

# The Turkish species of *Leptusa* KRAATZ in the Schubert collection (Naturhistorisches Museum, Wien) (Coleoptera: Staphylinidae, Aleocharinae)

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## Abstract

Turkish material of *Leptusa* KRAATZ (Coleoptera: Staphylinidae) from the Schubert collection (Naturhistorisches Museum, Wien) is examined. 14 species and subspecies are reported, among them several taxa which had not been recorded again since their original descriptions, as well as the first records of *L. pulchella* (MANNERHEIM) and *L. batumiensis batumiensis* PACE from Turkey; the number of *Leptusa* species and subspecies known from Turkey is thus raised to 22. Two species are described and illustrated: *Leptusa (Neopisalia) sica* sp.n. and *L. (Stictopisalia) fibula* sp.n. The distributions of *L. venusta* (HOCHHUTH), *L. asiatica* BERNHAUER, *L. merkli* BERNHAUER, *L. ionopolitana* PACE, *L. batumiensis* PACE, *L. fibula* sp.n., and *L. fuliginosa* (AUBÉ) are mapped.

**Key words:** Coleoptera, Staphylinidae, Aleocharinae, *Leptusa*, new species, new records, taxonomy, Turkey.

## Introduction

The genus *Leptusa* is represented in Europe by almost 270 species, not counting the subspecies (ASSING 2002, PACE 1989, 1996). Only 18 species of six subgenera have become known from Turkey; with the exception of *L. nurdaghensis* ASSING, which was recently described from Antakya, all of them have been reported from the European part and from northern Anatolia (ASSING 2002, 2003, PACE 1989, 1996). Only *L. fuliginosa* (AUBÉ) and *L. venusta* (HOCHHUTH) have been recorded also from adjacent regions; all the other (sub-)species have become known only from Turkey.

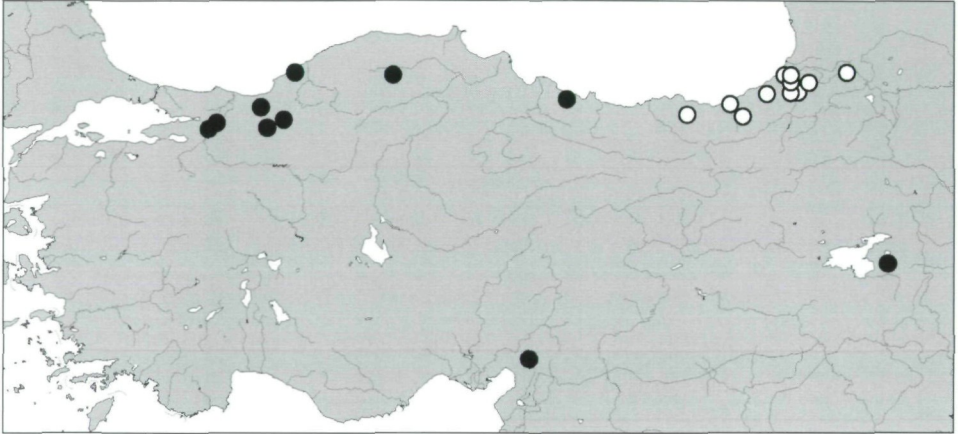
The collection of Franz Theodor Adolf and Franz Xaver Schubert is now housed and accessible in the Naturhistorisches Museum Wien (NMW) (SCHÖNMANN 1996). On the occasion of a visit to the NMW in spring 2002, I took the opportunity to sort unidentified Aleocharinae in the Schubert collection, which, besides other interesting material, also contained series of *Leptusa* specimens from various localities in Turkey. Subsequent examination of this material yielded numerous records of altogether 14 species and subspecies from Turkey, two of them new to science; the total number of species and subspecies known from Turkey is thus raised to 22, representing a total of seven subgenera. The new records and the descriptions are presented below. If not indicated otherwise, the listed material was collected by F.X. Schubert and is deposited in the NMW; some reference specimens are also in the author's collection (cAss).

