

SPIXIANA	33	1	65–68	München, Juli 2010	ISSN 0341–8391
----------	----	---	-------	--------------------	----------------

A new species of the genus *Zuphium* Latreille from northern central Queensland, Australia

(Coleoptera, Carabidae, Zuphiinae)

Martin Baehr

Baehr, M. 2010. A new species of the genus *Zuphium* Latreille from northern central Queensland, Australia (Coleoptera, Carabidae, Zuphiinae). Spixiana 33(1): 65–68.

Zuphium sedlaceki, spec. nov. is described from northern central Queensland. It is distinguished from all other Australian species of the genus by extremely elongate antenna and the raised 3rd and 5th intervals of the elytra; moreover from most species by small body size, reddish colour, and small eyes. It differs further from the likewise small-eyed and brownish *Z. castelnaui* Gestro by lesser body size and longer pronotum, and from the yellowish *Z. flavum* Baehr by larger body size, far longer antenna, and smaller eyes. The new species is introduced in the most recent key to the Australian species of *Zuphium*.

Martin Baehr, Zoologische Staatssammlung München, Münchhausenstr. 21, 81247 München, Germany; e-mail: martin.baehr@zsm.mwn.de

Introduction

While sorting through unidentified Oriental and Australian Carabidae in the collections of The Natural History Museum, London (NHM), I found, inter alia, a single Australian specimen of a peculiar species of the genus *Zuphium* Latreille, 1806 which, after comparison with all described species from this continent, proved to represent a new species that is described in the present paper.

The genus *Zuphium* Latreille is characterized by its remarkably depressed body, shortened elytra, very narrow neck, and remarkable elongate scapus of the antenna. From the genus *Parazuphium* Jeannel, 1942 which formerly was united with *Zuphium*, it is distinguished by usually major size, longer antenna and, in particular, longer scapus, and the presence of just a single elongate seta at the apex of scapus.

Methods

In the taxonomic survey standard methods are used. The male genitalia were removed from the specimen that was soaked for a night in a jar under wet atmos-

phere and then cleaned for a short while in hot 10 % KOH. The habitus photograph was obtained by a digital camera using ProgRes CapturePro 2.6 and AutoMontage, and subsequently edited using Corel Photo Paint 11.

Measurements were taken using a stereo microscope with an ocular micrometer. Length has been measured from apex of labrum to apex of elytra. Lengths, therefore, may slightly differ from those given by other authors. Length of orbit was taken from the posterior margin of the eye to the position where the orbital curvature meets the neck. Length of pronotum was measured along midline, length of elytra from the most produced part of the humerus to the most produced part of the apex.

Taxonomy

Genus *Zuphium* Latreille

Zuphium Latreille, 1806: 198. – Csiki 1932: 1562; Baehr 1986a: 4, 2001: 93; Moore et al. 1987: 312; Lorenz 1998: 479.

Type species: *Carabus olens* Rossi, 1792, by subsequent designation.



Fig. 1. *Zuphium sedlaceki*, spec. nov. Habitus. Body length: 6.8 mm.

Diagnosis. A diagnosis of the genus and a complete literature record is in Baehr (1986a). All species are characterized by very depressed body shape, a wide head bearing a remarkably narrow neck, and elongate antenna with a particularly elongate scapus, which is unisetose in contrast to the related genus *Parazuphium*.

The genus *Zuphium* has a worldwide distribution from tropical and subtropical to warm temperate regions. Already Jeannel (1942) separated a number of smaller species from the genus *Zuphium* that deviate from the larger ones in a couple of character states, and included these in the genus *Parazuphium* Jeannel.

In Australia species of *Zuphium* exist as well as those of *Parazuphium*. However, in the catalogue of Moore et al. (1987) the two genera were not yet separated, but this was done by Baehr in a series of revisionary papers about the Australian Zuphiinae (Baehr 1984, 1985a,b, 1986a,b, 1988, 1992, 1995, 2001, 2008a,b), who also erected a new subgenus *Austrozuphium* Baehr, 1985 for a couple of Australian species of *Parazuphium*. Baehr (2001) also described an additional Australian species of *Zuphium*, hence at the present state of knowledge from Australia 6 species of *Zuphium* with additional three subspecies are actually recorded. Two previously described species, however, *Z. fitzroyense* Macleay, 1888 and *Z. pindan* Macleay, 1888, are doubtful species, because the types are lost or so much damaged that identification is impossible. Perhaps these species are identical with one or another of the species or

subspecies described by Baehr (1986a), but they were omitted from the revision of the genus.

