

Linzer biol. Beitr.	39/1	57-63	23.7.2007
---------------------	------	-------	-----------

On the identity of *Atheta mucronata* (KRAATZ 1859) (Coleoptera: Staphylinidae, Aleocharinae)

B. FELDMANN

A b s t r a c t : *Atheta mucronata* (KRAATZ) is redescribed and illustrated. A lectotype is designated for *Homalota mucronata* KRAATZ. The following synonymy is proposed: *Atheta mucronata* = *Atheta vitalei* BERNHAUER 1932. The known distribution of the species in the Mediterranean and the Atlantic islands is mapped.

K e y w o r d s : Coleoptera, Staphylinidae, Aleocharinae, *Atheta*, Mediterranean, Canary Islands, taxonomy, new synonymy, distribution.

Introduction

The genus *Atheta* THOMSON (s.l.) is one of the most diverse genera in Staphylinidae. The vast majority of species are generally winged and inhabitants of short-lived habitats like mushrooms, excrements, compost, carrion, etc. While the *Atheta* fauna of central and northern Europe can be considered as well known, this is not true for most parts of the southern European fauna.

The present study was initiated by the examination of an *Atheta* species collected by the author in compost material in Mallorca, Spain, as well as of additional recently collected material of this species from the Atlantic islands and the Mediterranean.

Material and measurements

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

DEI.....Deutsches Entomologisches Institut Müncheberg (L. Zerche)
FMNH.....Field Museum of Natural History, Chicago (J.H. Boone)
TAU.....National Museum of Natural History, Tel Aviv
cAss.....private collection V. Assing, Hannover
cFel.....author's private collection
cZan.....private collection A. Zanetti, Verona

***Atheta mucronata* (KRAATZ 1859)** (Figs 1-15, Map 1)*Homalota mucronata* KRAATZ 1859: 29 f.*Atheta* (*Ceritaxa*) *vitalei* BERNHAUER 1932: 242 f., **syn.n.**

Type material examined: *H. mucronata*: Lectotype ♂, here designated: Ceylon, J. Nietner / *Homalota mucronata* K. / coll. Kraatz / Syntypus / coll. DEI, Müncheberg / Lectotypus ♂ *Homalota mucronata* KRAATZ desig. B. Feldmann 2006 / *Atheta mucronata* (KRAATZ) det. B. Feldmann 2006 (DEI). Paralectotypes 3♂♂, 2♀♀: Ceylon, J. Nietner / coll. Kraatz / Syntypus / coll. DEI, Müncheberg / Paralectotypus *Homalota mucronata* KRAATZ desig. B. Feldmann 2006 / *Atheta mucronata* (KRAATZ) det. B. Feldmann 2006 (DEI). For an illustration of the labels of the lectotype see Fig. 15.

A. vitalei: Holotype ♂: Vignazza, 22.XII.29, F. Vitale / *nigritula* ? / *Ceritaxa* / *vitalei* BERNH. Typus un. (*Ceritaxa*) / Chicago NHMus. M. Bernhauer Collection / *Atheta mucronata* (KRAATZ) det. B. Feldmann 2006 (FMNH).

Additional material examined: **Portugal:** 2♀♀, Madeira, near Prazeres, 2.III.2006, under bark, leg. Hlavac (cAss, cFel). **Spain:** 1♂, 2♀♀, Islas Canarias, El Hierro, La Plajas los Cordones, 27°43'N 17°58'W, 10-30 m, 29.XII.1999, leg. V. Assing (cAss); 1♂, Islas Canarias, El Hierro, Las Puntas, 27°48'N 17°59'W, 50 m, in rotting plant debris, 24.XII.1999, leg. V. Assing (cAss); 3♂♂, 1♀, Mallorca-East, Son Carrió, VI.2004, in compost, leg. B. Feldmann (cFel.); 1♂, 1♀, Mallorca-East, Son Carrió, VIII.2005, in compost, leg. B. Feldmann (cFel.). **Italy:** 1♂, Sicily, Pachino (SR), P. d. Forniche, 17.VII.2000, car-net, leg. A. Zanetti (cZan); 1♂, Sicilia (CT), bank of Alcantara river near Giardini Naxos, 10.IX.2006, leg. Puthz (cAss). **Turkey:** 6♂♂, 1♀, Manavgat env., Kızılot, 36°43'N 31°34'E, 0-50 m, dog carrion, 2.I.1991, leg. Assing (cAss). **Israel:** 1♂, Upper Galilee, Hurfeish, ca. 675 m, 13.XI.2005, 33°01'N 35°21'E (cFel); 1♂, 1♀, Upper Galilee, Hurfeish, ca. 664 m, 28.XI.2005, 33°00'N 35°21'E (cFel); 1♂, Upper Galilee, Hurfeish, ca. 675 m, 28.XI.2005, 33°01'N 35°21'E (cFel); 2♂♂, Upper Galilee, Ziv'on, ca. 773 m, 5.III.2006, 33°02'N 35°25'E (TAU, cFel); 1♂, Upper Galilee, Ya'ar Baram, ca. 674 m, 11.XII.2005, 33°02'N 35°25'E (cFel). 1♂, Upper Galilee, Ya'ar Baram, ca. 674 m, 3.XI.2005, 33°02'N 35°25'E (TAU).

