between-habitat similarity of guilds were examined in beetle communities in three stages of dolomite succession. Herbivore and decomposer guild diversity was found to be highest in the middle phase, while the predator guild peaked in the climax phase. For the predator and phytophagous guild vegetational structure seemed to be important but for the decomposers this supposed to be of no significance. With 3 figures and 4 tables.

I n t r o d u c t i o n — Guild studies area popular among ecologists, though studies of invertebrate taxa are less common than that of vertebrates. Papers relating the change of guild composition of arthropod communities during the course of ecological succession are even more scarce: examples of such papers on terrestrial communities are those of BROWN (1985), BROWN & SOUTHWOOD (1983), COYLE (1981), HANSKI & KOSKELA (1977), PARMENTER & MACMAHON (1987), TERAGUCHI et al. (1977) while on aquatic communities are those of MINSHALL et al. (1983) and GORE (1982).

Our goal was to study the guild composition of a beetle community sampled by pitfall trapping in three phases of primary dolomite succession. We aimed to investigate the change in guild composition in terms of their species number, abundance and diversity, and how can these patterns be explained.

S t u d y a r e a a n d m e t h o d — The study area is situated in the Budai Hills, near Nagykovácsi ($47^{\circ}35'N$, $18^{\circ}90'E$), on the so called Kutya-hill. Pitfall traps were placed in each of the following vegetational phases of primary succession:

1. Open dolomitic grassland (*Seseli leucospermo* — *Festuceto pallentis*). This is the first stage of grass communities of dolomite succession (JAKUCS 1981). Dominant plant species are *Festuca pallens* and *Seseli leucospermum*. Rock/grass ratio is about 50/50.
2. Dolomitic steppe meadow (*Chrysopogono* — *Caricetum humilis*). *Carex humilis* and *Chrysopogon gryllus* are the dominant and characteristic species. The vegetation is almost closed, rock/grass ratio here is about 5/95.
3. Sessile — Turkey Oak forest (*Quercetum petraea* — *cerris*). The climax phase, composed mainly of *Quercus cerris* and *Q. petraea*. The closedness is relatively low, the height of trees is about 10—15 m.

108—108 plastic jars were used for collecting ground-dwelling beetles with a mixture of water and ethylene-glycol. The collecting period ran from 7th of April to 23rd of October in 1988. The contents of all of the traps were removed in every second week and stored in glasses for later identification. Determination of common and easily recognizable species was carried out in the field.

G u i l d s e p a r a t i o n — We defined Coleoptera guilds on the basis of the feeding habits of adults, because we collected data exclusively on them (see Appendix). Information on the main resource type of individual species was obtained from the Fauna Hungariae volumes (ENDRÖDI 1956; KASZAB 1955, 1957, 1962; MAZUR 1980; SZÉKESSY 1961, 1963) and by MERKL (pers. comm.). The guilds are those of MORAN & SOUTHWOOD (1982), modified for ground-dwelling beetles, namely: herbivores, predators, decomposers, including scavengers and dung-feeders, fungivores, omnivores and tourists. The last three groups comprise only an insignificant fraction of each communities so we left them out from the analysis.

For establishing the similarity level of guilds between each of the successional stages we calculated Jaccard-coefficients for the species numbers and modified Sørensen coefficient for abundances. The Jaccard-coefficient:

$$C_J = j / (a + b - j)$$

where

- j: the number of species common to the two samples
- a: total number of species in sample a
- b: total number of species in sample b.

The modified Sørensen Coefficient (BRAY & CURTIS 1957) is:

$$C_N = 2 j_N / (a_N + b_N)$$

where

- j_N : the sum of the lesser values of abundances for species common to both a and b
- a_N : total individuals sampled in habitat a
- b_N : total individuals sampled in habitat b.

For calculating diversity indices for each of the guilds in all three stages the Shannon-Weaver diversity formula was applied:

$$H = - \sum p_i \log p_i$$

where

- p_i : proportion of individuals of the ith species.

