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RHYSODINE BEETLES (INSECTA: COLEOPTERA: CARABIDAE OR RHYSODIDAE): NEW SPECIES, NEW DATA, AND REVISED KEYS TO OMOGLYMMIUS (SUBGENERA OMOGLYMMIUS AND PYXIGLYMMIUS)

Ross T. Bell¹

Research Associate, Section of Invertebrate Zoology

JOYCE R. BELL¹

ABSTRACT

Three new species of Rhysodidae (Coleoptera: Carabidae or Rhysodidae) are described, Omoglymmius (Omoglymmius) sabah (Borneo), Omoglymmius (O.) cupedoides (New Guinea) and Omoglymmius (Pyxiglymmius) multicarinatus (Sulawesi). Descriptions are given for either males or females of the following four species previously known from only one sex: Clinidium (Mexiclinidium) championi Bell and Bell, Clinidium (C.) dubium Grouvelle, Rhyzodiastes (Temoana) propinquus Bell and Bell, Omoglymmius (O.) repetitus Bell and Bell. Range extensions are given for six species: Omoglymmius (O.) sus Bell and Bell, Omoglymmius (O.) ichthyocephalus (Lea), Omoglymmius (Hemiglymmius) javanicus (Grouvelle), Clinidium (C.) rojasi Chevrolat, Kaveinga (K.) abbreviata (Lea) and Kaveinga (K.) histrio Bell and Bell. The locality for Omoglymmius (Hemiglymmius) germaini (Grouvelle) is confirmed as Java, as previously hypothesized, not Bolivia as designated in the original description. Revised keys to Omoglymmius (Omoglymmius) and Omoglymmius (Pyxiglymmius) are provided.

INTRODUCTION

In previous papers (Bell, 1970, 1973, 1975, 1977; Bell and Bell, 1975, 1978, 1979, 1981, 1982, 1985, 1987*a*, 1987*b*, 1987*c*, 1988, 1989, 1991) we have treated the rhysodid beetles of the world. The present paper extends our work by providing descriptions of three new species, descriptions of sexes not previously described for four species, significant range extensions for six species and correction of an erroneous early locality record. A revision of the key to *Omoglymmius* (*Omoglymmius*), which covers 92 species including 14 species described since Bell and Bell (1982), is provided. Also included is a revised key to *Omoglymmius* (*Pyxiglymmius*), incorporating the species described in addition to the ten previously described in Bell and Bell (1982, 1985). Both keys contain geographical distribution information.

Abbreviations used in the text are: BMNH, Natural History Museum, London; CMNH, Carnegie Museum of Natural History, Pittsburgh; CMNO, Canadian Museum of Nature, Ottawa; CNCO, Canadian National Collection, Ottawa; HNHM, Hungarian Natural History Museum, Budapest; LEI, Rijksmuseum vor Natuurlijke Historie, Leiden, Netherlands; SAMA, South Australian Museum, Adelaide; UVM, University of Vermont, Burlington; ZMUC, Zoologisk Museum, Copenhagen. L/GW, ratio of pronotal length divided by its greatest width.

¹ Zoology Department, University of Vermont, Burlington, Vermont 05405-0086. Submitted 15 October 1992.

Systematics

New Species Descriptions

Omoglymmius (**Omoglymmius**) sabah, new species (Fig. 1, 2)

Type specimens.—Holotype female, labelled "Borneo, Sabah, Mt. Kinabalu Nat. Pk., Poring Hot Springs, 500 m., 10.V.87, A. Smetana" (CNCO). Paratypes: one female, labelled "Borneo, Sabah, Mt. Kinabalu N.P. above Poring Hot Springs, 530 m., 9.V.87, A. Smetana" (CNCO); two females, labelled "Borneo, Sabah, Mt. Kinabalu N.P. Por. H.S. area, Langanan Fall, 900 m., 14.V.87, A. Smetana" (CNCO, UVM).

Etymology. - This species is named for the state in which it was first collected.

Diagnosis.—An *Omoglymmius* (*O*.) without postorbital or suborbital tubercles, with a pollinose scarp at base of Stria IV, and the outer pronotal carinae punctate but inner carinae impunctate. Among species with this combination of characters, it is distinguished by having antennal segments V–X punctate, basal punctures in grooves, and many setae along the length of Stria IV.

Description. – Length 5.8–6.5 mm. Antennal segments I–IV very coarsely punctate; segments V–X with coarse basal punctures set in a groove (Fig. 2); head 1.2 times longer than wide; median lobe moderately short, apex narrowly rounded; lateral margin shallowly curved; medial angles obtuse, nearly in contact; posteromedial margin evenly curved into posterolateral margin, posterior margin of temporal lobe thus evenly rounded, occipital angle not distinct; orbital groove fine, fading to line of punctures opposite posterior margin of eye; temporal lobe with 12–15 punctures mainly in posterolateral portion; 1–2 temporal setae; postorbital and suborbital tubercles absent; eye large, round (Fig. 1).

Pronotum moderately elongate, L/GW about 1.40, widest slightly anterior to middle, base and apex narrowed; lateral margins curved, at most scarcely sinuate anterior to hind angle; carinae subequal at middle; medial margin of outer carina slightly sinuate anterior to base; outer carina widest anterior to middle, abruptly, obliquely narrowed to apex; gradually narrowed to base; inner carina widest at middle, gradually narrowed to apex, and nearly to base, but abruptly dilated at extreme base; outer carina with about 14 coarse punctures; inner carina impunctate; pronotum without setae; posternum without distinct precoxal carinae.

Elytron relatively long, narrow; striae impressed, coarsely punctate; base of Stria IV with longitudinal pollinose scarp; Stria II with 2–3 setae near apex; Stria IV with about seven rather stout setae; apical striole with one seta; extreme apex of Stria VII with 4–5 setae; metasternum with irregularly scattered coarse punctures; punctures of Sterna III–V coarse, numerous, tending to form broad transverse bands; female with shallow lateral pit on Sternum IV, and slight suggestion of one on Sternum V; Sternum VI densely punctate, with one pair of setae; legs coarsely punctate; male unknown.