Redescription

3.0-3.2 mm. Habitus as in Fig. 1. Coloration: head and abdomen brown to blackish, pronotum usually distinctly lighter than head and abdomen; elytra yellowish with the scutellar region and the posterior external angles usually darkened; antennae brown to dark brown, with the basal 2-3 antennomeres yellowish.

Head (Fig. 2) about 1.2 times as wide as long, widest across eyes; surface with distinct microreticulation and only with weak shine; puncturation fine and relatively sparse, denser in lateral than in median areas; eyes large and prominent, slightly projecting from lateral outline of head, postocular region approximately half the length of eyes in dorsal view. Antennomere II slightly shorter than III; IV smaller than V; VI-X transverse and weakly increasing in width apically; X approximately 1.5 times as wide as long; XI slightly longer than the combined length of IX-X (Fig. 5).

Pronotum relatively large, approximately 1.4 times as wide as long and 1.32 times as wide as head, maximal width in the middle; posterior angles obsolete (Fig. 2); surface with distinct microreticulation and only subdued shine; puncturation fine and moderately dense; pubescence fine, directed cephalad along midline and almost transversely laterad in lateral areas.

Elytra about 1.2 times as wide and at suture approximately 0.95 times as long as pronotum (Fig. 3); puncturation relatively coarse, distinctly granulate, conspicuously denser than that of pronotum; microreticulation distinct; hind wings fully developed.

Abdomen (Fig. 4) approximately as wide as elytra at anterior angles; puncturation finer and sparser than that of forebody (except tergite VIII), therefore with more shine; micro-

reticulation fine; posterior margin of tergite VII with palisade fringe; tergite and sternite VIII with conspicuous sexual dimorphism.

♂: posterior margin of tergite VIII (Fig. 6) with lateral process on either side and with two short dents in the middle; sternite VIII at posterior margin with long and acute process slightly curved upwards (Figs 7-8); aedeagus as in Figs 12-14.

♀: tergite VIII (Fig. 9) and sternite VIII (Fig. 10) without conspicuous modifications; spermatheca of characteristic shape (Fig. 11).

Comments

The taxonomic status of *A. mucronata* has been somewhat confused. In 1859, KRAATZ described *A. mucronata* (as *Homalota*) from Ceylon. In his description he explicitly referred to the morphology of the last abdominal segments. In 1922, BERNHAUER synonymized *A. mucronata* with *Atheta dilutipennis* (MOTSCHULSKY 1858) without stating any reasons.

SAWADA (1980) synonymized *A. dilutipennis* with *Pelioptera opaca* KRAATZ 1857 without reference to the synonymic status of *A. mucronata*. Two years later, he re-described *A. mucronata*, which indicates that he considered the name valid. Since then, the name has been used as a valid name by PACE (1984, 1986), KLIMASZEWSKI et al. (2002) and WHITEHEAD (2002). SMETANA (2004) erroneously lists *A. mucronata* as a synonym of *Pelioptera opaca*, apparently based on the implicit synonymy by SAWADA (1980).

In 1932, BERNHAUER described *Atheta vitalei* (subgenus *Ceritaxa* MULSANT & REY) based on a single male from Sicily. He also referred to the morphology of the posterior abdominal segments, but his description of sternite VIII was inaccurate. KOCH (1936) and BERNHAUER (1944) himself corrected this error. In 1953, BENICK transferred *A. vitalei* from the subgenus *Ceritaxa* to *Atheta* s. str. The same author (BENICK 1973) synonymized *A. vitalei* (this time again in the subgenus *Ceritaxa*!) with *A. dilutipennis*, which explains why SMETANA (2004) lists *A. vitalei* as a synonym of *P. opaca*.

