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New species and records of *Leptusa* KRAATZ from the Palaearctic region (Coleoptera: Staphylinidae, Aleocharinae)

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A b s t r a c t : Based on an examination of types and additional material, primarily from the Eastern Palaearctic region, numerous records of *Leptusa* are presented; 19 species are desribed, illustrated, and distinguished from similar congeners: *Leptusa* (*Neopisalia*) *spoliata* sp. n. (Turkey), *L.* (*Dysleptusa*) *honshuica* sp. n. (Japan), *L.* (*Aphaireleptusa*) *acuta* sp. n. (Taiwan), *L.* (*A.*) *michai* sp. n. (China: Shaanxi), *L.* (*A.*) *puthzi* sp. n. (Japan), *L.* (*A.*) *dissimulans* sp. n. (Japan), *L.* (*A.*) *ganzica* sp. n. (China: Sichuan), *L.* (*A.*) *wolongensis* sp. n. (China: Sichuan), *L.* (*Chondrelytropisalia*) *tectusoides* sp. n. (China: Sichuan), *L.* (*Drepanoleptusa*) *manasluensis* sp. n. (Nepal), *L.* (*D.*?) *wuyica* sp. n. (China: Fujian), *L.* (*Akratopisalia*) *limata* sp. n. (China: Shaanxi, Hubei), *L.* (*Heteroleptusa*) *hastata* sp. n. (China: Shaanxi), *L.* (*H.*) *flagellata* sp. n. (China: Shaanxi), *L.* (*H.*) *titillans* sp. n. (China: Sichuan), *L.* (*Eospisalia*?) *cornigera* sp. n. (Japan), *L. marmotae* sp. n. (China: Sichuan), and *L. excaecata* sp. n. (China: Shaanxi). *L. marmotae* and *L. excaecata* are the first blind representatives of the genus recorded from China. The previously unknown male sexual characters of *Leptusa korgei* SCHEERPELTZ, *L. tenchiensis* PACE, *L. semivolans* PACE, and *L. qinlingensis* PACE, as well as the spermatheca of *L. formidabilis* PACE are described and illustrated for the first time. The following synonymies are proposed: *Aphaireleptusa* PACE 1996 = *Aleteleptusa* PACE 1997, syn. n., = *Mimumenepisalia* PACE 1997, syn. n.; *Leptusa gonggamontis* PACE 1997 = *L. daxuemontis* PACE 2001, syn. n. *Leptusa ghoropanensis* PACE, stat. n., and *L. yakorum* PACE, stat. n., are regarded as distinct species. According to the Code, *L. scheerpeltzi* PACE 1981 and *L. diecki* PACE 1982 are unavailable names, so that the following valid bi- and trinomina result: *L. franziana* PACE 1981, *L. franziana scheerpeltzi* PACE 1983, *L. confinis* PACE 1982, and *L. confinis diecki* PACE 1983. A catalogue of the *Leptusa* species known from China and Taiwan is compiled.

K e y w o r d s : Coleoptera, Staphylinidae, Aleocharinae, *Leptusa*, Palaearctic region, Turkey, Nepal, China, Taiwan, Japan, distribution, taxonomy, revision, new species, new synonyms.

1. Introduction

The highly diverse genus *Leptusa* is represented in virtually all the major zoogeographic regions. According to the full-scale revision by PACE (1989a) and subsequent supplements, more than 260 species (subspecies not considered) are known from Europe alone. While the species inventory of the Western Palaearctic region can be considered to be relatively well-studied (though undescribed species are still being discovered), the opposite is true of many parts of the Eastern Palaearctic region. For instance, until only a few

years ago, not a single species of *Leptusa* had been known from mainland China. However, owing to an increased collecting activity and to more specialised collecting methods (especially sifting) in the recent past, 19 *Leptusa* species have been described from this area since 1997 (PACE 1997, 1999, 2001), suggesting that the actual species diversity in China (and many other parts of the Eastern Palaearctic) may be enormous.

Recently, abundant material of *Leptusa* from various parts of the Palaearctic region, especially from the Himalaya, the Chinese mainland, Taiwan, and Japan, was made available to me for identification. As could be expected, this material not only yielded various additional records of poorly known species, but also contained a considerable number of undescribed taxa. In *Leptusa*, a positive identification of species and subgenera generally relies on the male sexual characters. For this reason new species represented only by females are not described here. Owing to the fact that the current concept of intrageneric systematics is primarily based on typological criteria and that consequently phylogenetic affiliations are often difficult to assess, descriptions of additional subgenera are refrained from, even when it was impossible to attribute a species to one of the existing subgenera. It seems advisable to wait until the species diversity and the phylogenetic affiliations of the Eastern Palaearctic *Leptusa* fauna are better known and significant synapomorphies can be identified.

2. Material and measurements

The material referred to in this study is deposited in the following public institutions and private collections:

MHNG ..... Muséum d'Histoire Naturelle, Genève (G. Cuccodoro)
NHMW ..... Naturhistorisches Museum Wien (H. Schillhammer)
cAss ..... author's private collection
cHir ..... private collection G. Hirthe, Rostock
cFel ..... private collection B. Feldmann, Münster
cKor ..... private collection H. Korge, Berlin
cPüt ..... private collection A. Pütz, Eisenhüttenstadt
cSch ..... private collection M. Schülke, Berlin
cSme ..... private collection A. Smetana, Ottawa, eventually to be deposited in MHNG
cWun ..... private collection P. Wunderle, Mönchengladbach

Head length was measured from the anterior margin of the clypeus to the posterior margin of the head, elytral length at suture from the apex of the scutellum to the posterior margin of the elytra.

3. Descriptions and additional records of *Leptusa* from the Palaearctic region

Leptusa (*Stenoleptusa*) *venusta* (HOCHHUTH)

Material examined: **Turkey, NE-Anatolia:** 8♂♂, 3♀♀, Artvin, SW Artvin, 1900m, 9.VI.1986, leg. Besuchet, Löbl & Burckhardt (MHNG, cAss); 1♂, 1♀, Artvin, S Artvin, 1500m, 9.VI.1986, leg. Besuchet, Löbl & Burckhardt (MHNG); 8♂♂, 8♀♀, Artvin, Pirnalli, massif du Karkal Dağı 1600m, 11.VI.1986, leg. Besuchet, Löbl & Burckhardt (MHNG, cAss); 2♀♀, Artvin,

Col entre Borçka-Hopa, 700m, 8.VI.1986 (MHNG); 1♂, Kars, Col entre Damal-Prosof, 2400-2500m, 13.VI.1986, leg. Besuchet, Löbl & Burckhardt (cAss).

Comments: The species is distributed in the Caucasus region and was previously recorded from Turkey only once (PACE 1989a).

Leptusa (*Neopisalia*) *korgei* SCHEERPELTZ (Figs. 1-3)

Type examined: Holotype ♀: ♀ / Anatolia bor., Iliça (Ayder), Tal v. Ardeşen / leg. H. Korge, 1000-1200m, 28.VII.1967 / Leptusa (Neopisalia) Korgei m. / Holotypus / TYPUS Leptusa Korgei O. Scheerpeltz / ex coll. Scheerpeltz (NHMW). Paratype ♀: same labels as holotype, but "Allotypus" and without Scheerpeltz' collection label (cKor).

Additional material examined: **Turkey, NE-Anatolia:** 1♂, N-Anatolia, Iliça - Pazar, VII.1979, leg. Schubert (NHMW).

Comments: According to the original description, the type series consists of a ♂ holotype and a ♀ allotype. However, both type specimens proved to be ♀♀. There is some doubt if Scheerpeltz himself attached the holotype and allotype labels to the pins, particularly since this would contradict the sex label attached to the specimen here listed as holotype. PACE (1989a) regarded the specimen from the NHMW as the holotype, but apparently did not examine the type in the Korge collection. In this case, the question which of the two specimens represents the true holotype is taxonomically irrelevant: both are females and *Leptusa* species can generally be adequately characterized and interpreted only based on the male sexual characters. Fortunately, a male from the type locality was found in the material collected by Schubert, so that the previously unknown ♂ primary and secondary sexual characters can now be described:

Abdominal tergites VII and VIII without granula or carinae; posterior margin of tergite VIII truncate and with a few small denticles (Fig. 2); posterior margin of sternite VIII distinctly pointed (Fig. 3), in the middle with relatively dense and long marginal setae. Aedeagus distinctive, with moderately long and stout process at base of ventral process of median lobe (Fig. 1).

For illustrations of the facies and the spermatheca see PACE (1989a).

Leptusa (*Neopisalia*) *cimmeria* PACE

Material examined: **Turkey, NE-Anatolia:** 1♂ [teneral], Ikizdere/Rize, Pontus, 1600m, VI.1973, leg. Schubert (NHMW).

Distribution: The species was described only recently and was known only from the type locality (PACE 1996a).

Leptusa (*Neopisalia*) *confinis diecki* PACE

Leptusa (*Neopisalia*) *diecki* PACE 1983: 74.

Material examined: **Turkey, N-Anatolia:** 2♂♂, Ordu, Ulubey, 5.VII.1977, leg. Korge (cKor, cAss).

Comments: When PACE (1982) described *Leptusa diecki confinis*, the name *Leptusa diecki* was unavailable; its description was published one year later (PACE 1983). It could be argued that when describing *Leptusa diecki confinis*, PACE (1982) established two synonyms simultaneously, in which case Article 24.1 (ICZN 1999) would apply and *L. diecki* would take precedence, so that *L. confinis* would have to be replaced by a new

name. In the interest of stability of nomenclature, however, Article 47.2 (ICZN 1999) is here applied: *L. diecki* PACE 1982 is considered an unavailable name, *L. confinis* is regarded as the nominotypical subspecies, and the valid trinomina are *L. confinis confinis* PACE 1982 (= *L. diecki confinis* sensu PACE (1982)) and *L. confinis diecki* PACE 1983 (= *L. diecki* sensu PACE (1983)).

Distribution: Previously, only the holotype of *L. confinis diecki* (type locality: "Sumela bei Trapezunt") was known (PACE 1983). The species is here recorded from the adjacent province Ordu for the first time.

Leptusa (*Neopisalia*) *spoliata* sp. n. (Figs. 4-7)

Holotype ♂: Anatolia bor., leg. H. Korge 1977 / Ulubey S. Ordu, 5.VII. / Holotypus ♂ *Leptusa spoliata* sp. n. det. V. Assing 2001 (cKor). Paratypes: 3♂♂: same data as holotype (cKor, cAss).

Description: 2.2-2.6 mm. Whole body almost uniformly ferrugineous; abdominal segment VI at most only indistinctly darker than the remainder of abdomen; legs and antennae testaceous.

Head with distinct microsculpture, almost completely mat; puncturation extremely fine, barely noticeable; eyes small, less than half the length of temples in dorsal view.

Pronotum 1.25-1.30 times as wide as head and approximately 1.4 times as wide as long; microsculpture and puncturation similar to those of head.

Elytra slightly narrower and at suture distinctly (0.80-0.85 x) shorter than pronotum; with much weaker microsculpture and coarser puncturation than head and pronotum; hind wings reduced.

Abdomen widest at segments V/VI, with extremely fine puncturation and distinct transverse microsculpture; tergite VII without palisade fringe.

♂: tergites VII and VIII without median carina or tubercle; posterior margin of tergite VIII weakly concave in the middle (Fig. 6); sternite VIII obtusely projecting posteriorly (Fig. 7); median lobe of aedeagus as in Figs. 4-5.

♀: unknown.

Derivatio nominis: The name (Lat., adj.: robbed, bereft) refers to the absence of median carinae or tubercles on the ♂ tergites VII and VIII, which are present in most species of the subgenus.

Comparative notes: From *L. confinis diecki*, which belongs to the same subgenus and which was collected in the same locality, *L. spoliata* is readily distinguished by smaller size, the less distinctly infuscate abdominal segment VI, the distinctly smaller eyes and shorter elytra, the less convex and more transverse pronotum, and by the absence of carinae on the ♂ tergites VII and VIII. *L. spoliata* is separated from all its congeners by the morphology of the median lobe of the aedeagus. The Turkish species of the subgenus with a similar aedeagus have longer elytra and/or carinae on the ♂ tergites VII and VIII.

Distribution and bionomics: The type locality of *L. spoliata* is situated near Ulubey, south of Ordu, Ordu province, in northern Anatolia. According to KORGE (pers. comm.), the types were sifted from *Rhododendron* litter at an altitude of 900-1100m.

***Leptusa* (*Lasiopisalia*) *franziana* PACE**

Leptusa (*Tropidiopasilia*) *scheerpeltzi franziana* PACE 1981: 86.

Comments: When PACE (1981) described *Leptusa scheerpeltzi franziana*, the name *Leptusa scheerpeltzi* was unavailable; its description was published two years later later (PACE 1983). This nomenclatural situation is similar to that outlined and discussed below *Leptusa confinis diecki* (see above), so that, according to Article 47.2 (ICZN 1999), the following changes result: *Leptusa franziana* PACE 1981 (= *L. scheerpeltzi franziana* sensu PACE (1981); *Leptusa franziana scheerpeltzi* PACE 1983 (= *L. scheerpeltzi* sensu PACE (1983)).

***Leptusa* (*Dysleptusa*) *honshuica* sp. n. (Figs. 8-11)**

Holotype ♂: JAPAN - Honshu, Yamanashi Pref., Hacchoudaira, Sudamo-cho, 22.-26.VII.2001, T. Ueno / Holotypus ♂ *Leptusa honshuica* sp. n. det. V. Assing 2002 (cAss).

Description: 2.7 mm. Bicoloured species: head, pronotum, and abdomen (except for the lighter apex and tergite III) blackish brown to blackish; elytra ferrugineous; legs yellowish brown; antennae light brown with the basal antennomeres testaceous.

Head 1.18 times as wide as long; eyes large and bulging, in dorsal view slightly longer than temples and distinctly projecting from lateral outline of head; integument with distinct microreticulation, weakly shining; puncturation fine and shallow, barely noticeable. Antenna with antennomeres I-III distinctly oblong and of subequal length, IV weakly transverse, V-X of increasing width and increasingly transverse, X approximately twice as wide as long.

Pronotum approximately 1.2 times as wide as head and 1.27 times as wide as long; microsculpture and puncturation similar to those of head.

Elytra slightly more than 1.2 times as wide and at suture approximately 1.15 times as long as pronotum; puncturation granulose and much coarser than that of head and pronotum; microsculpture indistinct; hind wings fully developed.

Abdomen approximately 0.85 times as wide as elytra, widest at segment V; puncturation moderately fine and sparse, on tergite VII granulose; tergites III-VI with very shallow and indistinct, tergite VII with more distinct microsculpture; posterior margin of tergite VII with palisade fringe.

♂: tergite VII with pronounced median carina extending from middle to posterior margin; tergite VIII, too, with median carina and with pair or weak subcircular elevations in the middle of posterior margin (Fig. 10); posterior margin of sternite VIII in the middle weakly pointed and with very long marginal setae (Fig. 11); median lobe of aedeagus as in Figs. 8-9.

♀: unknown.

Derivatio nominis: The name (Lat., adj.) is derived from the Japanese island Honshū, where the type locality is situated.

Comparative notes: Regarding the morphology of the aedeagus, *L. honshuica* is most similar to *L. rossica* BERNHAUER, which is endemic to the Iaila range, Ukraine, and has much smaller eyes, shorter elytra, reduced hind wings, and an aedeagus with an apically more acute ventral process of the median lobe. In other species of the subgenus, the aedeagus is of distinctly different morphology; for illustrations see PACE (1989a, 2001).

Distribution and bionomics: *L. honshuica* is the first species of *Dysleptusa* to become known from Japan. The geographically closest congeners of this Holarctic subgenus are *Leptusa sibirica* PACE from the Russian Far East, *L. sinorum* PACE from China (Shaanxi), and three species from the Nearctic region. The large eyes and fully developed hind wings suggest that *L. honshuica* may not be confined to Honshū, but may occur also in other islands of the Japanese archipelago. Nothing is known about the bionomics of the species.

Leptusa (*Stictopisalia*) *alpicola* BRANCSIK

Material examined: 1♂, 4 exs., Romania, Bihar, "Kukurbeta", leg. Knirsch (MHNG, cAss).

Leptusa (*Stictopisalia*) *punctithorax* BERNHAUER

Material examined: 1♂, 6 exs., Albania, Tomor: Kulmak (MHNG, cAss).

Comment: *L. punctithorax* has become known only from Albania (PACE 1989a).

Leptusa (*Stictopisalia*) *merkli* BERNHAUER

Material examined: 1♂, Turkey, Istanbul, Belgrader Wald, 1.-7.VII.1954, leg. Schubert (NHMW).

Comment: *L. merkli* is apparently endemic to NW-Turkey (PACE 1989a).

Leptusa (*Stictopisalia*) *batumiensis artviniensis* PACE

Material examined: **Turkey, NE-Anatolia:** 39 exs., Artvin, SW Artvin, 1900m, 9.VI.1986, leg. Besuchet, Löbl & Burckhardt (MHNG, cAss); 92 exs., Artvin, S Artvin, 800m, 7.VI.1986, leg. Besuchet, Löbl & Burckhardt (MHNG, cAss); 18 exs., Artvin, S Artvin, 1500m, 9.VI.1986, leg. Besuchet, Löbl & Burckhardt (MHNG, cAss); 4 exs., Artvin, Pirnalli, massif du Karkal Dağı, 1600m, 11.VI.1986, leg. Besuchet, Löbl & Burckhardt (MHNG, cAss), 2 exs., Artvin, 5 km E Hopa, 100m, 10.VI.1986, leg. Besuchet, Löbl & Burckhardt (MHNG); 1 ex., Artvin, 8 km W Borçka, 350m, 8.VI.1986, leg. Besuchet, Löbl & Burckhardt (MHNG).

Comments: Previously, only the type material of this subspecies was known (PACE 1989a). It is apparently rather common in Artvin, NE-Anatolia, where it occurs at a wide range of altitudes (100-1900m).

Leptusa (*Leptopisalia*) *hopffgarteni* EPPELSHEIM

Material examined: 1 ex., "Castelnuovo", leg. Hummler (MHNG); 1♂, Krivosije, leg. Paganetti (cAss).

Leptusa (*Gnopheropisalia*) *reinosensis* PACE

Type examined: Holotype ♂: E (NW) Reinosa, Tres Mares / Camion, 2000-2150m, 04.06.91, Wunderle / Holotypus Leptusa reinosensis m. det. R. PACE 1992 / Leptusa reinosensis sp. n. det. R. PACE 1992 (cWun).

Additional material examined: 4♂♂, 4♀♀, Spain, Cantabria, Bosque de Saja, Campoo de Cabuérniqa, IX.1998, leg. Garcia (cAss).

Previously, only the two type specimens from the surroundings of Reinosa were known (PACE 1996a).

The subgenera *Aphaireleptusa* PACE 1996 and *Aleteleptusa* PACE 1997

Aphaireleptusa (type species: *L. anmashanensis* PACE) previously included 4 species from Taiwan and *Aleteleptusa* (type species: *L. chinensis* PACE) comprised 7 species (plus one synonym) from mainland China (see catalogue at the end of this paper). Based on a comparative study of the majority of species of both subgenera, including the type species, however, there are considerable doubts that a distinction of these subgenera is justified. The species from Taiwan (*Aphaireleptusa*) probably form a monophyletic group, but the same is apparently not true of *Aleteleptusa*. The species of both subgenera are highly similar in the morphology of the median lobe of aedeagus, the shape and chaetotaxy of the paramere, and in the spermatheca. In addition, the males of most species of both subgenera are characterized by a modified sternite VII (see Figs. 15, 21), an evident synapomorphy. The only distinguishing character indicated in the key containing the description of *Aleteleptusa* is the shape of the pronotum. Species currently attributed to *Aleteleptusa*, however, are very variable in this respect and in the present paper three species are described which have a similar external morphology as the Taiwanese species of *Aphaireleptusa*, but whose genitalia, especially in the case of *L. michai* sp. n., show a greater similarity to those of *L. chinensis*, the type species of *Aleteleptusa*. For these reasons, the following synonymy is here proposed: *Aphaireleptusa* PACE 1996 = *Aleteleptusa* PACE 1997, syn. n.