Distribution. - Known only from the type locality at Mt. Kinabalu.

Remarks.—*Omoglymmius hiekei* Bell and Bell, which was also described from Mt. Kinabalu, differs in that it lacks carinal punctures, temporal punctures, and basal antennal punctures. Grouvelle (1903) described *Rhysodes (Omoglymmius)* borneensis from Sambey River, West Borneo. The holotype has not been located,

Fig. 1-2.—Omoglymmius (s. str.) sabah, new species. Fig. 1.—Head, pronotum, dorsal aspect. Fig. 2.—Antennal Segments VIII-XI. Fig. 3-7.—Omoglymmius (s. str.) cupedoides, new species. Fig. 3—Head, pronotum, dorsal aspect. Fig. 4.—Head, left lateral aspect. Fig. 5.—Prothorax, left ventrolateral aspect. Fig. 6.—Metasternum, abdomen, ventral aspect, male. Fig. 7.—Hind tibia, male. Fig. 8–11.—Omoglymmius (Pyxiglymmius) multicarinatus, new species. Fig. 8.—Head, pronotum, dorsal aspect. Fig. 9.—Head, left lateral aspect. Fig. 10.—Left elytron, dorsal aspect. Fig. 11.—Metasternum, abdomen, ventral aspect. Fig. 9.—Head, left lateral aspect. Fig. 10.—Left elytron, dorsal aspect. Fig. 11.—Metasternum, abdomen, ventral aspect, female.

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but his description stated that the species has punctate inner carinae. Since O. sabah has impunctate inner carinae it cannot be conspecific with the Grouvelle species.

One of the paratypes of *O. sabah* has bilateral angular setae. This is highly unusual because the only species of the subtribe of Omoglymmiina to have angular setae is *Xhosores figuratus* (Germar) from South Africa. This singular specimen must be aberrant.

Omoglymmius (**Omoglymmius**) cupedoides, new species (Fig. 3-7)

Type specimens.—Holotype male, labelled "Friedrich-Wilh. Hafen, N. Guinea, Biró, 96" (HNHM). Paratype: one female, same data as holotype (UVM).

Etymology.—The name means "resembling the beetle *Cupes.*" This name was selected by O. Adám of the Hungarian Museum who had intended to describe the species. When he learned of our work on the genus he generously allowed us to describe it.

Diagnosis. — An Omoglymmius with a postorbital tubercle, a scarp at the base of Stria IV and both inner and outer carinae of pronotum punctate. The lesser width across the postorbital tubercle and the more acute tip on the median lobe separates it from O. sus; the narrow, acute median lobe separates it from O. monteithi.

Description. – Length 7.0 mm. Antennal segments I–VIII with small basal punctures; segments IX, X more finely punctate; segment XI impunctate; head distinctly longer than wide; median lobe narrowly lance-shaped, frontal space "U" shaped, its margins distinctly curved; medial angles pointed, narrowly separated; posteromedial margins shallowly emarginate; posterolateral margin evenly curved; occipital angle very obtuse; antennal lobe connected to temporal lobe by depressed pollinose ridge; orbital groove absent; temporal lobe with about 20 fine punctures; one temporal seta; postorbital tubercle small, less than 0.25 of length of eye, but visible in dorsal view (Fig. 4); eye large, round.

Pronotum elongate; L/GW about 1.25 (Fig. 3), widest near middle, base slightly narrowed, apex strongly narrowed; lateral margins slightly curved posteriorly, markedly curved anteriorly; margin not sinuate anterior to hind angle; outer carina slightly narrower than inner carina at middle; medial margin of outer carina sinuate, angulate medially; outer carina widest slightly anterior to middle, becoming somewhat narrower toward base; very strongly narrowed to apex; inner carina narrowly truncate at base; outer carina with about 27 fine punctures; inner carina with about 20 fine punctures; prosternum without precoxal carinae (Fig. 5).

Elytron elongate; striae impressed; strial punctures coarse except near apex of elytron; base of Stria IV with longitudinal pollinose scarp; small pollinose spot at base of Stria II; seta at apex of Stria IV present or absent, one seta in subapical striole; 2–3 setae near apex of marginal stria; metasternum entirely coarsely, densely punctate; abdominal Sterna III–V with coarse rather dense punctures except near anterior and posterior margins of each sternum, these punctures confluent near lateral margin; female with deep, narrowly oval, slightly oblique lateral pit on Sternum IV; male with large, deep, round pit on Sternum IV (Fig. 6); male with ventral tooth on profemur, female with obtuse angle in this position; middle calcar narrow, acute, and large; hind calcar triangular, rather deep, tip narrowly rounded, dorsal and ventral margins sinuate (Fig. 7).

Distribution.—Known only from the type locality of Friedrich-Wilhelmshafen, now called Madang, Papua New Guinea.

Omoglymmius (Pyxiglymmius) multicarinatus, new species (Fig. 8-11)

Type specimen.—Holotype female (unique), labelled "Indonesia: Sulawesi Utara, Dumoga-Bone N.P., April 1985, Plot B, ca. 300 m. lowland forest, flight interception, Trap 3, R. Ent. Soc. Lond, Project Wallace, B.M., 1985-10" (BMNH).

Etymology.-The name refers to the carinate intervals 3, 5, 6, 7 of the elytra.

Diagnosis. — Distinguished by the presence of narrow pronotal carinae, carinate elytra, and setose temporal lobes and the absence of grooves on the lateral metasternum of the female. It differs from all other members of the subgenus in having some elytral intervals carinate. This and the narrow pronotal carinae are suggestive of Omoglymmius (Carinoglymmius) hexagonus (Grouvelle) and Omoglymmius (Carinoglymmius) carinatus (Grouvelle). These two species are known from Borneo, Sumatra, and the Mentawei Islands, and either might be found in Sulawesi. They can be separated from this new species by the evenly curved medial margins of the temporal lobes, the straight tibial spur of the middle leg and the abdominal pits of the female being on Sternum V rather than IV.

