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Two new species of Athetini from Italy and Greece (Coleoptera: Staphylinidae, Aleocharinae)

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A b s t r a c t : *Emmelostiba kappi* sp.n., the second species of the genus from Italy and the third representative from Europe, and *Atheta fissilis* sp.n. from southern Greece are described, illustrated, and distinguished from similar congeners. The distributions of the Italian *Emmelostiba* species are mapped.

Key words : Coleoptera, Staphylinidae, Aleocharinae, Athetini, Emmelostiba, Atheta, Palearctic region, Europe, Italy, Greece, taxonomy, new species.

Introduction

Numerous species of Staphylinidae are confined to higher altitudes and the Western Palearctic endemic to certain mountain ranges. Among the Aleocharinae most of these species belong to large and diverse genera such as *Leptusa* KRAATZ, *Geostiba* THOMSON, *Alpinia* BRUNDIN, and *Tectusa* BERNHAUER. The remainder either comes from large genera comprising mostly widespread species, e. g. *Atheta* THOMSON and *Oxypoda* MANNERHEIM, or from small genera represented in the Western Palearctic by only few species such as *Paraleptusa* PEYERIMHOFF and *Emmelostiba* PACE. The latter is represented in the Mediterranean by three species, two of them European.

Material of Staphylinidae collected by Andreas Kapp and made available to me for study included two specimens of an undescribed third European species of *Emmelostiba* from central Italy. I also use this opportunity to describe a remarkable species of Athetini from Greece, whose aedeagus strikingly resembles that of *Emmelostiba*, but whose placement in that genus is not supported by other characters.

Material

The material referred to in this study is deposited in the following Collections:

ÖöLM..... Oberösterreichisches Landesmuseum Linz

cAss author's private collection

cKap..... private collection A. Kapp, Rankweil

cWun..... private collection P. Wunderle, Mönchengladbach

***Emmelostiba kappi* sp.n. (Figs. 1, 3-7; Map 1)**

H o l o t y p e ♂: Italien Abruzzen 5091, Maiella La Majelletta zum Mte. Focalone, 2620m S. Feldrand, 15.VI.2001, Ing. A. Kapp / Holotypus ♂ *Emmelostiba kappi* sp.n. det. V. Assing 2002 (cAss). **P a r a t y p e** ♂: same data as holotype (cKap).

D e s c r i p t i o n: 2.3-2.7 mm. Forebody dark brown; abdomen blackish; legs light brown; antennae dark brown, with the basal 3-4 antennomeres light brown. Facies as in Fig. 1.

Head of subrectangular shape, approximately 1.15 times as wide as long (length measured from anterior margin of clypeus); eyes of reduced size and weakly protruding from lateral outline of head, almost 0.5 times as long as postocular region in dorsal view (Fig. 1); dorsal surface somewhat flattened and with distinct microreticulation; puncturation extremely fine, invisible at magnifications of <100 x. Antennomere I distinctly larger and longer than II and III; III coniform, slightly longer than wide and slightly shorter than II; IV-X increasing in width and increasingly transverse; X approximately twice as wide as long; XI ovoid, shorter than the combined length of IX and X.

Pronotum approximately 1.15 times as wide as long and 1.05 times as wide as head; maximal width in anterior half, a short distance from anterior angles; lateral margins in dorsal view tapering posteriad in almost straight line; posterior angles obtuse, but rather well-marked (Fig. 1); pubescence directed cephalad along median line and more or less transversely laterad in lateral areas; puncturation and microsculpture similar to those of head.

Elytra short, at suture about 0.65 times the length of pronotum (Fig. 1); microsculpture shallower than that of head and pronotum, surface therefore somewhat more shining; puncturation extremely fine, barely noticeable even at higher magnifications; hind wings reduced.

Tarsal formula 4,5,5. First metatarsomere only slightly longer than second metatarsomere.

Abdomen long and of subparallel shape, widest at segments V/VI; approximately 1.15 times as wide as elytra; tergites III - V with distinct, tergite VI with weaker anterior impression; microsculpture present, but shallower than on head and pronotum; tergite VII without palisade fringe.

♂: posterior margin of tergite VIII weakly bisinuate (Fig. 6); sternite VIII much longer than the corresponding tergite, its posterior margin weakly convex and in the middle with long marginal setae (Fig. 7); posterior margins of tergite and sternite VIII narrowly transparent, semi-membranous; aedeagus apically deeply bifid (Figs. 3-4); apical lobe of paramere as in Fig. 5.

