Two new species of the genus *Mecyclothorax* Sharp from New Guinea (Coleoptera: Carabidae: Psydrinae)

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Two new species of the psydrine genus *Mecyclothorax* Sharp from New Guinea are described: *M. lackneri* sp. n., from central Papua (former Irian Jaya), western New Guinea, and *M. kubor* sp. n., from central Papua New Guinea, in the eastern half of the island. The first species was collected at median altitude and is most closely related to *M. jiwikae* Baehr of the same region, but is distinguished by wider pronotum and even shorter elytra, and by the structure of the aedeagus. The second species was sampled at high altitude of Kubor Range and is closely related to *M. sedlaceki* Darlington of the nearby Bismarck Range, but is distinguished by its larger body size and the presence of five deeply impressed setiferous punctures on the elytra. A revised key to the New Guinean species of *Mecyclothorax* is presented. Additional records of *M. sedlaceki* Darlington from Mt. Wilhelm are presented. Martin Baehr, Zoologische Staatssammlung, Münchhausenstr. 21, D-81247 München, Germany. martin.baehr@zsm.mwn.de

Introduction

The psydrine genus *Mecyclothorax* Sharp, 1903 is widely distributed in the area between Australia (Moore 1984, 1992, Moore et al. 1987, Baehr 2000, 2003), New Guinea (see below), New Caledonia (Jeannel 1944, Deuve 1987, unpublished records), New Zealand (Larochelle & Larivière 2001), Java (Louwerens 1949), Borneo (Baehr & Lorenz 1999), and far out in the Pacific on Tahiti (Perrault 1978, 1992) and Hawaii (Britton 1948, Liebherr 2005, 2007, 2008). In both latter archipelagos, the genus has developed its highest species diversity. Most probably the genus is of Australian origin; it is very widely distributed in the southern part of Australia and along the whole east coast. In view of their phylogenetic status the most plesiotypic species of the genus apparently occur in southern Australia.

In New Guinea the genus was repeatedly subject of descriptions of new species. Revisions (Darlington, 1962, 1971; Baehr, 1992, 1995, 1998, 2002) show that the mecyclothoracine fauna of New Guinea is only known from single or few specimens. It is yet unknown whether their recorded scattered occurrences simply demonstrates our limited knowledge, or whether they mirror their truly restricted ranges. Thus far, most species were recorded from central and eastern Papua (former Irian Jaya). In spite of much longer and better exploration, from the eastern half of the island (Papua New Guinea) only few species have been recorded. The extremely scattered records may reflect the yet absolutely inadequate sampling of these small beetles that probably are best collected by sieving or Berlese extraction of litter or soil. Apparently, such sampling methods so far have been very rarely employed.

As a conclusion, in New Guinea the genus *Mecyclothorax* is yet unknown from Owen Stanley Range, Huon Peninsula, the western part of Papua New Guinea, and also from the whole western part of Irian Jaya (now Papua) including Snow Mountains and Vogelkop Peninsula. Very probably species will be discovered in most of these areas in future, because the genus is as well distributed to the east of New Guinea as to the west.
Material and methods

The new species were detected within a sample of carabid beetles collected in western New Guinea and kindly sent on loan for identification from the Zoologisch Museum of the University of Amsterdam (ZMAN) and in the unidentified carabid material of the National Museum of Natural History Naturalis, Leiden (RMNH). The holotypes are located in these collections, one paratype of *M. lackneri* is stored in the working collection of the author at the Zoologische Staatssammlung, München (CBM). Additional records of *M. sedlaceki* Darlington were obtained from the collections of RMNH and of the Hungarian National Museum of Natural History, Budapest (HNMB).

For dissection of the male and female genitalia specimens were soaked in a wet jar for a night, then the genitalia were cleaned for a short while in hot 4% KOH. For the descriptions normal taxonomic methods have been used.

