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# *Marena* gen.n., new Metriorrhynchini genus from New Guinea (Coleoptera: Lycidae)

# *Marena* gen.n., новый род Metriorrhynchini из Новой Гвинеи (Coleoptera: Lycidae)

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КЛЮЧЕВЫЕ СЛОВА: Coleoptera, Lycidae, новый род, новые виды, таксономия, Папуасский регион.

ABSTRACT. A new genus *Marena* Kazantsev, 2007 **gen.n.** and three new species, *Marena tristis*, *M. madangensis* and *M. missai* Kazantsev, 2007 **spp.n.**, are described from New Guinea. The relationships of the new genus classified in Metriorrhynchina (Metriorrhynchini) are discussed and a key to its species is provided.

РЕЗЮМЕ. Новый род *Marena* Kazantsev, 2007 **gen.n.** и три новых вида, *Marena tristis*, *M. madangensis* и *M. missai* Kazantsev, 2007 **spp.n.**, описываются из Новой Гвинеи. Обсуждается положение нового рода в Metriorrhynchina (Metriorrhynchini), и приводится определительная таблица его видов.

## Introduction

In the Lycidae material from Papua New Guinea accumulated by the Institut Royal de Sciences naturelles de Belgique in the course of the 'canopy mission', several specimens were found that, belonging in the subtribe Metriorrhynchina [Bocak, 2002], could not be attributed to any existing supraspecific taxon. A further study has suggested that a new genus has to be erected to accommodate these forms within the subtribe. Description of the new genus, along with its three new species, is given below.

The type material is deposited in the Institut Royal de Sciences naturelles de Belgique, Bruxelles (IRSN), and in the author's collection (SVK).

## Material and methods

Specimens used as material for this study were dissected after being softened for several hours in water. Some parts of these specimens, including their external genitalia, were cleared for several hours with 10% KOH of room temperature.