## New records and species of *Leptusa* from Turkey

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

MATERIAL EXAMINED: **Artvin:** 9 exs., Borçka, 1.-3.VI.1960; 1 ex., Borçka, VII.1974; 1 ex., Hopa, Çiftköprü, 1000 m, VI.1977. **Trabzon:** 40 exs., Maçka, 1000 m, VII.1971. **Rize:** 2 exs., İkizdere, 1600 m, VI.1973; 2 exs., Pazar, İliça, VII.1979.

The distribution of *L. venusta* ranges from the Caucasus to Anatolia and Armenia. In Turkey (Map 1) it is confined to the very northeast of Anatolia (Artvin, Ardahan, Trabzon, Rize) (ASSING 2002, PACE 1989).



Map 1: Distributions of *Leptusa venusta* (HOCHHUTH) (white circles) and *L. asiatica* BERNHAUER (black circles) in Turkey, based on material examined, PACE (1989), and ASSING (2002).

***Leptusa (Neopisalia) cimmeria* PACE**

MATERIAL EXAMINED: **Rize**: 24 exs., İkizdere, 1600 m, VI.1973.

*Leptusa cimmeria* has become known only from Rize (ASSING 2002, PACE 1996).

***Leptusa (Neopisalia) korgei* SCHEERPELTZ**

MATERIAL EXAMINED: **Rize**: 6 exs., Pazar, İliça, VII.1979.

The material listed above was collected at or near the type locality. The male sexual characters were described only recently (ASSING 2002).

***Leptusa (Neopisalia) confinis diecki* PACE**

MATERIAL EXAMINED: **Ordu**: 2 exs., Akkuş, 3.-5.VI.1961.

The subspecies is known from Trabzon and Ordu (ASSING 2002, PACE 1989). The differences in the morphology of the aedeagus, as well as the general degree of character divergence and the distributions of the closely related species of the *L. microphthalmma* species group suggest that *L. confinis diecki* and the nominal subspecies probably represent distinct species.

***Leptusa (Neopisalia) othmaniorum* PACE**

MATERIAL EXAMINED: **Zonguldak**: 2 exs., Karabük - Yenice, VI.1962. **Sinop**: 14 exs., Çangal Dağı, 7.-15.VI.1960; 9 exs., same locality, 16.-26.V.1957; 2 exs., same locality, VI.1959; 1 ex., same locality, 8.-16.VII.1961; 3 exs., same locality, leg. Yaman; 1 ex., forest S Ayancık, VI.1966.

According to PACE (1989), *L. othmaniorum* is represented by two subspecies, the nominal subspecies being distributed from Istanbul to Zonguldak and *L. o. paphlagonica* PACE known only from Küre in Kastamonu. Based on external characters, except for the shape of the antennomere IV, and the morphology of the aedeagus, the material from Zonguldak would belong to *L. o. paphlagonica*, which, however, would not be in agreement with the distribution pattern indicated by PACE (1989). The specimens from Çangal Dağı have shorter elytra and a much larger "crista apicalis" of the aedeagus; in addition, the aedeagus is somewhat larger than in

the male from Zonguldak, so they may in fact represent a distinct species. More material from more northern Anatolian localities is needed to decide if these differences are an expression of intraspecific or inter(sub-)specific variation and to clarify the taxonomic status and the biogeography of *L. othmaniorum*.

***Leptusa (Neopisalia) sica* sp.n.**  
(Figs. 1 - 7)

TYPE MATERIAL: **Holotype** ♂: "Asm. Iliça/Pazar, 7/79, leg. F. Schubert / Holotypus ♂ *Leptusa sica* sp. n. det. V. Assing 2002" (NMW). **Paratypes**: 9 ♂♂, 10 ♀♀: same data as holotype (NMW, cAss).

**DESCRIPTION**: 2.3 - 2.8 mm. Body more or less evenly ferruginous to castaneous, sometimes with the head slightly darker; appendages ferruginous. Facies as in Fig. 1.