RESULTS

Data analyses were carried out on 23789 individuals of 219 species (see Appendix, p. 319). Pitfall traps collected 3480 individuals of 97 predator species, 382 individuals of 57 herbivore species and 19927 individuals of 65 decomposer species. The most common species of each guild are (numbers of caught individuals in parenthesis): *Carabus convexus* (1051), *Pterostichus melas* (479) and *Calathus fuscipes* (306) in the predator guild, *Amara aenea* (54), *Timarcha goettingensis* (47) and *Zabrus spinipes* (33) among the herbivores, *Geotrupes vernalis* (10814), *Sisyphus schaefferi* (2704) and *Nicrophorus vespilloides* (1194) in the decomposer guild.

Species ratios — In terms of species numbers, the three main guilds contribute to the whole species assemblage in a fairly constant ratio in the first two stages, in open grassland and dolomitic meadow. However, in the forest the predator guild has the highest number of species and the herbivore guild the lowest (Fig. 1).

If we partial out the dung-feeders and carrion-feeders from other decomposers we can find a surprisingly constant ratio of these subguilds in the three communities (Table 1).

Abundance ratios — The pattern of abundance ratios is quite different from that of species percentages (Fig. 2), the decomposer guild is predominantly superior in every stages but shows a decreasing trend from open dolomitic to closed forest. The predator guild shows an opposite pattern, while

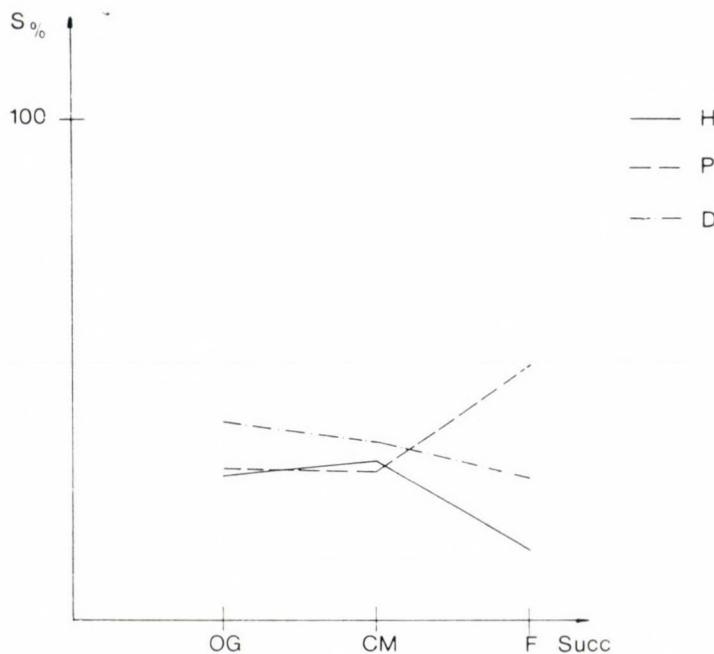


Fig. 1. Dominance of the three main guilds in the course of succession in terms of species richness. — OG = open grassland, CM = closed meadow, F = forest; H = herbivores ($n = 16, 41$ and 21 , respectively), P: predators ($n = 17, 38$ and 77), D: decomposers ($n = 22, 46$ and 43), $S\%$ = species percentage

the phytophagous guild gives only a small percent of the total number of individuals.

For the decomposer guild only, the scavengers subguild shows similar ratios in each of the stages, while detritus feeders show a sharply decreasing and dung-feeders a steeply increasing function in the course of succession (Fig. 3).

Similarity indices — The average similarity of guilds in terms of species numbers between the three stages was highest for the decomposer

Table I

The contribution of subguilds to the whole decomposer guild in terms of species richness. — OG: open grassland, CM: closed meadow, F: forest; S: species number, %: percentage of the guild total

Subguild	OG		CM		F	
	S	%	S	%	S	%
Detritus-feeders	6	27.2	12	27.3	12	28.6
Dung-feeders	8	36.4	14	31.8	14	33.3
Scavengers	8	36.4	18	40.9	16	38.1

