

BOCAGIANA

Museu Municipal do Funchal

Madeira

10.VII.1992

No. 158

***ATHETA PSEUDOLATICOLLIS* N.SP. A NEW SPECIES FROM THE
ATLANTIC ISLANDS AND AN ADDITIONAL DESCRIPTION
OF *ATHETA MADERENSE* LIKOVSKÝ 1963
(COLEOPTERA: STAPHYLINIDAE)**

By D. ERBER * & W. HINTERSEHER **

with 2 figures

ABSTRACT: Two *Atheta* species are described: *Atheta pseudolaticollis* n.sp. has been collected at several localities on Madeira and on the Canary Island of La Palma. *Atheta maderense* LIK. was found on Madeira at Caniço de Baixo; its description could be helpful as an addition to the description by LIKOVSKÝ (1963).

RESUMO: *ATHETA PSEUDOLATICOLLIS* N. SP., UMA NOVA ESPÉCIE DAS ILHAS ATLÂNTICAS E UMA DESCRIÇÃO DE *A. MADERENSIS* LIKOVSKÝ 1963. Descreve-se duas espécies do género *Atheta*: *A. pseudolaticollis* n.sp. foi colhido em várias localidades na Madeira e em La Palma das Ilhas Canárias. *A. maderense* LIK. foi encontrado na Madeira no Caniço de Baixo; a sua descrição pode ser útil como adição à descrição de LIKOVSKÝ (1963).

INTRODUCTION

H. PIEPER collected over several years a large number of beetles from a window pane at Caniço de Baixo, Madeira. In that collection we found one species of *Atheta*, which we were not able to refer to any species from Madeira familiar to us or from the literature.

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Dr.G.A.LOHSE, Hamburg, whom we asked to study these beetles, agreed with our supposition, but, for personal reasons, was not in a position to undertake its description. We therefore decided to describe it ourselves, - without, however, reviewing the confused literature on the genus *Atheta*. Since the female, on account of its typically shaped spermatheca, is more distinctly characterised than the male we chose a female for the holotype. In the same collections gathered by PIEPER we found several *Atheta* specimens which at first we had some difficulty to identify. Finally, however, we succeeded to determine them as *Atheta maderense* which was described by LIKOVSKÝ in 1963 as *Rhagocneme maderense* (*Rhagocneme* being a subspecies of *Atheta*). (BRINCK (1977) recorded *A.zealandica* CAMERON (1945) from the Azores and considered it synonymous with *A.maderense*. This synonymisation, however, is not valid, as a comparison of "our" *A.maderense* with *A.zealandica* of the British Museum of Natural History showed). Considering that we had made a profound study of our specimens we decided that publishing our findings might be a useful addition to LIKOVSKÝ's description of 1963.

Atheta pseudolaticollis n.sp.

In "Contribution to the knowledge of the Madeira beetles" (ERBER & HINTERSEHER 1988) we listed *Atheta laticollis* STEPH. as new to the Madeira Archipelago, based on a small series of specimens from several points of Madeira. However, we began to have doubts about our determination when we studied the specimens collected by PIEPER and compared them with specimens of *A.laticollis* from Central Europe. Dr.LOHSE was of the opinion that the Atlantic specimens could be considered a well defined subspecies of *laticollis*. Though these beetles plus some specimens from La Palma (Canary Islands) are very similar to *A.laticollis*, we found differences in body markings as well as in very characteristic sexual organs, that we considered ourselves fully justified to refer them to a separate species new to science. The status of this new species would have to be reduced to a subspecies, if in future intermediate forms should be detected (probably in Iberia or North Africa).

Material:

- | | | |
|----------|---------|---|
| 1 male | Madeira | : Funchal, 1.II.1973, under a stone, leg.
HINTERSEHER, |
| 1 male | " | : Santa Maria Madalena, 5.II.1973, under bark,
leg.HINTERSEHER, |
| 1 female | " | : Ribeiro Frio, Botanical Garden, 900m, 13.-27.
VIII.1983, in dead frond of fern, leg.ERBER, |

- 1 female Madeira : Levada da Serra do Faial, Queimada Chã, 820m,
13.-27.VIII.1983, leg. ERBER,
- 2 females “ : Caniço de Baixo, 80m, at a window pane, 10.
-16.IX.1985, leg. PIEPER,
- 5 males &
5 females “ : same locality, 4.-25.IX.1986, leg. PIEPER,
- 2 females “ : “ “ , 9.-29.IX.1988, “ “ ,
- 1 female La Palma : San José, 5.IV.1983, on the wing, leg.
HINTERSEHER,
- 3 females “ “ : Brena Baja, 8.IV.1983, in cattle dung, leg.
HINTERSEHER.