♀: unknown.

E t y m o l o g y: I dedicate this species to Andreas Kapp, Rankweil, who discovered this remarkable athetine.

Comparative notes and discussion: *E. kappi* is the second representative of the genus to become known from Italy. It is distinguished from *E. rosai* (PACE 1978) from the Gran Sasso range, its sole Italian congener, by a more rectangular shape of the head and the morphology of the aedeagus, especially the shorter, stouter, and less curved ventral process of the median lobe (lateral view), the deeper median incision of the ven-

tral process (ventral view), and the more pronounced crista apicalis and crista proximalis. For comparison see the illustrations in PACE (1978). The third European species of *Emmelostiba* is *E. renominata* (LIKOVSKY) from the Greek island Kefallinia; it is separated from *E. kappi* by a more distinctly bent and apically less deeply incised median lobe of the aedeagus and by a posteriorly more strongly convex δ sternite VIII. For illustrations of the sexual characters of *E. renominata* see ASSING (2001). In the slightly smaller *Emmelostiba besucheti* PACE from Israel, the type species of the genus, the whole body is more shallowly microsculptured and distinctly more shining, the eyes are smaller and even less protruding from the lateral outline of the head, the pronotum is more strongly tapering posteriorly, the male sternite VIII is more distinctly narrowed posteriorly and has a more distinctly convex posterior margin, and the aedeagus is more strongly bent in lateral view; for illustrations see PACE (1982).

According to the original description of *E. rosai*, that species has four-segmented mesotarsi, which is why PACE (1982) attributed it to the distinct subgenus *Italiusa* (type species: *E. rosai*). *Emmelostiba kappi*, almost certainly the closest relative of *E. rosai*, definitely has five-segmented mesotarsi, so that it seems likely that the same applies to *E. rosai* and that *Italiusa* is in fact a synonym of *Emmelostiba*.

Distribution and bionomics: The Montagna della Maiella, where *E. kappi* was discovered, is located some 80 km to the southeast of the Gran Sasso range, the type locality of *E. rosai* (Map 1). Both species are apparently confined to alpine habitats, *E. rosai* was found at 2200 m (PACE 1978) and *E. kappi* was collected at 2620 m at the edge of a snowfield.

Atheta fissilis sp.n. (Figs. 2, 8-13)

H o l o t y p e δ : GR. Pelopónnisos, nördl. Taygetos, W Perivolía, 1450m, 37°08'44N, 22°16'03E, 24.III.1997, V. Assing / Holotypus δ *Atheta fissilis* sp.n. det. V. Assing 2002 (cAss).

P a r a t y p e s : 2 δ δ , 3 ϕ ϕ : same data as holotype (cAss); 3 δ δ , 5 ϕ ϕ : GR-Peloponnes, N-Taygetos, Str. Perivolía ins Gebirge, 1450m, Tanne, 24.03.97, P. Wunderle (OÖLM, cWun, cAss); 1 δ δ : GR. Fthiotis, No. 7, Parnassos Oros, 1760m, ski resort, Abies wood, 38°33'17N, 22°34'35E, 15.IV.2000, V. Assing (cAss).

D e s c r i p t i o n : 2.7-3.5 mm (abdomen extended). Whole body, including appendages, blackish brown to black. Facies as in Fig. 2.

Head of subquadrate shape, approximately as wide as long (length measured from anterior margin of clypeus); eyes large, distinctly protruding from lateral outline of head and at least as long as postocular region in dorsal view; dorsal surface with distinct microreticulation and consequently only subdued shine; puncturation extremely fine, barely noticeable even at higher magnifications (Fig. 2). Antennomere I longer and slightly wider than II and III; III coniform, slightly oblong and approximately as long as II; IV-X increasing in width and increasingly transverse; X approximately twice as wide as long; XI ovoid, shorter than the combined length of IX and X. Mouthparts as in Figs. 12-13.

Pronotum of rather variable shape, 1.20-1.30 times as wide as long and 1.15-1.30 times as wide as head; maximal width in anterior half; lateral margins in dorsal view weakly convex; posterior angles weakly marked (Fig. 2); pubescence directed caudad along median line and diagonally latero-caudad in lateral areas; puncturation and microsculpture similar to those of head.