Head shaped as in Fig. 1; eyes small, 0.3 - 0.4 times the length of postocular region in dorsal view, not or only indistinctly projecting from lateral outline of head; punctuation very fine, barely noticeable in the distinct microreticulation. Pronotum relatively large and moderately transverse (Fig. 1); punctuation and microsculpture similar to those of head. Elytra slightly narrower and at suture somewhat shorter than pronotum (Fig. 1); microsculpture slightly less pronounced than that of head and pronotum; punctuation fine, but distinct, and weakly granulose. Hind wings reduced. Abdomen wider than forebody, widest at segments V/VI (Fig. 1); punctuation extremely fine and much sparser than that of forebody, especially on posterior tergites; integument with subdued shine; posterior margin of tergite VII with strongly reduced, barely visible palisade fringe.

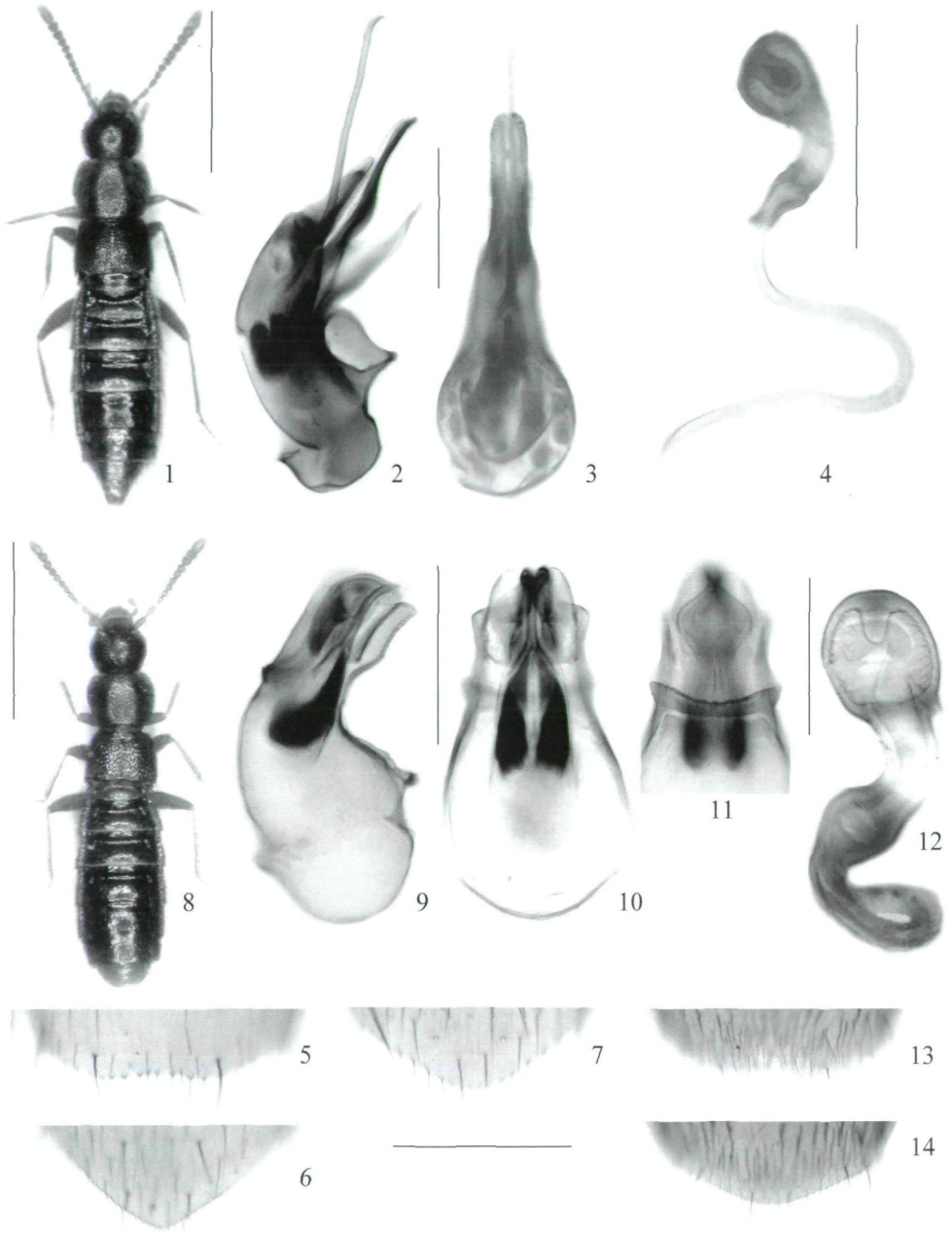
♂: tergite VII unmodified; sternite VII posteriorly weakly and broadly concave, in the middle without long marginal setae; posterior margin of tergite VIII weakly concave in the middle (Fig. 5); sternite VIII posteriorly pointed (Fig. 6); median lobe of aedeagus of distinctive morphology, somewhat reminding of the condition in *L. janczyki* PACE and *L. rizensis* PACE (Figs. 2 - 3).

