

## Two new species of Rhysodini from Indonesia (Coleoptera: Carabidae)

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**Taxonomy, description, new species** Coleoptera, Carabidae, Rhysodini, *Omoglymmius* (*Omoglymmius*), *Clinidium* (*Clinidium*), Indonesia, Lesser Sunda Islands, Bali I.

**Abstract.** *Omoglymmius* (*Omoglymmius*) *tamblinganensis* sp. nov. and *Clinidium* (*Clinidium*) *bellorum* sp. nov., both from Bali I., are described, illustrated and compared with related congeners.

### INTRODUCTION

The nominotypical subgenus of the nearly cosmopolitan genus *Omoglymmius* Ganglbauer, 1892 belongs with nearly one hundred of described species to the largest taxa of Rhysodini. The whole genus was revised by R. T. Bell & J. R. Bell in 1988 and subsequently described species were included in the revised key to *Omoglymmius* (*Omoglymmius*) (R. T. Bell & J. R. Bell 1993). Five additional species of *Omoglymmius* (s. str.) were described later (R. T. Bell & J. R. Bell 2000, 2009; Hovorka 2015), but so far no species has been known from the Indonesian island Bali. Similarly, the genus *Clinidium* was revised by R. T. Bell & J. R. Bell in 1985; subsequently (R. T. Bell & J. R. Bell 2009) published a new key to species of the nominotypical subgenus *Clinidium* (*Clinidium*), together with a new discussion about phylogeny of the subgenus and some changes in the arrangement of species-groups. The purpose of the present paper is to describe two additional species from Bali belonging to the mentioned (sub)genera - one in *Omoglymmius* (s. str.) and one in *Clinidium* (s. str.).

### MATERIAL AND METHODS

The present paper is based on studying the material of the new species described below. The specimens included in the study are deposited in the following institutional and private collections:

NMPC National Museum, Praha, Czech Republic (J. Hájek);

OHPC Oldřich Hovorka, private collection, Praha, Czech Republic.

Measurements were made with an MBS-10 stereoscopic microscope, under magnifications of 8x, 16x and 32x. Measurements of body parts and corresponding abbreviations used in the text are as follows:

EL = elytral length - length of left elytron measured from humerus to apex;

EW = elytral width - maximum width of both elytra combined;  
HL = length of head - measured from apex of clypeus to posterior margin of temporal lobe;  
HW = width of head - maximum width of head (including eyes);  
PL = pronotal length - length of pronotum measured along mid-line;  
PW = pronotal width – maximum width of pronotum;  
TL = total length - length measured from the apex of left mandible (mandibles closed) to the apex of left elytron.

The morphological terms used in this study are adopted from R. T. Bell & J. R. Bell (1978, 1979).

The colour photographs of the habitus and diagnostic characters were taken by the author with a Canon EOS 600D digital camera in Entomological Department, National Museum, Prague.

Each type specimen of newly described species is provided with a red printed label: “*Omoglymmius (Omoglymmius) tamblinganensis* sp. nov., HOLOTYPE (or ALLOTYPE or PARATYPE), det. O. Hovorka, 2017” or “*Clinidium (Clinidium) bellorum* sp. nov., HOLOTYPE, det. O. Hovorka, 2017”.

## DESCRIPTIONS

### *Omoglymmius (Omoglymmius) tamblinganensis* sp. nov.

(Figs. 1-5)

**Type material.** Holotype (♂) labelled: “Indonesia, Bali: Buleleng Distr.; Tamblingan - Danau Tamblingan (lake), montane forest around lake, 19-21.ii.2015, 08°16.1'S 115°05.5-9'E, 1250 m, J. Hájek & J. Šumpich leg.”, (NMPC). Allotype (♀) labelled “Bali isl., Bedegul Region, Tamblingan Lakes N.R., i-ii. 2005, 1300 m” (NMPC). Paratypes: (1 ♂), the same data as holotype, (NMPC); (1 ♂): labelled: “Bali, Bedegul Region, Tamblingan Lakes N.R., xi. 2004, 1200 m”, (OHPC).