Description.—Length 7.8 mm. Antennal segment XI wider than long, obtuse; basal setae and ring setae on segments V–XI; head longer than wide; clypeus impunctate, continuous with median lobe, latter narrow, longer than wide, rhomboidal, tip obtuse; anteromedial margin of temporal lobe oblique; both pairs of medial angles closely approximate; margin between them relatively shallowly emarginate; temporal lobe convex, rounded laterally with about ten punctures in posterolateral fourth, and with orbital groove represented by a row of punctures; approximately six temporal setae; region between temporal and antennal lobes depressed, pollinose; postorbit flat dorsad to postorbital tubercle; both tubercle and postorbit punctate, setose; tubercle relatively small (Fig. 9); gular grooves each with line of four very coarse punctures; most posterior of these on either side of small gular tubercle.

Pronotum L/GW 1.14; subcordate, base distinctly narrowed, apex more strongly so; all grooves much dilated, leaving very narrow, sinuate carinae; carinae and marginal grooves coarsely punctate (Fig. 8).

Elytra elongate, intervals conspicuously unequal, III, V, VI, VII narrow, carinate; I, II, IV scarcely convex; subapical tubercle divided by deeply impressed subapical striole; striae coarsely punctate except near apex where punctures become fine; two setae in apex of Stria IV, one in subapical striole; about five in apex of Stria VII (Fig. 10); female without groove along lateral margin of metasternum; abdominal sterna with coarse, scattered punctures; female with deep, smooth, triangular lateral impressions on Sternum IV, without "brace" or conspicuous striations (Fig. 11); margin of elytral epipleura not angulate opposite sternal pit; profemur of female with slight ventral angle; wings full (tip of wing visible between elytra on type specimen, which was taken in a flight intercept trap), male unknown.

Remarks.—In the key to Rhysodini of Sulawesi and Banggai (Bell and Bell, 1988), this species will trace to the first choice in couplet 3 which should be altered to lead to the new couplet:

Distribution. - Known only from the northern peninsula of Sulawesi (Celebes).

Descriptions of Males and Females Not Characterized Previously Clinidium (Mexiclinidium) championi Bell and Bell

Description of female. --6.0 mm, labelled "Guat: Quetzaltenango, 12 km. S.E. Zunil, N.W. face Cerro Zunil, 2700-2760 m., 28.V.1991, R. Anderson, hardwood for. litt. 91-30" (UVM). Very similar to male (Fig. 12, 13) (complete description in Bell and Bell, 1985:62); transverse abdominal sulci represented by lines of isolated punctures interrupted medially; lateral pit of Sternum IV deep, widely flared anteriorly; lateral pit of Sternum V round, small; lateral pit of Sternum III minute; Sternum VI unimpressed, small round lateral pit at anterolateral angle; curved submarginal groove; ventral tooth of profemur absent.

Remarks.—The original description was based on a unique holotype from the Quiché Mountains which did not have precoxal setae. Subsequently we have

studied another specimen with the same locality data and this specimen did have precoxal setae. The female here described also has precoxal setae so the original description should be amended.

Omoglymmius (Omoglymmius) repetitus Bell and Bell

Description of male. -5.8 mm, labelled "N. Sulawesi, Dumoga Bone NP, base camp, alt. m. 211, 13014 1985, J. Huijbregts, RMNH/HH 401, cult. area at light" (LEI). Very similar to female (Fig. 14) (complete description in Bell and Bell, 1982:222); lateral pit of abdominal Sternum IV deep, slightly smaller than in female (Fig. 15); anterior femur with small ventral tooth or tubercle evidently varying in development (distinct, although minute tooth on right femur, but only a well-marked mound-like tubercle on left one in this specimen); middle calcar minute, hind calcar (Fig. 16) moderate in size, obtusely pointed, dorsal margin angled.

Additional collecting data.—All from the Dumoga Bone National Park; one female labelled "Torout, alt. 210 m. 15–16 VIII 1985, J. Huijbregts, secondary growth, river bank, at light" (LEI); one female labelled "27 Feb 1985, lowland forest, Plot C, ca. 400 m., frass under bark of fallen tree" (BMNH).

Rhyzodiastes (Temoana) propinguus Bell and Bell

Description of male. --6.0 mm, labelled "Nicobar, Roepstorff" (ZMUC). Very similar to female (Fig. 17) (complete description in Bell and Bell, 1985:43); metasternum with fine median sulcus, transverse sulci of abdominal sterna broadly interrupted at midline, sulci deeply pilose at medial ends, shallowly pollinose laterally; lateral pit of Sternum IV very deep, that of Sternum V shallow (Fig. 18); posterior one-third of Sternum VI impressed (Fig. 19); ventral tooth of profemur and protibia absent; calcar acute, triangular (Fig. 20).

Remarks.—It is unusual for a male rhysodid to have a lateral pit on Sternum IV equally deep as that of the female.

Clinidium (Clinidium) dubium Grouvelle

Description of a female. - 5.0-6.8 mm (14 specimens) all labelled "Ecuador; Loja, Loja-Saraguro, 2680 m., 18 Nov. 1990, G. Onore, km. 17 of new road Loja to Saraguro, in rotten log in disturbed habitat" (CMNH). Similar to male holotype (Fig. 21) (complete description in Bell and Bell, 1985: 115); metasternum with complete narrow pilose median sulcus; pilose median sulcus of Sternum III interrupted at midline, complete on Sterna IV-VI; U-shaped submarginal groove of Sternum VI not connected to transverse sulcus; Sternum IV with large deep lateral pit, that of Sternum V shallow; Sternum VI unimpressed (Fig. 22); ventral tooth of profemur and protibia absent.

Range Extensions

Omoglymmius (Hemiglymmius) javanicus (Grouvelle, 1903)

All previous collecting sites for *O. javanicus* have been from the western twothirds of Java, the easternmost point being near Jogjakarta. Two specimens found in the Copenhagen collection, a male (5.6 mm) and a female (6.8 mm) are labelled "Camorta, Nicobar, Roepstorff" (ZMUC), thus extending the range west of Sumatra to the Nicobar Islands.