♀: tergite VIII of similar shape as in ♂; sternite more weakly pointed than in ♂ (Fig. 7); spermatheca as in Fig. 4.

**ETYMOLOGY**: The name (Lat.: dagger) is a noun in apposition and refers to the shape of the process at the base of the ventral process of the aedeagus.

**SYSTEMATICS AND COMPARATIVE NOTES**: Based on the morphology of the aedeagus, *L. sica* is most closely related to *L. rizensis* PACE, *L. janczyki* PACE, *L. glabriceps* BERNHAUER, *L. zerchei* PACE, and *L. microphthalma* REITTER of the subgenus *Neopisalia* SCHEERPELTZ, all of which are distributed in the Caucasus region and northeastern Anatolia and distinguished from the new species especially by the shape of the median lobe of the aedeagus. *Leptusa janczyki*, whose aedeagus is similar to that of *L. sica*, is additionally separated by the presence of tubercles on the male tergites VII and VIII. In *L. rizensis*, which PACE (1996) recently described from "Umg. Rize, Küstengebirge" (holotype examined), the male tergite VII has a median tubercle near the posterior margin, the ventral process and the additional process of the aedeagus are of different shape especially in lateral view, the "crista apicalis" is longer, but less deep, the flagellum of the aedeagus is shorter, and the spermatheca is more slender and has a relatively smaller capsule. For illustrations of the sexual characters and the facies of these species see the figures in PACE (1989, 1996).

**DISTRIBUTION AND BIONOMICS**: The type locality is situated in Rize, northeastern Anatolia. The new species was collected together with *L. fuliginosa* and *L. korgei*.



Figs. 1 - 14: *Leptusa sica* sp.n. (1-7) and *L. fibula* sp.n. (8-14): 1, 8) facies; 2, 9) median lobe of aedeagus in lateral view; 3, 10) median lobe of aedeagus in ventral view; 4, 12) spermatheca; 5, 13) posterior margin of  $\sigma$  tergite VIII; 6, 14) posterior part of  $\sigma$  sternite VIII; 7) posterior part of  $\sigma$  sternite VIII; 11) apical part of median lobe of aedeagus is dorsal view. Scales: 1, 8: 1.0 mm; 2-7, 9-11, 13-14: 0.2 mm; 12: 0.1 mm.



***Leptusa (Roubaliusa) trapezuntis* PACE**

MATERIAL EXAMINED: **Ordu**: 2 exs., Akkuş, 3.-5.VI.1961.

Previously, only the holotype of this species had become known (PACE 1989); the type locality is Gürgentepe (Ordu).

***Leptusa (Stictopisalia) batumiensis batumiensis* PACE (Map 2)**

MATERIAL EXAMINED: **Artvin**: 1 ex., Hopa, Çiftköprü, 1000 m, VI.1977.

The taxonomic status of the two subspecies of *L. batumiensis* must be regarded as uncertain, and the distributions require clarification. The nominal subspecies was previously known only from Batumi, Georgia (PACE 1989) and is here recorded from Turkey for the first time.