**Description.** Habitus - the new species is medium-sized, habitually very similar to its congeners (Fig. 1). Body colour (including antennae) is dark brown to brown-black, legs are brown-red, with femora slightly darker than tibiae and tarsi. Palpomeres yellow-brown. Body elongate, narrow. TL 5.9-7.1 mm. Head distinctly longer than wide, HL:HW 1.21-1.24. Pronotum 1.32-1.42 times wider than head, slightly longer than wide (PL:PW 1.13-1.20). Elytra elongate, EL:EW 2.18-2.32, widest in the anterior third of length.

Head (Fig. 2) relatively elongate, with large eyes. Antennomeres I-X punctate, distal antennomeres more sparsely than basal ones. Basal setae absent. Scapus dorsally covered by pollinosity, pedicellus and flagellomeres with punctures without distinct pollinosity. Antennomeres V-X with narrow apical ring of minute setae. Frontal, postclypeal and antennal grooves deep, antennal groove posteriorly shortly prolonged in short trace of orbital groove. Median lobe long, lanceolate with basal constriction and rounded, blunt tip. Frontal space narrow, deep, elongate triangular. Temporal lobe with median margin slightly emarginate, medial angles obtuse, distinctly separated; posterior medial margin convex; surface with 14-26 punctures, predominantly on posterior and lateral parts; 3-4 temporal setae present. Postorbital and suborbital tubercles absent. Mentum and submentum with only posterior V-



Figs. 1-5: *Omoglymmius* (*Omoglymmius*) *tamblinganensis* sp. nov.: 1- habitus, dorsal view; 2- head and pronotum, dorsal view; 3- posterior tibia of male; 4- median lobe of aedeagus, lateral view; 5- habitat of holotype (foto J. Hájek). Without scale.

shaped pollinose band, most of their surface glabrous. Mentum irregularly punctured. Three to four pairs of prelabial setae and one pair of postlabial setae present.

Pronotum (Fig. 2) relatively short, only slightly longer than wide, its sides convex, widest point approximately in the middle, slightly narrowed at the base, more strongly at apex. Lateral pronotal margin distinctly sinuate before hind angle, both lateral setae and angular seta absent. Pronotal carinae different, convex; inner carina wide, straight, strongly narrowed on both sides, outer carinae very narrow, slightly convergent anteriorly, of the same width along whole length. Inner carina punctate, with 0-5 punctures basally, practically impunctate in central part and with 1-7 punctures anteriorly. Outer carina with 3-9 small or middle sized punctures anteriorly. Inner carina about 2 times wider than outer carina at middle. Median groove with both anterior and posterior median pit developed, posterior one slightly larger.

Basal impression wide, pollinose, paramedian groove complete, pollinose fully only at apex, most of its length pollinose on outer side only (on border with outer carina). Epipleuron of pronotum with irregular row of punctures along whole length. Precoxal carina absent. Prosternite and proepisternite punctured, prosternite anteriorly with transverse stripe of pollinosity. Prosternal process with deep, narrow, elongate pollinose groove.

Elytral striae impressed, densely punctate, narrow, interstriae slightly convex. Base of stria IV without longitudinal pollinose scarp. Elytral stria II with 3 setae in apical third, stria IV with 6-7 setae along whole length; stria VII with 4-5 setae in apical part; apical tubercle with 2-3 setae. Metasternum without pollinosity except two transverse stripes posteriad each mesocoxa, punctured mainly along lateral margin and middle part, lateral punctures larger and distinctly pollinose on bottom. Both sexes with large lateral pits in sternum IV, this larger in female. Sterna III.-V. with uninterrupted transverse row of punctures; lateral punctures sometimes connected by pollinosity. Last visible sternite wholly punctured, and with one pair of setae near posterior margin.

Anterior femur with ventral tooth in male. Male middle tibia widened at apex, inner side with sharp distinct calcar, nearly as long as spur. Hind tibia of male with large, subtriangular, subacute calcar (Fig. 3).

Aedeagus as on Fig. 4.

**Differential diagnosis.** *O. (O.) tamblinganensis* sp. nov. is the first species of the nominotypical subgenus of *Omoglymmius* known from the Bali I.; habitat of the holotype and one male paratype as on Fig. 5. The species differs from congeners occurring in the region of Lesser Sunda Islands by the following combination of characters: antennal lobe glabrous, elytral intervals not carinate; head distinctly longer than wide; male with tooth on anterior femur; 3-4 temporal setae present; inner pronotal carina about 2 times wider than outer carina, both carinae punctate, outer carina without setae; postorbital and suborbital tubercle absent; temporal lobe not circular, its lateral margin rounded and anterior part not extensively pollinose and posteromedial margin convex, so that occipital angle indistinct; abdominal sterna with distinct punctures; pronotum not subquadrate, with sides curved, sinuate before hind angle; orbital groove very short, connected with pollinosity of posterior part of antennal groove.