Fig. 12–13.—*Clinidium (Mexiclinidium) championi* Bell and Bell. Fig. 12.—Head, pronotum, dorsal aspect. Fig. 13.—Metasternum, abdomen, ventral aspect, female. Fig. 14.—16.—*Omoglymmius (s. str.) repetitus* Bell and Bell. Fig. 14.—Head, pronotum, dorsal aspect. Fig. 15.—Metasternum, abdomen, ventral aspect, male. Fig. 16.—Hind tibia, male. Fig. 17–20.—*Rhyzodiastes (Temoana) propinquus* Bell and Bell. Fig. 17.—Head, pronotum, dorsal aspect. Fig. 18.—Metasternum, abdomen, ventral aspect, male. Fig. 19.—Sternum VI, lateral aspect, male. Fig. 20.—Hind tibia, male. Fig. 21–22.—*Clinidium (s. str.) dubium* Grouvelle. Fig. 21.—Head, pronotum, dorsal aspect. Fig. 22.—Metasternum, abdomen, ventral aspect, female.

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Omoglymmius (Omoglymmius) ichthyocephalus (Lea, 1904)

This species is described in more detail in Bell and Bell (1991). It was known previously from northern Queensland, Australia, from Cairns north to Cape York. In addition we have seen one male (5.0 mm) and two females (both 7.0 mm) labelled "Mt. Lamington, N.E. Papua, 1300–1500 ft., C. T. McNamara" (SAMA), thus extending the range into Papua New Guinea.

Remarks.—*Omoglymmius ichthyocephalus* was not included in our key to the subgenus (Bell and Bell, 1982) because we were not able to treat the Australian fauna at that time. In our key to the New Guinean species (Bell and Bell, 1982: 192), it traces to *Omoglymmius* (*O.*) *oroensis* Bell and Bell. *Omoglymmius ichthyocephalus* differs from the latter species in the following particulars: median lobe (not including clypeus) entirely impunctate; medial angles of temporal lobes closer together; temporal lobes broader; posterolateral margin not bent near temporal seta; orbital groove extended to posterior margin of eye; pronotum less narrowed anteriorly; outer carina narrower and more narrowed at base; inner carina with about ten fine punctures; outer carina with about 35 fine punctures; hind calcar not concave dorsally.

As stated in the original description of *O. oroensis*, several specimens were referred provisionally to that species, although they differed in various minor ways from the holotype. This group of specimens, including *O. ichthyocephalus*, will need further study when more material becomes available. It may be a complex of closely related species, or there may be only one variable species.

Omoglymmius (Omoglymmius) sus Bell and Bell 1982

This species was known previously from New Guinea at Katau, Fly River, Western Province and Morobe Province. One additional specimen has been located in the Copenhagen Museum, a male (8.0 mm) labelled "Bismarck Islands, Lavongai, Banatam, 20 March 1962, Noona Dan Exp. 61-61" [New Hanover Island] (ZMUC). This is an important addition to the inadequately known fauna of the Bismarck Archipelago.

Clinidium (Clinidium) rojasi Chevrolat, 1873

The range of this species is previously given from Falcon State east to Aragua State, Venezuela. A male (5.9 mm) was found in the Copenhagen collection labelled "Guiana, Lansberg" (ZMUC), thus extending the range of this species eastward to Guiana.

Kaveinga (Kaveinga) abbreviata (Lea, 1904)

The subgenus *Kaveinga* is represented by several species in New Britain, the Solomons, New Guinea, and Mindanao but this species has been recorded previously only from various sites in northern Queensland, Australia, from Daintree to Millaa Millaa and Babinda (Bell and Bell, 1991). Recently we have seen two specimens from the Budapest Museum, one male (5.9 mm) labelled "Biró 1898, Sattelberg, Huon Gulf" (HNHM) and one female (6.0 mm) labelled "Biró 1899, Sattelberg, Huon Gulf" (HNHM) which extends the range to New Guinea.

Kaveinga (Kaveinga) histrio Bell and Bell 1979

The species is known from the holotype and two paratypes collected on the east slope of Mt. Apo (Mt. McKinley), 3300 ft Davao Prov., Mindanao, Philip-

pines. One additional female (6.2 mm) specimen has been located labelled "Indonesia: Sulawesi, Utara, nr. Danau Mooat, 1200 m., nr. Kotamobagu, 17 Feb. 1985, rotten log, Roy. Ent. Soc. Lond. Project Wallace, BM 1985–6" (BMNH). This is the first record of this subtribe from the Celebes.

Remarks.—In the key to Sulawesi Rhysodidae (Bell and Bell, 1988:8) this beetle will key to subtribe Omoglymmiina in couplet 1. The key should be altered as follows: The second choice at couplet 1 should lead to couplet 1.1 below;

1.1. Median lobe of head elongate extending posteriorly to neck constriction, widely separating temporal lobes

1.1' Median lobe not so elongate, not separating temporal lobes

Assignment of the Sulawesi specimen to this species is provisional. The resemblance is very close, but there are few minor differences: the rings of minor setae start on segment six of the antenna (segment five in the Mindanao specimens); the temporal setae are displaced posteriorly, so that the most posterior one is at the margin of the temporal lobe; the pronotum has only one angular seta and is without marginals.

A longer series of specimens from Sulawesi might show that these differences are consistent, or the collection of a male specimen might reveal differences in the calcars or other secondary sexual characters.

Amendment of Locality Data of Previously Described Species

Omoglymmius (Hemiglymmius) germaini (Grouvelle)

This species was described from two specimens in the Paris Museum, both labelled as coming from Cochabamba, Bolivia (Bell and Bell, 1982). We doubted the labels because the species is close to O. (H.) javanicus (Grouvelle) from Java, and belongs to a genus not otherwise represented in the neotropical region. Our suspicions were confirmed by a specimen found in the Copenhagen collection labelled "Nongka Djadjar, Øst Java, Aug. 1913, J. Th. Skovgaard" (ZMUC). This locality is at 7.54°S–112.49°E in east Java. The specimen clearly can be distinguished from O. javanicus by the outer carina of the pronotum being much more inflated anteriorly.