***Leptusa (Stictopisalia) batumiensis artviniensis* PACE (Map 2)**

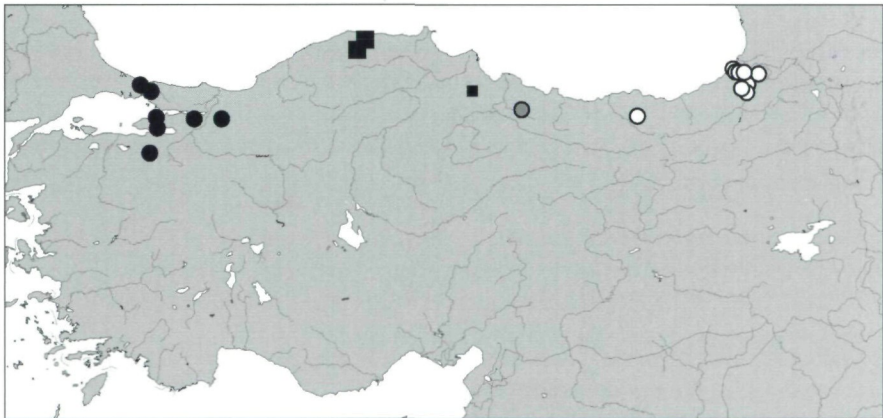
MATERIAL EXAMINED: **Artvin**: 93 exs., Borçka, 1.-3.VI.1960; 2 exs., Borçka, 1700 m, 18.-27.VI.1970; 1 ex., Borçka, 1500 m, VII.1974; 1 ex., Borçka, 1500 m, 4.-7.VI.1969. **Trabzon**: 1 ex., Hamsiköy, VII.1975.

This subspecies is apparently quite common in Artvin; for several additional records see ASSING (2002). It is here recorded from Trabzon for the first time.

***Leptusa (Stictopisalia) merkli* BERNHAUER (Map 2)**

MATERIAL EXAMINED: **Istanbul**: 7 exs., Yalova, V.1959; 3 exs., Yalova, 21.-23.VI.1961; 1 ex., Yalova, V.1962; 3 exs., Yalova, 5.VI.1957; 2 exs., Belgrat Forest, VIII.1974.

*Leptusa merkli* is widespread in northwestern Turkey (PACE 1989).



Map 2: Distributions of the Turkish species of the subgenus *Stictopisalia* SCHEERPELTZ, based on material examined, ASSING (2002), and PACE (1989): *Leptusa merkli* (black circles), *L. ionopolitana ionopolitana* PACE (large squares), *L. ionopolitana amisensis* PACE (small square), *L. fibula* sp.n. (grey circle), and *L. batumiensis* (both subspecies, white circles).

***Leptusa (Stictopisalia) fibula* sp.n.**  
(Figs. 8 - 14, Map 2)

TYPE MATERIAL: **Holotype** ♂: "Akkus, Anat. bor., 3.-5.6.61, leg. F. Schubert / Holotypus ♂ *Leptusa fibula* sp. n. det. V. Assing 2002" (NMW). **Paratypes**: 1 ♂, 1 ♀: same data as holotype (NMW, cAss).

**DESCRIPTION:** 2.1 - 2.3 mm. Head dark brown, pronotum and elytra reddish brown, abdomen reddish brown with the preapical segments distinctly infuscate; legs and antennae ferruginous. Facies as in Fig. 8.

Head subcircular; eyes approximately as long as postocular region in dorsal view or nearly so, weakly projecting from lateral outline of head (Fig. 8); punctures relatively large, but shallow, interstices on average narrower than punctures; microreticulation distinct. Pronotum distinctly transverse and wider than head, maximal width near anterior angles (Fig. 8); punctuation and microsculpture on the whole similar to those of head, but punctures somewhat shallower and more indistinct. Elytra as wide as, at suture distinctly (0.75 times) shorter than pronotum (Fig. 8); punctuation coarser and better defined than on head and pronotum, but surface more shining owing to weaker microsculpture. Hind wings reduced. Abdomen wider than forebody, widest at segments V/VI (Fig. 8); punctuation very fine and much sparser than that of forebody, especially on posterior tergites; integument with subdued shine; posterior margin of tergite VII without palisade fringe.