Most of characters are shared with *O. (O.) bucculatus* (Arrow, 1901) from Sumbawa, which differs by presence of two setiferous punctures on outer pronotal carina, by lateral pronotal margin not sinuate anterior to hind angle, by elytral chaetotaxy reduced in comparison with *O. (O.) tamblinganensis* sp. nov. etc. The species seems to be at the moment the nearest relative of *O. (O.) tamblinganensis* sp. nov. Other species of *Omoglymmius* (s. str.) with narrowed outer pronotal carina - *O. (O.) impletus* R. T. Bell et J. R. Bell, 1981 from Caroline Islands, *O. (O.) patens* R. T. Bell et J. R. Bell, 1982 from New Guinea, *O. (O.) solitarius* (Arrow, 1942) from Andaman Islands and *O. (O.) tabulatus* R. T. Bell et J. R. Bell, 1982 from Solomon Islands are more different and probably more distant; *impletus* differs by absence of antennal punctures, absence of profemoral tooth in male, only one temporal seta etc., *patens* by punctate median lobe, transverse frontal space, impunctate inner carina, pronotum not sinuate before hind angle etc.; *solitarius* has outer carina only 0.3

as wide as inner carina, broadly rounded apex of median lobe, impunctate pronotal carinae etc., *tabulatus* differs by outer pronotal carina not convex, but of two planes meeting at sharp edge, one vertical and other sloped towards paramedian groove, by pronotum hexagonal to subquadrate, only one temporal seta, different shape of metatibial calcar etc.

**Name derivation.** The species is named according to its type locality, Tamblingan Lake in north part of Bali I.

***Clinidium (Clinidium) bellorum* sp. nov.**

(Figs. 6-7)

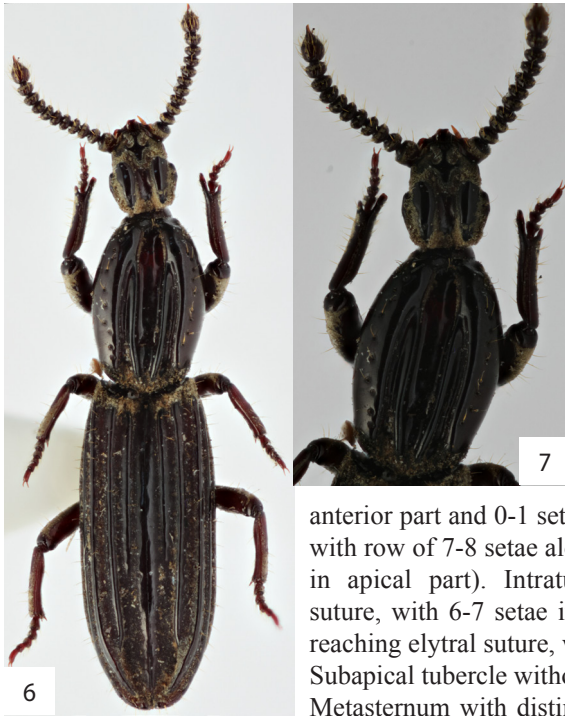
**Type material.** Holotype (♀) labelled: "Bali, Bedegul Region, Tamblingan Lakes N.R., XI. 2004, 1200 m", (OHPC).

**Description.** Habitus (Fig. 6) - the new species is medium-sized, habitually similar to its congeners. Body colour (including antennae) is brown-black, legs are brown, with femora darker than tibiae and tarsi. Palpomeres yellow-brown. Body elongate, narrow. TL 7.3 mm. Head distinctly longer than wide, HL:HW 1.21. Pronotum 1.63 times wider than head, distinctly longer than wide (PL:PW 1.51). Elytra elongate, EL:EW 2.48, widest approximately at midlength.