Leptusa (*Aphaireleptusa*) *tenchiensis* PACE (Figs. 12-15)

Type examined: Holotype ♀: TAIWAN, Nantou Hsien, Nenkaoshan, Tenchi Hut, 2895m, 7.V.1992, A. Smetana [T119] / HOLOTYPUS Leptusa tenchiensis m. det. R. PACE 1994 / Leptusa tenchiensis sp. n. det. R. PACE 1994 (cSme).

Additional material examined: 4♂♂, 6♀♀, Taiwan, Nantou Hsien, Yushan N.P. 1.8km W Pai-Yun Hut, 3375m, 17.V.1991, A. Smetana [T85]; 9♂♂, 18♀♀, Taiwan, Nantou Hsien, Yushan N.P. 2km W Pai-Yun Hut, 3350m, 16.V.1991, A. Smetana [T84]; 4♂♂, 2♀♀, Taiwan, Nantou Hsien, Yushan N.P. Pai-Yun Hut, 3528m, 16.V.1991, A. Smetana [T83]; 10♂♂, 19♀♀, Taiwan, Nantou Hsien, Yushan N.P. W slope blw. Yushan Mn. Pk., 3720m, 15.V.1991, A. Smetana [T81]; 5♂♂, 6♀♀, Taiwan, Nantou Hsien, Yushan N.P. SW slope blw. Yushan Mn. Pk., 3650m, 16.V.1991, A. Smetana [T82]; 20♂♂, 20♀♀, Taiwan, Nantou Hsien, Yushan N.P. SW slope blw. Yushan Mn. Pk., 3650m, 14.V.1991, A. Smetana [T80] (MHNG, cAss).

Redescription: Large species, 2.8-3.9 mm. Coloration variable; usual coloration: castaneous brown to blackish brown with the lateral parts of the head, the basal 2 or 3 antennomeres, the mouthparts, the margins of the pronotum, the shoulders of the elytra, the posterior margins of the abdominal segments, the apex of the abdomen, and the legs more or less ferrugineous; occasionally most or all of the pronotum and the elytra, and/or a large part of the abdomen may be reddish, or the elytra may be completely dark.

Head with very coarse and dense puncturation, interstices reduced to narrow ridges, integument only with very subdued shine; eyes relatively small, in dorsal view rather weakly projecting from lateral outline of head, postgenae in dorsal view approximately 1.5 times as long as head. Antenna distinctly incrassate apically, preapical segment more than twice as wide as long.

Pronotum very wide and transverse, 1.4-1.5 times as wide as long, approximately 1.4 times as wide as head, and 1.02-1.06 times as wide as elytra; posterior angles distinctly marked; puncturation as dense and coarse as that of head, occasionally slightly less coarse than that of head, in anterior median area extremely dense and usually more or less confluent.

Elytra at suture approximately 0.85 times as long as pronotum, shoulders marked; puncturation much coarser than that of head and pronotum, but less dense, relatively shallow, and partly ill-defined; surface with more shine than head and pronotum. Hind wings reduced.

Abdomen as wide as elytra, with sparse and fine puncturation, and with shallow, but distinct microreticulation; posterior margin of tergite VII with palisade fringe.

♂: tergite VII with longitudinal median elevation in posterior half; posterior margin of sternite VII concave and with dense and long pubescence in the middle (Fig. 15); tergite VIII in posterior half with longitudinal median elevation, which may be more or less reduced; posterior margin of tergite VIII concave and dentate (Fig. 14); sternite VIII posteriorly strongly convex and projecting, and with dense, long, thin marginal setae (similar to the condition in *L. acuta*, cf. Fig. 20); aedeagus as in Figs. 12-13.

♀: posterior margin of tergite VIII weakly concave and weakly dentate in the middle; posterior margin of sternite VIII moderately convex and with long thin marginal setae; spermatheca as illustrated by PACE (1996b).

Comparative notes and comments: In the type species of the subgenus, *L. anmashanensis* PACE, which is in many respects similar, the antennae are less distinctly incrassate and have less strongly transverse preapical antennomeres (approximately 1.5 times as wide as long), the forebody is completely dull, the pronotum is less strongly transverse (narrower than elytra), the puncturation of the pronotum is as coarse as that of the head, the elytra are longer (at suture longer than pronotum), the elytral puncturation is denser, less coarse, but more well-defined, the ♂ sternite VII is not distinctly concave, the aedeagus is of slightly different shape (in ventral view apically more strongly dilated and with broader ventral process), and the duct of the spermatheca is less strongly bent. In *L. semivolans* PACE, the aedeagus is of different morphology (see redescription of the species below), and the spermatheca has a less slender capsule with a wider and truncate apical cuticular intrusion and a strongly bent duct.

Unfortunately, the original description of this species is based on a single female, which renders an interpretation difficult. Consequently, it is not absolutely certain that the specimens listed as additional material, which were collected some 60 km from the type locality, are really conspecific with the holotype. Judging from external morphology, however, they belong to the same species. It seems worth noting that the pronotum is distinctly larger and broader than illustrated in the habitus drawing in PACE (1996b).

Distribution and bionomics: *L. tenchiensis* is now known from two localities, Nenkaoshan (type locality) and Yushan, where numerous specimens were found at altitudes of 3350-3720 m. One dissected female collected in May had a mature egg in the ovaries. A dissected male had parasitic Nematoda in the abdomen and a teratological aedeagus.

Leptusa (*Aphaireleptusa*) *acuta* sp. n. (Figs. 16-21)

Holotype ♂: TAIWAN Taichung Hsien, Hsuehshan, nr. Hsuehshan-Tun-Feng, 3170m, 11.V.91, A. Smetana [T76] / Holotypus ♂ *Leptusa acuta* sp. n. det. V. Assing 2001 (MHNG). Paratypes: 4♂♂, 3♀♀: same data as holotype; 1♂: same data, but 7.V.91 [T68]; 1♂, 2♀♀: TAIWAN Taichung Hsien, Hsuehshan, above Shan-Liu-Gieu Hut, 3150m, 8.V.91, A. Smetana [T71]; 1♀: same data, but 3200m [T72]; 1♂: same data, but 3220m, 7.V.91 [T69]; 3♀♀: TAIWAN Taichung Hsien, Hsiaohsueh Shan, 2650-2750m, 1.V.90, A. Smetana [T34]; 1♀,

TAIWAN Nantou Hsien, Houhuanshan, Kuenyang, 3050m, 27.IV.1990, A. Smetana [T29]; 1♂: same data, but 29.IV.1990, [T30];L 1♂: TAIWAN Nantou Hsien, Houhuanshan, Kuenyang, 3060m, 4.V.1991, A. Smetana [T63]; 1♂: same data, but 3050m [T64]; 1♂, 2♀♀: TAIWAN Hualien Hsien, Taroko N. P., Ridge SE Nanhushi Hut, 2700m, 11.V.90, A. Smetana [T52] (MHNG, cAss).

Description: Size, coloration, proportions, and puncturation as in *L. tenchiensis*, distinguished only by the following characters:

Puncturation in anterior median area of pronotum also dense, but usually well-defined and not confluent. Elytra at suture approximately as long as pronotum, sometimes even slightly longer; elytral puncturation as coarse as in *L. tenchiensis*, but well-defined, deeper, and slightly denser. Abdomen with more distinct puncturation.

♂: segments VII and VIII similar to those of *L. tenchiensis* (Figs. 19-21); aedeagus of similar general morphology as in *L. tenchiensis*, but on the whole larger, median lobe apically more strongly dilated (ventral view); the angulate projection at the base of the ventral process of the median lobe larger (lateral view), and the ventral process with a pronounced median carina (lateral view) (Fig. 16-17).

♀: segment VIII as in *L. tenchiensis*; spermatheca with more strongly bent duct and capsule apically with larger cuticular intrusion (Fig. 18).

Derivatio nominis: The name (Lat., adj.: sharp) refers to the pronounced median carina of the ventral process of the aedeagus.

Comparative notes: Like *L. tenchiensis*, *L. acuta* is distinguished from *L. anmashanensis* PACE by external characters alone: the less dense and more well-defined puncturation, as well as the less dull appearance of the forebody, the relatively shorter and much more coarsely punctured elytra, and the slightly more transverse preapical antennomeres. The new species differs from all the species of the subgenus by the primary and secondary sexual characters.

Distribution and bionomics: *L. acuta* was collected in several localities in Hualien Hsien, Taichung Hsien and the north of Nantou Hsien at altitudes of 2650-3220 m. Three dissected females found in April and May each had a mature egg in the ovaries.

Leptusa (*Aphaireleptusa*) *anmashanensis* PACE

Type examined: Holotype ♂: TAIWAN, Taichung Hsien, Annmashan, 2225 m, 14.V. 92, A. Smetana [T130] / HOLOTYPUS Leptusa anmashanensis m. det. R. PACE 1994 / Leptusa anmashanensis sp. n. det. R. PACE 1994 (cSme).

Additional material examined: 1♂, Taiwan, Taichung Hsien, Anmashan, 2225m, 3.V.1990, leg. Smetana [T42] (cAss); 1♀, Taiwan, Taichung Hsien, Anmashan, 2230m, 4.V.1990, leg. Smetana [T43] (MHNG); 1♂, 1♀, Taiwan, Hualien Hsien, Taroko N.P., Nanhushi Hut, 2220m, 12.V.1990, leg. Smetana [T55] (MHNG).

Comments: The species was previously known only from the Anmashan and is here recorded from Hualien Hsien for the first time.

Leptusa (*Aphaireleptusa*) *semivolans* PACE (Figs. 22-23)

Type examined: Holotype ♀: TAIWAN, Kahosiung Hsien, Peinantashan trail, 2390-2490m, 5.VII.1993, A. Smetana [T138] / HOLOTYPUS Leptusa semivolans m. det. R. PACE 1994 / Leptusa semivolans sp. n. det. R. PACE 1994 (cSme).

Additional material examined: 1♂, Taiwan, Chiai Hsien, Yushan N.P., Mun-Li Cliff, 2700m, 27.IV.1990, A. Smetana [T28] (MHNG).

Redescription: Size, coloration, proportions, and puncturation as in *L. anmashanensis*, but distinguished as follows:

Elytra at suture approximately as long as pronotum (in *L. anmashanensis* at least slightly (1.08x) longer than pronotum).

♂: tergite VII unmodified; segment VIII as in *L. anmashanensis*; aedeagus with ventral process of median lobe at base strongly excavate (lateral view) and with pronounced broad median carina (ventral view) (Figs. 22-23).

♀: spermatheca as illustrated by PACE (1996b).

Comparative notes and comments: For distinction from *L. anmashanensis* see description above. *L. semivolans* differs from all other species of the subgenus by the extremely dense and largely confluent or rugose puncturation of the forebody and by the morphology of the aedeagus.

The original description is based on two females, which renders an interpretation of this species difficult. The male listed as additional material, which was collected some 50 km from the type locality, is of somewhat lighter coloration, but otherwise no convincing evidence was found suggesting that it should represent a distinct species.

Distribution: *L. semivolans* is now known from two localities in Taiwan, Peinantashan trail in western Kaohsiung Hsien (type locality) and Yushan in western Chiai Hsien.

Leptusa (*Aphaireleptusa*) *formidabilis* PACE (Fig. 24)

Material examined: 2♂♂, Taiwan, Taichung Hsien, Anmashan, 2225m, 3.V.1990, leg. Smetana [T42] (MHNG); 2♂♂, 4♀♀, same data, but 2.V.1990 [T38] (MHNG, cAss).

Comments: The original description is based on a single male, which was collected in the same locality (PACE 1996b). The previously unknown spermatheca is illustrated in Fig. 24.

Leptusa (*Aphaireleptusa*) *michai* sp. n. (Figs. 25-28)

Holotype ♂: CHINA: S-Shaanxi (Qinling Shan), pass on rd Zhouzhi - Foping, 105 km SW Xi'an, N-slope, 1990 m, 33°44'N, 107°59'E, leg. M. Schülke [C01-01] / 2./4.VII.2001, small creek valley, mixed deciduous forest, bamboo, small meadows, dead wood, mushrooms (sifted) [C01-01] / Holotypus ♂ *Leptusa michai* sp. n. det. V. Assing 2002 (cAss).

Description: 3.2 mm. Forebody dark brown, with the pronotal margins and the posterior margin of the elytra lighter; abdomen bright ferrugineous, with segment VI and the anterior 2/3 of segment VII blackish; legs and basal antennomeres testaceous, antennomeres V-XI brown

Head approximately as wide as long; eyes almost as long as temples in dorsal view and distinctly projecting from lateral outline of head; punctures large, coarse, and umbilicate, interstices reduced to narrow ridges; microreticulation indistinct. Antennae relatively long and slender; antennomeres I-III oblong and of subequal length, IV weakly oblong, V approximately as wide as long, VI-X of increasing width and increasingly transverse, but preapical segments less than 1.5 times as wide as long.

Pronotum 1.35 times as wide as long and 1.3 times as wide as head; in anterior half strongly dilated, maximal width a short distance anterior to middle; median line with distinct furrow, which is deeper in posterior than in anterior half; posterior angles well-marked; puncturation similar to that of head, but even denser, surface without appreciable shine; microsculpture indistinct.

Elytra approximately 1.25 times as wide and at suture 1.2 times as long as pronotum; puncturation similar to that of head, but slightly coarser and less densce, the narrow interstices shining. Hind wings fully developed.

Abdomen distinctly (0.80 x) narrower than elytra, maximum width at segment VI; anterior impressions of tergites III-V with coarse, the remainder of the tergal surfaces with fine and sparse puncturation; anterior tergites without, posterior tergites with barely noticeable traces of microsculpture; posterior margin of tergite VII with palisade fringe.

♂: sternite VII weakly concave posteriorly and with scattered longer setae; tergite VII with pronounced and shining median carina in posterior half, extending from the posterior margin to the middle of the tergite; tergite VIII, too, with distinct and long median carina, posterior margin weakly bisinuate, in the middle slightly serrate (Fig. 17); sternite VIII posteriorly pointed (Fig. 28); median lobe of aedeagus as in Figs. 25-26.

♀: unkown.

Derivatio nominis: I dedicate this species to my friend and colleague Michael ("Micha") Schülke, who collected not only the holotype of this species, but also types of several other species treated in the present paper.

Comparative notes and systematics: *L. michai* is distinguished from other species of *Leptusa* known from mainland China by external characters alone, especially by the coloration, the densely punctate and dull forebody, the weakly transverse preapical antennomeres, and the strongly transverse pronotum with well-marked posterior angles. From other species of *Aphaireleptusa*, *L. michai* is separated also by the coloration and especially by the morphology of the aedeagus; for illustrations of the genitalia of those species see this paper and the figures in PACE (1991, 1995, 1996a, 1996b).

Distribution and bionomics: The species is known only from the Qinling Shan, southern Shaanxi, where the holotype was sifted from the litter of a mixed forest at an altitude of almost 2000 m, together with *L. limata* sp. n. and *L. flagellata* sp. n. The fully developed hind wings suggest that *L. michai* may be widespread.

Leptusa (*Aphaireleptusa*) *puthzi* sp. n. (Figs. 29-34)

Holotype ♂: JAPAN - Honshu, Tochigi Pref., above Oku-Nikko, 1500m, path to Lake Murunuma [recte Marunuma], 29.VII.1999, V. Puthz / Holotypus ♂ *Leptusa puthzi* sp. n. det. V. Assing 2001 (cAss). Paratypes: 1♂, 4♀♀: same data as holotype (cAss); 1♂, 2♀♀: JAPAN - Honshu, Shizuoka Pref., Mt. Fuji, E-Slope, 2000m, end of Asami-line, 2.VIII.1999, V. Puthz (cAss); 2♀♀: JAPAN: Honshu, Yamanashi Pref. Pass Kitazawatoge, Ashiyasu-mura, 15.-20.VII.2001, T. Ueno (cSch).

Description: 2.7-3.8 mm. Coloration somewhat variable; body more or less brightly ferrugineous, with abdominal segment VI and anterior half of segment VII blackish; often head, pronotum, and posterior 1/2 to 3/4 of elytra partly infuscate; legs testaceous; antennae ferrugineous to brown, with the basal antennomeres and antennomere XI usually lighter.

Head weakly transverse; eyes in dorsal view shorter than temples, but distinctly bulging and projecting from lateral outline of head; puncturation very dense, coarse, and umbilicate; interstices reduced to narrow ridges, surface without shine. Antennae relatively long and slender; antennomeres I-III oblong and of subequal length, IV approximately as wide as long, V-X of increasing width and increasingly transverse, and X approximately 1.5 times as wide as long.

Pronotum strongly transverse, 1.40-1.55 times as wide as long and 1.30-1.40 times as wide as head; widest a short distance anterior to middle, strongly tapering anteriad and posteriad; posterior angles obtuse, but well-marked; puncturation extremely dense (even more so than that of head) and coarse; surface without shine.

Elytra dimorphic, slightly wider than and at suture approximately 1.1 times as long as pronotum (macropterous specimens) or approximately as wide and at suture as long as pronotum (brachypterous specimens); puncturation similar to that of head, but much coarser. Hind wings either fully developed or of reduced length (approximately 1.5 times as long as elytra).

Abdomen of subparallel shape, slightly (brachypterous specimens) or distinctly (macropterous specimens) narrower than elytra; puncturation of anterior impressions of tergites III-VI coarse, that of remaining tergal surface relatively fine and moderately sparse, but distinct; posterior margin of tergite VII with palisade fringe.

♂: sternite VII unmodified; tergite VII with or without small oblong median tubercle near posterior margin; tergite VIII, too, with or without indistinct oblong median tubercle, posterior margin in the middle concave (Fig. 32); posterior margin of sternite VIII obtusely pointed (Fig. 33); aedeagus as in Figs. 29-30.

♀: tergite VIII of similar shape as in ♂; posterior margin of sternite VIII convex (Fig. 34); spermatheca with slender capsule and long duct (Fig. 31).

Derivatio nominis: The species is dedicated to my dear colleague Volker Puthz (Schlitz), who collected most of the types.

Systematics and comparative notes: In general appearance, *L. puthzi* is similar to the Taiwanese species of *Aphaireleptusa* and especially *L. michai* sp. n. from mainland China. No representatives of this subgenus were previously known from Japan. From all the congeners that have been recorded from Japan, *L. puthzi* is readily distinguished by the bright coloration, the coarsely punctate and mat forebody, and by the sexual characters. It is separated from other species of *Aphaireleptusa* especially by the bright coloration and the morphology of the aedeagus. The somewhat similar *L. michai* additionally differs by longer antennae, a narrower and less transverse pronotum, a median furrow on the pronotum, and much more pronounced carinae on the male tergites VII and VIII.

Distribution and bionomics: *L. puthzi* is known from three localities in the Japanese island Honshū, where it was collected at altitudes of 1500-2000 m. The record from Yamanashi Prefecture is, to some extent, uncertain, since it is based exclusively on females. Interestingly, all the specimens from Lake Marunuma are brachypterous, whereas those from Mt. Fuji are macropterous. As no significant differences in the sexual characters were observed, the specimens from both localities are here attributed to the same species. Wing dimorphism is a rare phenomenon in *Leptusa*.

Description: 3.0 mm. In external characters extremely similar to *L. puthzi*; distinguished from that species as follows:

Puncturation of pronotum more clearly defined, slighly less dense; elytra at suture slightly shorter than pronotum.

♂: tergites VII and VIII with slightly more distinct oblong tubercles; posterior margin of sternite VIII very weakly concave in the middle (Fig. 37); sternite VIII similar to that of *L. puthzi*; median lobe of aedeagus larger, with much longer ventral process, with distinct subapical fold at base of ventral process, with much longer flagellum, and smaller sclerotized structures of completely different shape in internal sac (Figs. 35-36).

♀: unknown.

Derivatio nominis: The name (Lat., present participle of dissimilare: to hide, to camouflage) refers to the fact that only after dissection of the aedeagus I discovered that the holotype represents a species distinct from *L. puthzi*.