## Descriptions

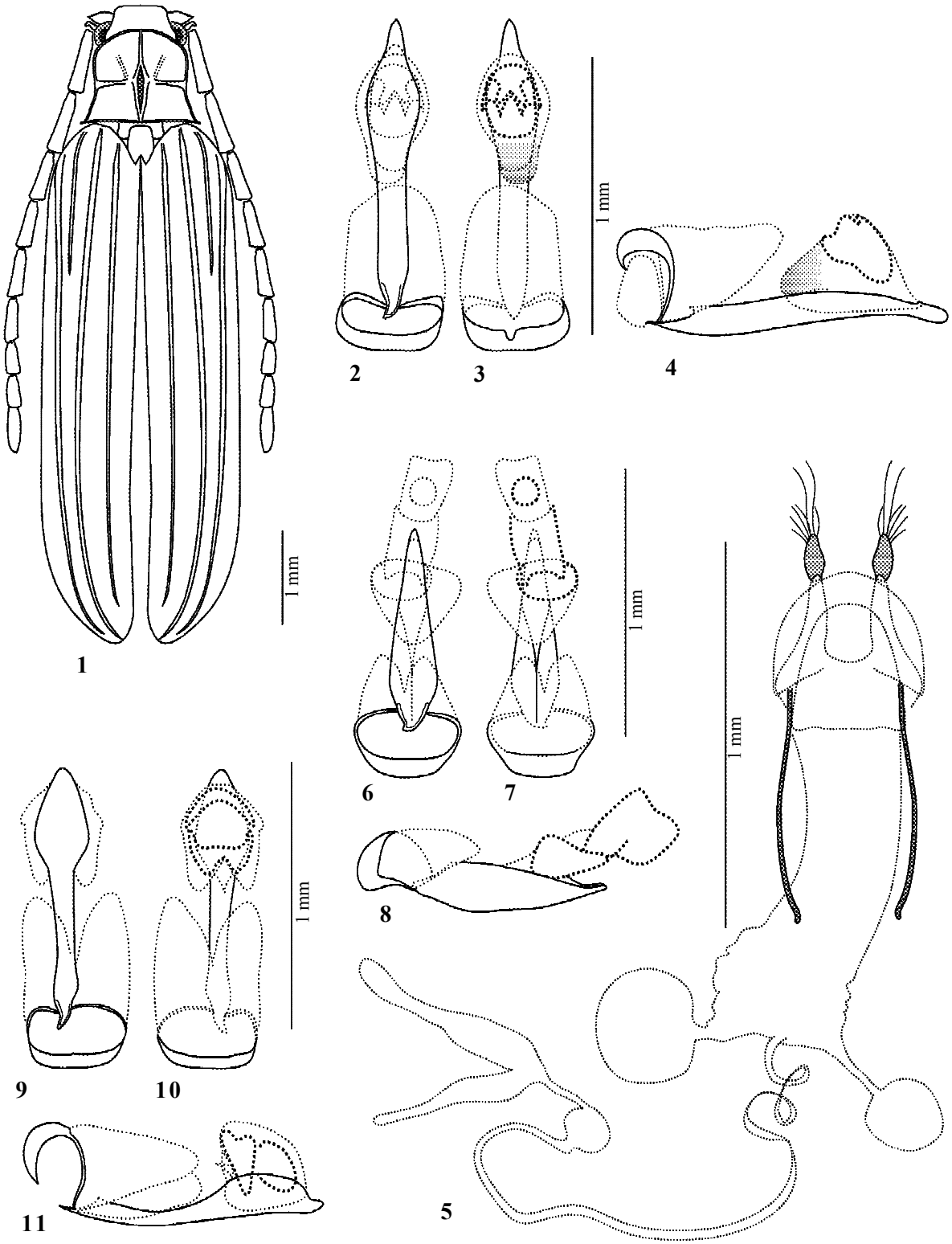
*Marena* Kazantsev, 2007, **gen.n.**

Type species: *Marena tristis* **sp.n.**

DESCRIPTION. Elongate (Fig. 1). Head short, transverse, slightly narrowed behind eyes. Fastigium right-angled. Eyes moderately large, spherical. Labrum transverse. Mandibles small, strongly curved at apices. Maxillary palps prominent, with ultimate palpomere long, ellipsoid, conspicuously flattened. Labial palps slender, with ultimate palpomere elongate and ellipsoid. Genal ventral closure narrow. Antennal prominence inconspicuous, antennal sockets separated by minute lamina. Antennae 11-segmented, relatively long, flattened, parallel-sided and gradually diminishing in length from antennomere 3; antennomere 3 many times longer than antennomere 2 (Fig. 1).

Pronotum transverse, with conspicuous median and inconspicuous antero-lateral carinae in anterior half, elongate median cell in posterior half and two almost perpendicular lateral carinae; posterior angles acute and produced laterally (Fig. 1). Prosternum short, with elongate triangular median part. Mesothoracic spiracles hardly protruding laterally beyond mesepisternal limits, with no dorsal hoods. Mesepimeron rather narrow and almost twice as short as mesepisternum. Postnotal plate of scutellum relatively broad (Fig. 1). Elytra long, parallel-sided, with three (first, second and fourth) full primary costae, costa 3 present basally (Fig. 1); interstices with double rows of small square cells; short pubescence manifest along costae. Discrimen (metasternal suture) almost complete, attaining to mesocoxae. Metathoracic wing with Cu veins connected to M above distal extremity of anal cell; wedge cell absent; cu-a brace present slightly distad of Cu veins fork.

Protrochantins very narrow and similar to mesotrochantins. Mesocoxae transverse and widely separated. Legs moderately short; trochanters elongate, connected to femora distally; femurs and tibiae conspicuously flattened; tibial spurs absent. Tarsi short, tarsomeres 1-2 narrow, not lobed, with plantar pads occupying approximately half the tarsus; all claws simple. Abdominal spiracles located dorsally on lateral edge of sternites.




Figs 1–11. Details of *Marena* **gen.n.** spp.: 1–5 — *M. tristis* **sp.n.**; 6–8 — *M. madangensis* **sp.n.**; 9–11 — *M. missai* **sp.n.**; 1 — body outline; 2–4, 6–8, 9–11 — aedeagus; 5 — external female genitalia; 1–4, 6–11 — holotype ♂; 5 — paratype ♀; 1, 2, 6, 9 — dorsal view; 3, 7, 10 — ventral view; 4, 8, 11 — lateral view.

