

Laemostenus (Antisphodrus) catlosi, sp.nov. from Turkey with remarks on the distribution of some *Antisphodrus* species in Anatolia (Coleoptera: Carabidae: Sphodrini)

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Laemostenus (Antisphodrus) catlosi, sp.nov. from Turkey with remarks on the distribution of some *Antisphodrus* species in Anatolia (Coleoptera: Carabidae: Sphodrini). *Entomol. Probl.* 34(1): XX–YY. – *Laemostenus (Antisphodrus) catlosi* sp.nov. from the Taurus mountains in Turkey is described, illustrated and compared with the related species of the *bodemeyeri* species-group. Key to the identification of the related species is provided and some comments on the subgenus *Antisphodrus* are given.

Key words: Coleoptera, Carabidae, *Laemostenus* subgenus *Antisphodrus*, taxonomy, Turkey, Taurus mountains, new species.

Introduction

The subgenus *Antisphodrus* (Schaufuss, 1865) of the genus *Laemostenus* (Bonelli, 1810) includes about 40 species with a circum-mediterranean distribution (Casale 1988, Casale & Vigna Taglianti 1999). Most of them are known to be depigmented, with a subterranean way of life, frequently cavernicolous (Casale 1988; Casale 1997, Casale et al. 2003, Jeanne 1996, Lassalle 1997). Twenty-one species from Turkey have been reported hitherto (Casale & Vigna Taglianti 1999, Casale et al. 2003). In the course of study of the Turkish material of Pterostichinae collected by Dušan Čatloš in the autumn 1997, one female belonging to an undescribed species of the *bodemeyeri* species group has been discovered. During the author's visit to the same locality in June 2003, four more specimens have been found. Furthermore, when the examination of the material collected by I. Puchner in the vicinity of Yarpuz (Vil. Antalya, ca 15 km North of Akseki) was carried out, another male was found. This material has been made available for study by Walter Heinz (Schwanfeld, Germany). The new species is described here below.

The abbreviations used in the text are: CRL – collection Roman Lohaj; CIS – collection Ivan Smatana, Košice, Slovakia, CWH – collection Walter Heinz, Schwanfeld, Germany, NMW – Naturhistorisches Museum, Wien, Austria.

***Laemostenus (Antisphodrus) catlosi* sp.nov.**
(Figs 1–9)

Material examined: Holotype ♂: “Turkey, vill Antalya, Akseki, Bademli geçidi 1400 – 1500 m, 8. – 9. 6. '03, R.Lohaj & I. Smatana lgt.”, NMW. Paratypes: 3 ♀♀, the same data as Holotype, 2 ex. CRL; 1 ex. CIS; 1 ♀: “S Turkey, Antalya, Taurus mts., Bademli geçidi (Bademli pass), cca 30 km north of Akseki,

1390 m, 15.–16.10.1997, D. Čatloš lgt.”, CRL; 1 ♂: “Türkei, s.c. Anatolien, Akseki, str.v. Yarpuz östlich, 1650 – 1800 m, I.Puchner, 17. IV. – 8. V. 2000”, CWH.

Description

Total body length (from the apex of mandibles to the apex of elytra) 14.0–17.5 mm (Holotype 14.0 mm), colour piceous brown, antennae and tarsi red-brown. Head and pronotum smooth, shiny, elytra glabrous, dull, with distinct microsculpture. (Fig. 1).

Head large, robust, almost as long as wide and as long as pronotum, shiny, smooth, with very fine microsculpture, with two supraorbital setiferous punctures, without accessory occipital setae. Frontal furrows shallow, smooth, reaching the level of anterior edge of the eye. Eyes small, strongly reduced. Mandibles long, narrow. Antennae long and slender, reaching almost half of elytral length. Antennomere 3 with accessory pubescence consisting of 4 to 7 setae (Fig. 2). Antennae with dense, decumbent pubescence from antennomere 4, from antennomere 5 strongly flattened.