Comparative notes: For distinction from *L. puthzi* see description, for separation from other species of *Aphaireleptusa* see the comparative notes below *L. puthzi*.

Distribution and bionomics: Like *L. puthzi*, *L. dissimulans* is known only from Honshū, where it was collected in a deciduous forest in the vicinity of Lake Marunuma at an altitude of 1350 m.

Leptusa (*Aphaireleptusa*) *gonggamontis* PACE

Leptusa (*Mimumenepisalia*) *gonggamontis* PACE 1997: 759.
Leptusa (*Aleteleptusa*) *daxuemontis* PACE 2001: 153; **syn. n.**
Types examined:
L. gonggamontis: Holotype ♀: CHINA, Sichuan, Gongga Shan, above Camp 3, 3050m, 22.VII.1994, A. Smetana [C18] / HOLOTYPUS Leptusa gonggamontis det. R. PACE 1996 / Leptusa gonggamontis sp. n. det. R. PACE 1996 (MHNG).
L. daxuemontis: Holotype ♂: CHINA: W-Sichuan (14), Daxue Shan, Hailuogou Glacier Park, Camp 3, 3000-3100m, 29.34.22N, 101.59.39E, 29.05.1997, M. Schülke / HOLOTYPUS Leptusa daxuemontis det. R. PACE 1999 / Leptusa daxuemontis sp. n. det. R. PACE 1999 (cSch).

Comments: *L. gonggamontis*, the type species of the subgenus *Mimumenepisalia* PACE, and *L. daxuemontis*, originally attributed to the subgenus *Aleteleptusa* were described from exactly the same locality, the surroundings of Camp 3 in the Gongga Shan. (The Gongga Shan forms part of the Daxue Shan.) The description of *L. gonggamontis* is based on a single female. A comparison of the holotypes revealed that they are conspecific, which results in the following synonymies: *Aphaireleptusa* PACE 1996 = *Mimumenepisalia* PACE 1997, syn. n.; *Leptusa gonggamontis* PACE 1997 = *L. daxuemontis* PACE 2001, syn. n.

Distribution: *L. gonggamontis* has become known only from one locality in ther Gongga Shan, Sichuan.

Leptusa (*Aphaireleptusa*) *chinensis* PACE (Figs. 38-46)

Types examined:
Holotype ♂: CHINA, Sichuan, Gongga Shan, above Camp 3, 3050m, 22.VII.1994, A. Smetana [C18] / HOLOTYPUS Leptusa gonggamontis det. R. PACE 1996 / Leptusa gonggamontis sp. n. det. R. PACE 1996 (MHNG). Paratypes: 2♀♀: CHINA, Sichuan, Gongga Shan, above Camp 3,

***Leptusa* (*Aphaireleptusa*) *chinensis* PACE (Figs. 38-46)**

Types examined:
Holotype ♂: CHINA, Sichuan, Gongga Shan, above Camp 3, 3050m, 22.VII.1994, A. Smetana [C18] / HOLOTYPUS Leptusa gonggamontis det. R. PACE 1996 / Leptusa gonggamontis sp. n. det. R. PACE 1996 (MHNG). Paratypes: 2♀♀: CHINA, Sichuan, Gongga Shan, above Camp 3, 3350m, 23.VII.1994, A. Smetana [C19]

Additional material examined: 1♂, CHINA: W-Sichuan, Ganzi Tibet, Aut. Pref. Kangding Co., Daxue Shan, Mu Ge Cuo, 30°11N, 101°52E, 3300m, below lower lake, litter of coniferous trees, 27.VI.1999, leg. M. Schülke; 1♂, 5♀♀, Ganzi Tibet, Daxue Shan, 10km S Kangding, 29°59N, 101°55E, 3150m, river valley, sifted, 26.VI.1999, leg. Schülke (cSch); 2♂♂, 4 exs., Daxue Shan, Paoma Shan near Kangding, 30°03N, 101°58E, 2700-2900m, 22.V.1997, leg. Schülke (cSch); 2 exs., Daxue Shan, Mu Ge Cuo, NW Kangding, 30°11N, 101°52E, 3200-3400m, 21.V.1997, leg. Schülke (cSch); 17 exs., same locality, 3150-3300m, 27.VI.&5.VII.1999, leg. Schülke (cSch, cAss); 3 exs., Daxue Shan, E Kangding, 30°03N, 102°00E, 2500-2800m, 23.V.1997, leg. Schülke (cSch); 12 exs., Daxue Shan, 5km E Kangding, 102°00, 30°03E, 3000m, river valley, 20.&23.V.1997, leg. Pütz (cPüt, cAss); 1♀, Daxue Shan, Hailuogou Glacier Park, Camp 1, 2100m, 29°36N, 102°04E, 27.-31.V.1997, leg. Schülke (cSch); 4♂♂, 3♀♀, S-Shaanxi, Daba Shan, mountain range N pass 22 km NW Zhenping, 32°01′N, 109°21′E, 2850m, N-slope near mountain top, *Abies*, bushes, dead wood (sifted), 14.VII.2001, leg. Schülke, Smetana (cSch, cSme, cAss); 1♂, 1♀: S-Shaanxi, Qinling Shan, mountain range W pass on road. Xi′an-Shagoujie, 45km SSW Xi′an, 33°52′N, 108°46′E, 2675m, N-slope, *Abies*, *Betula*, *Larix*, *Rhododendron*, subalpine meadows (sifted), 26.VII.2001, leg. Schülke, Smetana (cSch, cSme, cAss); 1♀, same data, but 2600m, 25.VII.2001, leg. Smetana (cSme).

Redescription: 2.8-3.8 mm. Coloration variable; forebody usually dark brown to blackish with the narrow margins of the pronotum and the elytra slightly lighter, more rarely whole forebody ferrugineous; abdomen brown, with segment VI and the anterior part of segment VII, sometimes also part of the anterior tergites black; legs and antennae light brown, antennomeres V-XI mostly infuscate.

Head approximately as wide as long; eyes relatively large, in dorsal view approximately as long as temples and moderately projecting from lateral outline of head; punctures large, dense, umbilicate and well-defined; interstices reduced to narrow ridges. Antennae relatively slender; antennomeres I-III oblong and of subequal length, IV weakly oblong; V subquadrate to weakly transverse, VI-X of increasing width and increasingly transverse, preapical segments less than twice as wide as long.

Pronotum approximately 1.25 times as wide as long and 1.20-1.15 times as wide as head; maximal width in anterior half about half way between anterior angles and middle; posterior angles obtuse, but well-marked; puncturation densely granulose and partly confluent; microsculpture indistinct.

Elytra 1.15-1.20 times as wide and at suture approximately as long as pronotum, or slightly longer; puncturation similar to that of head, but slightly less dense; microsculpture absent. Hind wings fully developed.

Abdomen 1.10-1.15 times as wide as elytra, maximum width at segments V/VI; anterior impressions of tergites III-V with coarse and dense, the remainder of the tergal surfaces with fine and relatively sparse puncturation; tergites III-V without, tergite VI usually with very shallow, and tergite VII with somewhat more distinct microsculpture; posterior margin of tergite VII with palisade fringe.

♂: sternite VII posteriorly broadly concave (somewhat more so than in *L. tenchiensis* and *L. acuta*) and with conspicuously long and dense marginal setae; posterior margin of tergite VIII in the middle concave (Fig. 41), that of sternite VIII weakly pointed and with

dense marginal setae (Fig. 42); median lobe of aedeagus as in Figs. 38-39, 45.

♀: tergite VIII of similar shape as in ♂ (Fig. 43); posterior margin of sternite VIII obtusely pointed (Fig. 44); spermatheca as in Fig. 40.

Intraspecific variation: The material from the Qinling Shan differs from the specimens from the Daba Shan and from Sichuan by a posteriorly somewhat lighter pronotum, completely dark reddish elytra, a slightly lighter abdomen, and a slightly smaller aedeagus. On average, the specimens from Shaanxi are slightly smaller and more slender than those from Sichuan. However, no significant distinguishing characters were found suggesting that the different populations should be specifically distinct, so that they are attributed to the same species.

Comparative notes and systematics: From other species of the subgenus, *L. chinensis* is distinguished especially by the morphology of the aedeagus; for illustrations of the genitalia of *Aphaireleptusa* species from the Chinese mainland see PACE (1997, 1999, 2001). *L. xiahensis* PACE, *L. gansuensis* PACE, and *L. jiudingensis* PACE have shorter elytra, and *L. michai* is of lighter coloration, has a more strongly transverse pronotum, and modified male tergites VII and VIII.

Distribution and bionomics: Previously, only the types of this species from the Gongga Shan (Sichuan) were known. The material here studied shows that the species is widespread. It is now known from the Daxue Shan (Sichuan), the Daba Shan (Shaanxi), and the Qinling Shan (Shaanxi), where it was sifted from litter of *Abies*, deciduous trees, and bushes at an altitude of almost 2100-3400 m.

Leptusa (*Aphaireleptusa*) *ganzica* sp. n. (Figs. 46-50)

Holotype ♂: CHINA: W-Sichuan, 1999, Ganzi Tibet, Aut. Pref. Kangding Co., Daxue Shan, Mu Ge Cuo, ob. See, 15 km NW Kangding, 3700m, Moos, Rhododendr., Pilze, 30°09N, 101°52E, 27.VI., leg. M. Schülke / Holotypus ♂ *Leptusa ganzica* sp. n. det. V. Assing 2002 (cAss).

Paratypes: 2♀♀: same data as holotype (cSch, cAss); 1♀: same data, but 27.VI.-5.VII.1999, D. W. Wrase (cSch).

Description: 3.3 mm. Highly similar to *L. chinensis*, distinguished only by the following characters:

Body darker than in average *L. chinensis*, almost completely black, only the narrow posterior margins of the abdominal tergites III-V and the abdominal apex slightly lighter; legs and antennae dark brown, with the basal antennomeres ferrugineous.

Pronotum with slightly more shine, the granulose puncturation less dense and not or less distinctly confluent; elytra more shining.

Abdomen with shallow microsculpture present also on anterior tergites, tergites VI and VII with distinct microsculpture. (In *L. chinensis*, the anterior tergites are often without microsculpture.)

♂: posterior margin of sternite VII only indistinctly concave (in *L. chinensis* broadly concave) and with shorter marginal setae; posterior margin of tergite VIII more strongly concave (Fig. 49), that of sternite VIII in the middle convex (Fig. 50) (in *L. chinensis* pointed); median lobe of aedeagus smaller, in ventral view more slender and apically less distinctly dilated, in lateral view with less slender ventral process and at base of ventral process with pair of carinae; internal structures smaller, of different shape, and less strongly sclerotized; flagellum shorter (Figs. 46-47).

♀: posterior margin of tergite VIII weakly concave in the middle and with sparser marginal setae than in *L. chinensis*; posterior margin of sternite VIII weakly concave (in *L. chinensis* strongly concave to almost pointed); spermatheca as in Fig. 48.

Derivatio nominis: The name (Lat., adj.) is derived from Ganzi Tibet, where the type locality is situated.

Comparative notes and systematics: For distinction from the similar *L. chinensis* see description. From other species of the subgenus from mainland China, *L. ganzica* is distinguished by its broader and larger pronotum (even broader and larger only in *L. michai*), its darker coloration, the larger elytra, and the male sexual characters.

Distribution and bionomics: The species is known only from the Daxue Shan, Ganzi Tibet, where the types were sifted from *Rhododendron* litter and moss at an altitude of 3700 m. *L. chinensis* was found in various localities near the type locality of *L. ganzica*, but all of them are at lower elevations.

***Leptusa (Aphaireleptusa) wolongensis* sp. n. (Figs. 51-53)**

Holotype ♂: CHINA: W-Sichuan, Aba Tibetian Aut. Pref., Weizhou Co., Qionglai Shan, Wolong valley, 69km WSW / Guanxian, 3500m, 30.53,57N, 102.58,63E, 15.VII.1999, leg. A. Pütz, mix. forest sifting / Holotypus ♂ *Leptusa wolongensis* sp. n. det. V. Assing 2002 (cAss).

Description: 2.8 mm. Body reddish brown, with abdominal segment VI and the anterior half of segment VII blackish; legs and antennae ferrugineous, with the basal antennomeres slightly lighter.

Head indistinctly transverse; eyes slightly shorter than temples in dorsal view, and distinctly projecting from lateral outline of head; punctures very large, coarse, and umbilicate, interstices reduced to narrow ridges; microreticulation absent. Antennae relatively short; antennomeres I-III oblong and of subequal length, IV subquadrate, V-X of increasing width and increasingly transverse, preapical segments more than twice as wide as long.

Pronotum 1.3 times as wide as long and 1.3 times as wide as head; in anterior half distinctly dilated, maximal width a short distance anterior to middle; posterior angles obtuse, but well-marked; puncturation similar to that of head, but somewhat denser and more ill-defined, especially in the middle confluent; without appreciable microsculpture.

Elytra approximately as wide and at suture approximately 0.85 times as long as pronotum; puncturation conspicuously coarse, much more so than that of head and pronotum; interstices reduced to narrow ridges; microsculpture absent. Hind wings reduced.

Abdomen approximately as wide as elytra, maximum width at segment VI; anterior impressions of tergites III-V with coarse, the remainder of the tergal surfaces with fine and sparse puncturation; microreticulation present, more distinct on tergites VI and VII than on anterior tergites; posterior margin of tergite VII with reduced, very narrow palisade fringe.

♂: tergite VII with narrow median carina in posterior half, extending from the posterior margin not quite to the middle of the tergite; tergite VIII with indistinct median carina, posterior margin weakly bisinuate (Fig. 53); sternite VIII posteriorly strongly convex; median lobe of aedeagus as in Figs. 51-52.

♀: unkown.

Derivatio nominis: The name is derived from Wolong, the region where the type locality is situated.

Comparative notes and systematics: *L. wolongensis* is readily distinguished from other species currently attributed to the subgenus, except for *L. gonggamontis* PACE, by the coarse puncturation and the coloration alone. From *L. gonggamontis*, it differs by smaller size, a denser and less well-defined puncturation of the pronotum, the presence of median carinae on the male tergites VII and VIII, and by the smaller and differently shaped aedeagus. In external appearance it is also similar to *L. flagellata* sp. n. (see below), from which it is separated by the more coarsely punctate head and pronotum, the absence of microsculpture on head and pronotum, the slightly longer elytra, the more distinct microsculpture of the abdomen, the less pronounced median carinae on the male tergites VII and VIII, and by the completely different morphology of the aedeagus.

Distribution and bionomics: The species is known only from the Qionglai Shan, western Sichuan, where the holotype was sifted from the litter of a mixed forest at an altitude of 3500m.

Leptusa (*Kochliodepisalia*) *spirarum* PACE

Material examined: 1♂, Taiwan, Hualien Hsien, Taroko N.P., Chungyantienshi (Riv.), waterfall, 2300m, 10.V.1990, leg. Smetana [T50] (MHNG).

Comments: The species was previously known only from the type locality: Anmashan (Taichung Hsien) (PACE 1996b).

Leptusa (*Chondrelytropisalia*) *ghoropanensis* PACE stat. n.

Leptusa (*Chondrelytropisalia*) *indica ghoropanensis* PACE 1989a: 120.

Material examined: 2♂♂, Nepal, Parbat Distr., Ridge E Ghoropani Pass, 3100m, 7.X.1983, leg. Smetana & Löbl (MHNG, cAss); 1♂, Annapurna region, Mardi Himal, W Mardi Khola, Rhododendron forest, 3950m, 15.V.2001, leg. Hirthe (cHir).

Comments: The specimens taken by A. Smetana and I. Löbl were collected together with the types, but not included in the type series.

According to PACE (1989a), the eight Himalayan taxa of the *L. indica* CAMERON complex are distinct on the subspecific level, presumably because of the similar general morphology of the aedeagus. A study of *L. ghoropanensis* and *L. yakorum* (see below), however, revealed that at least these two, if not all the taxa of the *L. indica* group should rather be regarded as distinct species. Apart from the slightly different morphology of the median lobe of the aedeagus and of the spermatheca, they are distinguished by various other characters, i. e. body shape, proportions, puncturation, coloration, and the male secondary sexual characters. For instance, *L. ghoropanensis* differs from *L. yakorum* by the much lighter and less uniform coloration, the much coarser puncturation of the forebody, the near absence of microsculpture on head and pronotum, the distinctly finer and sparser puncturation of the posterior halves of the abdominal tergites, the more slender antennae, the longer and stouter legs, the more weakly concave posterior margins of the abdominal tergites VIII, the posteriorly less strongly produced male sternite VIII, and by the different morphology of the median lobe of the aedeagus (both ventral and lateral aspect). Moreover, both taxa are brachypterous (suggesting restricted distribution) and

occur in different mountain ranges separated by deep valleys, *L. ghoropanensis* in the Annapurna Himal and *L. yakorum* in the Manaslu Himal. There is no evidence of either transitional character states or overlapping distributions. Low character divergence in the morphology of the genitalia does not by itself constitute differentiation on the subspecific level and is known also from other species groups of Himalayan Staphylinidae.

Leptusa (*Chondrelytropisalia*) *yakorum* PACE stat. n.

Leptusa (*Chondrelytropisalia*) *indica yakorum* PACE 1987: 402.

Material examined: 6♂♂, 8♀♀, Central Nepal, Manaslu Himal, Barapokhari Lekh, 23 km NE Besisahar vill., 28°21N, 84°33E, 3800-4100m, sieved from moss and *Rhododendron* leaf litter, 14.IX.2000, leg. Hetzel (cFel, cAss).

Comments: Previously, only the types of this species were known. For a discussion of the taxonomic status see comments below *L. ghoropanensis*.

Leptusa (*Chondrelytropisalia*) *tectusoides* sp. n. (Figs. 54-56)

Holotype ♂: CHINA: W-Sichuan, 1999, Ya'an Prefecture, Fulin Co., Daxiang Ling, Rd. zw. Hanyuanjie u. Siping, 51 km NNE Shimian, 2300m, 29°39N, 102°37E, Ufer, Gesiebe, 10.VII., leg. M. Schülke / Holotypus ♂ *Leptusa tectusoides* sp. n. det. V. Assing 2001 (cAss).

Description: 2.9 mm. Head dark brown, pronotum and elytra brown; abdomen ferrugineous, with segment VI and the anterior half of segment VII blackish; legs brown, antennae yellowish brown.

Head about as long as wide; eyes in dorsal view slightly shorter than temples, weakly projecting from lateral outline of head; puncturation moderately dense, relative large, but rather shallow; interstices narrower than punctures; microsculpture very shallow and indistinct. Antennae relatively slender; antennomeres I-III oblong and of subequal length, IV and V approximately as wide as long or weakly oblong, VI-X of increasing width and increasingly transverse, and X approximately 1.5 times as wide as long.

Pronotum strongly convex in cross-section and slender, 1.07 times as wide as long and 1.15 times as wide as head; widest a short distance anterior to middle, strongly tapering posteriad; lateral margins in posterior half sinuate in dorsal view; posterior angles well-marked; puncturation dense, rather ill-defined, and partly confluent; microsculpture indistinct, surface with some shine.

Elytra nearly 1.1 times as wide and at suture approximately 0.8 times as long as pronotum; puncturation much coarser than that of head and pronotum; surface without microsculpture and shining.

Abdomen slightly (ca. 1.1 x) wider than elytra, maximal width at segments VI/VII; puncturation of anterior impressions of tergites III-VI coarse, that of remaining tergal surface relatively fine and moderately sparse, but distinct; tergites III-VI without, tergite VII with indistinct traces of microsculpture, integument with distinct shine; posterior margin of tergite VII with narrow palisade fringe.

♂: tergite VII unmodified; posterior margin of tergite VIII concave (Fig. 56), that of sternite VIII weakly convex; median lobe of aedeagus as in Figs. 54-55.

♀: unknown.

Derivatio nominis: The name refers to the facies of the species, which somewhat resembles that of some species of *Tectusa* BERNHAUER.