Рис. 1–11. Детали строения *Marena* **gen.n.** spp.: 1–5 — *M. tristis* **sp.n.**; 6–8 — *M. madangensis* **sp.n.**; 9–11 — *M. missai* **sp.n.**; 1 — общие очертания тела; 2–4, 6–8, 9–11 — эдеагус; 5 — наружные гениталии самки; 1–4, 6–11 — голотип, ♂; 5 — паратип, ♀; 1, 2, 6, 9 — сверху; 3, 7, 10 — снизу; 4, 8, 11 — сбоку.

**Male**. Aedeagus with basally constricted and asymmetric median lobe bearing no sclerotized spines; phallobase relatively wide distally (Figs 2–4, 6–11).

**Female**. Spiculum ventrale absent. External genitalia with membranous coxites and slender slightly curved valvifers; spermatheca turnip-shaped (Fig. 5).

DIAGNOSIS. *Marena* **gen.n.** appears to be related to *Leptotrichalus* Kleine, 1925, similar in the parallel-sided antennomeres (Fig. 1), and the aedeagus with no sclerotized spines and relatively wide phallobase (Figs 2–4, 6–11), at the same time differing from it by the pronotal structure, more reminiscent of the genus *Conderis* Waterhouse, 1879, and conspicuously shortened elytral costa 3 (Fig. 1). On the other hand, *Marena* **gen.n.** is readily distinguishable from *Prometanoeus* Kleine, 1925 and *Tricautires* Kazantsev, 2006, also with shortened third primary elytral costa, by the flattened ultimate palpomeres and the pronotal structure; it may be additionally distinguished from *Tricautires* by the parallel-sided antennomeres.

ETYMOLOGY. The name of the genus is derived from the Slavic deity in charge of the dark forces alluding to the uniformly dark brown coloration of the species. Gender feminine.

DISTRIBUTION. So far *Marena* **gen.n.** is known only from Papua New Guinea.

BIOLOGY. No biological data on *Marena* **gen.n.** is available, except that all specimens were captured in April through July by fogging or at light, probably in the canopy of the rain forest.

### *Marena tristis* Kazantsev, 2007 **sp.n.**
Figs 1–5

MATERIAL: Holotype, ♂: Papua New Guinea IRSN canopy mission, Madang Province, Baiteta, Fog AR 26, 7.VII.1995, O. Missa leg. (IRSN); paratypes, 2 ♂♂ and ♀: same label (SVK).

DESCRIPTION. Uniformly dark brown.

**Male**. Head with triangular impression behind antennal prominence. Eyes small (interocular distance 2.5 times longer than radius). Antennae attaining to elytral two thirds (Fig. 1); antennomere 3 9 times longer than antennomere 2 and 1.1 times longer than antennomere 4; antennal pubescence short and semi-erect.

Pronotum transverse (1.4 times wider than long), semicircular anteriorly; hind angles acute and produced laterally; median cell occupying ca. basal two thirds (Fig. 1). Scutellum elongate, trapezoid, with triangular distal emargination (Fig. 1).

Elytra long, 3.5 times longer than wide at humeri and 5.8 times longer than pronotum, parallel-sided, with equally developed primary costae 2 and 4, costa 1 also reaching elytral apex, but conspicuously weakened most of length; costa 3 present in basal third (Fig. 1).

Aedeagus with median lobe first dilated, then abruptly constricted distally (Figs 2–4).

**Female**. Similar to male, but antennae slightly shorter and elytra longer and narrower, 4.5 times longer than wide at humeri and 6.5 times longer than pronotum. External genitalia with relatively prominent elongate styli (Fig. 5).

Length: 7.2–8.2 mm. Width (humerally): 1.6–1.9 mm.

