

**A new species of the genus *Adelotopus* Hope from the Moluccas.
With new records of some New Guinean species
of *Sphallomorpha* Westwood.**

10th Supplement to the “Revision of the Pseudomorphae of the Australian Region”

(Coleoptera, Carabidae, Pseudomorphae)

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Adelotopus moluccensis, spec. nov. is described from the island of Bacan (Batjan) in the Moluccas. It belongs to the “*multipunctatus*-group” of species in the sense of Baehr (1997) that includes a considerable number of externally rather similar, medium-sized, unicolourous black species or black species with red apical margin of the elytra. This is one of the few groups of the genus *Adelotopus* species of which occur outside of Australia, even in southern Asia. With respect to body shape, structure of surface, and female gonocoxites, the new species is most closely related to *A. jacobsoni* Ritsema and *A. laticaudatus* Baehr, but is distinguished not only from these species but from all others of the *multipunctatus*-group by the unique female gonocoxite which has a markedly hamate median border.

New records of *Sphallomorpha litterata* Baehr and *S. setifera* Baehr from Papua New Guinea are dealt with. These rare species so far were known from western Irian Jaya (now Papua) and from the holotypes only.

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Introduction

A determination sample of carabid beetles recently received from Mr. A. Weigel (Pößneck), from the Moluccas, includes a single pseudomorphine specimen of the genus *Adelotopus* Hope. Specimens of this genus from outside of Australia are rarely collected, although a few species occur in southern Asia, New Guinea, and even on Solomon Islands. From South Asia so far only *Adelotopus jacobsoni* Ritsema was recorded as occurring on the Malayan Peninsula and on Java (Baehr 1997). The present specimen at the first glance was recognized as being quite different from

that species, as well as from those Australian species of similar shape and structure that bear a red apex of the elytra. Hence it is herein described as a new species, and it is altogether the first pseudomorphine species recorded from the Moluccas.

The genus *Adelotopus* Hope is an apotypic one within the outstanding carabid subfamily Pseudomorphae, and, apart from the viviparous reproduction confirmed in many species, this status is demonstrated by the female gonocoxites which are very depressed, foliaceous structures devoid of any distinction between basal and apical gonocoxites (see figures in Baehr 1997). However, shape of the

gonocoxite and of the likewise very depressed lateral plate, and the number of setae on both structures are characteristic for most species.

The *multipunctatus*-group of the genus *Adelotopus* at present covers 12 species (Baehr 1997) which are quite similar in external shape and structure. All species are medium sized, either completely black or black with reddish apex of the elytra, they possess comparatively narrow and elongate, but not parallel elytra, and are more or less densely and distinctly punctate on the upper surface. The group itself is characterized by the combination of abbreviated basal margin of the elytra and presence of no more than 6 basal marginal elytral punctures and setae. Through courtesy of Dr. L. Hendrich (München) and Dr. S. L. Heydon (Davis, Ca.) I furthermore received two specimens of the genus *Sphallomorpha* Westwood from Papua New Guinea for identification, the results of which are worth to be mentioned.

Measurements, style, and format of the description exactly correspond to those in my pseudomorphine revisions (Baehr 1992, 1993a,b, 1994, 1997, 2002, 2004, 2005, 2006, 2007, 2008) which also can be used to gain additional information about the genera *Adelotopus* Hope and *Sphallomorpha* Westwood, their morphology, distribution, and habits, and generally about the Australian-Oriental pseudomorphines.

The holotype of the new species is stored in the working collection of the author (CBM) at Zoologische Staatssammlung, München, the mentioned specimens of *Sphallomorpha* are stored in Bohart Museum of Entomology, Davis, Ca.

Methods

For dissection of the genitalia the specimens were soaked in a wet jar for one night, the genitalia were then cleaned for a short while in hot 4 % KOH. Measurements and style of the description follow those used in the revision of the genus *Adelotopus* in Baehr (1997).

Adelotopus moluccensis, spec. nov.

Figs 1, 2

Types. Holotype: ♀, INDONESIA N-Molukken Bacan, Labuha, Flußtal ca. 3 km S, 40 m, UWS 0°40'28"N, 127°29'44"E 13.I.2006 leg. A. Weigel (CBM).