Systematics and comparative notes: In general appearance, *L. tectusoides* is similar to some Himalayan representatives of *Chondrelytropisalia* (*L. nepalica* Scheerpeltz, *L. indica* Cameron, and related species), from which it is readily distinguished by the morphology of the median lobe of the aedeagus, especially the shape in lateral view and the internal structures; for comparison see the illustrations given by PACE (1989a). The only representative of the subgenus previously known from the Chinese mainland is *L. schuelkei*, which differs from *L. tectusoides* considerably by the much broader facies, the shorter antennae with more transverse preapical antennomeres, smaller and less convex eyes, distinctly finer puncturation of the forebody, a much less convex and more transverse pronotum, the less shining integument of the abdomen, the presence of carinae on the male tergites VII and VIII, and by the completely diffferent morphology of the aedeagus.

Distribution and bionomics: The type locality is in western Sichuan; the holotype was sifted near the bank of a stream at an altitude of 2300 m.

Leptusa (*Drepanoleptusa*) *manasluensis* sp. n. (Figs. 57-58)

Holotype ♂: C-Nepal, Manaslu massif, Barapokhari Lekh, 23km NE Besisahar vill., 28°21'N,84°33'E, 14.IX.2000, leg. A. Hetzel / 3800-4100m, sieved from moss and *Rhododendron* leaf litter / Holotypus ♂ *Leptusa manasluensis* sp. n. det. V. Assing 2001 (cAss).

Description: 2.7 mm. Head and abdomen, apart for the slightly lighter posterior margins of the segments and the apex, blackish; pronotum and elytra dark brown; antennae brown, with the three basal antennomeres yellowish brown; legs light brown.

Head approximately as long as wide and of subcircular shape; eyes small, not distinctly projecting from lateral outline of head in dorsal view, less than half the length of postgenae; integument with relative large, but shallow and ill-defined punctures and with shallow microsculpture; antennae with antennomeres I-III clearly oblong and of subequal length, IV approximately as wide as long, V-X increasingly transverse and wide, and X more than twice as wide as long.

Pronotum 1.2 times as wide as long and 1.2 times as wide as head, widest a short distance anterior to middle, and weakly tapering posteriorly; puncturation finer and denser than that of head, but also ill-defined.

Elytra at suture 0.83 times as long and approximately as wide as pronotum; puncturation much coarser than that of head and somewhat granulose; microsculpture absent; hind wings completely reduced.

Abdomen of subparallel shape; puncturation of anterior impressions of tergites III-VI very coarse and dense, that of remaining tergal surface moderately fine and moderately sparse; posterior margin of tergite VII with narrow palisade fringe.

♂: tergite VII unmodified; tergite VIII posteriorly weakly concave in the middle; posterior margin of sternite VIII broadly convex, not strongly produced; median lobe of aedeagus as in Figs. 57-58.

♀: unknown.

Derivatio nominis: The name refers to the Manaslu Himal, where the type locality is situated.

Systematics and comparative notes: Based on the morphology

of the median lobe of the aedeagus, especially the internal structures and the slender apex of the ventral process (ventral aspect), the new species is attributed to the subgenus *Drepanoleptusa* PACE, which previously comprised nine species from the Himalaya, five from the Chinese mainland, two from Taiwan, and, in addition, two Japanese species, which were attributed to this subgenus, although the ♂ sexual characters are unknown (PACE 1989a, 1989b, 1995, 1999). In contrast to other representatives of the subgenus, the male tergites VII and VIII of the holotype are unmodified, i. e. they lack a median carina. (Note that in many *Leptusa* species the male secondary sexual characters are subject to considerable intraspecific variation; so the possibility that such modifications may in fact be present in other males of the species cannot be excluded.)

L. manasluensis is readily distinguished from all other Himalayan representatives of *Drepanoleptusa* by the shorter and more slender elytra, the smaller eyes, the absence of median carinae on the ♂ abdominal tergites VII and VIII (but see remarks above), and by the morphology of the aedeagus. From *L. yakorum*, together with which the new species was collected, it is separated by the more transverse antennomeres V-X, the smaller and less prominent eyes, the less convex and differently shaped pronotum (more transverse, more weakly tapering caudad), the less strongly concave posterior margin of the male tergite VIII, the posteriorly convex male sternite VIII (in *L. yakorum* distinctly pointed), and by the completely different morphology of the aedeagus. For comparison see the illustrations and descriptions in PACE (1989a).

Distribution and bionomics: External morphology (reduced eyes and wings) and the elevation of the type locality suggest that *L. manasluensis* has a restricted distribution and is probably endemic to the Manaslu Himal. It was collected together with *L. yakorum* and undescribed brachypterous species of *Emmelostiba* PACE and *Atheta* THOMSON by sifting moss and *Rhododendron* litter at an altitude of 3800-4100 m.

Leptusa (*Drepanoleptusa*) *chengduensis* PACE

Type examined: Holotype ♂: CHINA: Sichuan (17), Qingcheng-Shan, NW Chengdu, 650-700m, 30.53.57N, 103.32.23E, 3./4.06.1997, M. Schülke / HOLOTYPUS Leptusa chengduensis det. R. PACE 99 / Leptusa chengduensis sp. n. det. R. PACE, 1999 (cSch).

Additional material examined: 2♂♂, China, Sichuan, Qingchzeng Shan, 65km NW Chengdu, 30.53N, 103.33E, 8 km W Taiping, 800-1000m, 18.V./3.-4.VI.1997, leg. A. Pütz (cPüt, cAss).

Comment: The material listed as additional material was apparently collected together with the holotype.

Leptusa (*Drepanoleptusa*?) *wuyica* sp. n. (Figs. 59-60)

Holotype ♂: CHINA, Fujian Province, Wuyi Shan, 1150m, N27°70′, E117°64′ [sic] / Qiliqiao - Guadun road, 1.vi.2001, Mixed forest litter, Leg. J. Cooter + P. Hlaváč / Holotypus ♂ *Leptusa wuyica* sp. n. det. V. Assing 2002 (cAss).

Description: 2.0 mm. Body brightly ferrugineous, with abdominal segment VI and anterior part of segment VII blackish. Whole body without distinct microsculpture, interstices shining.

Head approximately 1.15 times as long as wide; eyes relatively large, in dorsal view slightly longer than temples; integument with relative large, but not very deep punctures;

interstices much narrower than diameter of punctures; antennae with antennomeres I-III oblong and slightly decreasing in length, IV-X of increasing width and increasingly transverse, and X approximately 3 times as wide as long.

Pronotum 1.28 times as wide as long and 1.12 times as wide as head, widest a short distance anterior to middle, and weakly tapering posteriorly; puncturation distinctly finer than that of head, well-defined.

Elytra 1.15 times as wide and at suture approximately as long as pronotum; puncturation coarse and somewhat granulose; hind wings fully developed.

Abdomen of subparallel shape; puncturation of anterior impressions of tergites III-VI very coarse and dense, that of remaining tergal surface moderately fine and moderately sparse, but distinct; posterior margin of tergite VII with palisade fringe.

♂: tergite VII with long median carina extending from posterior margin anteriad beyond the middle; tergite VIII posteriorly weakly concave in the middle and indistinctly serrate; posterior margin of sternite VIII weakly convex, not strongly produced; median lobe of aedeagus highly distinctive (Figs. 59-60).

♀: unknown.

Derivatio nominis: The name (Lat., adj.) is derived from the Wuyi Shan in Fujian, where the type locality is situated.

Systematics and comparative notes: Based on the morphology of the median lobe of the aedeagus, especially the internal structures and the slender apex of the ventral process (ventral aspect), the new species is tentatively attributed to the subgenus *Drepanoleptusa* PACE, which was previously represented in continental China by five species (see catalogue at the end of this paper).

L. wuyica is readily distinguished from the Chinese species of *Drepanoleptusa*, as well as from all other Chinese congeners by the distinctive morphology of the median lobe of the aedeagus. For illustrations of the genitalia of other species of *Leptusa* from mainland China see PACE (1997, 1999, 2001).

Distribution and bionomics: Although currently known from only one locality in Fujian, the species is probably more widespread, as can be inferred from the fully developed hind wings and the relatively low altitude (1150 m), at which the holotype was collected.

Leptusa (Akratopisalia) quinlingensis PACE (Figs. 61-62)

Leptusa (Akratopisalia) qinlingensis PACE 1999: 375.

Type examined: Paratype ♀: China: Shaanxi, Qin Ling Shan, 108.47E, 33.51 N, Mountain W pass at Autoroute km 70, 47 km, 2500-2600m, sifted, 26.-27.08.1995, leg. M. Schülke / PARATYPUS Leptusa qinlingensis det. R. PACE 99 / Leptusa qinlingensis sp. n. det. R. PACE 1999 (cSch).

Additional material examined: 1♂, China, S-Shaanxi, Qinling Shan, pass on road Zhouzhi - Foping, 105 km SW Xi'an, 33°46N, 107°58E, 1700m, small creek valley, mixed deciduous forest, 3.VII.2001, leg. Schülke (cAss); 1♀, China, S-Shaanxi, Quinling Shan, mountain range W pass on road to Shagoujie, 45 km SSW Xi'an, 33°52N, 108°46E, 2675m, mixed forest with Rhododendron, subalpine meadows, 25.VII.2001, leg. Schülke (cSch).

Comments: The original description is based on four females. The previously unknown male primary and sexual characters are as follows:

♂: tergite VII in posterior half with median carina extending from middle of tergite almost to posterior margin; tergite VIII with weakly bisinuate and indistinctly serrate posterior margin; sternite VIII posteriorly obtusely pointed, with relatively long and in the middle somewhat denser marginal setae; median lobe of aedeagus of highly distinctive morphology (Figs. 61-62).

Systematics and distribution: Primarily based on the morphology of the median lobe of the aedeagus, PACE (1996) established the subgenus *Akratopisalia* for the type species *L. cribrata* from Taiwan. He later attributed two more species from the Chinese mainland to the subgenus, *L. xianensis* and *L. qinlingensis*, although only females of the latter were available. The morphology of the aedeagus, especially the apex of the median lobe, the relatively long and thin flagellum, and the sclerotized internal structures, as well as the modified ♂ tergite VII suggest, however, that *L. qinlingensis* is not particularly closely related to *L. cribrata*, so that its subgeneric placement appears most doubtful. *L. qinlingensis* is currently known only from the Qinling Shan. Its fully developed wings suggest that it is capable of flight and probably widespread.

Leptusa (*Akratopisalia*) *xianensis* PACE

Leptusa (*Akratopisalia*) *xianensis* PACE 1999: 373ff.

Type examined: Paratype ♀: China: Shaanxi, Qin Ling Shan, 108.47E, 33.51 N, Mountain W pass at Autoroute km 70, 47 km S Xian, 2200-2500m, sifted, 26.-30.08.1995, leg. A. Pütz / PARATYPUS Leptusa xianensis det. R. PACE 99 / Leptusa xianensis sp. n. det. R. PACE 1999 (cSch).

Additional material examined: 2♂♂, China, S-Shaanxi, Qinling Shan, range W pass on road Xi'an-Shagoujie, 45 km SSW Xi'an, 33°52N, 108°46E, 2600m, 25.VII.2001, leg. Smetana (cSme, cAss).

Comments: Previously, only the types of this species were known. The additional material was collected in the vicinity of the type locality.

Leptusa (*Akratopisalia*) *limata* sp. n. (Figs. 63-68)

Holotype ♂: CHINA: S-Shaanxi (Qinling Shan), pass on rd. Zhouzhi - Foping, 105 km SW Xi'an, N-slope, 1990m, 33°44'N, 107°59E, leg. M. Schülke [C01-01] / 2./4.VII.2001, small creek valley, mixed deciduous forest, bamboo, small meadows, dead wood, mushrooms (sifted) [C01-01] / Holotypus ♂ *Leptusa limata* sp. n. det. V. Assing 2002 (cAss).

Paratypes: 3♀♀: same data as holotype (cSch); 1♀: CHINA, Shaanxi, Qinling Shan, pass rd. Zhouzhi Foping, 105km SW Xi'an / N_slope, 1700m, 1700m, 33°46'N, 107°58'E, 3.VII.2001, A. Smetana [C91] (cSme); 1♂: CHINA: W-Hubei, Daba Shan, crk. valley, 11 km NW Muyuping, 31°30'N / 110°22'E, 1960m, 18.VII.2001, A. Smetana [C 109] (cAss).

Description: 3.1-3.5 mm. Head blackish brown; pronotum brown with lighter margins; elytra brown, with the anterior margin (including shoulders) and the posterior margin yellowish; abdomen light brown, with segment VI, the anterior part of segment VII, and sometimes also parts of segments IV-V dark brown to black; legs and antennae light brown.

Head of subcircular shape, weakly transverse; eyes relatively large, almost as long as temples in dorsal view, moderately projecting from lateral outline of head; puncturation very fine and sparse, barely noticeable; microreticulation pronounced, rendering the integument mat. Antennae relatively slender; antennomere I-III distinctly oblong and of subequal length, IV approximately as wide as long, V-X of increasing width and increasingly transverse; preapical segments approximately twice as wide as long.

Pronotum 1.30-1.35 times as wide as long and approximately 1.25 times as wide as head; maximal width in anterior half, but nearer to middle than to anterior angles; posterior angles rather weakly marked; puncturation and microsculpture similar to those of head.

Elytra 1.15-1.20 times as wide and at suture approximately as long as or slightly longer than pronotum; puncturation fine and dense, but more distinct than that of head and pronotum; microsculpture shallow, surface with some shine. Hind wings present.

Abdomen of subparallel shape, slightly narrower than elytra; anterior impressions of tergites III-V with large, but shallow punctures, the remainder of the tergal surfaces with fine and dense puncturation; microsculpture present; posterior margin of tergite VII with palisade fringe.

♂: tergite VII with minute oblong granulum at some distance from posterior margin; tergite VIII, too, with small granulum, posterior margin in the middle slightly concave and weakly serrate (Fig. 66); posterior margin of sternite VIII broadly convex and with long marginal setae (Fig. 67); median lobe of aedeagus with strongly sclerotized armatures of sclerotized structures (Figs. 63-64).

♀: tergite VIII posteriorly weakly convex, sometimes in the middle weakly concave; posterior margin of sternite VIII pointed, distinctly more so than in ♂ (Fig. 68); spermatheca with long and relatively wide tube (Fig. 65).

Derivatio nominis: The name (Lat., adj.: smoothened) refers to the smoothly microsculptured surface of the head and pronotum.

Intraspecific variation: The male from the Daba Shan is somewhat darker than the specimens from the Qinling Shan and the lateral margins of its pronotum are not (lateral margins) or only very indistinctly (posterior margin) lighter. However, no differences were found in the morphology of the aedeagus and the secondary sexual characters, so that it is here attributed to the same species.

Comparative notes and systametics: In size and body shape, *L. flagellata* is somewhat similar to *L. shaanxiensis* PACE, but easily distinguished from that species (and other Chinese congeners) by the coloration, the extremely fine puncturation of the forebody, as well as by the primary and secondary sexual characters. Based primarily on the morphology of the internal structures of the aedeagus, it is here tentatively attributed to the subgenus *Akratopisalia* PACE.

Distribution and bionomics: The species was discovered in the Qinling Shan (Shaanxi) and the Daba Shan (Hubei); it is probably widespread, as can be inferred from the fully developed hind wings. The types were sifted from leaf litter in a mixed deciduous forest at an altitude of almost 2000 m, in the Qinling Shan together with *L. flagellata* sp. n. and *L. michai* sp. n.

***Leptusa* (*Heteroleptusa*) *peregrina* PACE**

Material examined: 1♂, Taiwan, Taichung Hsien, Hsuehshan, above Shan-Liu-Gieu Hut, 3150 m, 8.V.1991, leg. Smetana [T71] (MHNG).

Comments: The species was previously known from Kaohsiung Hsien, Pingtung Hsien, and Nantou Hsien (PACE 1995). It is here for the first time recorded from Taichung Hsien.

***Leptusa* (*Heteroleptusa*) *hastata* sp. n. (Figs. 69-74)**

Holotype ♂: CHINA: Shaanxi, Daba Shan, mtn. range N pass 22km NW Zhenping / 32°01'N, 109°21'E, 2850m, 14.VII.2001, A. Smetana [C103] / Holotypus ♂ *Leptusa hastata* sp. n. det. V. Assing 2002 (cSme).

Paratypes: 3♂♂, 3♀♀, 3 exs.: same data as holotype (cSme, cAss); 1♀: CHINA: S-Shaanxi (Daba Shan), mountain range N pass 22 km NW Zhenping, 32°01'N, 109°21'E, 2850 m, 14.VII.2001, leg. M. Schülke [C01-12] / N- slope near mountain top, Abies, bushes, dead wood (sifted) [C01-12] (cSch).

Description: 2.1-2.7 mm. Head and abdomen, except for the apex and sometimes segments III and IV, blackish brown to black; pronotum and elytra brown to dark brown; legs and basal antennomeres testaceous; antennomeres IV-XI or V-XI dark brown.

Head approximately 1.15 times as wide as long; eyes approximately as long as or slightly longer than temples in dorsal view; punctures dense and large, but very shallow and ill-defined; interstices distinctly narrower than diameter of punctures; microreticulation very shallow, integument therefore with some shine. Antennae relatively short and apically distinctly incrassate; antennomeres I-III oblong and of subequal length, IV weakly transverse, V-X of increasing width and increasingly transverse, preapical segments more than twice as wide as long.

Pronotum transverse, approximately 1.3 times as wide as long and 1.15-1.20 times as wide as head; in anterior half distinctly dilated, posteriad strongly tapering; posterior angles obtuse, relatively weakly marked; puncturation much finer than that of head, barely noticeable; microreticulation distinct, usually more pronounced than that of head.

Elytra slightly narrower than and at suture 0.70-0.75 times as long as pronotum; puncturation not very coarse, but more distinct than that of head and pronotum; microsculpture shallower than that of head, sometimes almost absent. Hind wings reduced.

Abdomen 1.25-1.30 times as wide as elytra, maximum width at segment VI; anterior impressions of tergites III-V with relatively coarse (though somewhat ill-defined), the remainder of the tergal surfaces with fine and sparse puncturation; microsculpture shallow, more distinct on tergite VII than on anterior tergites; posterior margin of tergite VII with reduced, very narrow palisade fringe.

♂: tergite VIII posteriorly truncate (Fig. 72); posterior margin of sternite VIII obtusely pointed, in the middle with rather long and dense marginal setae (Fig. 73); median lobe of aedeagus of distinctive morphology (Figs. 69-70).

♀: tergite VIII of similar shape as in ♂; posterior margin of sternite VIII convex and with sparser marginal setae (Fig. 74); spermatheca as in Fig. 71.

Derivatio nominis: The name (Lat., adj.: armed with a spear) refers to the spear-shaped ventral process (ventral view) of the median lobe of the aedeagus.

Comparative notes and systematics: In general appearance, *L. hastata* somewhat resembles *L. schuelkei* PACE from the Qinling Shan (Shaanxi). It is distinguished from that species especially by the infuscate antennae, the shorter and more slender elytra, the more strongly reduced palisade fringe at the posterior margin of the abdominal tergite VII, by the unmodified male tergites VII and VIII, and by the primary sexual characters. *L. hastata* differs from other Chinese congeners by the morphology of the genitalia, especially of the aedeagus, as well as by the combination of the following

external characters: low size and slender body, fine puncturation, short and narrow elytra, reduced hind wings, strongly reduced palisade fringe at the posterior margin of tergite VII, and unmodified male tergites VII and VIII. For illustrations of the facies and genitalia of these species see PACE (1997, 1999, 2001) and this paper.

Distribution and bionomics: The type locality is situated in the Daba Shan, southern Shaanxi, where the species was sifted from litter of *Abies* and bushes at an altitude of almost 3000 m. The reduced wings suggest that it has a restricted distribution.

Leptusa (*Heteroleptusa*) *flagellata* sp. n. (Figs. 75-80)

Holotype ♂: CHINA: S-Shaanxi (Qinling Shan), pass on rd. Zhouzhi - Foping, 105 km SW Xi'an, N-slope, 1990m, 33°44'N, 107°59E, leg. M. Schülke [C01-01] / 2./4.VII.2001, small creek valley, mixed deciduous forest, bamboo, small meadows, dead wood, mushrooms (sifted) [C01-01] / Holotypus ♂ *Leptusa flagellata* sp. n. det. V. Assing 2002 (cAss).