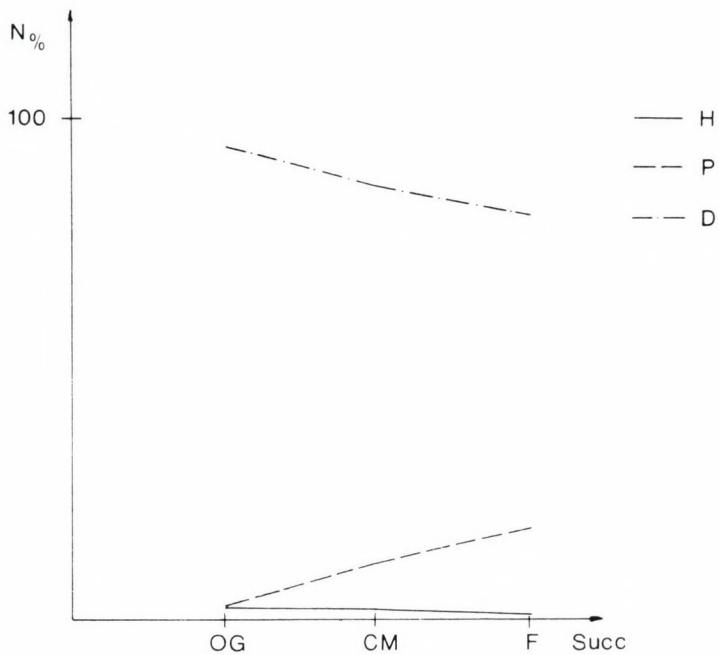


Fig. 2. Dominance of the three main guilds in the course of succession based on abundance data.
For explanation see Fig. 1. $N\%$ = individual percentage

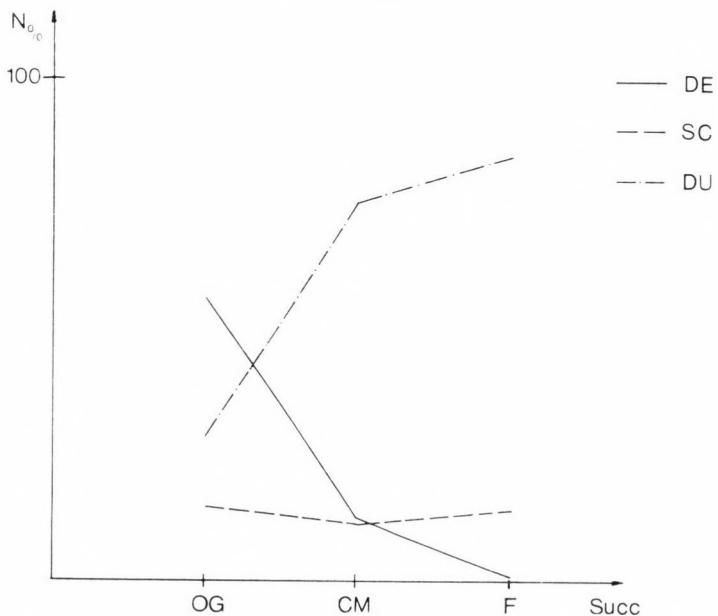


Fig. 3. Dominance of the three subguilds of the decomposer guild calculated from abundance data. — OG : open grassland, CM: closed meadow, F: forest; DE: detritus-feeders, SC: scavengers, DU: dung-feeders, $N\%$ = individual percentage

Table 2

Jaccard similarity coefficients for each of the three main guilds between the successional stages studied. — OG: open grassland, CM: closed meadow, F: forest

Guild	F—CM	CM—OG	F—OG	Average
Predators	0.192	0.309	0.160	0.220
Herbivores	0.148	0.239	0.194	0.194
Decomposers	0.344	0.388	0.326	0.353

guild as a whole and lowest for the herbivores (Table 2). However, Jaccard coefficients are rather low in every case. If we consider the indices separately for each guild the similarity is greatest between the open and closed meadows and smallest between the initial and climax phase of succession, except for herbivores (Table 2).

If we express similarity in terms of species abundances, again the decomposer guild gives the highest average similarity. Similarity of grassland communities is pronounced only in the case of herbivores, but the dissimilarity between open grassland and forest is much sharper than for species number (Table 3).