A female of the series from Caniço de Baixo 1986 has been selected as holotype. This and a male (paratype) of the same series will be preserved in the Museu Municipal do Funchal under Reg.Nrs. 25169 & 25170 respectively. Other paratypes will be distributed as follows: 1 male and 1 female in the Museum für Naturkunde Stuttgart, all others in the collections of the authors. For comparison we have had 3 males of *A.laticollis* STEPH., one from D-Bayern: Rohrenfels bei Ingolstadt, 28.III.1981, one from D-Hessen: Bad Nauheim, 9.IV.1971, both leg.PAPPERITZ, one from D-Württemberg: Pleidelsheim, NSG Wiesental, 21.II.1976, leg.KONZEMANN (all lent by the Staatliches Museum für Naturkunde Stuttgart) and 1 female from D-Hessen: Umg.Bad Hersfeld, 2.I.1991, leg.HINTERSEHER from the collection of HINTERSEHER. Meanwhile we had the opportunity to examine 15 specimens from the Azores which had been determined as *A.laticollis*: All these also belong to *A.pseudolaticollis*. This species has been found on all Azoran Islands excluding Corvo (see BORGES 1990).

Derivation of the name:

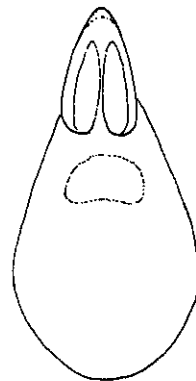
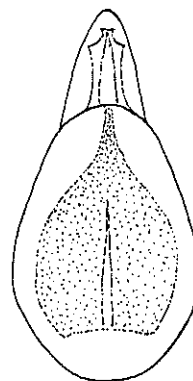
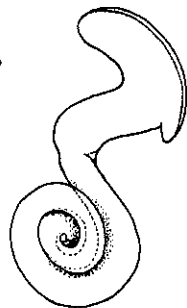
Since the new species is very similar to *A.laticollis* we chose the name *pseudolaticollis* appropriate.

Description:

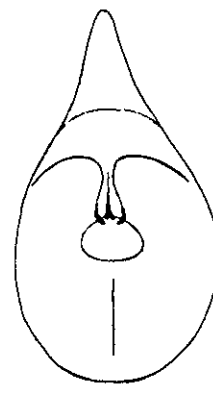
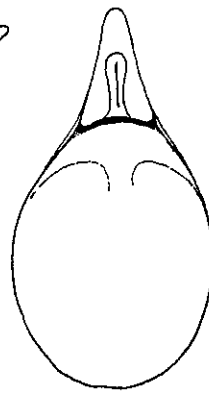
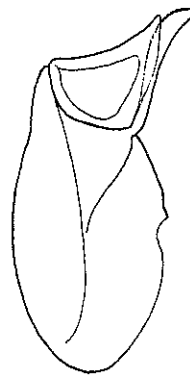
A.pseudolaticollis belongs to the same systematic group as *A.laticollis*, which was called “Mischgruppe 1” by G.A.LOHSE (BENICK & LOHSE, 1974); within this group it is very closely related to *A.laticollis*.

The size varies between 2.4 mm and 3.1mm (holotype female = 2.7mm); nearly the same size as in *A.laticollis*. The following characters agree with *A.laticollis*: pronotum regularly rounded laterally, more narrowed anteriorly than posteriorly; episterns of pronotum

*Atheta
pseudolaticollis*



*Atheta
laticollis*



A

B

C

l

d

v

D

Fig. 1 - *Atheta pseudolaticollis* n. sp. and *Atheta laticollis* Steph. A = tergite VI of male, B = spermatheca, C = left paramere, D = aedeagus (l = lateral, d = dorsal, v = ventral).

not visible in side-view; pubescence on the disc, central of the pronotum, directed forward; abdomen narrowed towards the apex (though slightly less than in *A. laticollis*), tergite V with regular dense transverse reticulated microsculpture; eyes as long in diameter as the temples. *A. pseudolaticollis* differs from *A. laticollis* in the following characters: head distinctly smaller than in *A. laticollis*; distance between insertions of the antennae significantly shorter than distance between insertion of antennae and hind margin of head (in *A. laticollis* these distances are nearly the same); segments VII-X of antennae broader than in *A. laticollis*, especially segment IX (seen from exactly above) very nearly twice as broad as long (in *A. laticollis* only slightly broader than long); body decidedly more robust than in *A. laticollis*, in relation to the whole body length broader than in *A. laticollis* (measurement taken in the last quarter of the elytra, the broadest point of the body); lateral margins of elytra lineal, insignificantly broadened posteriorly and only in the hindmost part abruptly bent inwards (in *A. laticollis* lateral margins slightly, but distinctly, rounded); pronotum and especially elytra in side-view flattened (in *A. laticollis* distinctly arched); middle seta of middle tibia longer than breadth of the tibia (in *A. laticollis* it is nearly as long as the breadth of the tibia); middle and hind tibia in comparison to *A. laticollis* distinctly shorter; the same applies to segments II-IV of hind tarsae. Colour in both species nearly identical: head and abdomen dark brown, hind margins of the tergites indistinctly lighter; pronotum in *A. pseudolaticollis* slightly lighter than head but much darker than elytra, which are yellowish-brown (in *A. laticollis* pronotum mostly as light as elytra); legs and basis of antennae yellow in both species. Males are characterised by hind margin of tergite VI: lateral protuberances are robust and rounded in *A. pseudolaticollis* but more slender and pointed in *A. laticollis* (see fig. 1, A). Copulatory organs differ in aedeagus and in parameres (see fig. 1, Ca, D). Females differ very distinctly in the spermathecae (see fig. 1, B). The following table gives a direct comparison of the external characters, useful for distinguishing the two species:

	<i>A. laticollis</i> Steph.	<i>A. pseudolaticollis</i> n.sp.
Segment IX of antenna:	only slightly broader than long	nearly twice as broad as long
Head:	very broad and large	distinctly smaller
Elytra:	distinctly curved (in side-view)	flattened (in side-view)
Lateral margins of elytra:	regularly slightly rounded	lineal
Segments II-IV of the posterior tarsae:	each nearly 2.5 times as long as broad	each less than 2 times as long as broad
Middle seta of the median tibia:	as long as breadth of tibia	longer than breadth of tibia

Life history:

Very little is known of the natural history of *A. pseudolaticollis*. Imagos have been found under bark of trees, under stones, in dead frond of fern, in rotten banana and tomato, and also in one day old cattle dung. One can assume that the species prefers rotten plant material. Larvae are unknown.

ATHETA MADERENSE LIKOVSKÝ 1963**Material:**

All specimens were collected by H. PIEPER in Madeira at Caniço de Baixo, 80m, from a window pane:

2 males and 6 females 4.-25.IX.1986

3 males and 5 females 7.-13.IX.1989.

Description:

Size varies from 2.7mm to 3.3mm. Head: Breadth (including the slightly arched eyes) hardly longer (about one-sixth) than distance from the middle of anterior margin of the labrum to posterior angle of the head (measured obliquely); greatest breadth at the outer centres of the eyes; eyes nearly twice as long as temples (as seen in top view), fairly curved and distinctly covered with setae, which are about twice as long as the diameter of one facet; temples with distinct edges over the whole length; head not contracted at the base; well delimited pin-head sized indentation at midpoint between eyes (visible in side-view); head surface small, rounded, reticulated; single points at least twice as large as one mesh, at temples pattern of dots stronger, denser, and more distinctly granulated; distance between two dots at forehead beside eyes about two diameters of one dot; pubescence strong, at temples bristly or brush-like; colour deeply dark-brown, nearly black. Antennae: segments I to III extended; segment III as long as II, in the male slightly nodular and thickened; segments IV to V as long as broad; segments VI to X about 1.5 times as broad as long; segments IV-X anteriorly conical and broadened; segment XI mitre-like, about twice as long as broad; segments I to III bright yellowish-brown, from the top of segment III to segment XI dark-brown. Pronotum in transverse section rectangular with uniform slightly curved margins; anterior margin somewhat more strongly curved, base much more curved toward the scutellum; lateral margin in side-view not uniformly curved, episternum visible; anterior angles rounded, posterior angles obtuse but distinct; pubescence in the middle of the disc completely directed forward; at lateral margin five long setae, each about half as long as the anterior tarsus, and some small setae only a third as long as the long setae; pattern of points of insertion of setae seems to be variable, mostly, however, as in fig. 2, B; surface finely reticulated, similar to surface of head, meshes, however, less distinctly circumscribed, but often running into one another; pattern of dots as strongly marked as on head, but distances between dots only slightly more than diameter of a dot;

