

A new species of neotenic *Neolyrium* from Peru (Coleoptera: Lycidae)

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Abstract. *Neolyrium iquitosense* sp. nov., a new species of Lycidae, is described and illustrated. This second species of the genus represents the first record of *Neolyrium* from Peru, keeping its distribution restricted to tropical areas of South America.

Key words. Coleoptera, Lycidae, Leptolycini, new species, taxonomy, South America, Neotropical Region

Introduction

The Leptolycini are a Neotropical tribe of net-winged beetles composed of small to medium sized individuals often presenting slender body with reduced mouthparts and genitalia. The females are assumed to be apterous and likely neotenic (BOCAK & BOCAKOVA 2008). Among Leptolycini a larviform female of *Leptolycus heterocornis* Leng & Mutchler, 1922 was described from the West Indies (MILLER 1991). Similarly modified development when females keep larval morphology was thoroughly documented in Oriental *Platerodrilus* Pic, 1921 (MASEK & BOCAK 2014). Such lineages show extremely low dispersal propensity and consequently high molecular diversity (MASEK et al. 2015). Generating space-limited diversity has recently been documented in several neotenic Elateroidea like the lycid genus *Scarelus* Waterhouse, 1878 (BRAY & BOCAK 2016), or in fireflies of the subfamily Ototretinae (JANISOVA & BOCAKOVA 2013, BOCAKOVA et al. 2015, BOCAKOVA & BOCAK 2016).

Currently, the Leptolycini were shown to belong to the subfamily Lycinae, forming a sister-group of *Calopteron* Guérin-Méneville, 1830 (BOCAK et al. 2008). The Leptolycini are composed of five genera: *Ceratoprion* Gorham, 1884, *Leptolycus* Leng & Mutchler, 1922, *Neolyrium* Kazantsev, 2005, *Tainopteron* Kazantsev, 2009, and *Tishechkinia* Kazantsev, 2013

(MILLER 1991; KAZANTSEV 2005, 2013; BOČAK & BOČAKOVA 2008). A recent morphological analysis of neotenic Lycidae (KAZANTSEV 2013) revived the broad concept of the subfamily Leptolycinae including the following tribes: Afrotropical Dexorini, Oriental Antennolycini and Lyropaeini, Neotropical Dominopterini and Electropterini, and Leptolycinae (correctly probably Leptolycini) that were shown to be paraphyletic. These relationships of neotenic lycids (KAZANTSEV 2013) are in contradiction to the results of molecular data (BOČAK et al. 2008) presenting Neotropical neotenic ('*Pseudoceratoprion*' sensu MILLER 1991) as a crown clade within Calopterini.

Two species were originally included in *Neolyrium* (KAZANTSEV 2005), *N. duidaeense* Kazantsev, 2005, from Venezuela and *N. carltoni* Kazantsev, 2005 from Ecuador. Another specimen of the genus was recorded from French Guyana (CONSTANTIN 2010) and provisionally associated to *N. duidaeense*. Recently, *N. carltoni* was transferred to *Tishechkinia* Kazantsev, 2013 since this species presents shorter maxillary palps, differences in antennae, and longer parameres, and consequently, *Neolyrium* became monotypic. *Neolyrium* was described as a unique genus of Neotropical Lycidae presenting 10-segmented antennae. Recent findings by the Natural History Museum in London expedition to the Amazonian basin in Peru (M. Barclay) allowed us to recognize the second species of *Neolyrium* presented here.

Material and methods

The specimen was examined under a Zeiss SteREO Discovery V8 stereoscopic microscope and illustrated using digital photographs taken with an Axiocam ERc 5s camera. All measurements are in mm. The eye diameter was measured at the widest point, the interocular distances at the narrowest point. Dissection of genitalia was carried out after boiling in 10% KOH solution. The semicolon used in the label of the type material indicates the end of line. Abbreviation used:

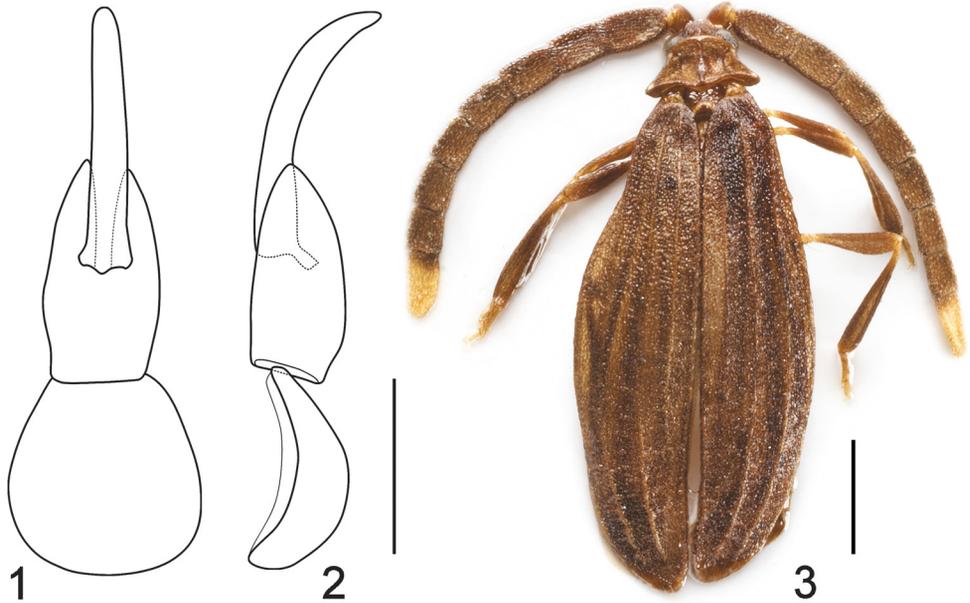
BMNH – Natural History Museum, London, United Kingdom.

Taxonomy

Neolyrium iquitosense sp. nov.

Type material. HOLOTYPE: ♂, PERU: Amazon, Iquitos; xii.1997 Lowland forest; Rio Napo - Rio Sucusari; 3°9'46"S; 73°15'49"W; coll. MVL Barclay; BMNH{E} 2003-49 (BMNH).

Description. Body, pronotum, and elytra brown (Fig. 3). Antennae brown, terminal antennomere presenting distal portion yellow (Fig. 3). Legs brown, distal 1/4 of trochanter and proximal 1/5 of femur yellow. Eye diameter as long as interocular distance. Antennae parallel-sided, antennomere 3 1.2× longer than 4 and 1.1× longer than antennomere 5. Antennae reaching elytral midlength. Labial palpi considerably reduced, maxillary palpomere 2 elongate, 2.2× longer than 3 and 1.3× longer than palpomere 4. Palpomere 4 distally pointed. Mandibles reduced. Pronotum trapezoidal, 1.4× wider than long medially, anteriorly almost right angled, posterior angles produced transversely. Pronotum presenting median longitudinal carina forming shallow areola in 2/4 to 3/4, posterior margin of pronotum bisinuate. Scutellum with



Figs 1–3. *Neolyrium iquitosense* sp. nov. 1–2 – male genitalia (1 – ventral view, 2 – lateral view); 3 – habitus. Scales: 0.5 mm (Figs 1–2), 1.0 mm (Fig. 3).

distal emargination. Elytra elongate, widened in distal 3/4, 3.5× longer than humeral width. Each elytron with 3 conspicuous longitudinal costae, costae 2 and 4 reaching apex, costae 1 absent in apical 1/3, costae 3 hardly noticeable, restricted to humeral portion. Prosternum triangular, mesoventrite transverse, trapezoidal. Male abdominal ventrite 8 short, rounded distally and proximally. Trochanters elongate, cylindrical, as long as half femur length, tibiae 1.4× longer than femur. Phallus straight in ventral view (Fig. 1), distal half arcuate ventrally in lateral view (Fig. 2). Parameres broadly connected basally, pointed apically, as long as phallus. Phallobase wider than parameres in ventral view and almost as long as phallus. Body length: 4.8 mm, humeral width: 1.15 mm.

Differential diagnosis. *Neolyrium iquitosense* sp. nov. differs from *N. duidae* mainly in the following characters: antennomere 3 longer than 4 (while *N. duidae* presents antennomere 3 shorter than 4), body generally broader than in *N. duidae*, legs robust, distal half of phallus bent ventrally (while phallus is entirely straight in *N. duidae*), parameres as long as phallus (while parameres are short in *N. duidae*), and phallobase wider than parameres in ventral view (while phallobase of *N. duidae* is slenderer than width of parameres).

Etymology. The species name is latinized adjective *iquitosensis* (-is, -e) derived from the collection site.

Distribution. Peru.

Acknowledgements

We would like to thank M. Barclay and M. Geiser (BMNH) for providing the specimen of the new species, and H. Taylor (BMNH) for taking the photograph of the holotype. This study has been supported by the grants 480372/2013-6 (CNPq-Brazil), CZ.1.07/2.3.00/20.0166 (European Social Fund and Ministry of Education of the Czech Republic), and IGA_PdF_2016_018 (Palacky University Olomouc, Czech Republic).

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