A new species of the genus *Adelotopus* Hope from northern Queensland, Australia

(Insecta, Coleoptera, Carabidae, Pseudomorphinae)

Martin Baehr


*Adelotopus parrotti*, spec. nov. is described from northern Queensland, Australia. It belongs to the “rubiginosus-group” of species in the sense of Baehr (1997) that includes a large number of externally extremely similar, convex, reddish species that are most common in the drier areas of the continent. With respect to the male aedeagus, the new species most probably is closely related to the widespread *A. rubiginosus* Newman, but is distinguished by slightly more depressed body, in particular by the wider, more depressed pronotum with more explanate lateral margins, and by sparser punctuation of the elytra.

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

**Introduction**

In a determination sample of diverse Australian ground beetles that included some pseudomorphine beetles, within a small series of the common and widespread *Adelotopus rubiginosus* Newman two specimens were detected that at the first glance differ in body shape, in particular shape of the pronotum, from *A. rubiginosus*. Closer examination revealed that the two specimens belong in the *rubiginosus*-subgroup within the *rubiginosus*-group, which subgroup is defined by the lack of any microreticulation on the frontal part of the head. Although the male aedeagi of the two mentioned specimens rather match that of *A. rubiginosus* – at least better than any other species of the subgroup – some character states of body shape and structure of surface are different. Hence these specimens are described as a new species. The sampling locality of the new species is far outside of the known range of the common and comparatively well known and well documented *A. rubiginosus*.

The *rubiginosus*-group of the pseudomorphine genus *Adelotopus* Hope at present covers 25 species (Baehr 1997, 2002) that are very similar in external shape and structure. All species are more or less uniformly reddish to yellow, rather convex and of small to medium size. Species identification and distinction using only external characters is very difficult if not impossible, and not only the males, but likewise females are best identified through their genitalia: male aedeagus and female stylomere and lateral plate.

The genus *Adelotopus* is an apotypic one within the outstanding carabid subfamily Pseudomorphinae, and, apart from the confirmed vivipary, this status is also demonstrated by the female stylomeres which are very depressed, foliaceous structures without any distinction between basal and apical stylomeres (see figures in Baehr 1997). However, shape of the stylomere and of the likewise very depressed lateral plate, and the number of setae on both structures are characteristic for most species.

Style and format of the description exactly corresponds to those in my pseudomorphine revisions (Baehr 1992, 1997, 2002, 2005) which also can be used to gain additional information about the genus *Adelotopus* Hope, its morphology, distribution, and
habits, and generally about the Australian pseudomorphines.

**Adelotopus parrotti**, spec. nov.

**Figures 1, 2**

- Paratype: 1δ, same data (working collection M. Baehr, in Zoologische Staatssammlung, München).

**Diagnosis.** Species of the *rubiginosus*-group and therein of the group of species that lack any microreticulation on the head surface. In shape of aedoeagus fairly similar to *A. rubiginosus* Newman, though aedeagus slightly wider; also body more depressed, pronotum wider with wider lateral margins, and elytra with sparser punctuation.

**Description**

Measurements. Length: 4.4-5.0 mm. Width: 1.95-2.20 mm. Ratios. Width/length of pronotum: 1.54-1.58; width base/apex of pronotum: 1.47-1.52; width pronotum/head: 1.55-1.56; length/width of elytra: 1.53; length elytra/pronotum: 2.48-2.51.

Colour. Upper and lower surface including mouth parts, antennae, and legs reddish, fore body faintly darker.


![Fig. 1. *Adelotopus parrotti*, spec. nov. Details of male genitalia: Lower surface and lateral view of aedeagus; parameres, genital ring. Scales: 0.25 mm.](https://zoologische-staatssammlung-muenchen/txt/verlag_friedrich_pfeil/download/www.pfeil-verlag.de)
of eyes with a row of short setae. Suborbital field punctate and shortly setose. Gula impilose.


Lower surface. Prosternal process rather short, narrow, convex, apex very short, narrow, compressed, passing over in an almost right angle from ventral surface, shortly setose. Metepisternum elongate, c. 1.8 x as long as wide, in posterior third not hollowed. Abdominal sterna with 1 elongate seta each side. Lower surface rather densely punctate and very shortly setose.