REVISED KEYS

Key to Adults of Species of Omoglymmius (Omoglymmius)

1.	Posterolateral margin of temporal lobe oblique, meeting posterome-
	dial margin at prominent occipital angle; posteromedial margin also
	oblique, posterior part of temporal lobe nearly rectangular
	O. germari (Ganglbauer)
	(Europe to western Asia)
1'.	Posterolateral margin of temporal lobe rounded; occipital angle not
	prominent; posterolateral margin convex, oblique or emarginate 2
2(1').	Antennal lobe, postantennal area densely microsculptured, not sep-
	arated by antennal groove O. continuus Bell and Bell
	(Sula Islands, Indonesia)
2'.	Antennal lobe glabrous, raised above level of postantennal area, or
	separated from latter by distinct antennal groove 3

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3(2′).	Inner carina distinctly narrower than outer carina at middle; prono- tal grooves coarsely, densely punctate O. malabaricus (Arrow)
3'.	(southern India) Inner carina equal to or wider than outer carina at middle; pronotal
	grooves impunctate or sparsely punctate
4(3′).	Temporal lobe nearly circular; frontal space very small, longer than wide; median lobe short, rhomboid; carinae of pronotum only mod-
	erately narrowed at base; precoxal carina present
4'.	species wider than long; median lobe either not rhomhoid or if
	rhomboid, elongate; inner carina either pointed posteriorly or else
	constricted just anterior to base, with extreme base widened; pre-
5(4)	coxal carina present or absent
5(4).	5 setae along its length: total length 5 1-5 2 mm O sakuraji (Nakane)
	(Japan, Viet Nam)
5'.	Medial angles of temporal lobes obtuse, slightly separated; Stria IV
	with one or two setae near apex; total length 6.1-7.1 mm
	(Phyter)
6(4')	Postorbital and suborbital tubercles absent 7
6'.	Either postorbital or suborbital tubercle present
7(6).	Fourth interval in form of sharp, raised carina O. bicarinatus Bell
71	(Schouten Islands, Indonesia)
8(7')	Outer carina at middle equal to or only slightly narrower than inner
0(7).	carina, 0.66 or more of width of inner carina
8'.	Outer carina at middle 0.5 or less of width of inner carina 69
9(8).	Elytron with short longitudinal scarp at base of Stria IV, pollinose
0'	Spot medial to it except in O. summissus (scarp minute in O. pollius) 10 Elytron without longitudinal scarp at base of Stria IV: pollinose
1.	medial spot absent (except in some <i>O. wallacei</i>)
10(9).	Either or both pairs of pronotal carinae with six or more punctures
101	(in most species with many more; punctures very fine in O. vadosus) 11
10'.	Pronotal carinae without punctures, or with one or two punctures
11(10).	Inner carina with many punctures
11'.	Inner carina with no, or one to three punctures
12(11).	Two to five temporal setae; posterior margin of temporal lobe bisinu-
	ate, forming two projecting lobes in addition to medial angles
	(Oueensland, New South Wales)
12'.	One temporal seta; posterior margin of temporal lobe evenly curved 13
13(12').	Median lobe of head narrow, its margins only slightly curved; outer
	carina of pronotum broadest at anterior margin, slightly flattened
	hind angle
	(Sumatra)
13'.	Median lobe relatively broad, its margins more strongly curved;
	outer carina widest near middle, in many specimens sinuate anterior
	to mild alight 14

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14(13').	Orbital groove complete, continuously pollinose to base of temporal
14'.	Pollinosity of orbital groove incomplete, ended posteriorly near pos-
	terior margin of eye, or else interrupted there
15(14).	Head relatively broad posteriorly, its lateral margin abruptly round- ed near base; latter transverse; anteromedial margin transverse; frontal space broadly U-shaped O. fringillus Bell and Bell (in part) (New Guinea)
15'.	Head not broad posteriorly, lateral margin evenly rounded from eye
16(15′).	Outer carina markedly narrowed posteriorly, width at base less than 0.5 of greatest width; median lobe narrow, its junction with clypeus distinctly constricted; apex of median lobe obtuse; postantennal area convex, extensively pollinose
16'.	Outer carina scarcely narrowed posteriorly; width at base 0.9 of
	greatest width; median lobe relatively broad, its junction with clyp-
	area less extensively pollinose
17(14)	(Solomon Islands)
1/(14').	margins strongly curved; eye somewhat reduced, with posteroven- tral margin oblique: antennal segments V-XI impunctate
17'.	Tip of median lobe broadly rounded or obtuse; pronotum quadrate or subquadrate, in most specimens with lateral margins less rounded; eye round, not reduced; antennal segments VII–X in some species
19(17/)	with punctures indistinct
18(17).	tures
18'.	Outer antennal segments with punctures sparse, in some species
19(18).	Pronotum subquadrate, lateral margins convergent only near apex 20
19'.	Pronotum with lateral margins curved, convergent from middle to
20(19).	Most posterior points on temporal lobes separated from one another
20'	by much less than 0.5 width of head
20.	by more than 0.5 width of head O. fringillus Bell and Bell (in part) (New Guinea)
21(20).	Median head lobe punctate
21'.	(New Guinea) Median head lobe impunctateO. ichthyocephalus (Lea)
22(19')	(Australia, New Guinea) Medial angle of temporal lobe obtusely pointed: posterior margin
(1)).	slightly sinuate; strial punctures elliptical, fine, sparse
	(Key Islands, Indonesia)
22'.	Medial angle rounded; posteromedial margin rounded; elytral punc- tures coarse