Diversity indices — The highest average index for the three stages is in the herbivore guild, the lowest is for the decomposers. Predator diversity is highest for the forest while diversity of herbivores and decomposers is highest in the second phase (Table 4).

DISCUSSION

Problems with methodology — Pitfall traps give good results for estimating relative abundances of ground-dwelling beetles, as it is demonstrated for predator carabid beetles (BAARS 1979). However, because of the mobility of most adult beetles traps may catch a sample of tree- and flower-

Table 3

Modified Sørensen similarity coefficients for each of the main guilds between the successional stages studied. — OG: open grassland, CM: closed meadow, F: forest

Guild	F—CM	CM—OG	F—OG
Predators	0.146	0.121	0.043
Herbivores	0.124	0.379	0.074
Decomposers	0.356	0.350	0.145

Table 4

Diversity values of the main guilds in the successional stages studied. —
OG: open grassland, CM: closed meadow, F: forest

Guild	OG	CM	F	Average
Predators	2.229	2.177	2.401	2.268
Herbivores	2.195	3.014	2.271	2.490
Decomposers	1.509	1.992	1.127	1.542

inhabiting Coleoptera, but the efficiency for trapping such species is much lower than for ground-living ones. It is especially true for foliage-living beetles which can be caught only occasionally with pitfalls.

Another problem is the increasing number of insect carcasses in the traps after the first few days, which attracts carrion-feeders and carrion predators. This may be responsible for the observed bias towards these guild members in the communities studied. However, we can suppose that traps caught decomposers and predators with equal likelihood in each successional stages so the observed patterns must be reliable at least for these two guilds.

A problem might arise from the fact that these guilds are based on very broad and robust categorization, namely, that they do not use the same resources so seeking for interactions among members of such guilds is senseless. This is partly due to our limited knowledge of resource utilization of many beetle species. Other species are opportunistic feeders making their ordering into one or the other guild somewhat elusive. For detailed interpretation of such data we have to define smaller sets of species based upon real resource utilization functions to decide which species may be potential competitors, if at all.

S p e c i e s a n d a b u n d a n c e p a t t e r n s o f c o m m u n i t i e s i n t h e c o u r s e o f s u c c e s s i o n — Invoking disturbance-hypothesis, LENSKI (1982) stated that carabid within-genus diversity increased following forest cutting. In contrast, LIEBHERR & MAHON (1979) proposed that carabid diversity may be related to habitat heterogeneity. Our results for predators supports the latter view as there is an increased absolute and relative number of species in the course of succession. With the increasing heterogeneity of vegetation structure there is an increase in total community abundance (BÁLDI 1990), and this can support a more diverse predator guild. The increased niche specialization and smaller resource-overlap values in late successional stages (MACMAHON 1979) is the means which help to maintain this diversity.

For the herbivore guild the observed species ratios can be explained on the ground of medium disturbance hypothesis (CONNELL 1978). Because of the placing of pitfall traps the collected phytophagous beetles consist of mainly

herbivores of the herbaceous or grass layer. In the grass phases it is self-evident, while in the forest phase foliage-dwellers rarely, if at all leave the canopy, so fell in our traps only occasionally. The herb layer of the forest stand is relatively species-poor and patchy because of the shading of canopy. In contrast of this, the herbaceous layer of meadows, especially the closed dolomitic meadow is dense and diverse. This may explain the high relative number of phytophagous beetles in the first two phases. BROWN & HYMAN (1986) found in phytophagous beetles that middle stages showed the highest diversity values. Our results are in agreement with this finding.

For the decomposer guild it is much harder to explain the observed patterns on the basis of current theories. The observed constancy in relative species numbers in the three subguilds (decomposers, dung-feeders and scavengers) suggests that the methodological problem mentioned earlier might have operated here. In other words decomposers feed opportunistically and they are not bound tightly to any of the successional stages as a whole. It is also supported by the relatively high similarity of this guild between the three communities.