DIAGNOSIS. *Marena tristis* **sp.n.** differs from its congenerics by the small eyes and the shape of the median lobe of the aedeagus (Figs 2–4). It also differs from *M. missai* **sp.n.** by the shorter third primary elytral costa (Fig. 1).

ETYMOLOGY. The name of the species is derived from the Latin for "sad" alluding to its uniformly dark brown coloration.

### *Marena madangensis* Kazantsev, 2007 **sp.n.**
Figs 6–8

MATERIAL: Holotype, ♂: Papua New Guinea IRSN canopy mission, Madang Province, Baiteta, Light AR 20, 16.IV.1996, O. Missa leg. (IRSN); paratype ♂: Papua New Guinea IRSN canopy mission, Madang Province, Baiteta, Light AR 52, 20.V.1996, O. Missa leg. (SVK).

DESCRIPTION. Dark brown; posterior pronotal angles light brown.

**Male**. Head with roundish impression behind antennal prominence. Eyes relatively large (interocular distance 1.6 times longer than radius). Antennae attaining to elytral five sixths; antennomere 3 6.7 times longer than antennomere 2 and 1.1 times longer than antennomere 4; antennal pubescence short and semi-erect.

Pronotum transverse (1.3 times wider than long), with pronounced anterior angles; hind angles acute and produced laterally; median cell occupying ca. basal three fourths; lateral carinae very inconspicuous. Scutellum square, with triangular distal emargination.

Elytra long, 3.4 times longer than wide at humeri and 6.5 times longer than pronotum, parallel-sided, with equally developed primary costae 2 and 4, costa 1 also reaching elytral apex, but conspicuously weakened most of length; costa 3 present in basal fourth.

Aedeagus with basally widened median lobe (Figs 6–8).

**Female**. Unknown.

Length: 4.8–5.0 mm. Width (humerally): 1.25–1.3 mm.

DIAGNOSIS. *Marena madangensis* **sp.n.** differs from other *Marena* species by the smaller size, lighter posterior pronotal angles, longer antennae and the wider median lobe of the aedeagus (Figs 6–8). It also differs from *M. tristis* **sp.n.** by the larger eyes.

ETYMOLOGY. The name of the species is derived from the type locality.

### *Marena missai* Kazantsev, 2007 **sp.n.**
Figs 9–11

MATERIAL: Holotype, ♂: Papua New Guinea IRSN canopy mission, Madang Province, Baiteta, Light AR 8, 11.VII.1996, O. Missa leg. (IRSN); paratypes, 1 ♂: Papua New Guinea IRSN canopy mission, Madang Province, Baiteta, Light AR 9, 17.IV.1996, O. Missa leg.; 1 ♂ Papua New Guinea IRSN canopy mission, Madang Province, Baiteta, Light AR 62, 4.VII.1996, O. Missa leg. (IRSN and SVK).

DESCRIPTION. Uniformly dark brown.

**Male**. Head with roundish impression behind antennal prominence. Eyes large (interocular distance 1.3 times longer than radius). Antennae attaining to elytral two thirds; antennomere 3 6.7 times longer than antennomere 2 and 1.2 times longer than antennomere 4; antennal pubescence short and semi-erect.

Pronotum transverse (1.25 times wider than long), semicircular anteriorly with noticeable anterior angles; hind angles acute and produced postero-laterally; median cell occupying ca. basal two thirds; lateral carinae inconspicuous. Scutellum square, rounded distally.

Elytra long, 3.2 times longer than wide at humeri and 4.8 times longer than pronotum, parallel-sided, with equally developed primary costae 2 and 4, costa 1 also reaching elytral apex, but conspicuously weakened most of length; costa 3 present in basal two thirds.

Aedeagus with median lobe dilated and gradually narrowed distally (Figs 9–11).

**Female**. Unknown.

Length: 6.0–6.4 mm. Width (humerally): 1.5–1.6 mm.

DIAGNOSIS. *Marena missai* **sp.n.** differs from its congenerics by the longer third primary elytral costa, rounded scutellum and the shape of the median lobe of the aedeagus (Figs 9–11). It also differs from *M. tristis* **sp.n.** by the larger eyes.