23(22').	Antennal segments V-X as coarsely punctate as segments I-IV; legs, abdominal sterna coarsely punctate O. puncticornis Bell and Bell (New Guinea)
23'.	Antennal segments V–X more finely punctate than segments I–IV; legs, abdominal sterna more finely punctateO. tolai Bell and Bell (New Dritain Dismonsh Island)
24(18').	Pronotum elongate, lateral margins only slightly curved; temporal lobe with 30–50 punctures; median lobe obtusely rounded; marginal
	(Solomon Islands)
24'.	Pronotum shorter; temporal lobe with 20 or fewer punctures; medial angle produced; posteromedial margin sinuate in most specimens; marginal groove not deeper posteriorly 25
25(24').	Median lobe with approximately ten fine punctures
25'.	Median lobe impunctate
26(25').	Anterior portion of temporal lobe a convex pollinose ridge
26'.	Anterior portion of temporal lobe glabrous, separated from antennal
	lobe by narrow, pollinose antennal groove
27(26').	Median lobe narrow, its tip acute
27'.	Median lobe relatively broad, its tip obtuse
28(27).	Pronotum subquadrate, widest, anterior to middle; outer carinae
	dilated, divergent near base O. classicus Bell and Bell
28'	Pronotum subcircular markedly narrowed at both base and apex.
20.	outer carinae narrow, parallel at bases O. princeps Bell and Bell
	(Solomon Islands)
29(27')	Outer carina narrowed posteriorly base neither dilated nor divergent 30
29'.	Outer carina scarcely narrowed posteriorly, base either sinuate me-
	dially or else distinctly dilated
30(29).	Pronotum subquadrate, lateral margins nearly parallel; base of pro-
	notum scarcely narrowed
	(Solomon Islands)
30'.	Pronotum oval, lateral margins strongly curved; base of pronotum
	distinctly narrowed
31(29').	Medial margin of temporal lobe distinctly angulate opposite tip of
	median lobe; frontal space more nearly U-shaped
	O. modicus Bell and Bell
	(Solomon Islands)
31'.	Medial margin of temporal lobe scarcely angulate opposite tip of
	median lobe; frontal space more nearly V-shaped
32(31').	Medial margin of temporal lobe produced, blunt; posteromedial
	margin emarginate; lateral margins of pronotum markedly curved;
	lateral pits of abdominal sternum IV shallow in female
	(Solomon John de)
	(Solomon Islands)

32'.	Medial angles not produced; posteromedial margin not emarginate; lateral margins of pronotum less curved, subparallel; lateral pits of sternum IV deep, round in female O. regius Bell and Bell
	(Solomon Islands)
33(11').	Lateral abdominal sulci III-V faintly pollinose, distinct punctures
	absent O. vadosus Bell and Bell
	(Southern Moluccas, Indonesia)
33'.	Lateral abdominal sulci III-V with distinct scattered punctures or
	coalesced punctures
34(33').	Median lobe very narrow, elongate, margins nearly parallel, tip acute;
	base of outer carina markedly narrowed O. crassicornis Bell and Bell
	(Philippines)
34'.	Median lobe moderate in width or broad, margins either parallel or
	not parallel: base of outer carina less narrowed 35
35(34')	Temporal lobe with 5-6 setae <i>O. aristeus</i> Bell and Bell
55(51).	(New Guinea)
351	Temporal lobe with 0-1 setae 36
26(251)	Antennal segments V VI nunctate
30(33).	Antennal segments V VI with nunctures indistinct or absent
27(26)	Antennal suggesting in a basel groover 5, 7 setes along Strip IV
37(30).	Antennal punctures in a basal groove; 5–7 setae along Stria IV
	O. sabah, new species
A	(Borneo)
37.	Antennal punctures in a slightly scattered ungrooved row; 1–2 setae
	at apex of Stria IV
38(37').	Lateral margin of outer carina deeply sinuate anterior to hind angle
	O. amplus Bell and Bell
	(Sumatra)
38'.	Lateral margin scarcely sinuate anterior to hind angle
	O. modiglianii Bell and Bell
	(Mentawei Islands, Indonesia)
39(36').	Lateral margin of temporal lobe almost straight; anteromedial mar-
	gin of temporal lobe abruptly bent; frontal space very broad
	(northern Moluccas)
39'.	Lateral margin of temporal lobe rounded: anteromedial margin
	abruptly bent or rounded: frontal space narrower 40
40(39')	Head as broad as long or broader than long. frontal space broadly
	U-shaped 41
40'	Head longer than broad: frontal space V ₋ or U-shaped 44
41(40)	Outer carina slightly parrower than inner carina at middle: marginal
+1(+0).	groove deep broad
	(Caroline Islands)
A11	Outer carina equal in width at middle to inner carina: marginal
41.	outer carma equal in width at initiale to initer carma, marginar
12(11)	Antennal groove very normovy temporal labor very flat, length 5.0
42(41).	Antennai groove very narrow, temporar robes very nat, tength 5.0-
	0.6 mm
401	(Caroline Islands)
42'.	Antennal groove broader; temporal lobes convex; length $6.5 - 1.2 \text{ mm}$ 43
43(42').	Pronotum nearly quadrate, scarcely narrowed posteriorly
	O. batchianus (Arrow)
	(northern Moluccas)

43'.	Pronotum distinctly narrowed posteriorly, markedly narrowed an- teriorly
44(40').	Antennal segments V–VIII, and in some specimens also IX, X finely
	punctate
44'.	Antennal segments V–XI impunctate
43(44).	broadened 46
45'.	Inner carina not constricted just anterior to base; base truncate
	O. renutus Bell and Bell
16(15)	(Solomon Islands)
40(43).	O trepidus Bell and Bell
	(New Guinea)
46'.	Preorbital pit with pollinosity restricted; median lobe narrow
17(11)	(New Guinea) Temporal lobe punctate over most of its surface: median lobe per
4/(44).	row, tip acute: sides of pronotum nearly parallel
	<i>O. philippensis</i> (Chevrolat)
	(Philippines)
47'.	Punctures of temporal lobe limited to lateral margin; median lobe
	sugnuy broader, up more obtuse; pronotum widest at middle, sides
48(47').	Eye large, round; basal scarp of Stria IV distinct; male with ventral
. ,	tooth on profemur
10/	(Philippines)
48'.	Eye slightly reduced; basal scarp of Stria IV very small, scarcely
	tooth on profemur
	(Philippines)
49(10').	Median lobe broad, margins rounded; abdominal Sterna IV, V with
	punctures not coalescent O. opticus Bell and Bell
49'	(Dammer Island, Lesser Sundas) Median lobe narrow elongate: Sterna IV V with nunctures coales-
	cent near lateral margins, forming shallow pits
50(49′).	Anterior part of temporal lobe forming narrow pollinose ridge; gla-
	brous area of temporal lobe separated from antennal lobe by nearly
	temporal lobe with up to three nunctures near lateral margin or none
	(Philippines)
50'.	Anterior part of temporal lobe glabrous nearly to antennal lobe,
	separated from latter only by rather broad antennal groove; one temporal seta: temporal lobe with many punctures
	(Sumatra)
51(9').	Inner, outer or both pairs of pronotal carinae punctate
51'.	Pronotal carinae entirely impunctate