Atheta mucronata belongs to the *A. laticollis* group, characterized especially by the distinctive shape of the spermatheca (SAWADA 1982, KLIMASZEWSKI et al. 2002). In the Western Palaearctic region, this group is represented only by *A. laticollis* (STEPHENS), *A. fimorum* (BRISOUT), and *A. immucronata* PACE (= *A. atlantidum* SMETANA; see ASSING & SCHÜLKE 2006) (SMETANA 2004). In the Afrotropical region, the species diversity of this group is considerably higher (see KLIMASZEWSKI et al. 2002).

Distribution

Atheta mucronata has been recorded from the Afrotropical (PACE 1984) and the Oriental regions (PACE 1987, KRAATZ 1859).

It was also recorded from El Hierro (Canary Islands) by ASSING (2000) as *A. dilutipennis* (specimens revised). Therefore, it seems obvious that the records of *A. dilutipennis* from the Canary Islands by OROMI et al. (2004) refer to *A. mucronata*, too.

The record of *A. dilutipennis* in ZANETTI (1995) refers to the type specimen of *A. vitalei* (BERNHAEUER 1932); the abbreviation "S" for southern Italy in the checklist is an error and should read "Si" for Sicily (Zanetti pers. comm.). The distribution of *A. mucronata* in the Atlantic islands and in the Mediterranean region, where it seems to be widespread, is shown in Map 1.

A. mucronata has been known from the Mediterranean for a long time (as *A. vitalei*; see also the record in KOCH (1936)). So, there is no real evidence regarding a possible expansion of the range of the species or regarding the direction of such an expansion. The argumentation of WHITEHEAD (2002) on the distribution and possible range expansion of this species - based only on the type locality, a doubtful record (obviously referring to the record of *A. dilutipennis* in BERNHAUER & SCHEERPELTZ (1926), which has to be revised) and an additional record from southern Italy – lacks any basis whatsoever. Based on the records available, the high dispersal power of the species, and in view of the history of taxonomic confusion, a convincing explanation of the distribution is, at present, problematic.



Map 1: Distribution of *Atheta mucronata* in the Mediterranean region and the Atlantic islands, based on revised material (filled circles) and the literature record of WHITEHEAD (2002) (open circle).

Bionomics

A. mucronata seems to be an r-selected inhabitant of unstable habitats like excrements, compost, carrion, etc (see material section). The specimens from Israel (the specimens in the material section represent only a small part of the real shown material, that will be treated in a later publication) were collected with pitfall traps filled with a mix of glycerine, ethanol, acetic acid, and water. One specimen from Sicily was caught with a car-net.

Acknowledgements

My thanks are extended to all the colleagues listed in the material section for the loan of material from the collections under their care. In addition, I am indebted to Volker Assing for his help in preparing the map and for proof-reading the manuscript. Heinrich Terlutter (Billerbeck) also kindly proof-read the manuscript.