In terms of species abundances, the superiority of detritus-feeders at one end of succession and of dung-feeders at the other end is a reflexion of the dominance of a few extremely numerous species. *Pedinus femoralis*, a real steppe species contributes mostly to the detritus-feeding guild abundance in the initial stage, *Geotrupes vernalis* to the dung-feeders in the forest phase. This suggests that the appearance of a few superabundant species may make the understanding of community processes more difficult.

* * *

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A p p e n d i x

LIST OF SPECIES AND TYPE OF GUILDS

(P = predator, H = herbivore, DE = detritus-feeder, DU = dung-feeder.
SC = scavenger)

Abax parallelepipedus (PILLER et MITTERPACHER, 1783)	P
Acalles camelus (FABRICIUS, 1792)	H
Agriotes elongatus (MARSHAM, 1802)	H
Agrypnus murinus (LINNAEUS, 1758)	H
Agyrtes bicolor CASTELNAU, 1840	SC
Aleochara curtula (GOEZE, 1777)	P
Amara aenea (DE GEER, 1774)	H

<i>Amara communis</i> (PANZER, 1797)	H
<i>Amara consularis</i> (DUFTSCHMID, 1812)	H
<i>Amara cyrinota</i> (PANZER, 1797)	H
<i>Amara familiaris</i> (DUFTSCHMID, 1812)	H
<i>Amara saphyrea</i> DEJEAN, 1828	H
<i>Amphotis marginata</i> (FABRICIUS, 1781)	DE
<i>Anisodactylus signatus</i> (PANZER, 1797)	H
<i>Anotylus sculpturatus</i> (GRAVENHORST, 1806)	P
<i>Anthobium atrocephalum</i> (GYLLENHAL, 1827)	DE
<i>Antipa macropus</i> ILLIGER, 1800	H
<i>Aphodius distinctus</i> (O. F. MÜLLER, 1776)	DE
<i>Aphodius equestris</i> (PANZER, 1798)	DU
<i>Aphodius erraticus</i> (LINNAEUS, 1758)	DU
<i>Aphodius lugens</i> CREUTZER, 1799	DU
<i>Aphodius luridus</i> (FABRICIUS, 1775)	DU
<i>Aphodius maculatus</i> STURM, 1800	DU
<i>Aphodius oblitteratus</i> PANZER, 1823	DU
<i>Aphodius prodromus</i> (BRAHM, 1790)	DE
<i>Aphodius rufipes</i> (LINNAEUS, 1758)	DU
<i>Aphthona euphorbiae</i> (SCHRANK, 1781)	H
<i>Aptinus bombarda</i> (ILLIGER, 1800)	P
<i>Atheta crassicornis</i> (FABRICIUS, 1792)	P
<i>Atheta ravilla</i> (ERICHSON, 1839)	P
<i>Atheta triangulum</i> (KRAATZ, 1856)	P
<i>Atheta trinotata</i> (KRAATZ, 1856)	P
<i>Atholus duodecimstriatus</i> (SCHRANK, 1781)	P
<i>Atomaria analis</i> ERICHSON, 1846	DE
<i>Baeoglena praecox</i> (ERICHSON, 1839)	P
<i>Blaps lethifera</i> MARSHAM, 1802	DE
<i>Brachinus explodens</i> DUFTSCHMID, 1812	P
<i>Byrrhus pilula</i> (LINNAEUS, 1758)	H
<i>Calathus fuscipes</i> (GOEZE, 1777)	P
<i>Calathus ochropterus</i> (DUFTSCHMID, 1812)	P
<i>Calosoma inquisitor</i> (LINNAEUS, 1758)	P
<i>Cantharis obscura</i> LINNAEUS, 1758	P
<i>Carabus convexus</i> FABRICIUS, 1775	P
<i>Carabus coriaceus</i> LINNAEUS, 1758	P
<i>Carabus hortensis</i> LINNAEUS, 1758	P
<i>Carabus nemoralis</i> O. F. MÜLLER, 1764	P
<i>Carabus scheidleri</i> PANZER, 1797	P
<i>Cassida nobilis</i> LINNAEUS, 1758	H
<i>Catops grandicollis</i> ERICHSON, 1837	SC
<i>Cercyon quisquilius</i> (LINNAEUS, 1761)	DU
<i>Cetonia aurata</i> (LINNAEUS, 1758)	H
<i>Clanoptilus geniculatus</i> (GERMAR, 1824)	P
<i>Clanoptilus marginellus</i> (OLIVIER, 1790)	P
<i>Clanoptilus strangulatus</i> (ABEILLE, 1891)	P
<i>Coccinella septempunctata</i> LINNAEUS, 1758	P
<i>Copris lunaris</i> (LINNAEUS, 1758)	DU
<i>Coprochara bipustulata</i> (LINNAEUS, 1761)	P
<i>Coptocephala unifasciata</i> (SCOPOLI, 1763)	H
<i>Coraebus elatus</i> (GMELIN, 1790)	H
<i>Cryptaracha strigata</i> (FABRICIUS, 1787)	H
<i>Crypticus quisquilius</i> (LINNAEUS, 1761)	DE
<i>Cryptocephalus coryli</i> (LINNAEUS, 1758)	H
<i>Cryptocephalus sericeus</i> (LINNAEUS, 1758)	H
<i>Cycloderes pilosus</i> (FABRICIUS, 1792)	H
<i>Cymindis axillaris</i> (FABRICIUS, 1794)	P
<i>Datomierra nigra</i> (KRAATZ, 1856)	P
<i>Dendroxena quadrimaculata</i> (SCOPOLI, 1772)	P
<i>Dermestes olivieri</i> LEPESME, 1939	SC
<i>Dermestinus frischii</i> (KUGELANN, 1792)	SC
<i>Dermestinus murinus</i> (LINNAEUS, 1758)	SC