Zuphium sedlaceki, spec. nov.
Figs 1, 2

Types. Holotype: ♂, Hughenden Q. 6.2.82 / J. Sedlacek Collector / BM 1983-125 (NHM).

Etymology. The name is a patronym in honour of the late Joe Sedlacek, collector of this species and well known collector of a multitude of interesting carabid species and other insects in Australia and New Guinea.

Diagnosis. A small, uniformly reddish *Zuphium* distinguished from all other Australian species by remarkably small eyes, very elongate antenna, elongate pronotum, and distinctly raised 3rd and 5th elytral intervals. In addition it differs from the likewise reddish Australian species *Z. castelnaui* Gestro, 1875 by lesser size, and from the pale yellowish *Z. flavum* Baehr, 2001 by slightly larger size.

Description

Measurements. Length: 6.8 mm; width: 2.35 mm.

Ratios. Width/length of pronotum: 1.15; width of pronotum/width of head: 1.15; length of orbit/length of eye: 1.66; length/width of elytra: 1.59; width of elytra/width of pronotum: 1.63; length of 1st antennomere/width of head: 1.04.

Colour (Fig. 1). Body including mouth parts, antennae, legs, and lower surface uniformly reddish brown.

Head (Fig. 1). Eye small and depressed, about half as long as the orbit to neck incision, eye laterally barely projected. Suture between occiput and summit very deep. Orbit evenly convex. Clypeus and labrum anteriorly straight, clypeal suture deep. Mandibles short, apicad suddenly incurved, lateral margins at base with 4-5 elongate setae. Glossa corneous, apically square, paraglossa membraneous, short, fused to glossa, laterally little surpassing the glossa. Both palpi narrow and elongate, densely pilose, basal palpomere of maxillary palpus on median surface with several longer setae. Galea densely pilose. Antenna very elongate, almost attaining apex of elytra, scapus considerably longer than widest diameter of head, also much longer than 2nd and 3rd antennomeres together, median antennomeres c. 5 × as long as wide. Anterior supraorbital seta situated in front of anterior margin of eye, posterior supraorbital seta very far removed from posterior margin of eye, situated shortly in front of neck suture. Frons between eyes with two shallow, circular impressions. Surface very glossy, not microreticulate, sparsely and rather finely punctate, with moderately sparse, erect, fairly elon-

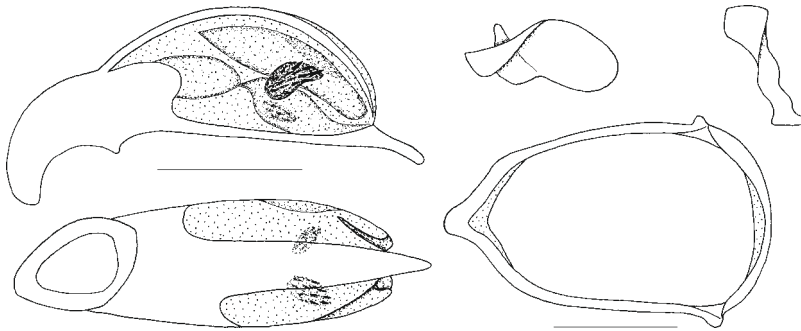


Fig. 2. *Zuphium sedlaceki*, spec. nov. Male genitalia: aedeagus, left side and lower surface, parameres, genital ring. Scale bars: 0.5 mm.

gate pilosity which is slightly inclined anteriorly.