ETYMOLOGY. The species is named after its collector, Mr. Olivier Missa.

KEY TO *MARENA* KAZANTSEV, 2007 **GEN.N.** SPECIES

1. Scutellum distally rounded. Third primary elytral costa present in basal two thirds. Aedeagus — Figs 9–11 ..... ..... *M. missai* Kazantsev, 2007 **sp.n.**
— Scutellum distally incised. Third primary elytral costa present in basal fourth or third only ..... 2
2. Larger, 7–8 mm. Eyes small, separated above by ca. 2.5 their radius (Fig. 1). Third primary elytral costa present in basal third. Antennae attaining to elytral two thirds. Median lobe of aedeagus basally narrow (Figs 2–4) ..... ..... *M. tristis* Kazantsev, 2007 **sp.n.**
— Smaller, ca. 5 mm. Eyes relatively large, separated above by ca. 1.6 their radius. Third primary elytral costa present in basal fourth. Antennae attaining to elytral five sixths. Median lobe of aedeagus basally widened (Figs 6–8) .... ..... *M. madangensis* Kazantsev, 2007 **sp.n.**

## Discussion

The parallel-sided male antennomeres, inconspicuous pronotal carinae, wide phallobase and median lobe of the aedeagus without sclerotized spines, which distinguish *Marena* **gen.n.**, appear to be plesiomorphic in this group of Lycidae [Bocak, 2002]. The obvious apomorphies of the new genus, the flattened ultimate palpomeres, developed secondary elytral reticulation and absent spiculum ventrale, are actually homoplasies widespread not only in Metriorrhynchini, but among many other lineages of net-winged beetles [Kazantsev, 2005]. At the same time, it is unclear if the reduced third elytral costa of *Marena* **gen.n.**, a feature that is shared of all Metriorrhynchina genus-group taxa only by Sri Lankan *Prometanoeus* and *Tricautires* from the Bioko Island, is in the plesiomorphic or apomorphic condition. It is noteworthy that all three taxa with reduced third elytral costa are confined to one large island each scattered across the distribution area of the tribe in three different zoogeographic regions, i.e., Afrotropical (*Tricautires*), Indomalayan (*Prometanoeus*) and Papuan (*Marena* **gen.n.**) (Fig. 12). Until a satisfactory cladistic analysis of this group that would take into consideration other lineages of the family is carried out, it seems reasonable to consider the combination of characters distinguishing *Marena* gen.n. to be its apomorphy.

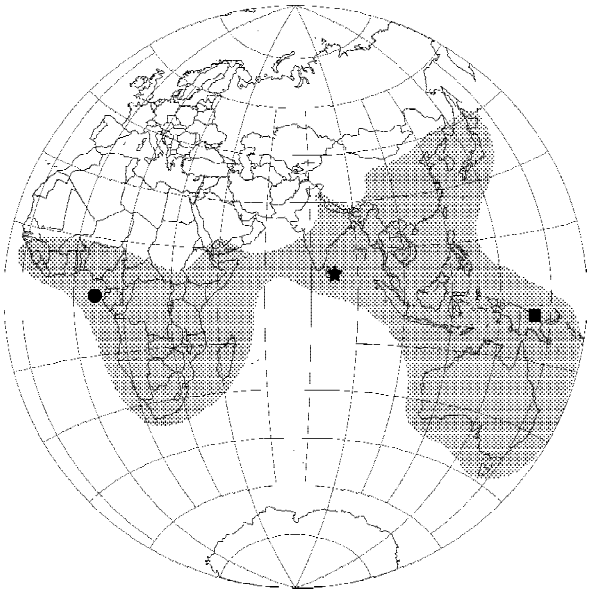


Fig. 12. Distribution area of Metriorrhynchini (shown by shaded area), *Tricautires* (circle), *Prometanoeus* (star) and *Marena* **gen.n.** (square).

Рис. 12. Ареал Metriorrhynchini (показан затемнением), *Tricautires* (кружок), *Prometanoeus* (звездочка) и *Marena* **gen.n.** (квадрат).

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