<i>Dermestinus undulatus</i> (Brahm, 1790)	SC
<i>Diastictus vulneratus</i> (STURM, 1805)	DE
<i>Dicronychus rubripes</i> (GERMAR, 1824)	H
<i>Dorcadion pedestre</i> (PODA, 1761)	H
<i>Drusilla canaliculata</i> (FABRICIUS, 1787)	P
<i>Epicometis hirta</i> (PODA, 1761)	H
<i>Gabrius vernalis</i> (GRAVENHORST, 1806)	P
<i>Galeruca pomonae</i> (SCOPOLI, 1763)	H
<i>Galeruca tanaceti</i> (LINNAEUS, 1758)	H
<i>Geotrupes spiniger</i> (MARSHAM, 1802)	DU
<i>Geotrupes stercorosus</i> (SCRIBA, 1791)	DU
<i>Geotrupes vernalis</i> (LINNAEUS, 1758)	DU
<i>Gnaptor spinimanus</i> (PALLAS, 1781)	DE
<i>Gonodera luperus</i> (HERBST, 1783)	H
<i>Gymnopleurus geofroae</i> (FUESSLY, 1774)	DU
<i>Harpalus atratus</i> LATREILLE, 1804	H
<i>Harpalus dimidiatus</i> (ROSSI, 1790)	H
<i>Harpalus picipennis</i> (DUFTSCHMID, 1812)	H
<i>Harpalus rufipes</i> (DE GEER, 1774)	H
<i>Harpalus tardus</i> (PANZER, 1797)	H
<i>Heptaulacus villosus</i> (GYLLENHAL, 1806)	DU
<i>Heterothops dissimilis</i> (GRAVENHORST, 1802)	P
<i>Hister illigeri</i> DUFTSCHMID, 1805	P
<i>Hister quadrimaculatus</i> LINNAEUS, 1758	P
<i>Hypera postica</i> (GYLLENHAL, 1813)	H
<i>Ischnopoda aterima</i> (GRAVENHORST, 1802)	P
<i>Judolia erratica</i> (SCHÖNHERR, 1817)	H
<i>Labidostomis longimana</i> (LINNAEUS, 1761)	H
<i>Lampyris noctiluca</i> (LINNAEUS, 1758)	P
<i>Leistus rufomarginatus</i> (DUFTSCHMID, 1812)	P
<i>Leptacinus sulcifrons</i> (STEPHENS, 1833)	P
<i>Lethrus apterus</i> (LAXMANN, 1770)	H
<i>Margarinotus brunneus</i> (FABRICIUS, 1775)	P
<i>Margarinotus obscurus</i> (KUGELANN, 1792)	P
<i>Masoreus wetterhallii</i> (GYLLENHAL, 1813)	P
<i>Megasternum obscurum</i> (MARSHAM, 1802)	DE
<i>Melandrya caraboides</i> (LINNAEUS, 1761)	DE
<i>Melanotus castanipes</i> (PAYKULL, 1800)	H
<i>Melanotus erythropus</i> (GMELIN, 1790)	H
<i>Meloe scabriusculus</i> BRULLÉ, 1832	H
<i>Meneidophallus roubali</i> (COIFFAIT, 1956)	P
<i>Mocytta fungi</i> (GRAVENHORST, 1806)	P
<i>Mocytta negligens</i> (MULSANT et REY, 1873)	P
<i>Molops piceus</i> (PANZER, 1797)	P
<i>Mycetodrepa formosa</i> (KRAATZ, 1856)	P
<i>Nargus velox</i> (SPENCE, 1815)	DE
<i>Necrodes littoralis</i> (LINNAEUS, 1758)	SC
<i>Netocia cuprea</i> (ANDERSCH, 1797)	H
<i>Nicrophorus vespillo</i> (LINNAEUS, 1758)	SC
<i>Nicrophorus vespilloides</i> HERBST, 1784	SC
<i>Nicrophorus fissor</i> (ERICHSÖN, 1837)	SC
<i>Nicrophorus germanicus</i> (LINNAEUS, 1758)	SC
<i>Nicrophorus humator</i> (GLEDITSCH, 1767)	SC
<i>Nothiophilus rufipes</i> (CURTIS, 1829)	P
<i>Ocyphus biharicus</i> (G. MÜLLER, 1926)	P
<i>Ocyphus olens</i> (O. F. MÜLLER, 1764)	P
<i>Ocyphus similis</i> (G. MÜLLER, 1904)	P
<i>Oiceoptoma thoracicum</i> (LINNAEUS, 1758)	SC
<i>Omalium caesum</i> GRAVENHORST, 1806	P
<i>Omalium rivulare</i> (PAYKULL, 1789)	P
<i>Omaloplia ruricola</i> (FABRICIUS, 1775)	H
<i>Omiomima mollina</i> (BOHEMAN, 1834)	H
<i>Omophlus rugosicollis</i> (BRULLÉ, 1832)	H