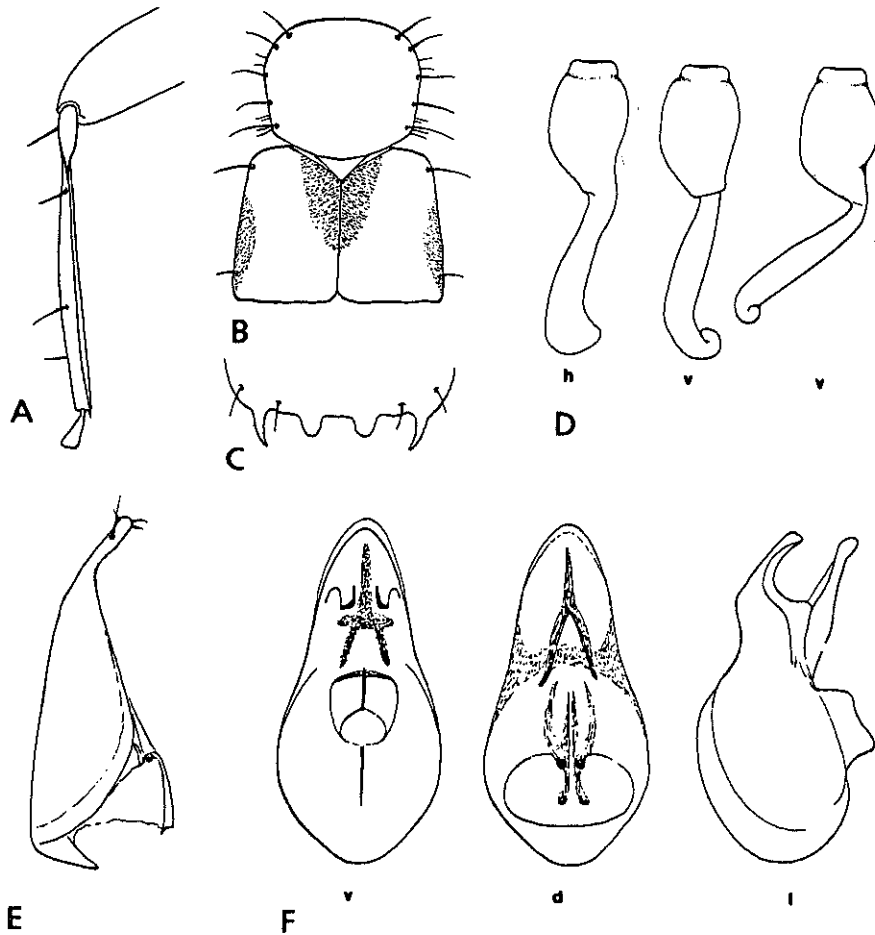


Fig. 2 - *Atheta maderense* Lik. A = left posterior tibia, B = pronotum and elytra, C = tergite VI of male, D = spermatheca (h = of holotype, v = variations in paratypes), E = left paramere, F = aedeagus (v = ventral, d = dorsal, l = lateral).

because of this the distribution of the dots on the pronotum distinctly denser than that of forehead; colour uniformly dark-brown, mostly a shade brighter than the head, margin and base not so. Elytra broader than pronotum, length of suture as long as middle length of pronotum; in transverse section rectangular, lateral margins posteriorly very slightly and trapezoidly widened (appearing almost parallel), posterior angles rounded; directly behind the shoulder a long seta (as long as those of pronotum); pattern of dots as strong but slightly denser and perhaps somewhat more granulated than on the pronotum; colour deep brown, round the scutellum a bead-like black spot, not sharply restricted and reaching to shortly behind middle of length of elytra ; at lateral margin also a blackness, beginning at the anterior third and reaching the apex, also not sharply restricted and slightly curved toward the surface (see fig.2,B); shoulders somewhat brighter than other parts of surface; posterior margin cut off evenly with a small indentation near the suture, occasionally another indentation near the lateral margin but then only indistinctly. Abdomen parallel at tergite I to III, after which slightly narrowing in the posterior tergites; posterior margin of tergite V with a small fimbria of skin, directly in front of this, parallel with the margin, a dense row of granulated points (in both sexes); the posterior margin of tergite VI with protuberances in male (see fig. 2,C), but straight with slight indentation in the middle in female; colour of tergite IV and V as dark as the head, the other tergites somewhat paler, the posterior margin of tergite I, II and VI occasionally even more so. For copulatory organs of male and spermatheca of female see fig. 2,D,E,F.

Legs yellowish-ochre throughout; the two dark setae at the middle and posterior tibiae distinctly longer than the tibia is broad; posterior tibia laterally strongly compressed and twisted immediately beyond the knee, the result being a short razor-sharp outer edge (see fig.2,A) (this structure is typical in the subgenus *Rhagocneme*); segments I to IV of the posterior tarsae nearly all of equal length, segment V slightly longer than III and IV together.

ACKNOWLEDGEMENT

We would like to express our cordial thanks to the following colleagues: Dr.H.PIEPER, Kiel, for his indefatigability in collecting such considerable quantities of minute beetles from a window pane of his bungalow over several years and for letting us have this material; Dr.Dr.hc.G.A.LOHSE, Hamburg, for advice after studying the recently here described species; Dr.W.SCHAWALLER, Stuttgart, for the loan of some *Atheta laticollis* from the collection of the Staatliches Museum für Naturkunde Stuttgart, DR.P.BORGES, Terceira (Azores), for sending us the Azoran specimens of *Atheta pseudolaticollis*, Mr.P.M.HAMMOND, London, for comparison of *Atheta maderense* with *Atheta zealandica*, and Mr.G.E.MAUL, Funchal, for editorial support.

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Received 29.11.1991