52(51). Inner carina with three or more (in most species many) punctures 53 52'. Inner carina with one or two punctures or none 56 53(52). Head twice as long as wide; median lobe elongate, margins almost parallel O. nasalis Bell and Bell (southern Moluccas) 53'. Head slightly or not at all longer than wide; median lobe lance-54 shaped, margins not parallel 54(53'). Outer antennal segments punctate to segment IX; anterior portion of temporal lobe forming pollinose ridge to antennal lobe, broadly separated from glabrous portion of temporal lobe (Celebes) 54'. Outer antennal segments impunctate; anterior portion of temporal lobe glabrous, narrowly separated from antennal lobe by deep pol-55 linose groove 55(54'). Median lobe constricted at junction with clypeus; tip of median lobe subtruncate; antennal segments IV-IX impunctate; base of outer carina not sloped into basal impression; eve slightly reduced, about 0.33 of length of temporal lobe in profile view ... O. data Bell and Bell (Philippines) 55'. Median lobe not constricted at junction with clypeus; tip of median lobe acute; all antennal segments impunctate; eye not reduced, about 0.5 of length of temporal lobe; base of outer carina sloped gradually (New Guinea) 56(52'). Intervals II, IV distinctly elevated anteriorly; head elongate anterior to eye; frontal grooves very narrow O. mycteroides Bell and Bell (Solomon Islands) 56'. Intervals II, IV not elevated; head not elongate; frontal grooves moderately broad 57 57(56'). Prosternum with precoxal carinae; temporal seta absentO. thoracicus Bell and Bell (Java) 57'. Prosternum without precoxal carinae; one temporal seta 58 58(57'). Stria IV with five or six setae along its entire length 59 59(58). Outer carina scarcely narrowed at base O. coelebs Bell and Bell (Philippines) 59'. Outer carina strongly narrowed to base; latter bluntly pointed 60 60(59'). Median lobe not constricted at junction with clypeus; tip of median lobe rounded; pronotum elongate O. malaicus (Arrow) (Malay Peninsula) 60'. Median lobe constricted at junction with clypeus; tip of median lobe 61(60'). Bases of outer carinae markedly divergent O. fraudulentus Bell and Bell (Sumatra) 61'. Bases of outer carinae scarcely divergent ... O. nemoralis Bell and Bell (Sarawak)

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62(58′). 62′.	Antennal segments V–X with faint basal punctures
63(62).	(Philippines) Median lobe of head with punctures; female with round lateral pit in Sternum IV (male unknown) O. brendelli Bell and Bell
63'.	(Celebes) Median lobe of head without punctures; both sexes with deep di- agonal lateral pit in Sternum IVO. sectatus Bell and Bell (New Guinea)
64(51'). 64'. 65(64). 65'. 66(65').	Temporal setae absent or one seta65Temporal setae 2-468Median lobe broader, lance-shaped66Median lobe narrow, elongated67Lateral margin of inner carina sloped gradually to groove; temporal
	lobe with few punctures in position of orbital groove
66'.	Lateral margin of inner carina deep, sharply defined; temporal lobe with 10–12 punctures scattered on lateral half
	O. gracilicornis (Grouvelle) (New Guinea)
67(65′).	Abdominal Sterna III–V with coarse punctures, these coalescent near lateral margin; Stria IV with one or two setae near apex
67'.	Abdominal Sterna III–V with finer, isolated punctures, not at all coalescent laterally; Stria IV with five setae along its length
68(64′).	Precoxal carinae absent; outer carina as broad as inner one at middle
68'.	Precoxal carina present; outer carina 0.66 as broad as inner carina at middle
69(8′).	Outer carina of two planes meeting at sharp edge, one vertical, other sloped towards paramedian groove; pronotum hexagonal to subquadrate; Stria IV with five to seven setae along its length O. tabulatus Bell and Bell (Solomon Islands)
69'.	Outer carina not formed of two planes; pronotum not hexagonal;
70(69′).	Stria IV with one or two setae near apex
70'. 71(70').	Head anterior to eye not elongate; setae of outer carina absent 71 Punctures present on outer carina
71'. 72(71').	Punctures absent on outer carina

	rounded; outer carina 0.3 as wide as inner carina at mid-point; male
	with ventral profemoral tooth O. solitarius (Arrow)
701	(Andaman Island)
12'.	Antennal segments V-X impunctate; median lobe lance-shaped, tip
	obtuse; outer carina 0.5 as wide as inner carina at mid-point; male
	(Carolina Island)
72(61)	(Caroline Island)
73(0).	Postorbital tubercle present 78
73.	Outer carina more than 0.6 as wide as inner carina at middle: mar-
14(13).	ginal groove not dilated 75
74'.	Outer carina about 0.4 as wide as inner carina at middle: marginal
	groove dilated
	(New Guinea)
75(74).	Outer carina broadest just anterior to base; base of inner carina
	strongly narrowed; inner carina impunctate.
	(New Guinea)
75'.	Outer carina narrowed posteriorly; base of inner carina less nar-
	rowed; inner carina punctate
76(75').	Median lobe broad, tip subtruncate; pronotum nearly quadrate;
	metasternal punctures limited to midline and margins
	O. biroi Bell and Bell
70	(New Guinea)
/6'.	Median lobe narrow, tip acute; pronotum not quadrate; metaster-
77(761)	Nadian laba nunotate: outer carina aqual to or slightly narrower
//(/0).	than inner carina at middle: one temporal seta
	(Arrow)
	(New Guinea)
77'.	Median lobe impunctate: outer carina distinctly narrower than inner
(anging)	carina at middle: temporal seta absent O. asetatus Bell and Bell
	(New Guinea)
78(73').	Postorbital tubercle visible only in lateral view
78'.	Postorbital tubercle visible in dorsal view
79(78).	Lateral margins of pronotum nearly parallel; median lobe broad,
	rounded; pollinosity of orbital groove extended to posterior margin
	of eye O. quadraticollis (Arrow)
701	(Tanımbar, Indonesia)
19.	Lateral margins more curved; pronotum not subquadrate; median
	lose ortensive
80(70)	Outer carina parrow curved densely punctate
00(15).	O gressitti Bell and Bell
	(New Guinea)
80'	Outer carina not conspicuously narrower than inner carina, sparsely
	punctate or impunctate
81(80').	Inner carina truncate at base; outer carina narrowed to base
	Q repetitus Poll and Poll