Diagnosis. Species of the *multipunctatus*-group in the sense of Baehr (1997); within that group probably most similar to *A. jacobsoni* Ritsema from Malacca and Java and *A. laticaudatus* Baehr from northernmost Cape York Peninsula in northern

Queensland, Australia. Distinguished from both species by relatively longer and narrower elytra and by the uniquely shaped female gonocoxite; further on from *A. jacobsoni* by narrower, more parallel body shape, and from *A. laticaudatus* by narrower red apical margin of the elytra and narrower pronotum bearing more angulate basal angles.

Description

Measurements. Length: 6.4 mm. Width: 2.7 mm. Ratios. Width/length of pronotum: 1.65; width base/apex of pronotum: 1.48; width pronotum/head: 1.54; length/width of elytra: 1.59; length elytra/pronotum: 2.65.

Colour (Fig. 2). Upper surface black, apical fifth of elytra and narrow lateral margins of pronotum and of elytra reddish, anterior margin of red apical elytral spot concave. Mouth parts and antennae reddish piceous, femora reddish, tibia and tarsi quite contrastingly dark piceous. Lower surface reddish-piceous.

Head. Rather short and wide, dorsally rather convex. Anterior border very slightly convex, lateral angle rounded, laterally faintly projecting, lateral borders slightly narrowed behind eyes. Clypeal suture even laterally barely recognizable, in middle very widely interrupted. Labrum rather wide and short, moderately overlapped by the clypeus, apex slightly concave, bisetose. Antennal groove laterally sharply bordered, latero-posteriorly with slightly convex area. Mental tooth triangular, short, apex acute. Wings of mentum wide, laterally rounded, apex obtuse. Glossa fairly wide, tongue-like, at apex convex, ventrally with distinct keel, at border with c. 12 elongate setae. Terminal palpomere of maxillary palpus moderately widened, fairly securiform. Terminal palpomere of labial palpus very wide, markedly securiform, at apex about as wide as at lateral margin. Antenna short, 8th and 9th antennomeres almost twice as wide as long. Microreticulation extremely fine and superficial, recognizable only at very high magnification. Punctures extremely fine, fairly dense. Surface with weak sulcus medially of eyes, with several very fine, irregular wrinkles, impilose, glossy. Ventro-laterally of eyes with a row of short setae. Suborbital field punctate and shortly setose. Gula impilose.

Pronotum (Fig. 2). Wide, markedly convex, base much wider than apex, lateral margins evenly curved, barely incurved towards base, widest diameter situated near base. Apical angles markedly produced, at apex slightly obtuse, fairly oblique, far surpassing posterior border of eyes. Apex deeply excised, markedly convex in excision, bordered only laterally. Margins narrow, barely channelled, finely

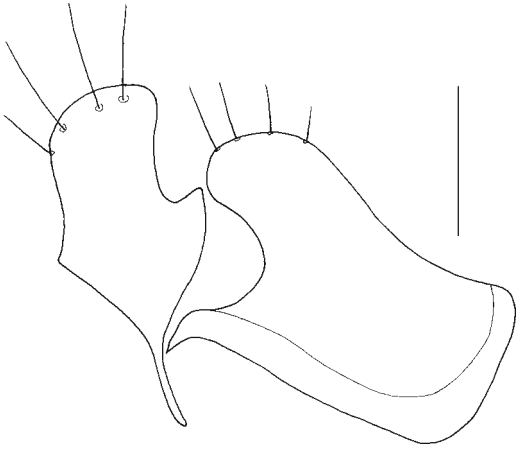


Fig. 1. *Adelotopus moluccensis*, spec. nov. Female gonocoxites and lateral plate. Scale: 0.1 mm.

bordered. Basal angles obtusely angulate, almost rectangular. Base almost straight, not bordered. Surface lacking impressions. Microreticulation absent, punctures sparse on disk, laterally denser, though extremely fine. Surface impilose, very glossy.

Elytra. Moderately wide, very little convex, slightly depressed on disk, rather parallel, though faintly narrowed in basal third. Lateral borders almost straight. Apex wide, slightly oblique, barely convex, apical angles widely rounded off. Humeri rounded, basal margin slightly oblique, lacking setae behind humeri. Marginal channel moderately wide, visible along the whole length. Basal border incomplete, attaining about middle of base. Lateral margin asetose. Series of umbilical pores consisting of 6 rather spaced pores behind humerus. Marginal setae fairly elongate. Striae including sutural stria absent. Scutellary pore and seta lacking. Microreticulation absent, punctures very sparse and extremely fine, surface impilose, very glossy.