Legs. Elongate, 1st tarsomere of protarsus slightly longer than wide, tibial groove of profemur moderately deep, anterior plate overlapping the groove for about apical third, posterior border of groove sharp. Femur wide. Metatibia elongate, c. 6 x as long as wide, 1st tarsomere of metatarsus almost 2.5 x as long as wide.

♂ genitalia (Fig. 1). Genital ring rather wide, convex, fairly asymmetric, left arm convex, right almost straight, with elongate apex and slightly asymmetric, narrow, little excised base. Aedeagus rather short, fairly depressed, in middle considerably widened, slightly asymmetric. Basal part rather long, moderately bent. Lower surface gently convex, not perceptibly striped. Apex moderately wide, evenly rounded off, rather symmetric. Orifice elongate, internal sac complex, with a distinct oblique fold near apex. Both parameres large, rather elongate, square, with widely rounded apex, left paramere considerably larger than right, upper part of lateral surface moderately striped.

♀ genitalia. Unknown.

Vivipary. Unknown.

Variation. Apart from some differences of body size little variation noted.

Collecting circumstances. Unknown, though most probably this is a subcorticolous species like all other species of the genus.

Distribution. North-eastern Queensland, Australia. Known only from type locality. The type locality is a small river valley in submontane rain forest.

Material examined (2). Only the holotype and the paratype.

Etymology. The name is an acronym in honour of the collector.

Relationships. Member of the rubiginosus-group in the sense of Baehr (1997, 2002) and, according to the absence of any microreticulation on the head and to the structure of the male aedeagus, most closely related to the widespread A. rubiginosus Newman.

Recognition. For recognition the revised key to the species of the rubiginosus-group in Baehr (2002) should be used. According to absence of microre-
ticulation on head, and by comparison of shape and structure of the aedeagus using the figures in Baehr (1997, 2002, as B97 and B02, respectively) caption 140. is easily reached which has to be altered as following:

140 Aedeagus narrower, lateral margin near apex faintly concave (Fig. 1; B97 fig. 170g). Punctuation of elytra less coarse and dense, on the average 3 or less punctures present pro interval. e. SA, Vic, ACT, NSW, QLD, c. NT, s. WA .......................................................... 140a.

- Aedeagus wider, lateral margin near apex convex (B97 fig. 186g). Punctuation of elytra coarser and denser, on the average 4 punctures present pro interval. o unknown. n. WA ........

140a. Pronotum narrower and more convex, ratio w/l < 1.51, usually less, with narrower lateral margins; elytra more convex, with c. 3 punctures present pro interval; aedeagus less widened in middle, left paramere slightly shorter (B97 fig. 170g). e. SA, Vic, ACT, NSW, c. and s. QLD, c. NT, s. WA .......................................................... rubiginosus Newman

- Pronotum wider and less convex, ratio w/l > 1.54, with wider lateral margins; elytra more depressed, with c. 2 punctures present pro interval; aedeagus wider in middle, left paramere slightly longer (Fig. 1). ne. QLD .......................

Remarks

Very few species of the rubiginosus-group in the sense of Baehr (1997, 2002) have been recorded so far from tropical north-eastern Queensland, and those species usually were discovered in open sclerophyll forest that in northern Queensland is mainly dominated by a number of bark shedding Eucalyptus species which are the shelter of most pseudomorphine species in Australia. The discovery of the new species in a rain forest grown river valley thus seems surprising, because very few pseudomorphine species thus far were recorded from rain forest, and certainly no one of the genus Adelotopus nor even of the rubiginosus-group. This group of presently 25 described species (Baehr 1997, 2002) is mainly distributed in the drier parts of Australia and has its highest species diversity in semiarid southern Australia. Therefore, I guess that even in the mentioned rain forest covered type locality of A. parrotti the specimens were collected rather from eucalypts growing in patches of open forest in the Mulgrave River Valley, or along the rivers course, than actually in rain forest.

The new species most probably is next related to the widespread A. rubiginosus Newman, which species is distributed mainly in drier areas of the Southeast and Interior of Australia. Despite of the large number of specimens examined in the revision, no one specimen of A. rubiginosus was ever recorded from north-eastern Queensland. Thus, A. rubiginosus and A. parrotti seem to inhabit different ranges and to exclude one another.

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References


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