Head (Fig. 7) relatively elongate, with small median lobe, very small antennal lobes separated from temporal lobe by broad pollinose area; temporal lobes narrow, elongate, four temporal setae present; each eye divided into two ocelliform structures. Antennae without tufts of minor setae; last antennomere with distinct, long, subacute apical stylet. Scapus dorsally widely pollinose, antennomeres II-X with relatively wide apical transverse band of pollinosity. Mentum and submentum with posterior W-shaped pollinose band, most of their surfaces glabrous. Mentum not punctured. Two to three pairs of both prelabial and postlabial setae present.

Pronotum elongate, median groove very wide, widest across anterior median pit, which is without central tubercle; width of median groove 0.21 greatest width of pronotum, its sides almost parallel except terminal part behind posterior pit; basal impressions continued anteriorly as scarp which turns anteriorly medially and joins median groove defining inner carina, which is shorter, narrower, basally higher and anteriorly lower than outer carina, impunctate, basally covered by pollinosity and bearing one seta. Outer carina wide, glabrous, only base and anterior lateral spot pollinose. There are 3-4 setae in basal pollinosity and two setae in anterior pollinose spot, between those areas with irregular row of ten setae arising from pollinose punctures. Sternopleural groove nearly complete, covered by narrow stripe of pollinosity. Prosternite and proepisternite unpunctured, precoxal carina not developed

Elytral base with transverse strip of strong pollinosity, in which are two setae at the level of base of parasutural stria or third interval, and three setae at the level of base of intercalary stria or fourth interval. Elytral striae deep, punctured, covered by pollinosity. Sutural and parasutural stria connected slightly posteriorly to elytral midlength in one, flat and wide stria, so that second interval is strongly shortened. Elytral intervals narrow, carinate with exception of first (sutural) interval. Sutural stria with 3 setae in anterior (separate) part and 5-6 setae in posterior part common with parasutural stria. Parasutural stria with 4-5 setae in



Figs. 6-7: *Clinidium (Clinidium) bellorum* sp. nov.: 6- habitus, dorsal view; 7- head and pronotum, dorsal view. Without scale.

anterior part and 0-1 seta in posterior one. Intercalary (III) stria with row of 7-8 setae along almost whole length (setae missing in apical part). Intratubercular (IV) stria reaching elytral suture, with 6-7 setae in apical part. Marginal (V) stria deep, reaching elytral suture, with about 20 setae along whole length. Subapical tubercle without setae, apical tubercle with 4-5 setae. Metasternum with distinct, deep and pollinose median sulcus.

Abdominal sternum III with transverse pollinose sulcus uninterrupted, sterna IV and V with transverse sulcus shortly interrupted in middle, both parts almost connected by central pollinose spot; sternum VI with widely interrupted anterior transverse sulcus and widely U-shaped posterior sulcus. Sternum IV with large lateral not pollinose pits in female; male unknown.

**Differential diagnosis.** *Clinidium (s. str.) bellorum* sp. nov. differs from all related consubgenera from the *beccarii*-group, as defined by R. T. Bell & J. R. Bell (2009: page 58) by following combination of characters: antennomeres without tufts of minor setae, discal pronotal striola connected with median groove, metasternum with median sulcus, parasutural stria with 4-5 setae.

Most of characters are shared with *C. (C.) dux* R. T. Bell et J. R. Bell, 2009 from the Philippines (Marinduque), which differs by absence of metasternal median sulcus, by absence of setae in parasutural stria, by more elongate pronotum, differently shaped median lobe on head etc. and seems to be at the moment the nearest relative of *C. (C.) bellorum* sp. nov. Both species share the unique connection of discal pronotal striola with median groove, very unusual within the whole genus *Clinidium*, and many other character states.

**Name derivation.** The species is named in honour of Ross T. Bell and Joyce R. Bell, the best world's experts on rhyssodine beetles, who monographed the world fauna of this group.

ACKNOWLEDGEMENT. I am very grateful to my colleagues Jiří Hájek (NMPC) for the loan of Rhysodini material from his trip to Indonesia and for providing the photograph of the type habitat of *Omoglymmius* (s. str.) *tamblinganensis* sp. nov. and Stanislav Jákl (Praha, Czech Republic) for the kind donation of the material of Rhysodini.

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*Received: 16.6.2017*

*Accepted: 30.6.2017*

*Published: 5.10.2017*