Paratypes: 4♀♀: same data as holotype (cSch, cAss).

Description: 2.1-2.5 mm. Body reddish brown, with abdominal segment VI and the adjacent parts of segments V and VII blackish; legs and antennae yellowish brown.

Head of subcircular shape, weakly transverse; eyes relatively small, slightly more than half the length of temples in dorsal view, and weakly projecting from lateral outline of head; punctures large, shallow, and rather dense, interstices distinctly narrower than diameter of punctures; microreticulation present. Antennae relatively short; antennomeres I-III oblong and of subequal length, IV subquadrate to weakly transverse, V-X of increasing width and increasingly transverse, preapical segments more than twice as wide as long.

Pronotum wide and strongly transverse, approximately 1.4 times as wide as long and 1.35 times as wide as head; in anterior half distinctly dilated, posteriad strongly tapering; posterior angles obtuse, but well-marked; puncturation similar to that of head, but somewhat denser and more ill-defined; microsculpture very shallow.

Elytra approximately as wide and at suture approximately 0.8 times as long as pronotum; puncturation conspicuously coarse, much more so than that of head and pronotum; each elytron with relatively large impression of triangular shape extending from a point a short distance behind shoulders to posterior margin; microsculpture absent. Hind wings reduced.

Abdomen indistinctly wider than elytra, maximum width at segment VI; anterior impressions of tergites III-V with coarse, the remainder of the tergal surfaces with fine and sparse puncturation; anterior impressions of tergites III-V, especially that of tergite V, very shallow; microsculpture present; posterior margin of tergite VII with reduced, very narrow palisade fringe.

♂: tergite VII with broad and conspicuous median elevation extending from the middle to the posterior margin of the tergite; tergite VIII, too, with large median elevation, its posterior margin truncate (Fig. 78); sternite VIII obtusely pointed posteriorly (Fig. 79); median lobe of aedeagus of distinctive morphology, with very long flagellum (Figs. 75-76).

♀: tergite VIII truncate posteriorly; posterior margin of sternite VIII convex in the middle (Fig. 80); spermatheca as in Fig. 77.

Derivatio nominis: The name (Lat., adj.) refers to the long flagellum of the median lobe of the aedeagus.

Comparative notes and systematics: In general appearance, *L. flagellata* somewhat resembles *L. gonggamontis* PACE from the Gongga Shan, from which it is distinguished by smaller size, a more transverse pronotum, the distinctly shallower and less well-defined puncturation of head and pronotum, the presence of extensive impressions on the elytra, the shallower anterior impressions of tergites III-V (especially of tergite V), the presence of median carinae on the male tergites VII and VIII, and by the completely different morphology of the aedeagus. For separation from *L. wolongensis* see comparative notes below that species. Only two species of *Heteroleptusa* were previously known from China and Taiwan: *L. shaanxiensis* PACE from Shaanxi and *L. peregrina* PACE from Taiwan. *L. flagellata* is distinguished from both species by the smaller eyes, the much more transverse pronotum, the shorter elytra, the reduced hind wings, and by the completely different morphology of the genitalia.

Distribution and bionomics: The type locality is situated in the Qinling Shan, southern Shaanxi, where the species was sifted from leaf litter in a mixed deciduous forest at an altitude of almost 2000 m, together with *L. michai* sp. n. and *L. limata* sp. n. The reduced wings suggest that it has a restricted distribution.

Leptusa (*Heteroleptusa*) *titillans* sp. n. (Figs. 81-84)

Holotype ♂: CHINA: W-Sichuan, 1999, Ganzi Tibet, Aut. Pref., Kangding Co., Daxue Shan, Mu Ge Cou, 2 km oberhalb unt. See, 30.11N, 101.52E, Laub, Pilze, Bambus, 5.VII., leg. M. Schülke / Holotypus ♂ *Leptusa titillans* sp. n. det. V. Assing 2002 (cAss).

Description: 2.9 mm. Head blackish brown; pronotum and elytra brown; abdomen brown, with segment VI and the anterior half of segment VII blackish; legs testaceous; antennae light brown, with the basal antennomeres testaceous.

Head of subcircular shape, weakly transverse, slightly more than 1.1 times as wide as long; eyes approximately as long as temples in dorsal view, rather weakly projecting from lateral outline of head; punctures large, shallow, and moderately dense, interstices narrower than diameter of punctures; microreticulation distinct. Antennae relatively slender; antennomeres I-III oblong and of subequal length, IV subquadrate to weakly oblong, V-X of increasing width and increasingly transverse, preapical segments about 1.5 times as wide as long.

Pronotum transverse, approximately 1.35 times as wide as long and almost 1.2 times as wide as head; in anterior half distinctly dilated, posteriad distinctly tapering; posterior angles obtuse, but well-marked; puncturation much finer and sparser than that of head, interstices distinctly wider than punctures; microreticulation distinct.

Elytra distinctly wider than and at suture 1.25 times as long as pronotum; puncturation coarser and somewhat larger than that of head; interstices shining, without microsculpture. Hind wings fully developed.

Abdomen of subparallel shape; puncturation sparse and fine, but distinct; anterior tergites with shallow, posterior tergites with more pronounced microsculpture; posterior margin of tergite VII narrow palisade fringe.

♂: tergite VII in posterior half with pronounced median carina; posterior margin of tergite VIII in the middle weakly concave and slightly serrate (Fig. 84); sternite VIII poste-

riorly weakly pointed (Fig. 84); median lobe of aedeagus long, slender, and of distinctive shape, internal structures weakly sclerotized (Figs. 81-82).

♀: unknown.

Derivatio nominis: The name (Lat., present participle of titillare: to titillate) refers to the minutely spinose apical part of the flagellum of the aedeagus, which may have a titillating effect when in action.

Comparative notes: *L. titillans* is readily distinguished from all its congeners by the distinctive morphology of the aedeagus. From the three known representatives of *Heteroleptusa*, it is additionally separated as follows: *L. flagellata* and *L. hastata* have much shorter elytra and reduced hind wings. *L. shaanxiensis* is distinctly larger and of darker coloration, has a less transverse and much more densely punctate pronotum, and a long carina on the male tergite VIII.

Distribution and bionomics: The holotype was sifted from leaf litter in the Daxue Shan, western Sichuan, at an altitude of approximately 3200 m (SCHÜLKE, pers. comm.). The fully developed wings suggest that it may be widespread.

Leptusa (*Eospisalia?*) *cornigera* sp. n. (Figs. 85-90)

Holotype ♂: JAPAN: Honshu, Yamanashi Pref., Pass Kitazawatoge, Ashiyasu-mura, 15.-20.VII.2001, T. Ueno / Holotypus ♂ *Leptusa cornigera* sp. n. det. V. Assing 2002 (cSme).
Paratypes: 3♀♀: same data as holotype (cSch, cAss); 2♀♀: same data, but 28.-4.VIII.2001 [sic] (cSch).

Description: 2.9-3.6 mm. Whole body blackish; legs dark brown to blackish brown, often partly lighter; antennae brown, with the basal 3 or 4 antennomeres testaceous.

Head weakly transverse; eyes approximately as long as or slightly longer than temples in dorsal view, strongly bulging and distinctly projecting from lateral outline of head; punctures dense, large, and umbilicate; interstices reduced to narrow ridges; microreticulation very shallow or indistinct. Antennae relatively long and slender; antennomeres I-III distinctly oblong and of subequal length, IV weakly oblong, V approximately as wide as long, VI-X of increasing width and increasingly transverse, but preapical segments less than 1.5 times as wide as long.

Pronotum strongly transverse, approximately 1.4 times as wide as long and 1.30-1.35 times as wide as head; in anterior half distinctly dilated; lateral margins near the well-marked posterior angles slightly sinuate; puncturation similar to that of head; microreticulation indistinct or absent.

Elytra 1.10-1.15 times as wide and at suture approximately 1.15 times as long as pronotum; puncturation as coarse as that of head, but less dense, surface with distinctly more shine than that of head; microreticulation indistinct or absent. Hind wings fully developed.

Abdomen approximately as wide as elytra, maximum width at segment VI; anterior impressions of tergites III-V with relatively coarse, the remainder of the tergal surfaces with finer and sparser (but distinct) puncturation; tergites III-VI without, tergite VII occasionally with very shallow microsculpture; posterior margin of tergite VII with palisade fringe.

♂: tergite VII unmodified; posterior margin of tergite VIII weakly concave in the middle

(Fig. 88); posterior margin of sternite VIII very weakly pointed (Fig. 89); median lobe of aedeagus rather short and stout, internal sac with distinctive sclerotized structures (Figs. 85-86).

♀: tergite VIII of similar shape as in ♂; posterior margin of sternite VIII convex, in the middle indistinctly concave (Fig. 90); spermatheca as in Fig. 87.

Derivatio nominis: The name (Lat., adj.: with horns or antlers) refers to the conspicuous shape of the pair of sclerotized structures in the internal sac of the median lobe of the aedeagus.

Comparative notes: *L. cornigera* is distinguished from all other *Leptusa* species by the morphology of the median lobe of the aedeagus, especially by the distinctive internal structures. From other congeners occurring in Japan, it is additionally separated by its dark coloration in combination with long elytra and coarse puncturation.

Distribution and bionomics: The species is currently known only from the type locality in the Japanese island Honshū, but the fully developed hind wings suggest that it may be rather widespread. Apart from the date of collection, the labels attached to the types specify no bionomic data.

***Leptusa marmotae* sp. n. (Figs. 94-98)**

Holotype ♂: CHINA, Prov. Sichuan, Ganzi Tibetian Auton. Pref. Litang Co., Shalui Shan, *Marmota*-sift, 15km NW Litang, route 318, km 3186, 4200m, 3.VII.1999, leg. A. Pütz / Holotypus ♂ *Leptusa marmotae* sp. n. det. V. Assing 2001 (cAss).

Description: 2.1 mm. Whole body uniformly testaceous.

Head as long as wide and of subcircular shape; eyes completely obsolete; integument with extremely fine and sparse, barely noticeable puncturation and with shallow microreticulation; antenna distinctly incrassate, antennomere III short and almost globulous, antennomeres IV-X increasingly transverse, preapical antennomeres disc-shaped.

Pronotum 1.05 times as wide as long and only indistinctly (<1.05x) wider than head, widest a short distance behind anterior angles, and distinctly tapering posteriorly; puncturation barely noticeable; microreticulation distinct, much more so than that of head.

Elytra at suture 0.7 times as long as and only indistinctly wider than pronotum; puncturation extremely fine; microreticulation much weaker than that of pronotum and with larger meshes; hind wings completely reduced.

Abdomen wider than forebody, widest at segments V/VI; puncturation fine and relatively sparse; microreticulation similar to that of elytra, but less shallow.

♂: tergite VII unmodified; tergite VIII posteriorly bisinuate (Fig. 97); posterior margin of sternite VIII truncate (Fig. 98); aedeagus with ventral process of median lobe in lateral view slender and in ventral view broad; internal sac without distinctly sclerotized structures (Figs. 94-95); apical lobe of paramere short and apically broadly rounded (Fig. 96).

♀: unknown.

Derivatio nominis: The name refers to the habitat, where the species was discovered: the burrows of *Marmota himalayana*.

Systematics and comparative notes: Based on the external morphology (facies, tarsal formula, shape of ♂ tergite VIII) and the mouthparts, the new

species is attributed to the diverse genus *Leptusa*. However, judging from the morphology of the aedeagus, the species holds an isolated systematic and phylogenetic position in the genus. Based on the typological subgeneric concept established by PACE (1989a, 1997), it cannot be attributed to any of the known subgenera. Nevertheless, the description of a new subgenus is here refrained from, particularly because the *Leptusa* fauna of China and adjacent regions is phylogenetically and presumably also taxonomically poorly known.

From all the species described from mainland China (PACE 1997, 1999, 2001), *L. marmotae* sp. n. is distinguished by the complete absence of eyes, the light body colour, the slender habitus, the short and narrow elytra, and by the distinctive morphology of the aedeagus. For separation from the almost anophthalmous *L. excaecata* see below.

Distribution and bionomics: The holotype was sifted from dung and debris in the burrows of *Marmota himalayana* together with numerous other Staphylinidae at an altitude of 4300 m. However, the marmot burrows are not very likely to represent the real habitat of *L. marmotae*. Instead, the adaptive reductions of eyes, pigmentation, and wings suggest that is an endemic endogean species.

***Leptusa excaecata* sp. n. (Figs. 91-93)**

Holotype ♂: CHINA: S-Shaanxi (Daba Shan), mountain range N pass 22 km NW Zhenping, 32°01´N, 109°21´E, 2850m, 14.VII.2001, leg. M. Schülke [C01-12] / N-slope near mountain top, Abies, bushes, dead wood, (sifted) [C01-12] / Holotypus ♂ *Leptusa excaecata* sp. n. det. V. Assing 2002 (cAss).

Description: 2.3 mm. Whole body uniformly yellowish brown.

Head indistinctly transverse and of subcircular shape; eyes reduced to minute rudiments without pigmentation; integument with extremely fine and sparse, barely noticeable puncturation and with shallow microreticulation; antenna distinctly incrassate, antennomeres I and II of subequal length, III approximately twice as long as wide, but shorter than I and II, IV-X increasingly transverse, preapical antennomeres disc-shaped, approximately 3 times as wide as long.

Pronotum strongly transverse, 1.5 times as wide as long and 1.2 times as wide as head, widest a short distance behind anterior angles, and distinctly tapering posteriorly; puncturation extremely fine, but more distinct than that of head; microreticulation more pronounced than that of head.

Elytra as wide and at suture almost 0.8 times as long as pronotum; with rather coarse and granulose puncturation and with microsculpture rendering the intersticed mat; each elytron shallowly impressed near lateral margin; hind wings completely reduced.

Abdomen only slightly wider than elytra, widest at segments V/VI; puncturation very fine and sparse; microreticulation shallow, tergal surfaces therefore with some shine; tergite VII without palisade fringe.

♂: tergite VII at posterior margin with short and weakly elevated oblong granulum in the middle; tergite VIII posteriorly indistinctly concave (Fig. 93); posterior margin of sternite VIII weakly pointed; aedeagus as in Figs. 91-92.

♀: unknown.

Derivatio nominis: The name is the past participle of the Latin verb excaecare (to blind) and refers to the strongly reduced eyes.

Systematics and comparative notes: Based on the morphology of the aedeagus and external characters, it is difficult to attribute this species to any of the subgenera known to occur in the Eastern Palaearctic region. In view of the fact that the current knowledge of the species inventory and the phylogenetics of the *Leptusa* species of the Chinese mainland and adjacent regions must be considered highly unsatisfactory, *L. excaecata* is here treated as a species of uncertain subgeneric affiliations.

The only other Chinese congener with strongly reduced eyes is *L. marmotae*, from which *L. excaecata* is easily distinguished by numerous characters, especially by the presence of minute eye rudiments, the much larger and broader body, the distinctly more tranverse pronotum, the much coarser puncturation of the elytra, and by the primary and secondary sexual characters.

Distribution and bionomics: The holotype was collected in the Daba Shan, southern Shaanxi province, where it was sifted from litter of *Abies* and bushes at an altitude of almost 3000 m. Its external morphology (reduced eyes and pigmentation) suggests that it has an endogean habitat.

4. Catalogue of the *Leptusa* species of China and Taiwan

Species	Distribution
Subgenus *Drepanoleptusa* PACE	
L. taiwanensis PACE 1991	Taiwan
L. rorata PACE 1995	Taiwan
L. sichuanensis PACE 1997	China: Sichuan
L. rougemonti PACE 1997	China: Shaanxi
L. microvolans PACE 1997	China: Hong Kong
L. erlangensis PACE 1999	China: Sichuan
L. chengduensis PACE 2001	China: Sichuan
Subgenus *Nesopisalia* PACE	
L. centralis centralis PACE 1991	Taiwan
L. centralis yushanensis PACE 1991	Taiwan
L. centralis tarokensis PACE 1991	Taiwan
L. centralis reposita PACE 1991	Taiwan
L. jinfomontis PACE 2001	China: Sichuan
Subgenus *Homopisalia* PACE	
L. taichungensis PACE 1996	Taiwan
Subgenus *Kochliodepisalia* PACE	
L. spirarum PACE 1996	Taiwan
Subgenus *Eospisalia* PACE	
L. pingtungensis PACE 1995	Taiwan
Subgenus *Anosiopisalia* PACE	
L. nemoricultrix PACE 1995	Taiwan
Subgenus *Chondrelytropisalia* SCHEERPELTZ	

L. schuelkei PACE 1999	China: Shaanxi
L. tectusoides sp. n.	China: Sichuan
Subgenus *Dysleptusa* PACE	
L. sinorum PACE 2001	China: Shaanxi
Subgenus *Heteroleptusa* PACE	
L. peregrina PACE 1995	Taiwan
L. shaanxiensis PACE 1999	China: Shaanxi
L. hastata sp. n.	China: Shaanxi
L. flagellata sp. n.	China: Shaanxi
L. titillans sp. n.	China: Sichuan
Subgenus *Akratopisalia* PACE	
L. cribrata PACE 1996	Taiwan
L. xianensis PACE 1999	China: Shaanxi
L. qinlingensis PACE 1999	China: Shaanxi
L. wuyica sp. n.	China: Fujian
L. limata sp. n.	China: Shaanxi, Hubei
Subgenus *Aphaireleptusa* PACE	
L. anmashanensis 1996	Taiwan
L. formidabilis PACE 1996	Taiwan
L. semivolans PACE 1996	Taiwan
L. tenchiensis PACE 1996	Taiwan
L. acuta sp. n.	Taiwan
L. chinensis PACE 1997	China: Sichuan, Shaanxi
L. xiahensis PACE 1997	China: Gansu
L. gansuensis PACE 1997	China: Gansu
L. gonggamontis PACE 1997 = *L. daxuemontis* PACE 2001	China: Sichuan
L. jiudingensis PACE 1999	China: Sichuan
L. xuemontis PACE 2001	China: Yunnan
L. yunnanensis PACE 2001	China: Yunnan
L. michai sp. n.	China: Shaanxi
L. ganzica sp. n.	China: Sichuan
L. wolongensis sp. n.	China: Sichuan
Incertae sedis	
L. marmotae sp. n.	China: Sichuan
L. excaecata sp. n.	China: Shaanxi

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and Andreas Pütz for the generous gift of various holotypes. Horst Korge provided some helpful information on Anatolian localities.