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. $1.8\times$ as long as wide, in posterior third not hollowed. Abdominal sterna with one elongate seta each side. Lower surface sparsely 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. $5.5\times$ as long as wide, 1st tarsomere of metatarsus almost $2.5\times$ as long as wide.



Fig. 2. *Adelotopus moluccensis*, spec. nov. Habitus. Length: 6.4 mm.

♂ genitalia. Unknown.

♀ genitalia (Fig. 1). Gonocoxite wide, with obliquely rounded apex, lateral border in middle characteristically unciform, apex with 3 or 4 sub-apical setae. Lateral plate elongate, medio-apically markedly rounded, with 4 rather elongate setae.

Vivipary. Not confirmed.

Variation. Unknown.

Collecting circumstances. Unknown, though most probably this is a subcorticolous species like all its congeners.

Distribution. Island of Bacan (Batjan), northern Moluccas, Indonesia. Known only from this island and from the type locality. The type locality is a river valley.

Material examined (1). Only the holotype.

Etymology. The name refers to the area of sampling, the Moluccas.

Relationships. Member of the *multipunctatus*-group in the sense of Baehr (1997) and, according to body shape and structure, probably most closely related to *A. jacobsoni* Ritsema from Malaysia and Java and *A. laticaudatus* Baehr from north-eastern Australia.

Recognition

For recognition of the new species, in the key to the species of the genus *Adelotopus* in Baehr (1997) follow on to couplet 54. which must be altered as follows:

54. Elytra parallel for basal two thirds, surface more depressed towards apex (Fig. 2; figs 338, 339 in Baehr 1997). Aedeagus unknown. Australia, Moluccas55.
– Elytra distinctly narrowed from behind humeri, surface rather convex towards apex (Fig. 337 in Baehr 1997). For aedeagus see fig. 150g-k in Baehr (1997). Malaysia, Java *jacobsoni* Ritsema
55. Anterior margin of red apical spot of elytra concave (Fig. 2); apex of gonocoxite wider, lateral margin characteristically unciform (Fig. 1). Bacan Is., Moluccas*moluccensis*, spec. nov.
– Anterior margin of red apical spot of elytra either convex or sinuate (Figs 338, 339 in Baehr 1997); apex of gonocoxite narrower, lateral margin not unciform (Figs 1511, 1521 in Baehr 1997). Australia 55a.
- 55a. = 55. in Baehr (1997).

Sphallomorpha litterata Baehr

Baehr, 1992: 189.

This characteristic species was described from a single female from Waigeo Island off the west coast of New Guinea. It belongs to a separate and, in terms of its systematic position, probably rather isolated species-group within the genus *Sphallomorpha* Westwood, of yet uncertain relationships. Probably the discovery of males could assist towards a better definition of the relationships.

The new record reveals a much wider distribution of this species in New Guinea.

New record. 1♀, PAPUA NEW GUINEA GULF: Ivimka Res. Station, Lakekamu Basin 120 m 7°44'S 146°30'E T. Sears 19-23.III.2000.

Sphallomorpha setifera Baehr

Baehr, 1993: 208.

This species was described from a single male from western Irian Jaya (now Papua). It is unique not only within the genus *Sphallomorpha*, but generally within Pseudomorphae, in the presence of setae at the apex of both parameres which most probably is a plesiomorphic character of this species. This

feature, alongside with some other external and genitalic features, induced me to erect a separate species-group for this species, the systematic position of which, however, still is doubtful.

The new record likewise reveals a much wider distribution of this species in New Guinea.

New record. ♂, PAPUA NEW GUINEA GULF: Ivimka Res. Station, Lakekamu Basin 120 m 7°44'S 146°30'E 3-15.XI 1999 SLHeydon, N. Schiff & T. Sears.

Remarks

Only a single species of the pseudomorphine genus *Adelotopus* had been so far recorded from the Oriental Region, namely *A. jacobsoni* Ritsema known from Java and the Malayan Peninsula. Outside of Australia one species is known from Solomon Islands (*A. penelopeae* Baehr), and three additional species were recorded from Papua New Guinea. Characteristically enough, both, the Javanese and Solomon species and one of the New Guinean species belong to the *multipunctatus*-group in the sense of Baehr (1997) which is distributed through tropical northern and north-eastern Australia and apparently is the group members of which have the best opportunity to occur outside of the Australian continent.