Pronotum almost as wide as long, ratio maximum width / maximum length 0.93–0.97 (holotype 0.95), shiny, smooth, with very fine transversal rugae. Sides of pronotum sinuate before the base, posterior angles obtuse, with one setiferous puncture. Anterior angles prominent, rounded at apex. Base of pronotum slightly oblique towards the posterior angles, with two shallow, smooth basal impressions. Lateral furrow narrow, with one setiferous puncture in the apical third.

Elytra oval, broadened posteriorly, with maximal width at its apical third, strongly flattened, dull, with evident microsculpture. Base of elytra almost as wide as the base of pronotum. Basal bead strongly concave, humeri scarcely distinct. Elytral striae very fine, impunctate, intervals flat. Scutellar stria present, fine, obsolete in the distal

half. Mesosternum denticulate before the middle coxa. Abdominal sternites smooth, dull, with fine, dense microsculpture, sternites 4–6 with two setae on the distal margin, without accessory ones.

Legs elongate, slender, mesotibiae straight. Protibiae with fine, sparse pubescence limited to the internal sides of apical portions (Fig. 3). Pubescence of metatibiae dense, limited to the apical half. Tarsi with fine, sparse, decumbent pubescence; tarsal claws smooth, without traces of denticulation.

Genitalia, aedeagus (Figs 6–9) with median lobe short, arcuate, inflated at its basal third, apex very short, subtruncate, slightly prominent on the dorsal side. Right paramere rounded apically, left paramere with short apical membranous lobe. Female stylomeres as in Figs 4 and 5.

Sexual dimorphism. Male is easily distinguished by first three tarsal segments of protarsi dilated, other significant differences not observed.

Distribution. So far known only from the localities in Turkey cited above.

Bionomy. The first female (collected in October 1997) was found after a storm under a large stone in a fir forest on the northern slope of the Bademli pass. Another three specimens were collected at night on the surface of the karst walls and the fissures of the Bademli pass. The holotype was collected into a trap located in a small cave together with *Catops elephas* Jeannel, 1936 (Coleoptera, Leiodidae, Cholevinae). Ecological data of the paratype specimen from Yarpuz are not available.

Etymology: Patronymic, dedicated to Dušan Čatloš (Bratislava, Slovakia), the collector of the new species.

Discussion

According to the last revision of the genus *Laemostenus* (Casale, 1988) and the following works (Casale, 1998, Casale & Vigna Taglianti, 1999, Casale et al. 2003) the new species belongs to the *L.(A.) bodemeyeri* species group, which is spread through Greece (south Peloponnesos and the Island of Kalymnos) (Casale, 1988, Dubault & Lassalle, 1991), the Anatolian mountain range Taurus (Toros Daglari) to Lebanon (Djebel Sannin). This group includes 13 species (2 species from Greece, 10 species from Turkey and one species from Lebanon).

