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 (BOCA & 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.
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 Domiopenerini 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 (Bocak et al. 2008) presenting Neotropical neotenics (‘Pseudoceratoprion’ sensu Miller 1991) as a crown clade within Calopterini.

Two species were originally included in Neolyrium (Kazantsev 2005), N. duidaense 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. duidaense. 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
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. duidaense* mainly in the following characters: antennomere 3 longer than 4 (while *N. duidaense* presents antennomere 3 shorter than 4), body generally broader than in *N. duidaense*, legs robust, distal half of phallus bent ventrally (while phallus is entirely straight in *N. duidaense*), parameres as long as phallus (while parameres are short in *N. duidaense*), and phallobase wider than parameres in ventral view (while phallobase of *N. duidaense* is slenderer than width of parameres).

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

**Distribution.** Peru.
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References