Elytra rather short, at suture about 0.85-0.95 times the length of pronotum (Fig. 2);

microsculpture and puncturation similar to those of head and pronotum, or puncturation slightly more distinct; hind wings present, but of reduced length.

Tarsal formula 4,5,5. First metatarsomere approximately as long as second metatarsomere.

Abdomen somewhat dilated posteriad, widest at segments VI/VII; tergites III - V with very shallow anterior impressions; microsculpture present, but shallower than on head and pronotum; puncturation sparse and extremely fine; posterior margin of tergite VII with narrow palisade fringe.

♂: posterior margin of sternite VIII distinctly convex; median lobe of aedeagus with extremely incised ventral process (Figs. 8-9); apical lobe of paramere as in Fig. 10.

♀: sternite VIII broader, more transverse, and posteriorly only weakly convex; spermatheca of distinctive morphology (Fig. 11).

E t y m o l o g y : The name (Lat., adj.: split) refers to the bifid ventral process of the aedeagus.

Comparative notes and discussion: The new species is readily distinguished from all other athetine species by the distinctive genitalia. Based on the morphology of the aedeagus, *A. fissilis* would appear to refer to *Emmelostiba* PACE, but neither the mouthparts nor other external characters support this systematic position. Apically bifid aedeagi have evolved independently in various aleocharine taxa. The fact that this character has been attributed high systematic significance has evidently rendered *Emmelostiba* a polyphyletic genus already; for more details see the discussion in ASSING (2002). The morphology of the mouthparts, external characters (see description), and also the spermatheca (which distantly resembles that of *Atheta nigrifulva* (GRAVENHORST)) suggest that the new species refers to *Atheta* THOMSON. Its phylogenetic position in this genus, however, is very isolated. Since it cannot be attributed to any of the currently accepted subgenera, it is here placed in the "Mischgruppe II" (BENICK & LOHSE 1974).

Distribution and bionomics: *A. fissilis* is known from the south of the Pelopónnisos (Taygetos) and from the south of Central Greece (Parnassos), where the types were sifted from litter in fir forests at altitudes of 1450 and 1760m.

Acknowledgements

My sincere thanks are due to Andreas Kapp for the generous gift of the holotype of *E. kappi* and to Jürgen Vogel, Görlitz, for the helpful discussions regarding the systematic position of *A. fissilis*.

Zusammenfassung

Emmelostiba kappi sp.n, die zweite Art der Gattung aus Italien und die dritte *Emmelostiba*-Art aus Europa, sowie *Atheta fissilis* sp.n. aus dem südlichen Griechenland werden beschrieben und von ähnlichen Arten unterschieden; Habitus, Mundteile und Geschlechtsmerkmale werden abgebildet. Die Verbreitung der italienischen *Emmelostiba*-Arten wird anhand einer Karte illustriert.