Because the holotype of *A. moluccensis* is a female, its actual relationships are still uncertain, but certainly the species is not too closely related to *A. jacobsoni* Ritsema.

Whereas in Australia many pseudomorphine species seem to be quite common, or at least are commonly sampled, provided that appropriate sampling methods are employed, in New Guinea and in the southern Oriental Region pseudomorphine beetles either are much rarer, or collecting of these generally tree inhabiting beetles has been so far extremely unsatisfactory, either because few collectors have looked after them, either because collectors did not employ appropriate sampling methods. The present records of two New Guinean species of the genus *Sphallomorpha* far away from their type localities corroborates this opinion. Apparently, pseudomorphine species in New Guinea possess much wider ranges than it was known so far, but the knowledge of their distribution is still extremely fragmentary. Moreover, unfortunately enough, almost nothing has been recorded about the habits of any extra-Australian pseudomorphine species.

All Australian pseudomorphine species, except those of the genus *Cryptocephalomorpha* Ritsema which are very different in their external morphology from all other pseudomorphine genera, are tree living and the imagines generally occur either under bark

of bark shedding trees (mainly diverse eucalypts), or in deep cracks in the bark of rough barked trees of different families (eucalypts, acacias, proteaceans and others), and usually in rather open forest. The few species of which larvae are known, seem to occur by ants. It would be of major importance to know the habits of the extra-Australian species, because knowledge of their ecological requirements probably could explain why they apparently are so rare outside of Australia.

Acknowledgements

I am much indebted to the skilled collector A. Weigel, Pößneck, for the kind gift of the specimen of the new Moluccan species, alongside with a number of other very interesting specimens; and to Dr. L. Hendrich, München and Dr. S. L. Heydon, Davis, for the loan of the New Guinean specimens of *Sphallomorpha*.

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Buchbesprechungen

4. Bellmann, H.: Der Kosmos Libellenführer. – Franckh-Kosmos Verlags-GmbH & Co. KG, Stuttgart, 2007. 279 S., ISBN 978-3-440-10616-7.

Dieses Libellenbuch, das sich vom Umfang her sehr deutlich vom früheren Kosmos Naturführer "Welche Libelle ist das?" absetzt, behandelt alle mitteleuropäischen Arten, wobei der Autor, der auch der Urheber aller hervorragenden und besonders gestalteten Fotos und Zeichnungen ist, darauf hinweist, dass er räumlich neben Deutschland auch die Arten der Beneluxstaaten, der Schweiz, Österreichs und Nordfrankreichs auführt. Auf Grund der Verwechslungsmöglichkeit ist hier auch die südwesteuropäische *Coenagrion coerulescens* mit aufgenommen. Vor den detaillierten Artbeschreibungen mit Bildteil, jeweils auf einer Doppelseite, sind in den Kapiteln Körperbau der Imagines und Larven, Paarung, Eiablage, Revierbildung, Entwicklung, Lebensräume, ausgewählte Libellenbiotope mit Artenlisten, Gefährdung und Schutz, Fang, Haltung und Sammeln sowie das Fotografieren mit allgemeine Aussagen vorangestellt. Diesen folgen die Bestimmungstabellen zu den Imagines und Larven, wobei wie gewohnt nur sehr prägnante Merkmale herausgegriffen sind, die die ausführlichen Beschreibungen nicht ersetzen. Obwohl im Spezialteil abgehandelt, fehlt hier jeweils die Integration der mediterran verbreiteten Prachtlibelle *Calopteryx haemorrhoidalis*. Ansonsten handelt es sich bei diesem umfassenden Führer um eine wie vom Autor gewohnte, hervorragend abgebildete Zusammenstellung der heimischen Libellenfauna.

Ernst-Gerhard Burmeister

5. Klausnitzer, B. & E. Sprecher-Uebersax: Die Hirschkäfer oder Schröter. Lucanidae. 4. stark bearbeitete Auflage. – Die Neue Brehm-Bücherei. Bd. 551, 161 pp., Westarp Wissenschaften, Hohenwortsleben, 2008, ISBN 3-89-432-451-1.