Pronotum (Fig. 1). Narrow and very elongate, depressed, widest near apex. Apical angles broadly rounded, apex in middle faintly concave, lateral margins gently convex, with elongate and rather deep sinuation in front of the acute, rectangular, laterad projected basal angles. Base in middle very slightly projected, basal angles slightly removed from base. Median line distinct but not impressed, anterior transverse sulcus not perceptible. Lateral margins in anterior four fifths narrow, apically slightly widened to a fairly deep impression. Anterior marginal seta situated at apical sixth, the posterior seta situated at basal angle. Surface glossy, except in the basal impressions, not microreticulate, rather densely and coarsely punctate, with moderately dense, erect, fairly elongate pilosity which is inclined posteriorly.

Elytra (Fig. 1). Elongate, slightly more than 1.5 × as long as wide, depressed, lateral margins almost straight though oblique, widest diameter about at apical fourth. Humerus oblique and slightly convex. Apex almost transverse, faintly sinuate, slightly incurved to suture, with wide hyaline margin. Odd intervals considerably more raised than the even ones. 3rd interval apparently with three setiferous punctures which are very difficult to recognize, because the erect setae are very short. Striae impunctate, intervals with very fine and dense punctures and with traces of extremely fine microreticulation. Pilosity very dense, depressed, inclined posteriorly, hairs shorter than the diameter of one interval. Margin at humerus with 6 marginal setae, in apical half with 8 setae, the terminal two situated near the apical margin. Setae, when present, very elongate. Series of marginal setae widely interrupted in middle.

Lower surface. Whole lower surface except the episterna with dense, elongate, depressed pilosity. Metepisternum slightly less than twice as long as wide at anterior border. Male terminal abdominal sternum slightly incised in middle, bisetose.

Legs (Fig. 1). Comparatively elongate, in particular the metatarsi. 1st-3rd tarsomeres of male protarsus biserially and slightly asymmetrically squamose at median side.

Male genitalia (Fig. 2). Genital ring wide, slightly asymmetrically triangular. Aedeagus moderately large, compact, apex comparatively elongate, lower surface almost straight. Orificium very large with two sclerotized clasps along the upper surface, which is deeply cleft in middle. Internal sac on either side with a somewhat sclerotized plate which is covered with small spines. Parameres differently shaped, the left one elongate, the right one very short.

Female genitalia. Unknown.

Variation. Unknown.

Distribution. Northern central Queensland, Australia. Known only from type locality.

Collecting circumstances. Not recorded, but most probably collected at light.

Relationships. According to colouration, the small eye, and the rounded orbit, probably more closely related to *Z. castelnaui* Gestro than to any other Australian species.

Recognition

The new species can be easily introduced in the most recent key to the Australian *Zuphium* of Baehr (2001) which must be slightly altered. For the benefit of the reader figures from previous papers are included as Ba86: fig. (Baehr 1986a) and Ba01: fig. (Baehr 2001).

1. Eyes small, much shorter than orbits, orbits evenly curved (Fig. 1; Ba86: fig. 1a); 1st antennomere longer than diameter of head including eyes; colour reddish. 1a.

- Eyes larger, usually longer than orbits, or but slightly shorter, orbits less evenly rounded (Ba86: fig. 1b); 1st antennomere shorter than diameter of head; colour commonly dark piceous to black; when yellowish, body size small (<6 mm) and antenna short and barely surpassing base of pronotum (Ba01: fig. 7)..... 2.
- 1a. Larger species, body length >7.65 mm; antenna shorter, not attaining middle of elytra (Ba86: fig. 1a); odd intervals not perceptibly more raised than even ones; aedeagus very short and compact, with short apex (Ba86: fig. 6). Eastern Victoria, south-eastern New South Wales.....
.....*castelnaui* Gestro
- Smaller species, body length 6.8 mm; antenna longer, almost attaining apex of elytra (Fig. 1); odd intervals markedly more raised than even ones; aedeagus slightly longer and less compact, with decidedly longer apex (Fig. 2). Northern central Queensland.*sedlaceki*, spec. nov.
- 2. = 2. in Baehr (2001).

Remarks

With its light colour and small eyes *Z. sedlaceki* rather reminds the southern *Z. castelnaui* Gestro, whereas the likewise pale coloured *Z. flavum* Baehr in certain respects is quite different. The small eyes and the pale colour suggest that the new species is strictly nocturnal and likewise that is an insect of semiarid and sandy environments, where similarly pale colourations are common with carabid beetles (Baehr 2009). Indeed, the area where *Z. sedlaceki* was collected is well within the northern part of the vast semiarid interior of Australia.