Zusammenfassung

Eine Untersuchung von Typen und weiterem Material, vorwiegend aus der Ostpaläarktis, ergab zahlreiche neue Nachweise von Arten der Gattung *Leptusa*. 18 Arten werden erstmals beschrieben und von ähnlichen Arten unterschieden; wesentliche Differenzialmerkmale werden abgebildet: *Leptusa* (*Neopisalia*) *spoliata* sp. n. (Türkei), *L.* (*Dysleptusa*) *honshuica* sp. n. (Japan), *L.* (*Aphaireleptusa*) *acuta* sp. n. (Taiwan), *L.* (*A.*) *michai* sp. n. (China: Shaanxi), *L.* (*A.*) *puthzi* sp. n. (Japan), *L.* (*A.*) *dissimulans* sp. n. (Japan), *L.* (*A.*) *ganzica* sp. n. (China: Sichuan), *L.* (*A.*) *wolongensis* sp. n. (China: Sichuan), *L.* (*Chondrelytropisalia*) *tectusoides* sp. n. (China: Sichuan), *L.* (*Drepanoleptusa*) *manasluensis* sp. n. (Nepal), *L.* (*D.*?) *wuyica* sp. n. (China: Fujian), *L.* (*Akratopisalia*) *limata* sp. n. (China: Shaanxi, Hubei), *L.* (*Heteroleptusa*) *hastata* sp. n. (China: Shaanxi), *L.* (*H.*) *flagellata* sp. n. (China: Shaanxi), *L.* (*H.*) *titillans* sp. n. (China: Sichuan), *L.* (*Eospisalia*?) *cornigera* sp. n. (Japan), *L. marmotae* sp. n. (China: Sichuan) und *L. excaecata* sp. n. (China: Shaanxi). *L. marmotae* und *L. excaecata* sind die ersten anophthalmen bzw. microphthalmen Vertreter der Gattung aus China. Die bisher unbekannten männlichen Sexualmerkmale von *Leptusa korgei* SCHEERPELTZ, *L. tenchiensis* PACE, *L. semivolans* PACE und *L. qinlingensis* PACE werden beschrieben und ebenso wie die Spermathek von *L. formidabilis* PACE erstmals abgebildet. Folgende Synonymien werden begründet: *Aphaireleptusa* PACE 1996 = *Aleteleptusa* PACE 1997, syn. n., = *Mimumenepisalia* PACE 1997, syn. n.; *Leptusa gonggamontis* PACE 1997 = *L. daxuemontis* PACE 2001, syn. n. *Leptusa ghoropanensis* PACE, stat. n., und *L. yakorum* PACE, stat. n., werden als distinkte Arten betrachtet. Die Namen *L. scheerpeltzi* PACE 1981 und *L. diecki* PACE 1982 sind nach den Nomenklaturregeln nicht verfügbar; somit ergeben sich folgende gültige Bi- und Trinomina: *L. franziana* PACE 1981, *L. franziana scheerpeltzi* PACE 1983, *L. confinis* PACE 1982 und *L. confinis diecki* PACE 1983. Für die *Leptusa*-Arten Chinas und Taiwans wird ein Katalog erstellt.

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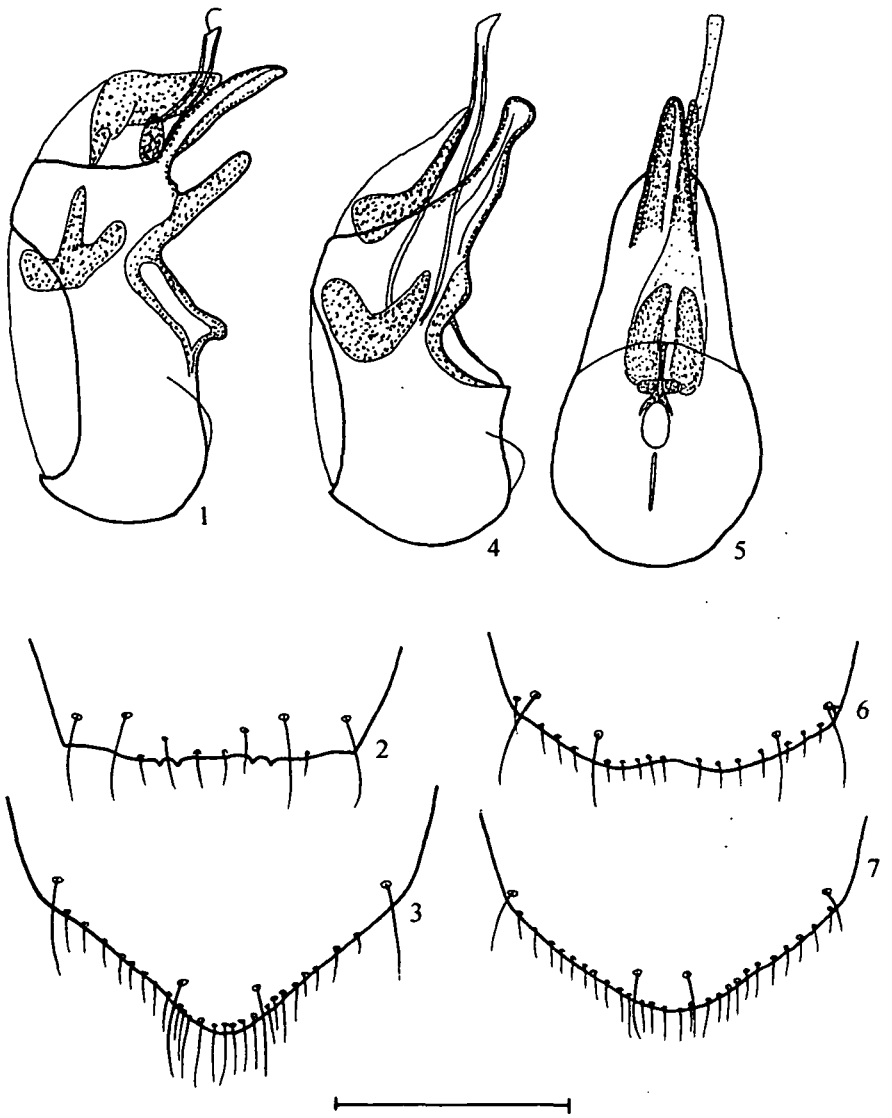
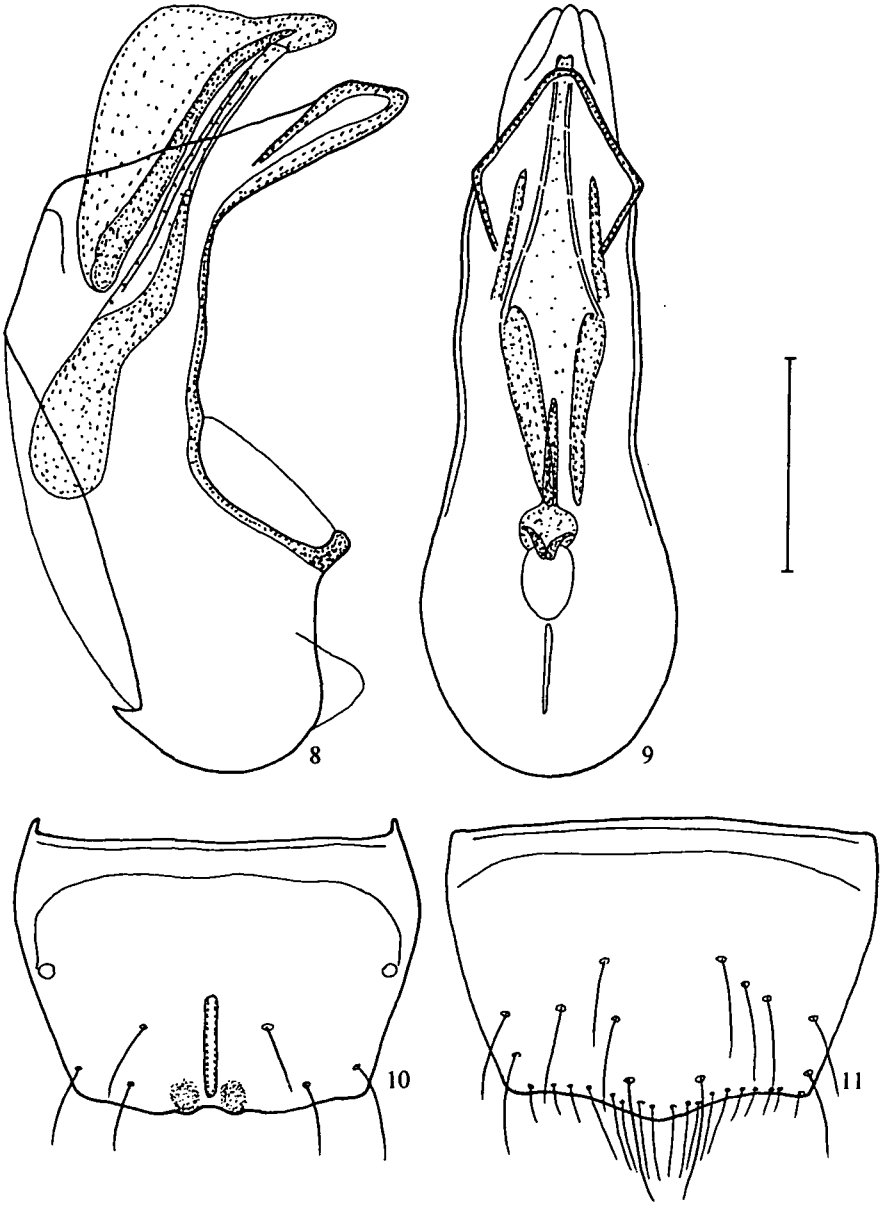
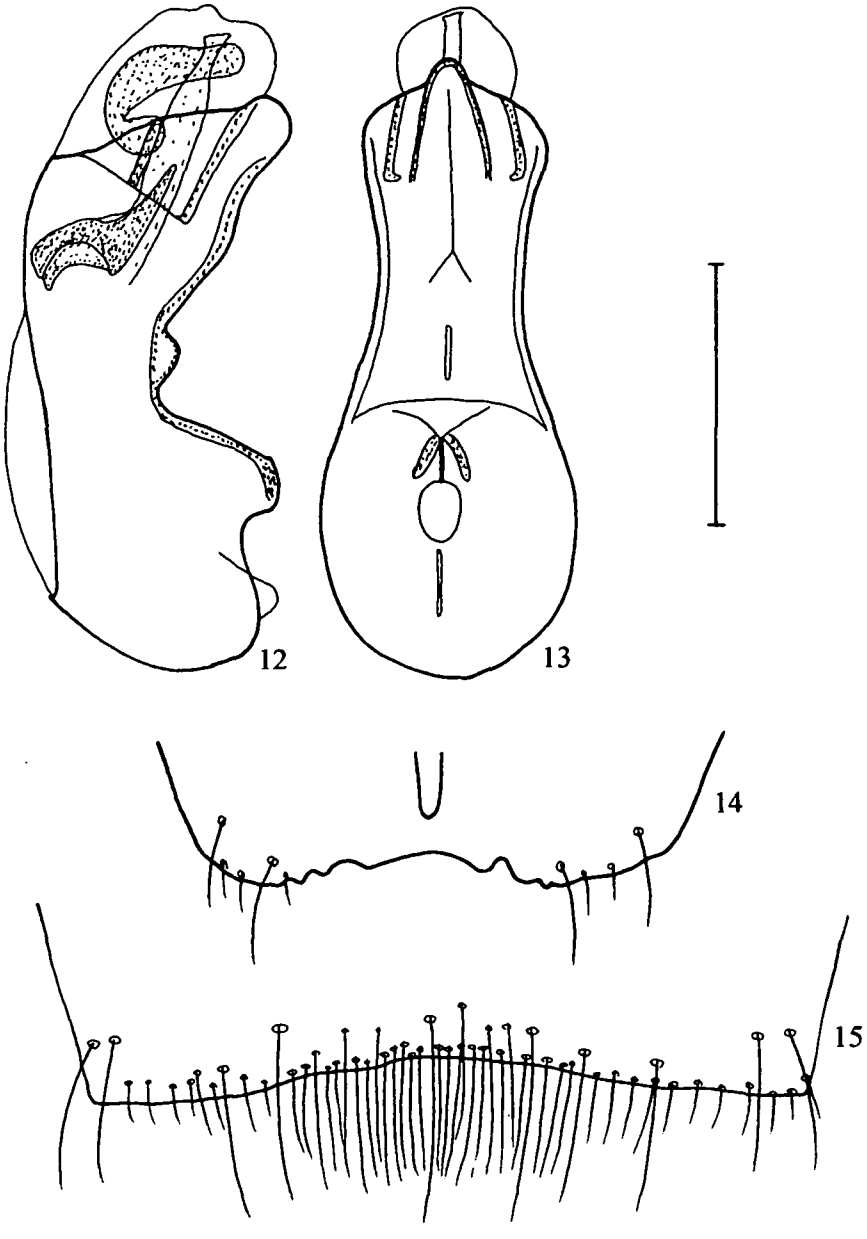


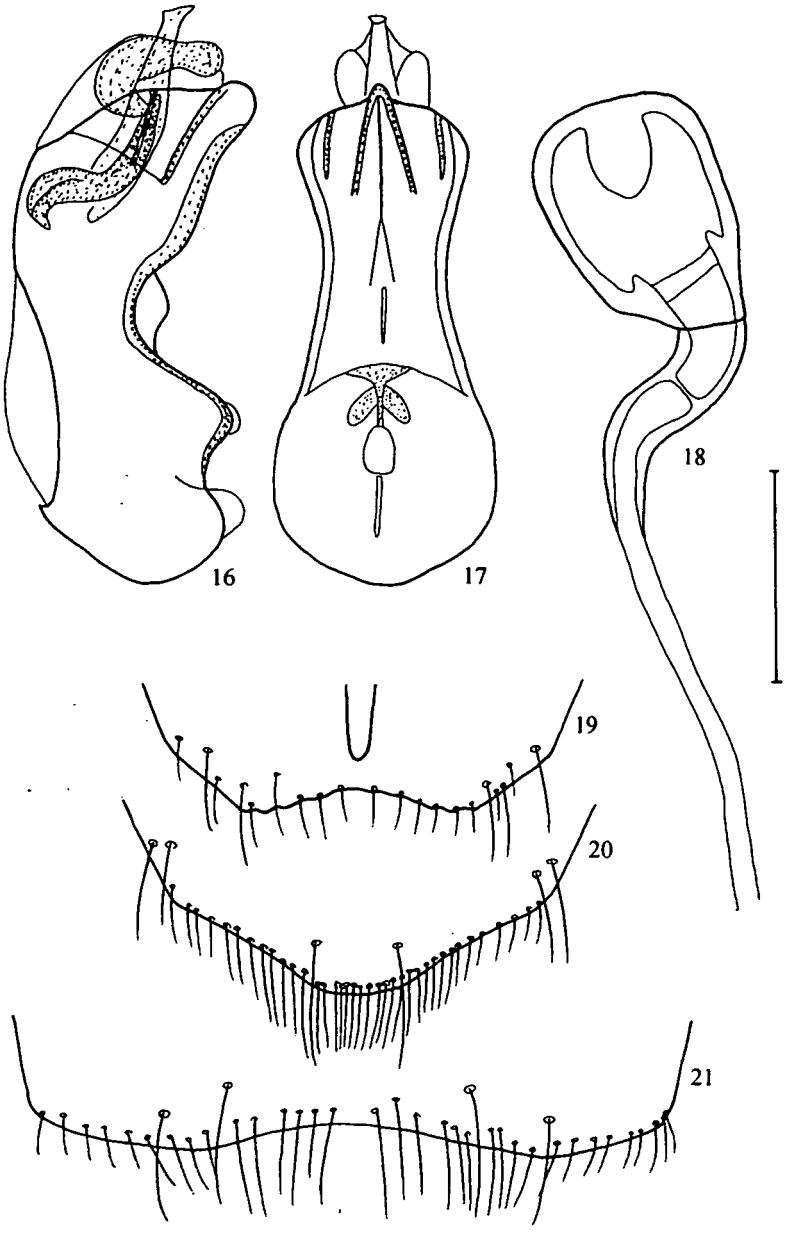
Figs. 1-7: *Leptusa korgei* SCHEERPELTZ **(1-3)** and *L. spoliata* sp. n. **(4-7)**: **1, 4, 5** – median lobe of aedeagus in lateral and in ventral view; **2, 6** – posterior margin of ♂ tergite VIII; **3, 7** – posterior margin of ♂ sternite VIII. Scale: 0.2 mm.



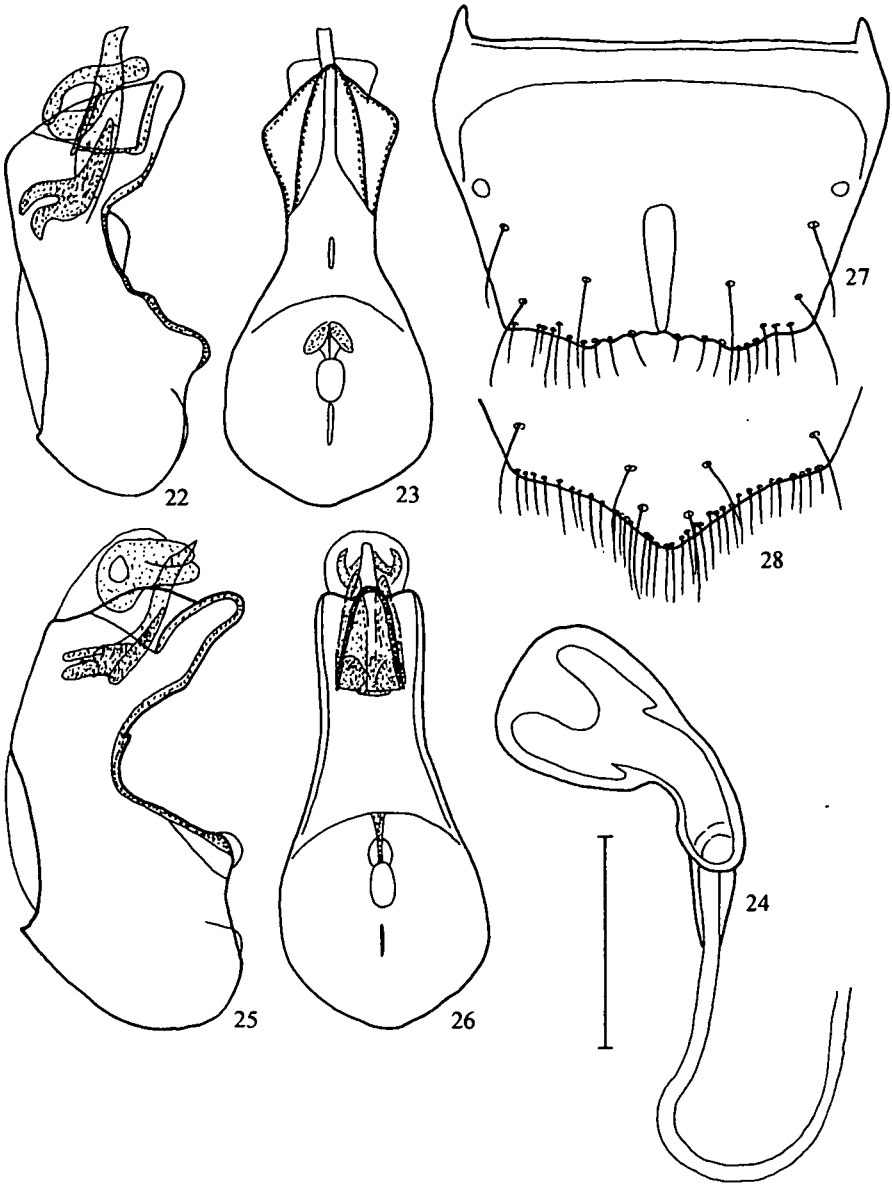
Figs. 8-11: *Leptusa honshuica* sp. n.: **8, 9** – median lobe of aedeagus in lateral and in ventral view; **10** – ♂ tergite VIII; **11** – ♂ sternite VIII; pubescence partly omitted in 10-11. Scale: 8, 9: 0.1 mm; 10, 11: 0.2 mm.