Zusammenfassung

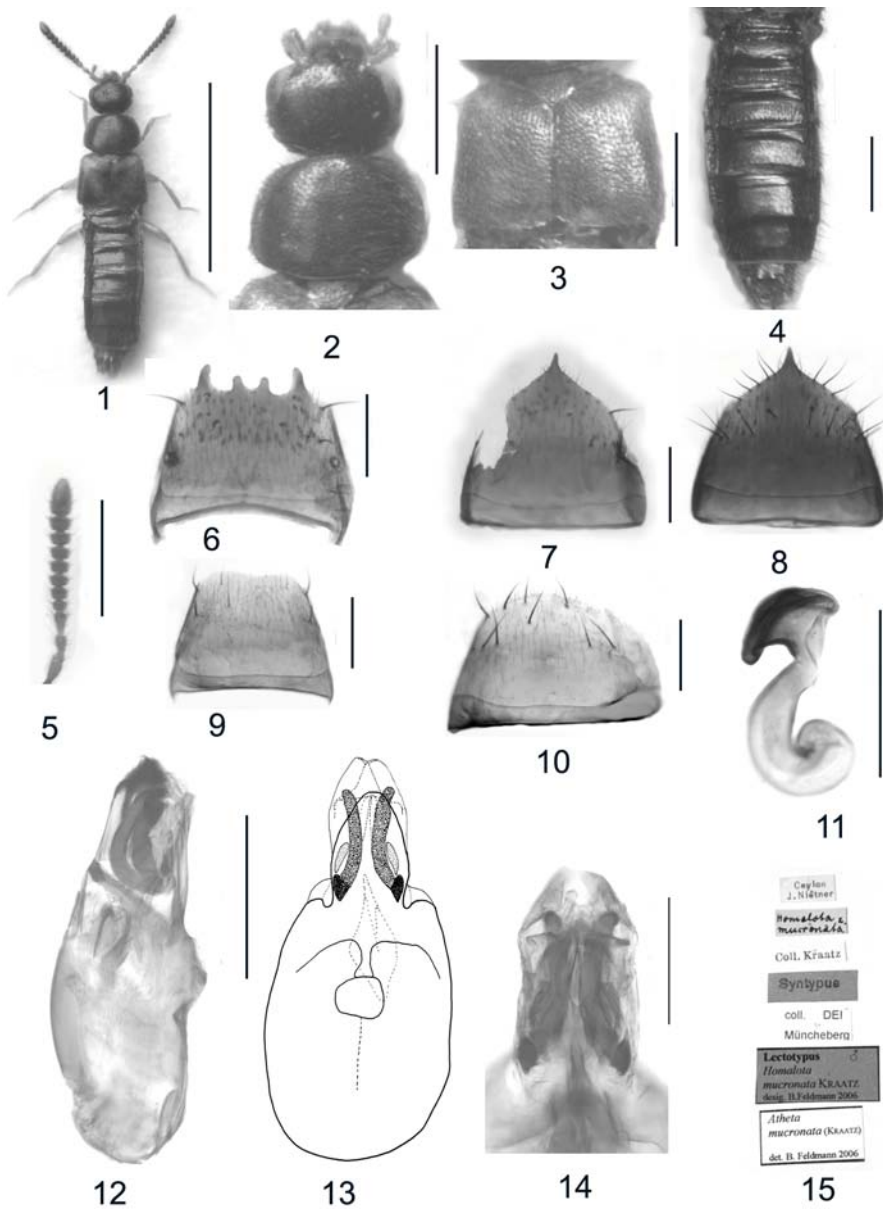
Atheta mucronata (KRAATZ) wird beschrieben und abgebildet. Ein Lectotypus für *Homalota mucronata* KRAATZ wird designiert. Die folgende Synonymie wird festgestellt: *Atheta mucronata* (KRAATZ 1859) = *Atheta vitalei* BERNHAUER 1932. Die derzeit bekannte Verbreitung der Art im Mittelmeerraum und auf den Atlantischen Inseln wird anhand einer Karte dargestellt.