Inner carina truncate at base; outer carina narrowed to base O. repetitus Bell and Bell (northern Celebes)

81′. 82(81′).	Inner carina pointed at base; outer carina dilated at base
82'.	Median lobe angulate at tip; medial margin of base of outer carina not sinuate; pollinosity of orbital groove limited; temporal lobe with a few minute punctures near lateral margin; pronotal carinae im- punctate
83(78').	Posterior face of temporal lobe with microsculpture in grid pattern:
	temporal seta marginal
83'.	Posterior face of temporal lobe pilose or scaly; temporal seta not
84(83).	Strial punctures relatively large, round, separated from adjacent
0 1(05).	punctures by about 0.5 of length of one of them; temporal lobe
	relatively convex
0.41	(New Guinea)
84.	one of them: temporal lobe strongly flattened
	<i>O. planiceps</i> Bell and Bell
0.5/0.50	(New Guinea)
85(83').	Metasternum entirely punctate
86(85).	Inner and outer carinae with numerous fine punctures: outer carina
	narrowed to base; strial punctures round, pilose, coarse
86'.	Outer carina punctate; inner carina impunctate; outer carina dilated
87(86)	at base; strial punctures fine, especially in Striae 1–111
07(00).	lobe
	(New Guinea)
87.	Width across postorbital tubercle less than width across temporal
88(87').	Median lobe rounder, tip obtuse; temporal lobe with posterior me-
	dial margin rounded; punctures of temporal lobe finer
	O. monteithi Bell and Bell
88′.	Median lobe narrow, tip acute: temporal lobe with posterior medial
	margin slightly emarginate; punctures of temporal lobe coarser
	O. cupedoides, new species
89(86')	Postorbital tubercles very large divergent: outer carina with many
0)(00).	fine punctures; medial angle of temporal lobe rounded
89'.	Postorbital tubercles smaller, scarcely divergent; outer carina with
	one or two fine punctures; medial angle obtuse <i>O. lentus</i> Bell and Bell
90(89).	Outer carina slightly narrower than inner carina at middle: outer
().	carina at anterior 0.33 broader than paramedian groove
	(New Guinea)

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90′	Outer carina about 0.5 as wide as inner carina at middle; outer carina
	at anterior 0.33 narrower than paramedian groove
01(05)	(New Guinea)
91(85')	strial punctures elliptical, very fine <i>O. auratus</i> Bell and Bell
	(New Guinea)
91'	. Postorbital tubercle small; pronotum more narrowed anteriorly; strial
	punctures round, moderately fine
92(91')	. Median lobe broad, tip rounded; width of pronotum at middle sub-
	equal to width at base O. massa Bell and Bell
0.21	(New Guinea)
92	middle clearly loss than width at base
	(New Guinea)
	(New Guinea)
	Key to Adults of Species of Omogrymmius (Pyxigrymmius)
1.	Many elytral setae present the length of every stria
	(Sumatra, Borneo)
1'.	Elytral setae absent from some striae
2(1').	Elytral intervals III, V, VI, VII narrow, carinate
	O. multicarinatus, new species
21	(Celebes)
3(21)	Median lobe distinctly longer than wide its anex opposite middle of
5(2).	eve postorbit in lateral view convex in form of deep but short ill-
	defined postorbital tubercle
3'.	Median lobe transverse, as wide as long, its tip opposite anterior
	margin of eye; postorbit flat, bounded ventrally by well-defined sub-
	or postorbital tubercle
4(3).	Medial emargination of temporal lobe relatively shallow, its depth
	about 0.25 of its length; basal setae present on antennal segments
	VIII-X
4'	Medial emargination of temporal lobe deep, its depth 0.5 or more of
	its length: basal setae present on antennal segments V or VI-X 5
5(4').	Temporal lobe broadly rounded posteriorly; postorbital tubercles
	scarcely visible in dorsal view; anteromedial margin of temporal lobe
	strongly curved
	(Viet Nam)
5'.	I emporal lobe with distinct occipital angle, margin markedly oblique
	dersal view anteromedial margin of temporal lobe oblique
	<i>O</i> crassiusculus (I ewis)
	(Japan)
6(3').	Five to six setae present on length of Stria II, IV
	O. krikkeni Bell and Bell
	(Sumatra)
6'. 7(6')	Setae absent from Stria II, 0–2 setae present near apex of Stria IV 7
/(())	CONCECTION OF DECONORDING ON THEORY DATA OWEL THAT DATA THEORAT STOOVE.

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(Andaman and Nicobar Islands) 7'. Outer carina wider than paramedian groove, widest near middle, 8 grooves relatively shallow 9 8'. Postorbital tubercles relatively small, not prominent in dorsal view; paramedian grooves deep, more sharply defined 10 9(8). Elytral intervals flat; intervals, pronotal carinae, temporal lobes strongly microsculptured in female; lateral pit of Sternum IV in female longitudinally striate, brace weakly developed ... O. opacus Bell and Bell (Sumatra) 9'. Elytral intervals convex; intervals, pronotal carinae, temporal lobes shining without microsculpture; in female, lateral pit of Sternum IV not striate, brace strongly developed O. hesperus Bell and Bell (Mentawei) 10(8'). Apex of antennal segment XI with short, stubby stylet; temporal lobes with 20 or more punctures O. cristatus Bell and Bell (Philippines) 10'. Apex of antennal segments XI without stylet; temporal lobe with 1-12 punctures O. strabus (Newman) (Borneo, Java, Sumatra, and Malay Peninsula)

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