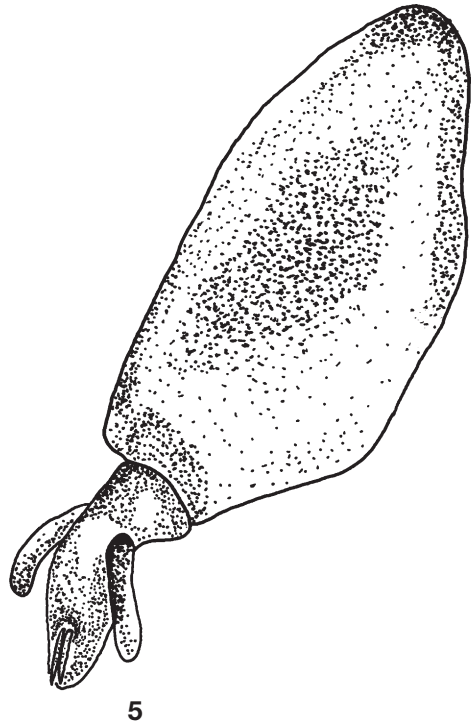
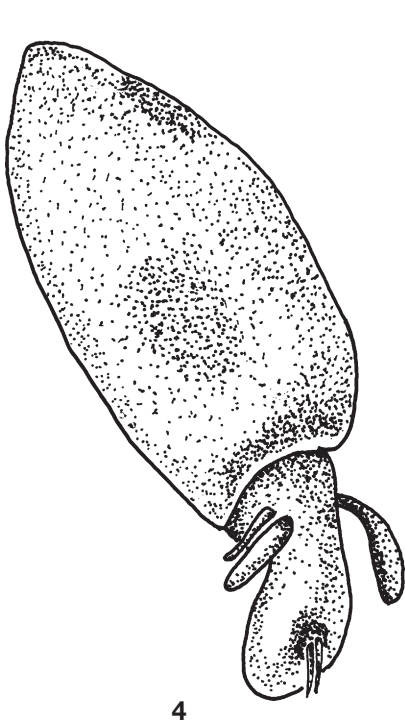
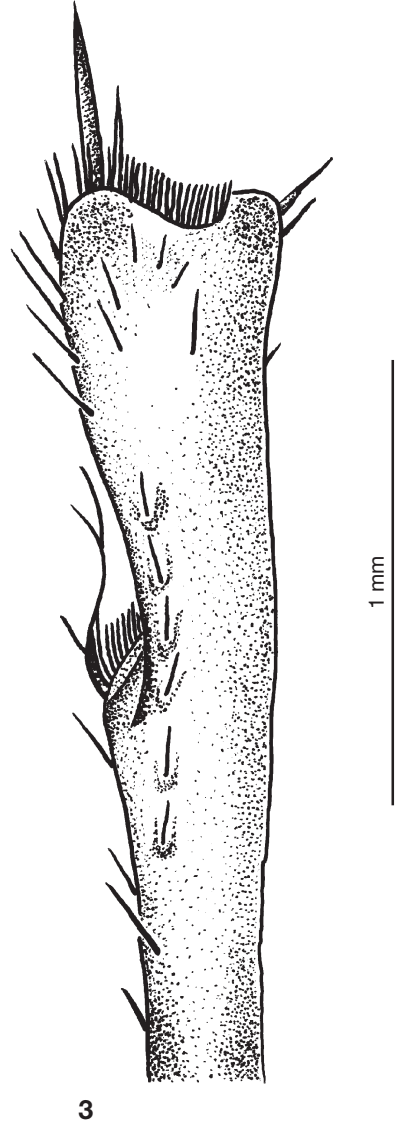
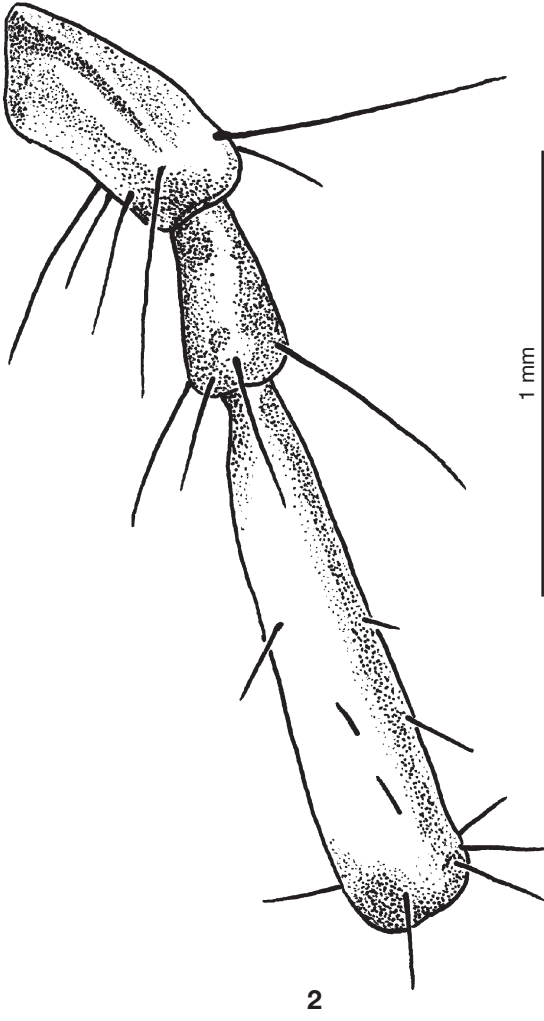
Laemostenus (Antisphodrus) catlosi sp.nov. can be easily separated from the other species of *L.(A.) bodemeyeri* species group described from Turkey so far as follows:

- 1(2) Antennomere 3 without accessory setae except apical fixed ones *bodemeyeri* (Ganglbauer, 1900, *longicornis* Casale, 1988, *zoiai* Casale & Vigna Taglianti 1999
- 2(1) Antennomere 3 with accessory pubescence consisting of 1–7 very short, or numerous long setae
- 3(6) Antennomere 3 with numerous long setae
- 4(5) Head with only two supraorbital setiferous punctures *agnolettii* Vigna Taglianti 1999
- 5(4) Head with numerous supraorbital setiferous

- punctures
- *lundbergi* Jeanne 1996, *cyrili* Lassalle 1997
- 6(3) Antennomere 3 with accessory pubescence consisting of 1–7 very short setae.



1–9 *Laemostenus (Antisphodrus) catlosi* sp.nov.: 1) Habitus; 2) Antennomere 1–3, right antenna; 3) Apical portion of right protibia; 4, 5) Female styles, ventral view, 4) right, 5) left; 6–9) genitalia features, male paratype: 6) median lobe, left side, 7) right paramere, 8) left paramere, 9) median lobe, dorsal side.

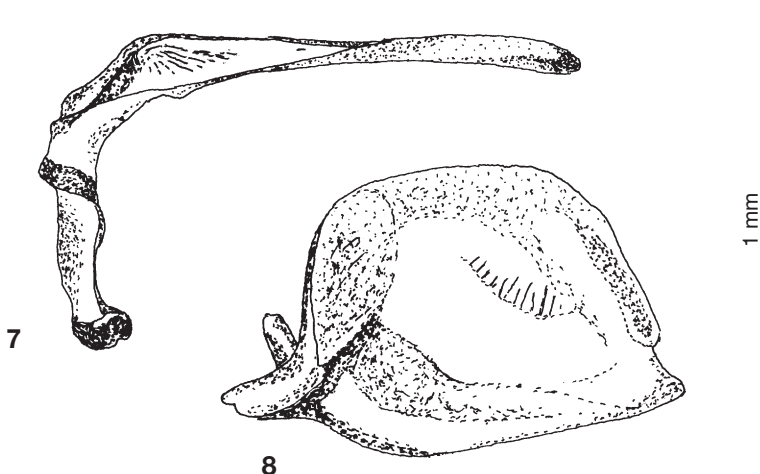
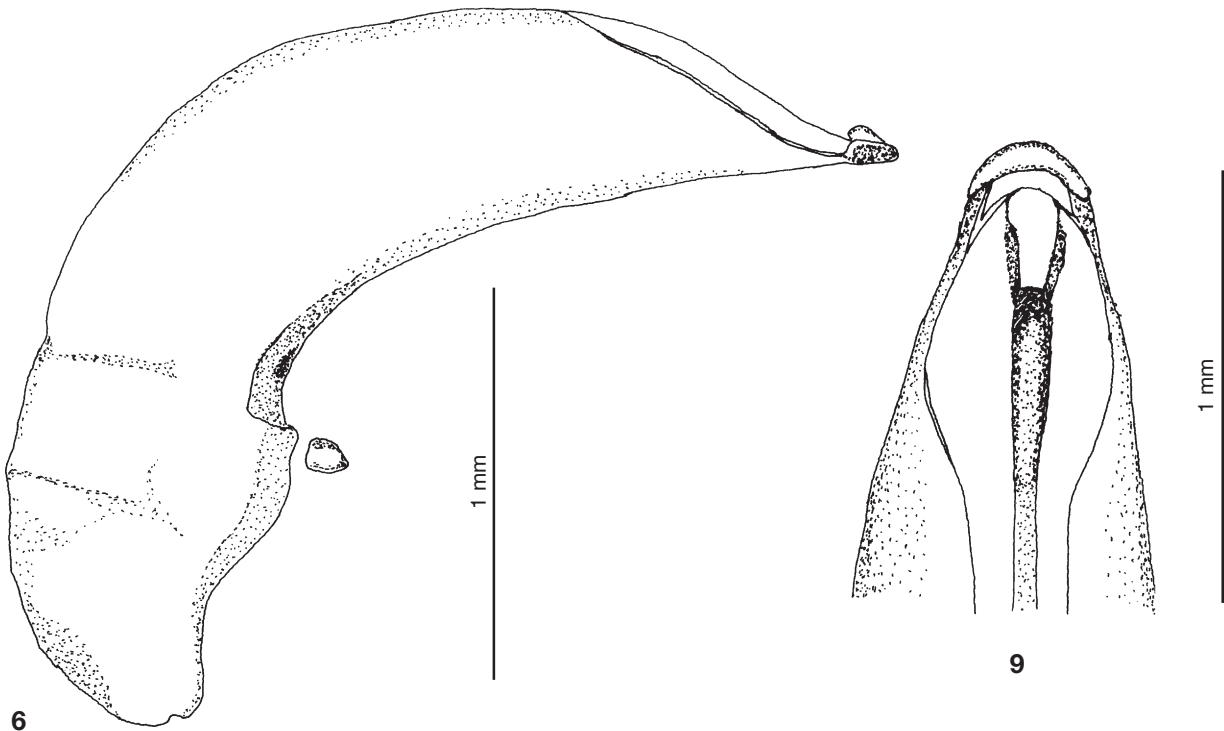