♂: tergite and sternite VII unmodified; posterior margin of tergite VIII weakly concave in the middle (Fig. 13); sternite VIII posteriorly pointed (Fig. 14); median lobe of aedeagus of distinctive morphology, dorsally with conspicuous transverse "bridge" (Figs. 9 - 11).

♀: tergite and sternite VIII of similar shape as in ♂; spermatheca as in Fig. 12.

**ETYMOLOGY:** The name (Lat.: clasp, clip) is a noun in apposition and refers to the distinctive dorsal bridge-like structure of the median lobe of the aedeagus.

**SYSTEMATICS AND COMPARATIVE NOTES:** Based on the morphology of the aedeagus, *L. fibula* belongs to *Stictopisalia*. It can be distinguished from all other Turkish and Caucasian representatives of this subgenus by the morphology of the aedeagus, especially the lateral and the dorsal aspect, and by the shape of the spermatheca. From most of these species it is also separated by the large punctures on the forebody.

**DISTRIBUTION AND BIONOMICS:** The type locality is situated in Ordu, northern Anatolia. Ecological data are unknown.

***Leptusa (s.str.) pulchella* (MANNERHEIM)**

**MATERIAL EXAMINED:** Trabzon: 10 exs., Trabzon, Maçka, 1000 m, VII.1971. Artvin: 4 exs., Borçka, 1.-3.VI.1960; 6 exs., Borçka, 1500 m, VI.1972.

This widespread species is here recorded from Turkey for the first time.

***Leptusa (Dysleptusa) fuliginosa* (AUBÉ) (Fig. 15, Map 3)**

**MATERIAL EXAMINED:** Kastamonu: 4 exs., İlgaz Dağı, 14.VIII.1974. Sinop: 2 exs., Çangal Dağı, 7.-15.VI.1960. Rize: 1 ex., Pazar, İliça, VII.1979; 1 ex., İkizdere, 1600 m, VI.1973. Artvin: 1 ex., Borçka, 1.-3.VI.1960; 1 ex., Borçka, 1500 m, VI.1972.

According to PACE (1989), the elytra of *L. fuliginosa* are longer than the pronotum, a character separating this species from *L. rossica* BERNHAUER, which is currently known only from the Crimea (several paralectotypes of *L. rossica* examined). In the material from northern Anatolia, the length of the elytra was found to be subject to considerable variation; in some specimens the elytra were shorter than the pronotum. No differences, however, were found in the morphology of the aedeagus, which, based on the illustration in SMETANA (1973), is identical with that of the lectotype of *L. fuliginosa*. According to PACE (1989), *L. fuliginosa* is the only species of the subgenus present in the Balkans. However, a specimen seen from the south of Central Greece (coll. Wunderle), also with long elytra, is apparently not conspecific with the present interpretation of *L. fuliginosa*; its aedeagus has a differently shaped ventral process, a much

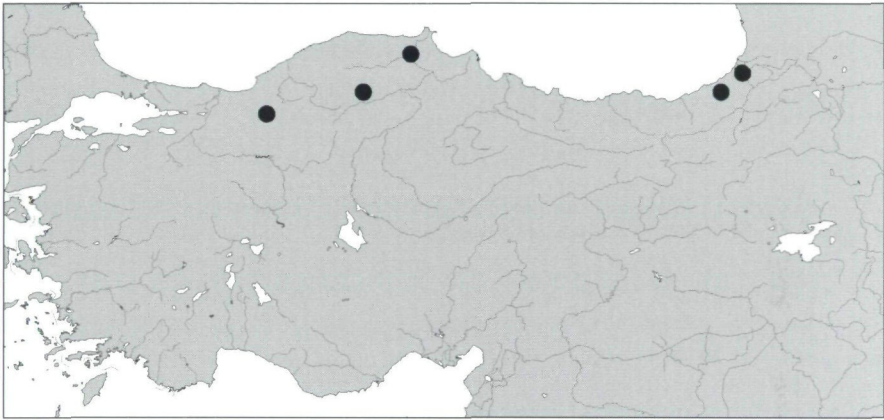
wider internal tube, and is on the whole more similar to that of *L. rossica* (Figs. 15 - 16). The identity of that species can only be clarified based on a revision of the types of the synonyms of *L. fuliginosa* (*L. cribripennis* KRAATZ, *L. vavrai* ROUBAL).