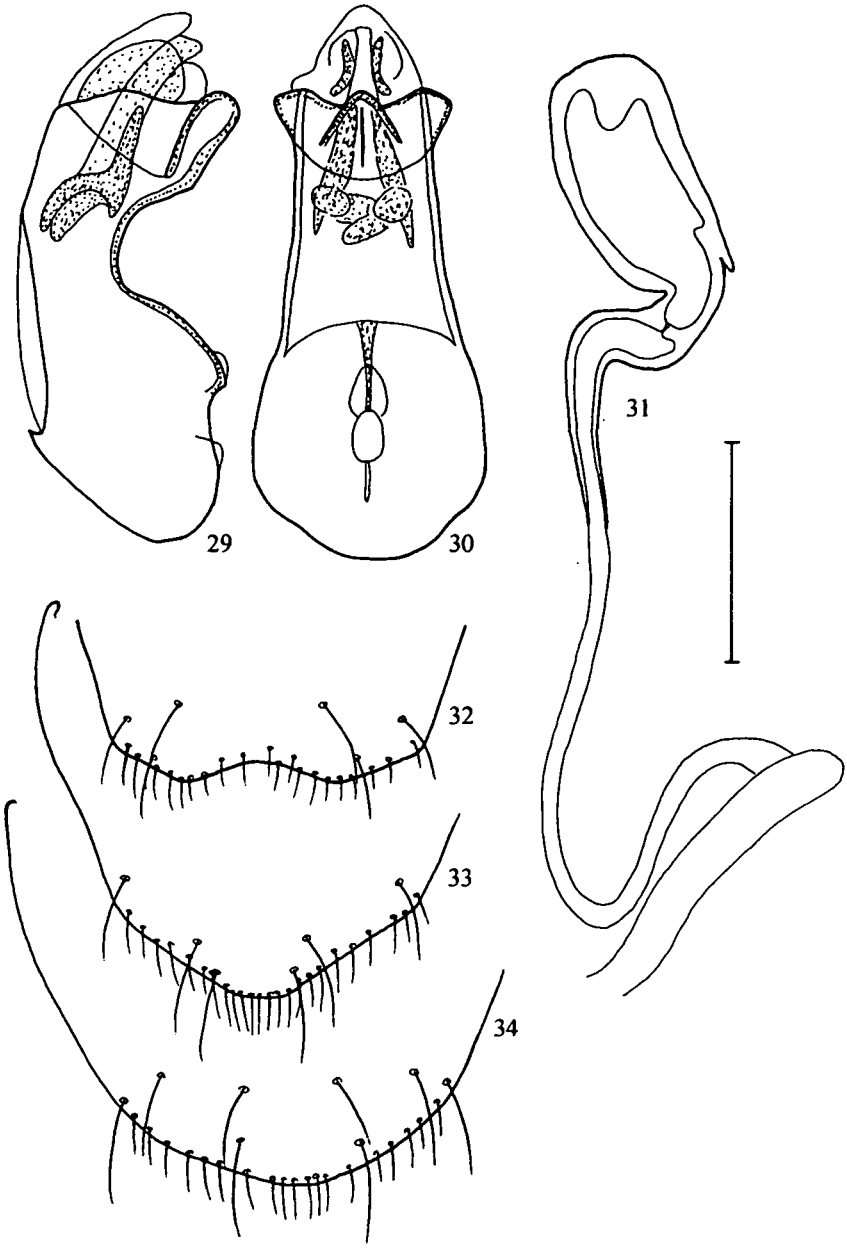
Figs. 12-15: *Leptusa tenchiensis* PACE: **12, 13** – median lobe of aedeagus in lateral and in ventral view; **14** – posterior margin of ♂ tergite VIII; **15** – posterior margin of ♂ sternite VII. Scale: 0.2 mm.



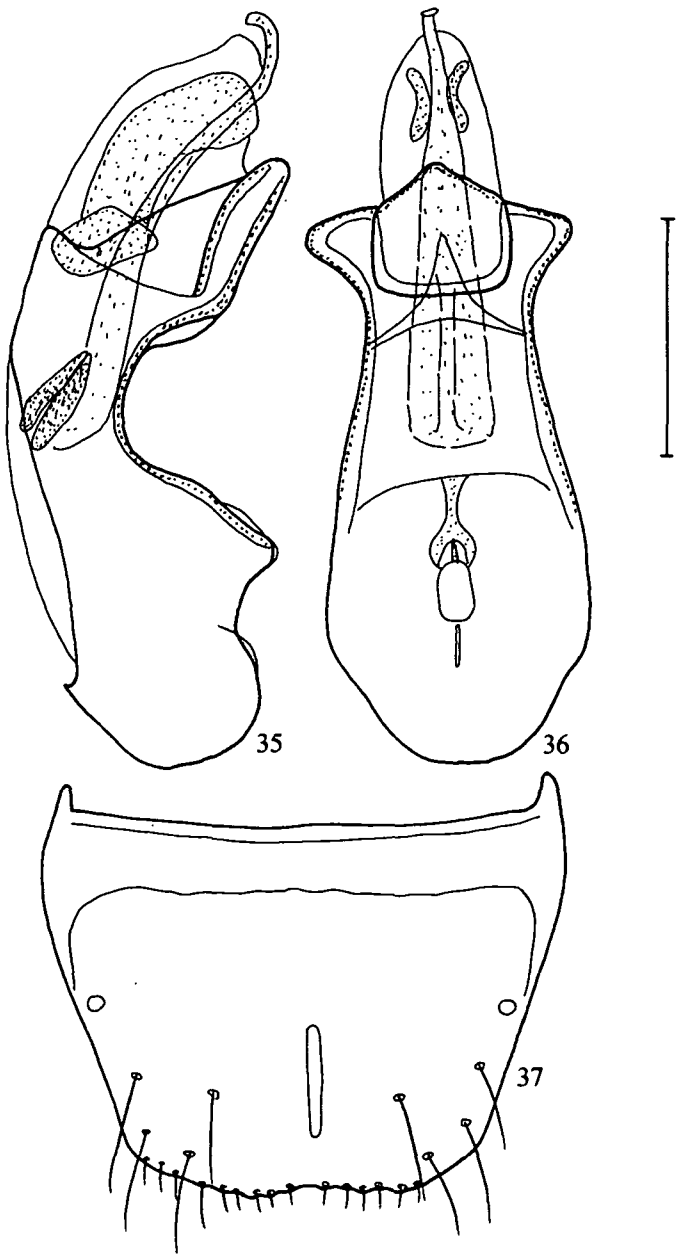
Figs. 16-21: *Leptusa acuta* sp. n.: **16, 17** – median lobe of aedeagus in lateral and in ventral view; **18** – spermatheca; **19** – posterior margin of ♂ tergite VIII; **20** – posterior margin of ♂ sternite VIII; **21** – posterior margin of ♂ sternite VII. Scale: 18: 0.1 mm; 16-17, 19-21: 0.2 mm.



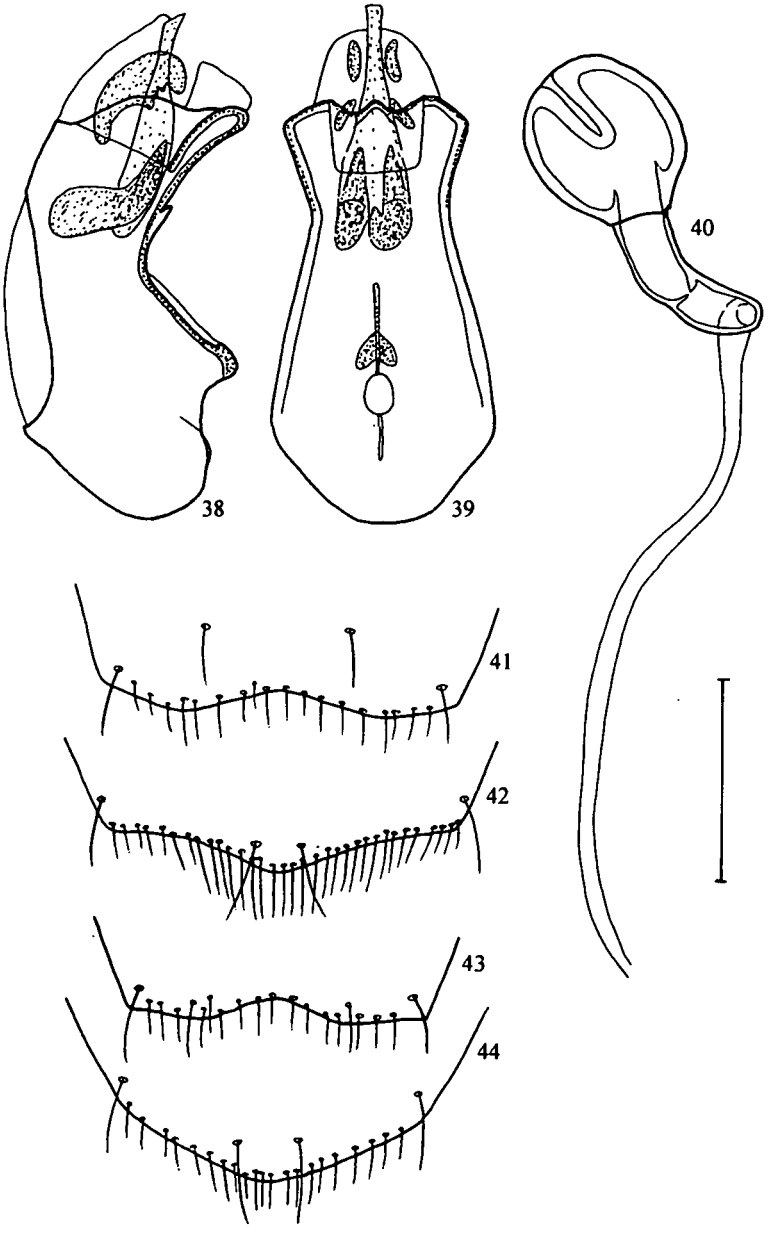
Figs. 22-28: *Leptusa semivolans* PACE **(22-23)**, *L. formidabilis* PACE **(24)**, and *L. michai* sp. n. **(25-28)**: **22, 23, 25, 26** – median lobe of aedeagus in lateral and in ventral view; **24** – spermatheca; **27** – ♂ tergite VIII; **28** – posterior margin of ♂ sternite VIII. Scale: 24: 0.1mm; 22-23, 25-28: 0.2 mm.



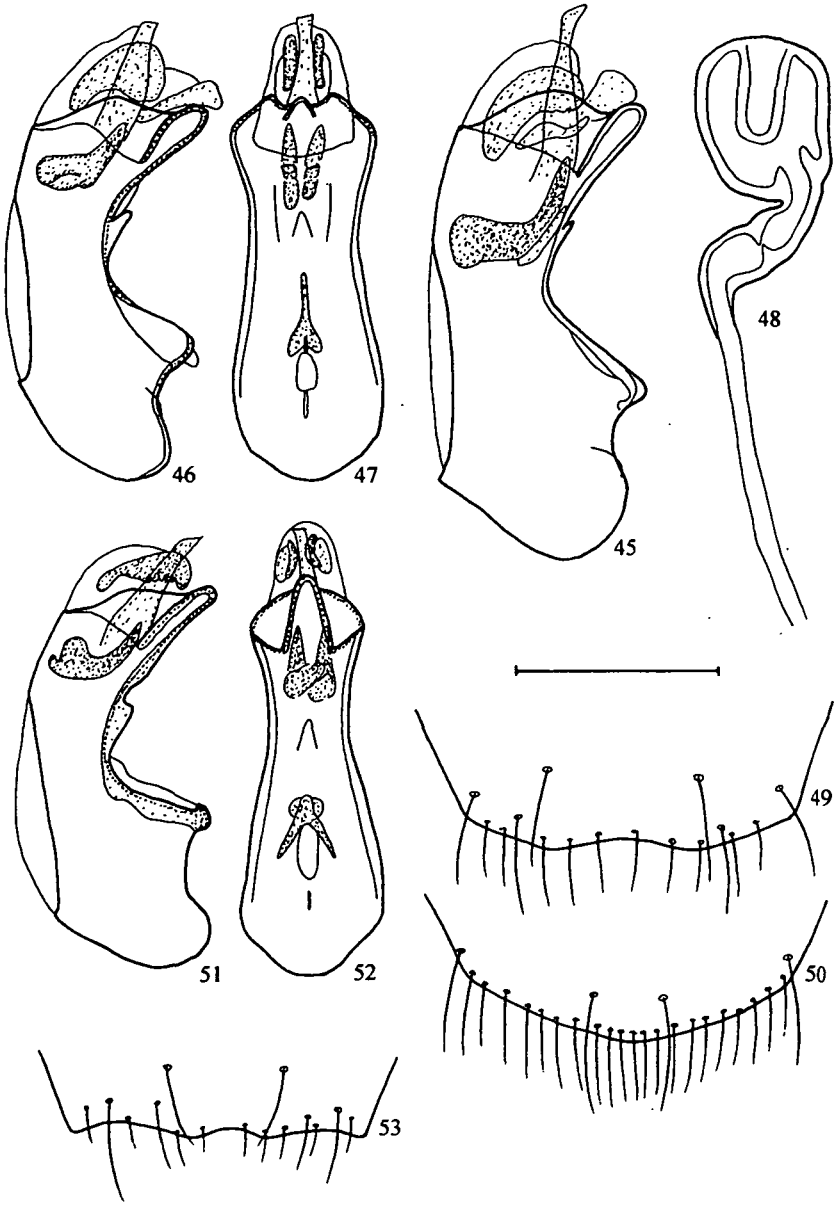
Figs. 29-34: *Leptusa puthzi* sp. n.: **29, 30** – median lobe of aedeagus in lateral and in ventral view; **31** – spermatheca; **32** – posterior margin of ♂ tergite VIII; **33** – posterior margin of ♂ sternite VIII; **34** – posterior margin of ♀ sternite VIII. Scale: 31: 0.1 mm; 29-30, 32-34: 0.2 mm.



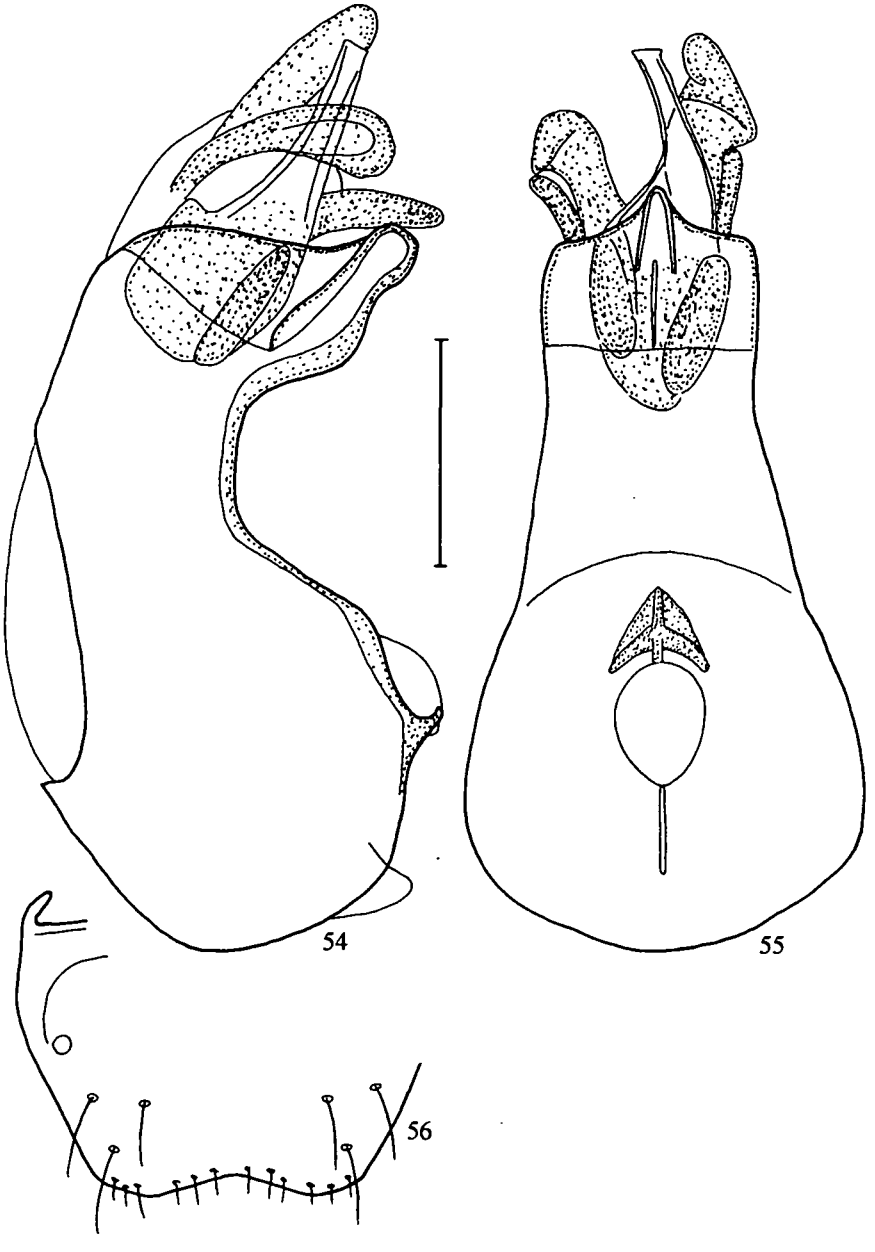
Figs. 35-37: *Leptusa dissimulans* sp. n.: **35-36** – median lobe of aedeagus in lateral and in ventral view; **37** – ♂ tergite VIII. Scale: 0.2 mm.



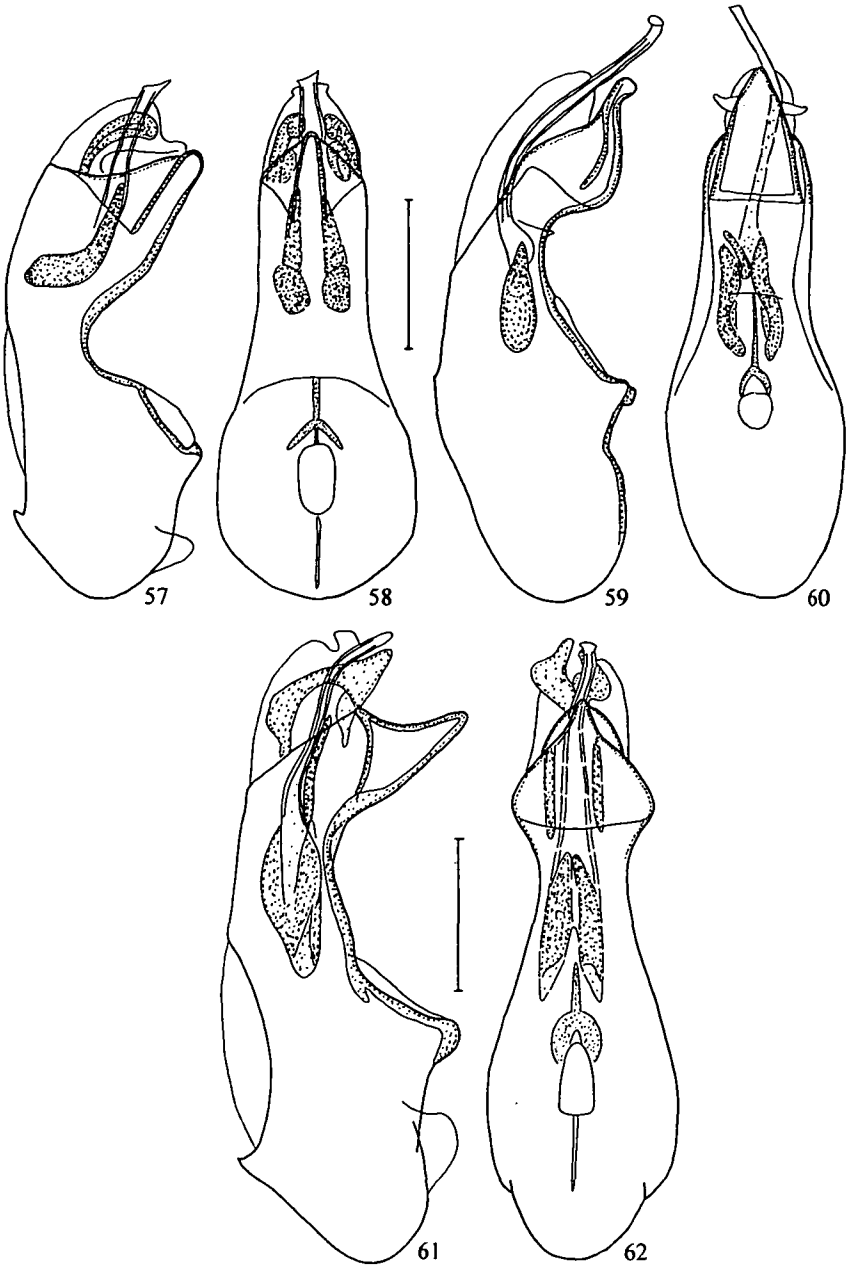
Figs. 38-44: *Leptusa chinensis* PACE (Daba Shan): **38-39** – median lobe of aedeagus in lateral and in ventral view; **40** – spermatheca; **41** – posterior margin of ♂ tergite VIII; **42** – posterior margin of ♂ sternite VIII; **43** – posterior margin of ♀ tergite VIII; **44** – posterior margin of ♀ sternite VIII. Scale: 40: 0.1 mm; 38-39, 41-44: 0.2 mm.