- 7(8) Eastern Taurus, caves and pits near Mersin (Güzeloluk, Silifke), 11.5–13 mm
 *guzelolukensis* **Lassalle 1997**
- 8(7) Western Taurus, surrounding of Antalya and Burdur.
- 9(10) Smaller species (11.9 mm), cave Akyarlar near road Antalya – Kemer *gasparoi* **Casale 2003**
- 10(9) Larger species, 12–17,5 mm
- 11(12) Colour dark brown, elytra strongly flattened, striae very fine, smooth. 14–17,5 mm ... *catlosi* **sp. nov.**
- 12(11) Colour fully redish to redish-brown, elytra more convex, striae deep.
- 13(14) % smaller (12–14,4 mm), with narrower and more elongate head, elytra shorter, more depressed. Caves in environs of Burdur
 *kestelensis* **Casale, Felix & Muilwijk 2003**
- 14(13) % larger (13–15,6 mm), elytra more elongated,

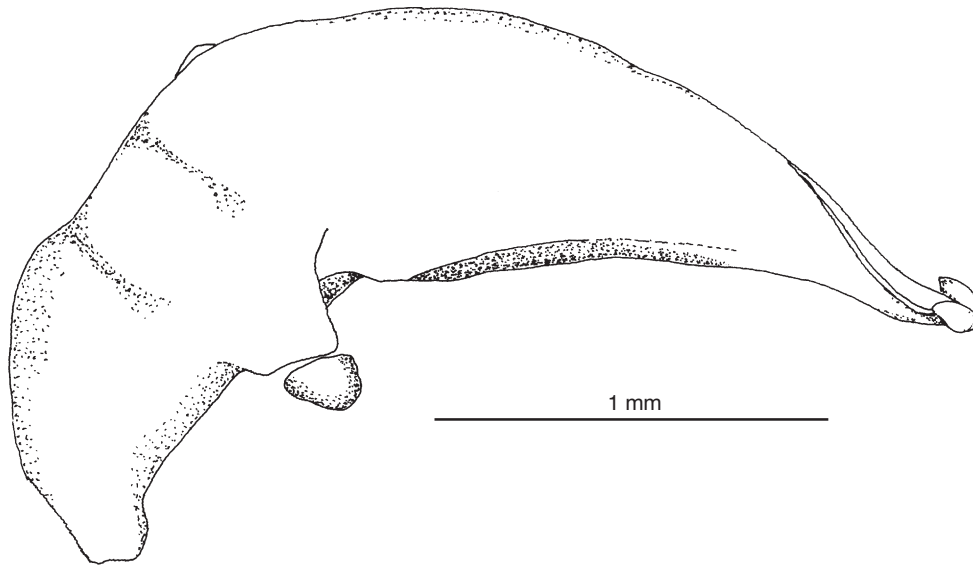
convex. Caves in environs of Antalya
 *patrizii* **Vigna Taglianti 1999**