Measurements were taken using a stereo microscope with an ocular micrometer. Length has been measured from the apex of labrum to the apex of elytra. Length of pronotum was measured along midline, width of base of pronotum at the extreme tips of the basal angles. Measurements and ratios were obtained in the same manner as in Baehr (1992, 1995, 1998, 2002).

Recognition

A new key to the New Guinean *Mecyclothorax* is given below. For easier identification, figures from former papers (Baehr, 1992, 1995, 1998, 2002) are quoted where necessary. Although range is not a prima facie distinguishing character, the ranges of most species seem to be so restricted that they can be used as support for the differentiation of the species. Therefore, geographic and altitudinal ranges are included in the key as exactly as possible.

Revised key to the New Guinean *Mecyclothorax*

1. Elytral striae 3 and 5 with setiferous punctures. Wilhelmina Top (Gunung Trikora), central Papua (former Irian Jaya), at 4200 m ........................................... toxopei Darlington, 1962
   - Only elytral stria 3 with setiferous punctures ........................................ 2
2. Posterior lateral seta of pronotum present ............. 3
   - Posterior lateral seta of pronotum absent ............. 5
3. Lateral margin of elytra distinctly sinuate in front of the subdentiform basal angles (Fig. 3). Papua New Guinea ......................... 4
   - Lateral margin of elytra not perceptibly sinuate in front of the rather obtuse basal angles (Baehr 1995, figs 3, 4). Papua ......................... 5
4. Elytra with 5 discal punctures and setae (Fig. 3); size larger, length 4.4 mm; aedeagus unknown. Kubor Range at 3600 m ........................................ kubor sp. n.
   - Elytra with 2–3 discal punctures and setae; size smaller, length < 4.0 mm; aedeagus with narrow, elongate and slightly sinuate apex and with two elongate sclerites in internal sac (Fig. 2). Bismarck Range (Mt. Wilhelm), above 3200 m ...... sedlaceki Darlington, 1971
5. Elytra with 4 discal punctures and setae; base of pronotum coarsely punctate; elytral striae well impressed, crenulate, intervals convex, stria 7 fairly well developed (Baehr 1995, fig. 3). Juliana Top (Gunung Mandala), eastern central Papua, at 3500 m .......................... julianae Baehr, 1995
   - Elytra with 2 discal punctures and setae; base of pronotum impunctate; elytral striae weakly impressed, outer striae consisting of rows of punctures only, intervals depressed, stria 7 scarcely indicated (Baehr 1995, fig. 4). Eipomek-Langda area, eastern central Papua, at 3500 m .......................... eipomeki Baehr, 1995
6. Basal angles of pronotum almost rectangular, lateral margin near base distinctly sinuate; aedeagus see Baehr (1995: figs 5, 7; 2002: fig. 1) .................................................. 7
   - Basal angles of pronotum obtuse, lateral margin near base not or barely sinuate; aedeagus see fig. 1 and Baehr (1992: fig. 2; 1995: figs 11, 12; 1998: fig. 2; 2002: fig. 2) ........ 9
7. Size larger, length > 5 mm; surface at least with traces of microreticulation; aedeagus see Baehr (1995: figs 5, 7). Eastern central Papua, above 3200 m ........................................ 8
   - Size smaller, length < 4 mm; surface without traces of microreticulation; aedeagus see Baehr (2002: fig. 1). Bulldog Rd., Morobe Prov., eastern central Papua New Guinea, at 2550 m .......................... cucudoroi Baehr, 2002
8. Larger species, length > 5.7 mm; microreticulation on head and pronotum barely indicated, on elytra superficial, but present on apical part of elytra; basal angles of pronotum obtuse at apex, lateral margins distinct, explanate and slightly upturned; at least two or three median elytral striae deeply impressed, intervals distinctly convex (Baehr 1995: fig. 8); aedeagus see Baehr (1995: fig. 5). Gunung Elit, eastern central Papua, at 3200–3300 m .................. eliti Baehr, 1995

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