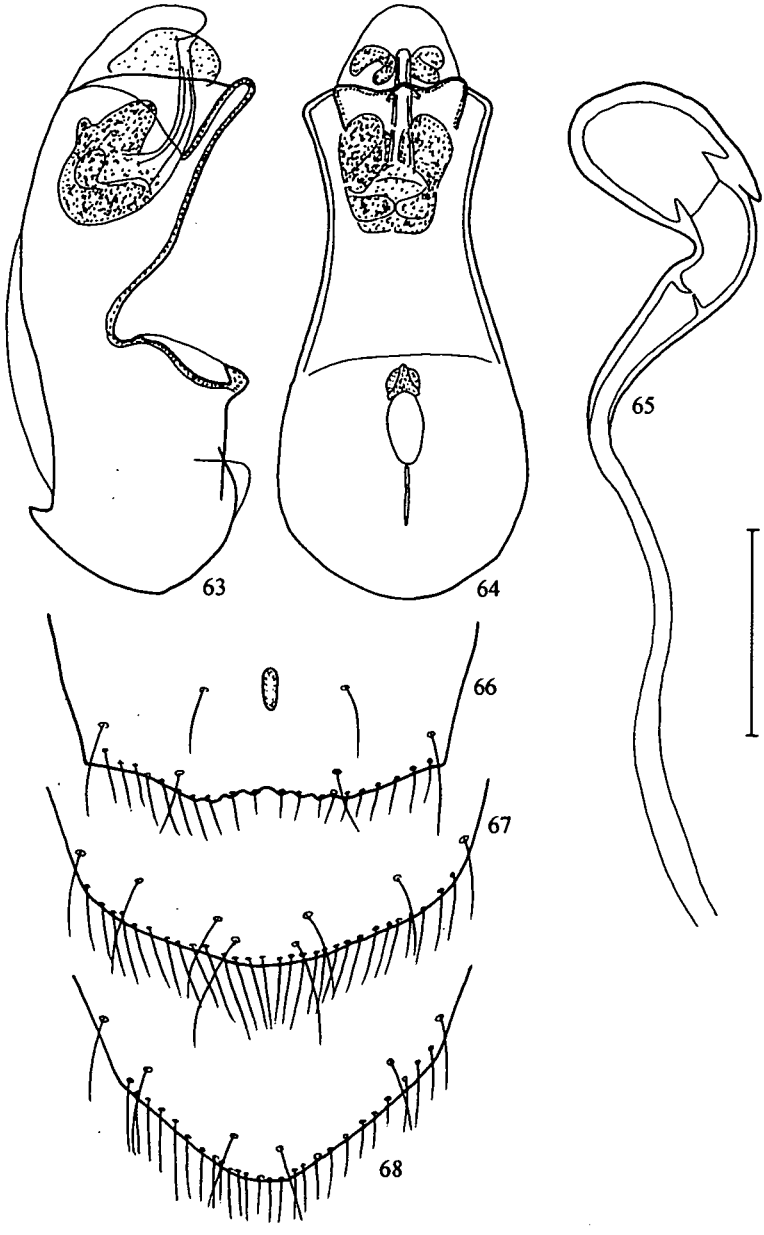
Figs. 46-53: *Leptusa chinensis* PACE **(45)**, *L. ganzica* sp. n. **(46-50)**, and *L. wolongensis* sp. n. **(51-53)**: **45-47, 51-52** – median lobe of aedeagus in lateral and in ventral view; **48** – spermatheca; **49, 538** – posterior margin of ♂ tergite VIII; **50** – posterior margin of ♂ sternite VIII. Scale: 48: 0.1 mm; 45-47, 49-53: 0.2 mm.



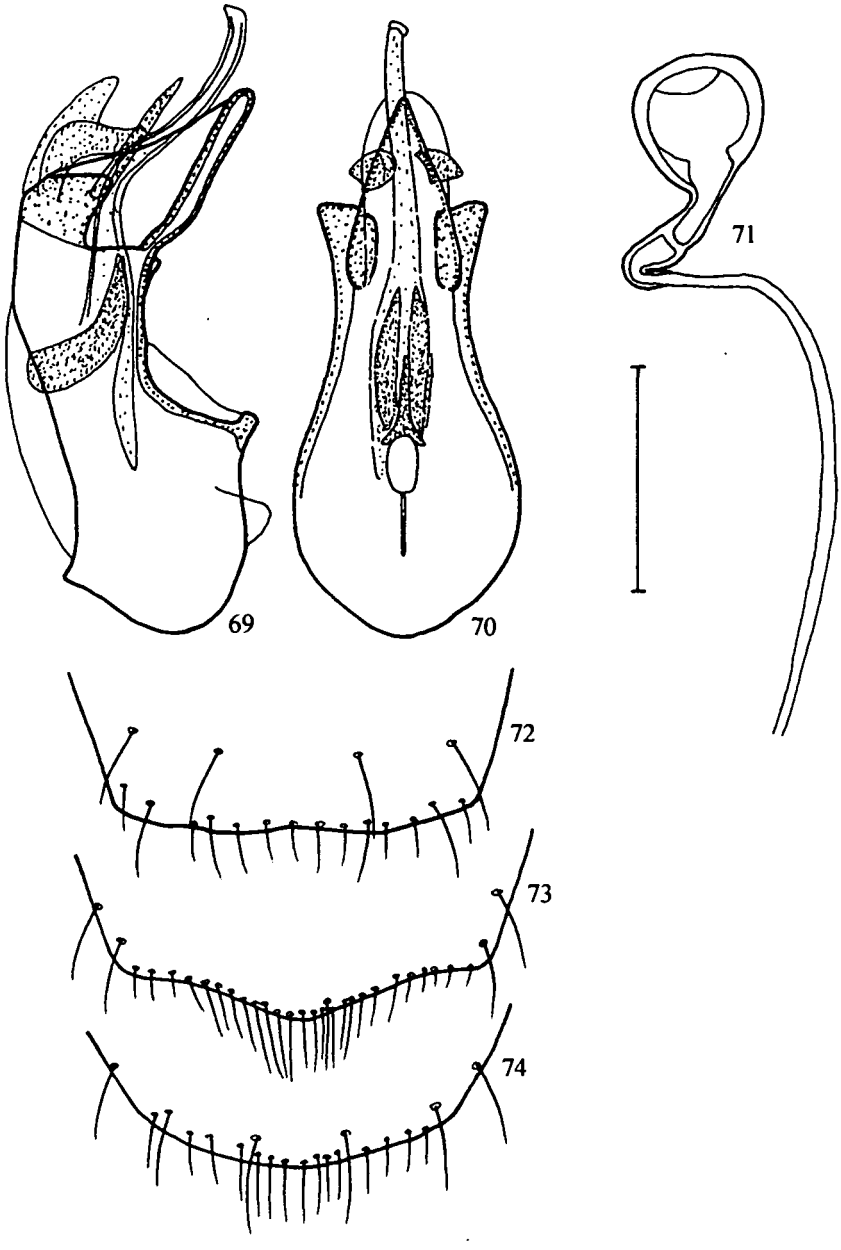
Figs. 54-56: *Leptusa tectusoides* sp. n.: **54, 55** – median lobe of aedeagus in lateral and in ventral view; **56** – posterior margin of ♂ tergite VIII. Scale: 54, 55: 0.1 mm; 56: 0.2 mm.



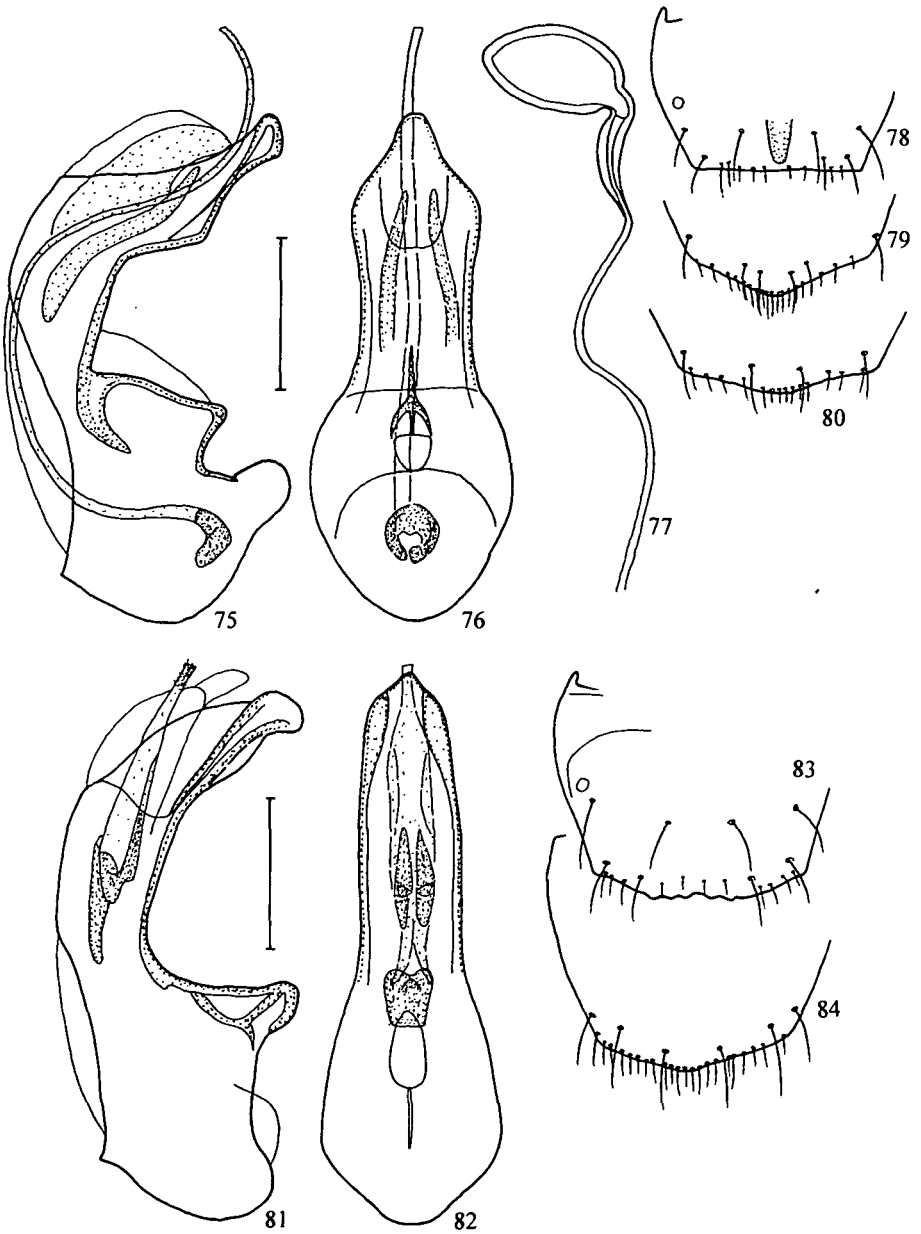
Figs. 57-62: *Leptusa manasluensis* sp. n. (**57-58**), *L. wuyica* sp. n. (**59-60**), and *L. qinlingensis* PACE (**61-62**): **57-62** – median lobe of aedeagus in lateral and in ventral view. Scale: 0.1 mm.



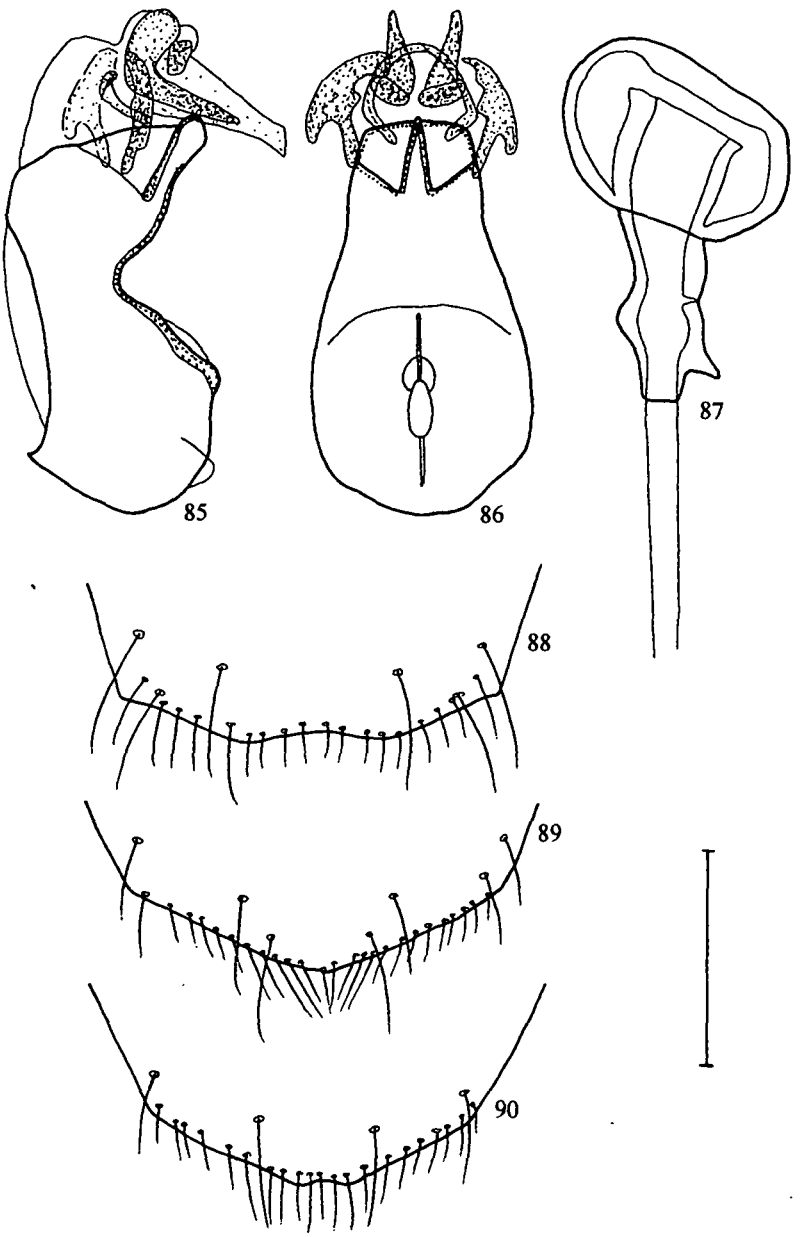
Figs. 63-68: *Leptusa limata* sp. n.: **63-64** – median lobe of aedeagus in lateral and in ventral view; **65** – spermatheca; **66** – posterior margin of ♂ tergite VIII; **42** – posterior margin of ♂ sternite VIII; **68** – posterior margin of ♀ sternite VIII. Scale: 65: 0.1 mm; 63-64, 66-68: 0.2 mm.



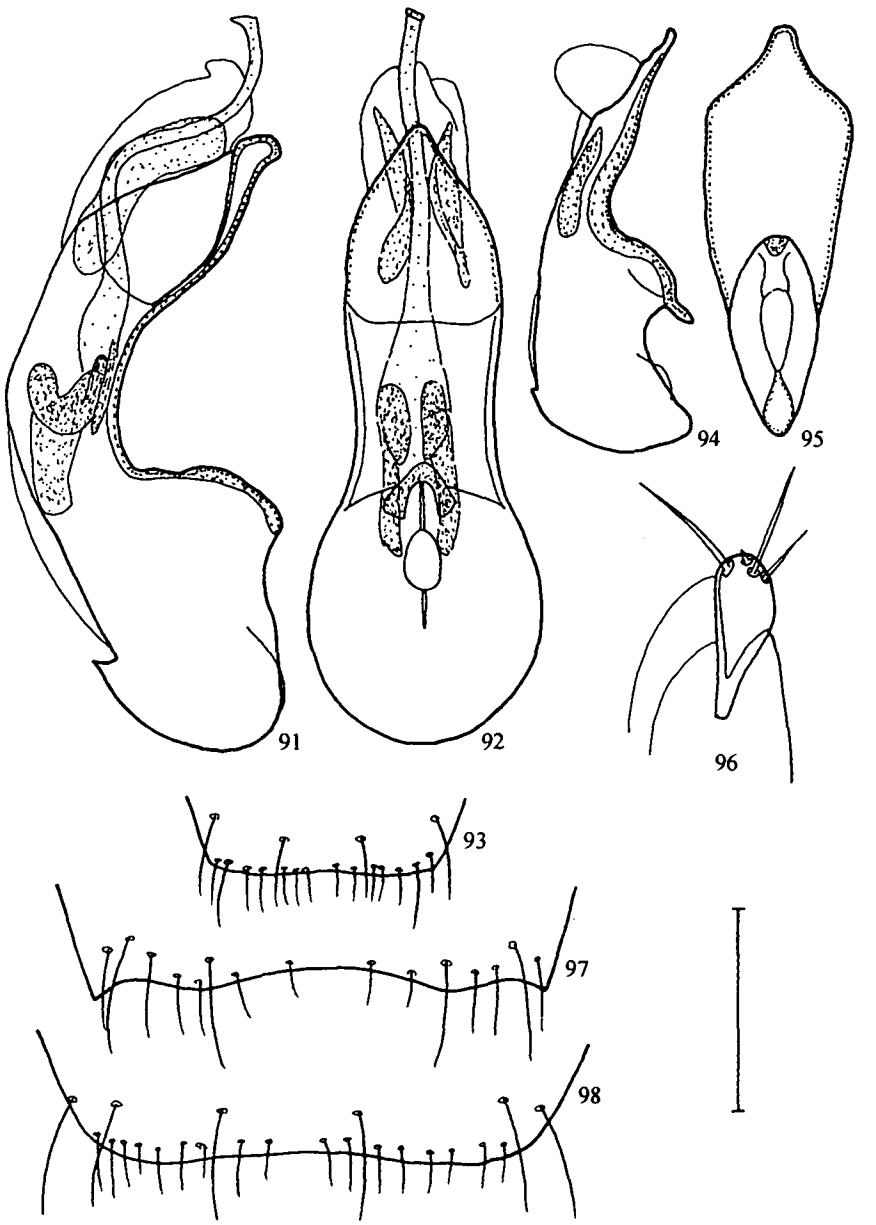
Figs. 69-74: *Leptusa hastata* sp. n.: **69, 70** – median lobe of aedeagus in lateral and in ventral view; **71** – spermatheca; **72** – posterior margin of ♂ tergite VIII; **73** – posterior margin of ♂ sternite VIII; **74** – posterior margin of ♀ sternite VIII. Scale: 71: 0.1 mm; 69-70, 72-74: 0.2 mm.



Figs. 75-84: *Leptusa flagellata* sp. n. (**75-80**) and *L. titillans* sp. n. (81-84): **75-76, 81-82** – median lobe of aedeagus in lateral and in ventral view; **77** – spermatheca; **78, 83** – posterior margin of ♂ tergite VIII; **79, 84** – posterior margin of ♂ sternite VIII; 80 – posterior margin of ♀ sternite VIII. Scale: 77: 0.08 mm; 75-76, 81-82: 0.1 mm; 78-80, 83-84: 0.2 mm.



Figs. 85-90: *Leptusa cornigera* sp. n.: **85, 86** – median lobe of aedeagus in lateral and in ventral view; **87** – spermatheca; **88** – posterior margin of ♂ tergite VIII; **89** – posterior margin of ♂ sternite VIII; **90** – posterior margin of ♀ sternite VIII. Scale: 87: 0.1 mm; 85-86, 88-90: 0.2 mm.



Figs. 91-98: *Leptusa excaecata* sp. n. **(91-93)** and *L. marmotae* sp. n. **(94-98)**: **91-92, 94-95** – median lobe of aedeagus in lateral and in ventral view; **96** – apical lobe of paramere; **93, 97** – posterior margin of ♂ tergite VIII; **98** – posterior margin of ♂ sternite VIII. Scale: 96: 0.08 mm; 91-92, 94-95, 97-98: 0.1 mm; 93: 0.2 mm.