Check-list of *Laemostenus* (sg. *Antisphodrus*) of the *bodemeyeri* species-group

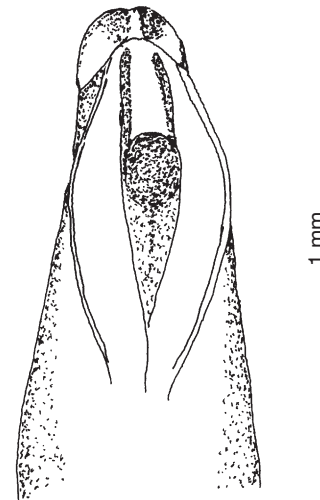
1. *Laemostenus* (*Antisphodrus*) *casalei* **Dubault & Lassalle 1991**: Greece, Peloponnesos, mountain range Taygétos (type locality).
2. *Laemostenus* (*Antisphodrus*) *beroni* **Casale 1988**: Greece, Island of Kalymnos, Cave of Seven virgins (type locality), Cave de Skalia.
3. *Laemostenus* (*Antisphodrus*) *bodemeyeri* **Ganglbauer, 1900**: Taurus, Bolkar **dađlari** (Bulghar Dagh by the ancient authors), Bolkar **Mađara** – cave (type locality).
4. *Laemostenus* (*Antisphodrus*) *longicornis* **Casale 1988**: Western Taurus, Akseki-Imrasan Geçidi (Pass)-un-



- known cave (type locality), Akseki-cave of Demirci Dükkanlan, Akseki, pit near Dikmen, 900 m. **Gülendağ**, North of Manavgat (Antalya).
5. *Laemostenus* (*Antisphodrus*) *zoiai* Casale & Vigna Taglianti 1999: Eastern Taurus, Mersin, Anamur, Kösen Bürkü **maðara** (cave) (type locality).
 6. *Laemostenus* (*Antisphodrus*) *lundbergi* Jeanne 1996: Western Taurus, Antalya, Yarpuz, 1200 m (type locality), Imrasan geçidi (Lassalle, 1997).
 7. *Laemostenus* (*Antisphodrus*) *cyrili* Lassalle 1997: Konya, south of **Beybehir** lake (type locality), Konya, **Yesildağ**.
 8. *Laemostenus* (*Antisphodrus*) *agnolettii* Vigna Taglianti 1999: Konya, **Seydişehir**, Ferzen **maðara** (cave), type locality.
 9. *Laemostenus* (*Antisphodrus*) *guzelolukensis* Lassalle 1997: Eastern Taurus, Mersin, caves and pits near Güzeloluk (type locality), Mersin, Silifke, Cennet **maðarasi**, Astim **maðarasi**.
 10. *Laemostenus* (*Antisphodrus*) *gasparoi* Casale 2003: Akyarlar **maðara** (cave), near road Antalya – Kemer (type locality).
 11. *Laemostenus* (*Antisphodrus*) *patrizii* Vigna Taglianti 1999: Western Taurus, Antalya, Dosemealti, **Yaðça**, Mustan Ini (type locality), unknown caves-mountain range In Dagh, Yeniköy, Karain **maðarasi**, Koca in **maðara** – mountain range In Dağ (ca 45 km North of Antalya).
 12. *Laemostenus* (*Antisphodrus*) *kestelensis* Casale, Felix & Muilwijk 2003: Yarasa **maðarasi** (cave) – type locality, Sefer **Yitiði maðarasi** (cave), Buçak, Burdur.
 13. *Laemostenus* (*Antisphodrus*) *catlosi* sp.nov.: Antalya, Akseki, Bademli pass (type locality), surrounding of Yarpuz.
 14. *Laemostenus* (*Antisphodrus*) *libanensis* La Brulerie, 1875: Lebanon, Djebel Sannin (type locality). Note: this taxon was described on remains (Casale, 1988), and its correct systematic position still needs to be verified.