References

- ASSING V. (2000): On the Staphylinidae of El Hierro, with additional new records from the Canary Islands (Coleoptera: Staphylinidae). — Entomologische Zeitschrift **110**: 114-118.
- ASSING V. (in press): New species, a new genus, and additional records of Staphylinidae from Turkey V (Coleoptera). — Stuttgarter Beiträge zur Naturkunde, Serie A (Biologie) (2007).
- ASSING V. & M. SCHÜLKE (2006): Coleoptera Part 2 – Staphylinoidea, Staphylinidae. — In: FRANQUINHO AGUIAR A.M. & M. BISCOITO (eds), Systematic Catalogue of the Entomofauna of the Madeira Archipelago and Selvagens Islands. — Boletim do Museu Municipal do Funchal, Supplement N° **11**: 5-167.
- BENICK G. (1953): Synonymische Bemerkungen über die Gattung *Atheta* und deren nächste Verwandte. — Entomologische Blätter **49**: 30-32.
- BENICK G. (1973): Weitere synonymische Bemerkungen über die Gattung *Atheta* THOMS. (Col. Staphylinidae) und deren nächste Verwandte. — Entomologische Blätter **69**: 183-188.
- BERNHAEUER M. (1922): No. II. Coleoptera, Staphylinidae. — In: Reports of the Percy Sladen Trust Expedition to the Indian Ocean in 1905, under the leadership of Mr. J. Stanley Gardiner. M. A., 7. — Transactions of the Linnean Society of London. (2: Zoology) **18**: 165-186.
- BERNHAEUER M. & O. SCHEERPELTZ (1926): Staphylinidae VI (Pars 82), pp. 499-988. — In: JUNK W. & S. SCHENKLING (eds), Coleopterorum Catalogus. Volumen **5**. Staphylinidae. — Berlin: W. Junk, 988 pp.
- BERNHAEUER M. (1932): Neuheiten der paläarktischen Staphylinidenfauna. — Koleopterologische Rundschau **17** (1931): 232-245.
- BERNHAEUER M. (1944): Übersicht über die paläarktischen Arten der Gattung *Actobius* FAUV., nebst Beschreibungen zweier neuer *Atheta*-(*Ceritaxa*-) Arten (Col. Staphyl.). — Koleopterologische Rundschau **30**: 148-150.
- KLIMASZEWSKI J., MAUS C. & A. GARDINER (2002): The importance of tracking introduced species: New records of Athetine rove beetles from South Atlantic Inaccessible Island (Coleoptera, Staphylinidae, Aleocharinae). — The Coleopterists Bulletin **56**: 481-490.
- KOCH C. (1936): Wissenschaftliche Ergebnisse der entomologischen Expeditionen Seiner Durchlaucht des Fürsten Alessandro C. della Torre e Tasso nach Aegypten und auf die Halbinsel Sinai. XIII. Staphylinidae. — Pubblicazioni del Museo Entomologico "Pietro Rossi" (Duino) **1**: 115-232.
- KRAATZ G. (1859): Die Staphylinen-Fauna von Ostindien, insbesondere der Insel Ceylan. — Archiv für Naturgeschichte **25**: 1-196.
- OROMI P., MACHADO A., ZURITA N. GARCIA A. & E. MARTIN (2004): Orden Coleoptera, pp. 208-247. — In: IZQUIERDO I., MARTIN J.N., ZURITA N. & M. ARECHAVELETA (eds), Lista de especies silvestres de Canarias (hongos, plantas y animales terrestres). Consejería de Medio Ambiente y Ordenación Territorial, Gobierno de Canarias. 500 pp.
- PACE R. (1984): Aleocharinae delle Mascarene, parte II: tribu Falagriini, Callicerini, Schistogeniini, Oxypodinini, Oxypodini e Aleocharini (Coleoptera, Staphylinidae) (XLVI contributo alla conoscenza della Aleocharinae). — Revue Suisse de Zoologie **91**: 249-280.

- PACE R. (1987): Aleocharinae dell'Asia sudorientale raccolte da G. de Rougemont (Coleoptera, Staphylinidae) (LXXII contributo alla conoscenza della Aleocharinae). — Bollettino del Museo Civico di Storia Naturale di Verona **13** (1986): 139-237.
- SAWADA K. (1980): *Atheta* and its allies of Southeast Asia (Coleoptera; Staphylinidae) II. Reexamination of the species mainly from Borneo. — Contributions from the Biological Laboratory, Kyoto University **26**: 23-66.
- SAWADA K. (1982): *Atheta* and its allies of Southeast Asia (Coleoptera; Staphylinidae) III. Oriental species described by V. von Motschulsky and G. Kraatz. — Contributions from the Biological Laboratory, Kyoto University **26**: 141-187.
- SMETANA A. (2004): Staphylinidae, subfamily Aleocharinae, pp. 353–494. — In: LÖBL I. & A. SMETANA (eds), Catalogue of Palaearctic Coleoptera. II. Hydrophiloidea – Histeroidea – Staphyloidea. Stenstrup: Apollo Books, 942 pp.
- WHITEHEAD P.F. (2002): *Atheta mucronata* (KRAATZ, 1859) (Coleoptera: Staphylinidae) apparently new to continental Europe. — Entomologist's Gazette **53**: 51-55.
- ZANETTI A. (1995): Genera 163-314. — In: CICERONI A., PUTHZ V. & A. ZANETTI, Fascicolo 48. Coleoptera Polyphaga III. (Staphylinidae). — In: MINELLI A., RUFFO S. & S. LA POSTA, Checklist delle specie della fauna italiana. Bologna: 36-58.

Author's address: Benedikt FELDMANN
 Juistweg 1
 D-48159 Münster, Germany
 E-mail: bfeldmann1@aol.com



Figs 1-15: *Atheta mucronata* (lectotype: 6-7, 12-14): (1) facies; (2) forebody; (3) elytra; (4) abdomen; (5) antenna; (6) male tergite VIII; (7, 8) male sternite VIII; (9) female tergite VIII; (10) female sternite VIII; (11) spermatheca; (12-13) median lobe of aedeagus in lateral and in ventral view; (14) apical part of median lobe of aedeagus in ventral view; (15) lectotype labels. Scale bars: 1: 2.0 mm; 2-5: 0.5 mm; 6-13: 0.2 mm; 14: 0.1 mm.