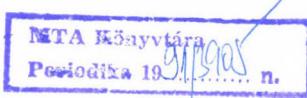
Omosita discoidea (FABRICIUS, 1775)	SC
Ontholestes murinus (Linnaeus, 1758)	P
Onthophagus coenobita (HERBST, 1783)	DU
Onthophagus fracticornis (PREYSSLER, 1790)	DU
Onthophagus grossepunctatus REITTER, 1905	DU
Onthophagus illyricus (SCOPOLI, 1763)	DU
Onthophagus lemur (FABRICIUS, 1781)	DU
Onthophagus nutans (FABRICIUS, 1787)	DU
Onthophagus ovatus (LINNAEUS, 1767)	DU
Onthophagus ruficapillus BRULLÉ, 1832	DU
Onthophilus punctatus (O. F. MÜLLER, 1776)	P
Oodescelis polita (STURM, 1807)	DE
Opatrum sabulosum (LINNAEUS, 1761)	DE
Opilo mollis (LINNAEUS, 1758)	P
Osphya bipunctata (FABRICIUS, 1775)	H
Othiellus punctulatus (Goeze, 1777)	P
Otiorhynchus hungaricus GERMAR, 1824	H
Otiorhynchus raucus (FABRICIUS, 1777)	H
Ouchemus caesareus (CEDERHIELM, 1789)	P
Ouchemus dimidiaticornis (GEMMINGER, 1851)	P
Ouchemus erytropterus (LINNAEUS, 1758)	P
Oxytelops tetracarinatus (BLOCK, 1779)	P
Palporus nitidulus (FABRICIUS, 1781)	P
Paraphallus linearis (OLIVIER, 1795)	P
Pedinus femoralis (LINNAEUS, 1767)	DE
Pella limbata (PAYKULL, 1789)	P
Philonthus atratus (GRAVENHORST, 1802)	P
Philonthus cognatus STEPHENS, 1832	P
Philonthus decorus (GRAVENHORST, 1802)	P
Philonthus intermedius (LACORDAIRE, 1835)	P
Philonthus laminatus (CREUTZER, 1799)	P
Philonthus mannerheimi FAUVEL, 1869	P
Philonthus pachycephalus NORDMANN, 1837	P
Philonthus politus (LINNAEUS, 1758)	P
Philonthus proximus KRAATZ, 1859	P
Philonthus tenuicornis REY, 1853	P
Phloeopora teres (GRAVENHORST, 1802)	P
Platyderes rufus (DUFTSCHMID, 1812)	P
Platydracus chalcocephalus (FABRICIUS, 1801)	P
Platydracus stercorarius (OLIVIER, 1795)	P
Poecilus versicolor (STURM, 1824)	P
Polygramma decemlineata (SAY, 1824)	H
Prionus coriarius (LINNAEUS, 1767)	H
Pristonychus terricola (HERBST, 1784)	P
Propylea quatuordecimpunctata (LINNAEUS, 1758)	P
Prosternon tessellatum (LINNAEUS, 1758)	H
Pseudocleonus cinereus (SCHRANK, 1781)	H
Pseudocypus fulvipennis (ERICHSON, 1840)	P
Pseudocypus mus (BRULLÉ, 1832)	P
Pseudocypus picipennis (FABRICIUS, 1792)	P
Psylliodes chrysocephalus (LINNAEUS, 1758)	H
Pterostichus melas (CREUTZER, 1799)	P
Pterostichus niger (SCHALLER, 1783)	P
Pterostichus oblongopunctatus (FABRICIUS, 1787)	P
Pterostichus strenuus (PANZER, 1797)	P
Ptinus nitidus DUFTSCHMID, 1825	DE
Ptinus rufipes OLIVIER, 1790	DE
Quedius fuliginosus (GRAVENHORST, 1802)	P
Rhizotrogus aestivus (OLIVIER, 1789)	H
Saprinus semistriatus (SCRIBA, 1790)	P
Sauridus limbatooides (COIFFAIT, 1963)	P
Scaphidema metallicum (FABRICIUS, 1792)	DE
Schinomosa forticornis (FAUVEL, 1875)	P