Der Große Europäische Hirschkäfer ist sicher der am besten bekannte Käfer in Deutschland, doch, obwohl jeder ihn kennt, ist das Wissen über ihn bei den meisten Menschen doch sehr begrenzt. Dass es bei uns noch einige weitere Hirschkäferarten gibt, die allerdings nicht so groß und prächtig sind, das ist meist noch weniger geläufig. Diesem Mangel abzuhelfen und der interessierten Öffentlichkeit eine exotische, eigentlich vor allem in den Tropen beheimatete Käfergruppe näherzubringen, ist das Anliegen dieses Buches. Dieses beschränkt sich allerdings nicht auf die wenigen einheimischen Arten, sondern gibt in Wort und Bild auch einen guten Überblick über die gesamte Familie, ihre Einteilung und Verbreitung, und stellt eine Reihe von exotischen Vertretern bildlich dar. Aber die Hauptsache sind doch die sieben einheimischen Arten, deren Morphologie, Verbreitung und Biologie sehr ausführlich beschrieben werden, und die man außerdem mit Hilfe einer Bestimmungstabelle

unterscheiden kann. Ausführliche Kapitel über Gefährdung und Schutz unserer Hirschkäfer, sowie über die Darstellung der Hirschkäfer in Kunst und Literatur, und schließlich ein umfangreiches Literaturverzeichnis runden das Buch ab. Tatsächlich sind alle unsere Hirschkäfer als Bewohner von Totholz durch die Zerstörung ihrer Habitate, aber auch durch zu intensive Bewirtschaftung unserer Wälder in ihrem Bestand bedroht. Wie man ihnen helfen kann, auch dafür gibt das Buch interessante Hinweise. Insgesamt ein Buch, das außerordentlich reichhaltige Information über eine kleine, aber biologisch hochinteressante und dazu noch gefährdete Tiergruppe vermittelt. Es ist allen Naturfreunden, aber auch Fachentomologen nur zu empfehlen.

M. Baehr

6. Bergbauer, M., Myers, R. F., Kirschner, M.: Das Kosmos Handbuch Gefährliche Meerestiere. Franckh-Kosmos Verlags-GmbH, Stuttgart, 2008, 384 pp., ISBN 978-3-440-10945-8.

Dass es gefährliche Meeresorganismen gibt, ist hinlänglich bekannt. Aber wie immer, wenn sich reale Gefahren mit der Lust des Menschen am Extremen durchmischen, kursieren vielfach auch Mythen und Übertreibungen, die mit der Wirklichkeit wenig zu tun haben, während manch reale Gefahr geradezu fahrlässig übersehen wird, wie immer wieder vorkommende, ebenso unnötige wie gefährliche Unfälle lehren. Ich finde es sehr verdienstvoll, dass sich ein Autorenteam um Matthias Bergbauer, einen unserer kompetentesten "Meeres-Journalisten", dieses Themas wieder einmal angenommen und dem Leser ein umfassendes, informatives und objektives Buch an die Hand gegeben hat, das ich jedem Interessierten und Meeresfan wärmstens empfehlen kann., u. a. weil es mehr ist als nur eine Einführung, es ist vielmehr ein Almanach der Giftigkeit bzw. Gefährlichkeit durch das gesamte Tierreich, in dem selbst Leser mit Vorkenntnissen gewiss Neues und ihnen Unbekanntes finden werden. So viele Taxa sind besprochen und wunderschön illustriert, dass einige Kapitel fast schon den Charakter eines Bestimmungsführers haben. Für giftige Meerestiere wird gezeigt, worauf die Giftwirkung beruht, wie eine Vergiftung ablaufen kann und wie man sie behandelt. Über sonstige gefährliche Meerestiere, die Menschen direkt angreifen und verletzen können, wird sachlich und ohne Verzerrungen berichtet, da und dort ist auch die Angabe der realen Zahl von Opfern sehr hilfreich, ebenfalls die Einbettung der "Giftstory" in die Biologie der besprochenen Arten, in der die Bedeutung eines Gifts oder der Verhaltensweise für die einzelnen Tiere oder die Hintergründe für die passive Giftigkeit von Meerestieren erläutert werden. Wichtig sind auch die Angaben zur Vermeidung von Gefahren, durch die ein wichtiger Punkt sehr klar wird: Gefährdungen lassen sich durch angemessenes, vorsichtiges Verhalten und natürlich auch durch das Wissen um die Gefahren weitgehend vermeiden!

Roland Melzer