This species, as well as *Z. flavum*, so far are known only from the holotype which is evidence of the very unsatisfactory knowledge that is available about these nocturnal species which probably during daytime are hidden in earth cracks or other crevices. Hence, it is to be expected that additional species of the genus *Zuphium* can be discovered in the semiarid interior of Australia when these vast, very little sampled areas in future will be better explored.

Acknowledgements

I am indebted to Conrad Gillett and Max Barclay (London) for the kind loan of the specimen, also for their kind hospitality during my recent visit at The Natural History Museum. The authorities of the Synthesys Pro-

gram of the European Community are thanked for the financial support of my visit at that collection.

References

- Baehr, M. 1984. Revision der australischen Zuphiinae. 1. Gattung *Acrogenys* Macleay (Insecta, Coleoptera, Carabidae). Spixiana 7: 115-134.
- 1985a. Revision of the Australian Zuphiinae. 3. The genus *Pseudaptinus* Castelnau (Insecta, Coleoptera, Carabidae). Spixiana 8: 33-57.
- 1985b. Revision of the Australian Zuphiinae. 4. The genus *Parazuphium* Jeannel (Insecta, Coleoptera, Carabidae). Spixiana 8: 295-321.
- 1986a. Revision of the Australian Zuphiinae. 5. The genus *Zuphium* Latreille (Insecta, Coleoptera, Carabidae). Spixiana 9: 1-23.
- 1986b. Revision of the Australian Zuphiinae. 6. The genus *Planetes* Macleay. Supplement to the other genera (Insecta, Coleoptera, Carabidae). Spixiana 9: 151-168.
- 1988. Revision of the Australian Zuphiinae 2. *Colasidia monteithi* sp. nov. from North Queensland, first record of the tribe Leleupidiini in Australia (Insecta: Coleoptera: Carabidae). Memoirs of the Queensland Museum 25(1987): 135-140.
- 1992. A new *Acrogenys* Macleay from Central Australia. Supplement to the revision of the Australian Zuphiinae (Insecta, Coleoptera, Carabidae). Spixiana 15: 75-80.
- 1995. A new species of *Pseudaptinus* Castelnau from Australia. 2nd supplement to the "Revision of the Australian Zuphiinae" (Insecta, Coleoptera, Carabidae, Zuphiinae). Koleopterologische Rundschau 65: 15-18.
- 2001. New species and new records of Zuphiinae from Australia (Coleoptera: Carabidae). Special Bulletin of the Japanese Coleopterological Society 1: 83-101.
- 2008a. New species of the zuphiine genus *Acrogenys* Macleay from Australia (Insecta, Coleoptera, Carabidae, Zuphiinae). Coleoptera 11 (2007): 113-124.
- 2008b. Two new species of the genus *Pseudaptinus* Castelnau from northern Australia (Insecta: Coleoptera: Carabidae: Zuphiini). The Beagle, Records of the Museum and Art Gallery of the Northern Territory 24: 55-62.
- 2009. Revision of the species of the genus *Anomotarus* (s.l.) Chaudoir from the Australian Region, formerly alluded to the genus *Nototarus* Chaudoir. (Coleoptera, Carabidae, Lebiinae). Coleoptera 13: 33-200.
- Lorenz, W. 1998. Systematic list of extant ground beetles of the world (Insecta Coleoptera "Geadephaga": Trachypachidae and Carabidae incl. Paussinae, Cicindelinae. Rhyssodidae). 502 pp., Tutzing, Germany (printed by the author).

ZOBODAT - www.zobodat.at

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: [Spixiana, Zeitschrift für Zoologie](#)

Jahr/Year: 2010

Band/Volume: [033](#)

Autor(en)/Author(s): Baehr Martin

Artikel/Article: [A new species of the genus Zuphium LATREILLE from northern central Queensland, Australia \(Coleoptera, Carabidae, Zuphiinae\) 65-68](#)