Sciodrepoides watsoni (SPENCE, 1815)	DE
Sepedophilus marshami (STEPHENS, 1832)	P
Sepedophilus pedicularius (GRAVENHORST, 1802)	P
Sisyphus schaefferi (LINNAEUS, 1758)	DU
Staphylinus maxillosus LINNAEUS, 1758	P
Stenocorus meridianus (LINNAEUS, 1758)	H
Stenomax aeneus (SCOPOLI, 1763)	DE
Stomodes gyrosicollis BOHEMAN, 1843	H
Synuchus vivalis (ILLIGER, 1798)	P
Tachinus corticinus GRAVENHORST, 1802	P
Tachinus signatus GRAVENHORST, 1802	P
Tachyporus hypnorum (FABRICIUS, 1775)	P
Tachyporus solitus ERICHSON, 1839	P
Thanatophilus rugosus (LINNAEUS, 1758)	SC
Thanatophilus sinuatus (FABRICIUS, 1775)	SC
Timarcha goettingensis (LINNAEUS, 1758)	H
Trachys problematica OBENBERGER, 1918	H
Trionthus lepidus (GRAVENHORST, 1802)	P
Trox cadaverinus ILLIGER, 1801	SC
Trox asiaticus FALDERMANN, 1835	SC
Trox sabulosus (LINNAEUS, 1758)	SC
Typhaea stercorea (LINNAEUS, 1758)	DE
Zabrus spinipes (FABRICIUS, 1798)	H
Zabrus tenebrioides (GOEZE, 1777)	H

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