In Turkey, *L. fuliginosa* was previously known from Bolu and Rize (PACE 1989).

### ***Leptusa (Oncopisalia) asiatica* BERNHAUER (Map 1)**

MATERIAL EXAMINED: **Ordu:** 2 exs., Ünye, VIII.1971. **Adana or Gaziantep:** 6 exs., E Osmaniye, 1200-1700 m. **Van:** 1 ex., E Lake Van, 1800-2200 m, VI.1969.

This species was previously known from several localities in the northwest of Turkey (PACE 1989). The new records show that *L. asiatica* is remarkably widespread, despite the reduced wings. The specimens listed above represent the first records from central northern (Ordu), central southern (surroundings of Osmaniye) and eastern Anatolia (Van).



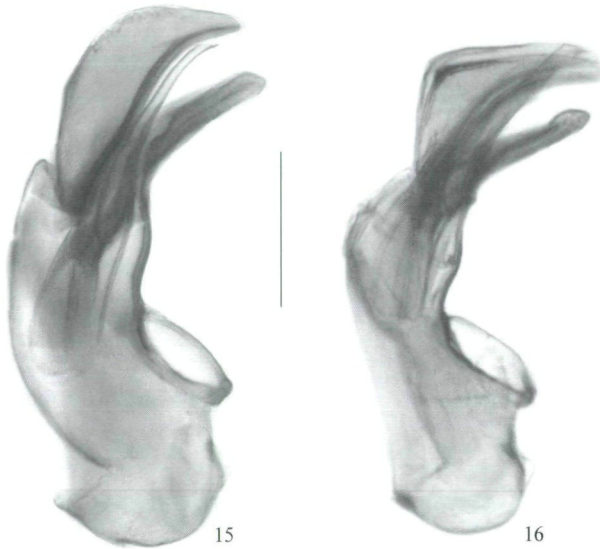
Map 3: Distribution of *Leptusa fuliginosa* (AUBÉ) in Turkey, based on material examined and PACE (1989).

### **Acknowledgements**

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### **Zusammenfassung**

Eine Untersuchung türkischen Materials der Gattung *Leptusa* KRAATZ aus der Schubert-Sammlung (Wien) ergab Nachweise von 14 Arten und Unterarten, darunter einige Taxa, die seit ihrer Originalbeschreibung nicht wieder gemeldet wurden, zwei Erstnachweise für die Türkei (*L. pulchella* (MANNERHEIM) und *L. batumiensis batumiensis*). Damit beträgt die Zahl der aus der Türkei bekannten *Leptusa*-Arten und -Unterarten 22. Zwei Arten werden beschrieben, abgebildet und von ähnlichen Vertretern der Gattung unterschieden: *Leptusa (Neopisalia) sica* sp.n. und *L. (Stictopisalia) fibula* sp.n. Für *L. venusta* (HOCHHUTH), *L. asiatica* BERNHAUER, *L. merkli* BERNHAUER, *L. ionopolitana* PACE, *L. batumiensis* PACE, *L. fibula* sp.n. und *L. fuliginosa* (AUBÉ) werden Verbreitungskarten erstellt.



Figs. 15 - 16: *Leptusa fuliginosa* (AUBÉ) (northern Anatolia) and *L. (Dysleptusa) sp.* (southern Central Greece): median lobe of aedeagus in lateral view. Scale: 0.1 mm.

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