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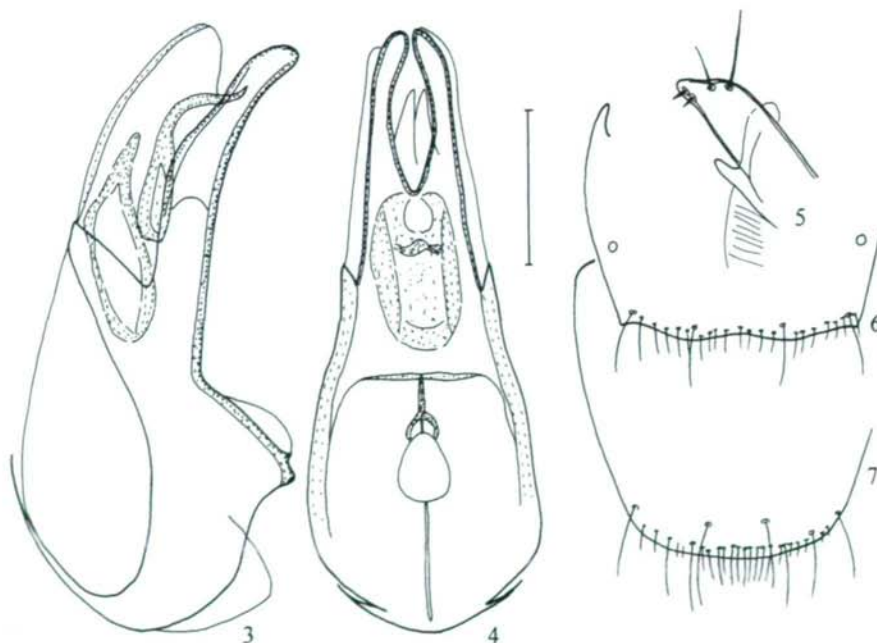
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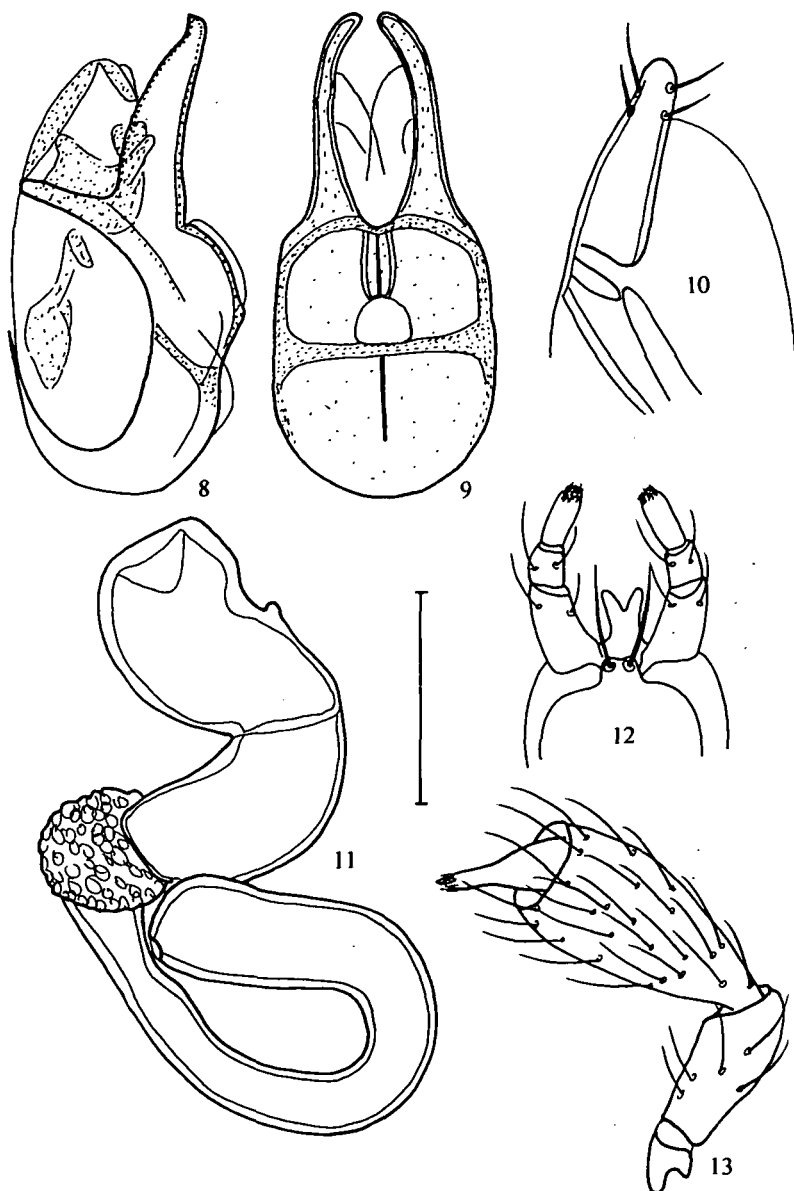
Map 1: Distribution of *Emmelostiba rosai* (PACE) (circle) and *E. kappi* sp.n. (square) in Italy.



Figs. 1-2: *Emmelostiba kappi* sp.n. (1) and *Atheta fissilis* sp.n. (2).



Figs. 3-7: *Emmelostiba kappi* sp.n.: 3, 4 – median lobe of aedeagus in lateral and in ventral view; 5 – apical lobe of paramere; 6 – outline of ♂ tergite VIII; 7 – outline of ♂ sternite VIII. Scale: 3-5: 0.1 mm; 6-7: 0.2 mm.



Figs. 8-13: *Atheta fissilis* sp.n.: 8, 9 – median lobe of aedeagus in lateral and in ventral view; 10 – apical lobe of paramere; 11 – spermatheca; 12 – labium; 13 – maxillary palpus. Scale: 8-9: 0.2 mm; 10-11: 0.1 mm; 12-13: 0.08 mm.

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