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A new species of the genus *Linoderus* Sharp, 1885 (Coleoptera, Staphylinidae, Philonthina) from the Colombian Andes

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Abstract

The monotypic genus *Linoderus* Sharp, 1885 was described based on a species from Panama and since the original description nearly nothing has been added to its taxonomical knowledge. The aim of the present paper is to describe a new species of the genus from Colombia and to report the genus for the first time from South America, adding some biological notes of the species.

Key words: Staphylinini, Philonthina, *Linoderus navarretei* sp. nov., Colombia, new species

Introduction

Philonthina is the most diverse and broadly worldwide distributed subtribe of the tribe Staphylinini (Smetana 1995.), and it is considered as sister group to Xanthopygina making up a monophyletic group (Chatzimanolis *et al.* 2010, Chani-Posse 2013). Although, its major richness is found in the Neotropics (17 endemic genera), this region has been the less studied and there are a lot of gaps in knowing its genera (Chani-Posse 2013, Chani-Posse 2014). In countries highly diverse in geography and ecosystems as Colombia, the genera and species richness of this staphylinid group is underestimated (Newton *et al.* 2005), mainly because available taxonomical keys are mostly based on the Holarctic fauna (Chani-Posse & Couturier 2012). Newton *et al.* (2005) recorded only six genera for the country while 17 more were cited as probable. Some ecological works have recorded an additional genus (*Pescolinus* Sharp 1885) for Colombia (Méndez-Rojas *et al.* 2012), and recently the new genus *Leptopeltoides* has been described (Chani-Posse & Asenjo 2013). But there is still a huge knowledge gap on the diversity of Philonthina.

The monotypic genus *Linoderus* Sharp, 1885 was described based on *Linoderus gracilipes*, which is known only from the type locality in Volcán de Chiriquí (Panama), and since the original description nearly nothing has been added to its taxonomical knowledge. However, it has been recently included by Chani-Posse (2013) in a phylogenetic analysis of Neotropical Philonthina and in the taxonomical key for the genera (Chani-Posse 2014). In Colombian riverine landscapes, some genera of Philonthina (*Philonthus*, *Pescolinus*, *Bisnius*, *Neobisnius*) have been reported near to the edge of streams or over the riparian vegetation (Gutiérrez-Chacón *et al.* 2009). Although rove beetles are abundant and important in ecological dynamics of forests, most of the fauna remains even without knowing at taxonomic species level (Navarrete-Heredia *et al.* 2002). Accordingly, the aim of this paper is to describe morphologically *Linoderus navarretei* sp. nov. and to depict some ecological features. This species is the first genus record for South America.

Several characters allow including the new species in *Linoderus*, most of which are consistent with its original description (Sharp 1885) and the Philonthina generic key by Chani-Posse (2014). The new species matches the Sharp's description in the following: antennal insertions at some distance behind frontal margin, prosternum divided by a well-marked transverse ridge, legs extremely long and tibiae clothed with long hairs. However, the

paratypes with the same data, ♂ ♀ (ICN-MHN), 1 ♂ (CIUQ). Two paratypes with the labels: Colombia, Risaralda Dept., La Celia, Parque Regional Natural Verdum, 4°26'13.3" N 75°37'29" W, 1800 m, 22.i.2013, Delgado-Santa L. col., manual on forest soil, Paratype *Linoderus navarretei* López-García & Méndez-Rojas 2014, 2 ♀ (CIUQ). Three paratypes with the labels: Colombia, Quindío Dept., Filandia, Reserva Forestal y de Investigación Bremen-La Popa, 4°40'16.4" N 75°36'57.3" W, 2040 m, 19.vii.2013, Soto-Garzón C. col., manual on leaves of Araceae, Paratype *Linoderus navarretei* López-García & Méndez-Rojas 2014, 1♂ 2♀ (ICN-MHN).

Distribution. The new species of *Linoderus* is known only from Central and Western Cordillera of the Colombian Andes (Departments of Quindío and Risaralda).

Habitat and bionomics. The species was found in riparian areas of montane forest. Most individuals were collected directly from vegetation, during the day. Thirteen individuals were observed on the lower leaf surface that they apparently use for perching behavior (Fig. 10–11). More than two individuals were often found in a same leaf; even six of them were together in two occasions. Only two individuals, a male and a female, were observed on the upper leaf. However, they were covered by a piece of fallen leaf. In addition, a male was observed moving actively on inflorescences of *Heliconia venusta* Abalo & G. Morales. The only two females of Risaralda were found on a highly moist soil.

Remarks. The color pattern of *Linoderus navarretei* sp nov. is widely similar to that of *Nordus* cf. *maculiceps* (Xanthophygina), which was also found on riparian vegetation in *Parque Regional Natural Barbas-Bremen* (Fig. 12–13). In *Nordus*, it has been thought that tail color (yellow) can act with abdomen waving and chemical secretion as a defense mechanism by combination of visual and chemical signals (Chatzimanolis 2003). Its convergences do not reflect a closer phyletic affinity and rather it can be a product of sharing the same habitat or mimicry, but it is necessary to carry out further studies that allow understand which species is model and which is mimic. Similar color patterns have been observed in some species of *Belonuchus*.

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