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Figs 10–11 *Laemostenus* (*Antisphodrus*) *patrizii* Vigna Taglianti 1999 (Koca in cave), genitalia features: 10) median lobe, left side; 11) dorsal side.

Notes on the geographic distribution and bionomy of some *Antisphodrus* – species from Anatolia.

Laemostenus (*Antisphodrus*) *bicolor* (Reitter, 1890): Turkey bor., or., Digor env., 2130 m., 12.6.1999, 1 female dead under a large stone, T.Lackner lgt., R.Lohaj det. and coll. 1 male labelled: “NE Turkey, Gemecik, NE Refahiye, 2.-3.VI.98, lgt.E.&P.Hajdaj”, R.Lohaj det., coll. J. Farkač. 1 female labelled: “NE Turkey, 30 km E Erzurum, 2200 m, 4003N, 4133E, 28.6.02, lgt. E.&P.Hajdaj”, R.Lohaj det. and coll. Further data on this species, originally described from Armenia.

Laemostenus (*Antisphodrus*) *kirschenhoferi* Casale 1988: Turkey bor., occ., Kurşunlu (ca 100 km north of Ankara), about 1000 m, 23.5.-13.6.1996, 1 male under a stone on steppe., F.Moravec lgt., R.Lohaj det. and coll. New locality for this species.

Laemostenus (*Antisphodrus*) *guzelolukensis* Lassale 1997: Turkey, prov. Mersin, Güzeloluk env., 1200-1400 m., 11.-12.6.1999, 1 male collected in a pit deep about 3 m on steppe, J.Vávra lgt., R.Lohaj det. and coll. Further data on this species, recently described from environs of Güzeloluk.

Laemostenus (*Antisphodrus*) *agnoletti* Vigna Taglianti 1999: 1 female Turkey, vill. Konya, Seydişehir env, Ferzen (Kuđlu) mađara (cave), 29.4.2001, R.Lohaj lgt., det. and coll., 1 male the same data, but 5.6.2003. Female was collected on the cave wall near fissure in the entrance at night. Male was collected under a stone inside the tunnel together with *Duvalius* (*Duvalius s.str.*) *huetheri* Jeannel, 1934 (Coleoptera, Carabidae, Trechinae), *Choleva sp.*, *Catops elephas* Jeannel, 1936 (Coleoptera, Leiodidae, Cholevinae). This species was described based on one male (Casale & Vigna Taglianti 1999), collected by P.Agnoletti in April 1973. New data on this species from the type locality.

Laemostenus (*Antisphodrus*) *longicornis* Casale 1988: 1 female labelled: “Türkei, s.c., Anatolien, Murtici, umg. Gözelsu, Gulendag, 1050 m, I.Puchner 16.IV.-7.V.2000”, R. Lohaj det., coll. W.Heinz. Further data on this species, known only from the environs of Akseki and Kemer (vil. Antalya).

Laemostenus (*Antisphodrus*) *patrizii* Vigna Taglianti 1999: 13 males, 12 females: Turkey, vill. Antalya, Killik env., In dađ mts., Koca in mađara (cave), 2.– 4.6.2003, R.Lohaj & I.Smatana lgt. and coll., R.Lohaj det. All specimens were collected in the entrance of a cave, on the cave walls and under the stones at night, together with *Tapinopterus cf. laevisternus* Müller, 1931, *Haptotapinus dipojranus* Straneo, 1987 (Coleoptera, Carabidae, Pterostichinae), *Choleva sp.*, *Cholevopsis sp.*, *Catops sp.* (Coleoptera, Leiodidae, Cholevinae). First record of this species from a

well known cave with great prehistorical interest (Casale & Vigna Taglianti 1999) The cave is also the type locality of *Sbordoniella indagi* Vigna Taglianti, 1980 (Coleoptera, Carabidae, Trechinae), which has been found as well.

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