



<http://dx.doi.org/10.11646/zootaxa.3609.5.3>

<http://zoobank.org/urn:lsid:zoobank.org:pub:A24204B3-53C9-4A95-85F2-D766E2704FFD>

Three new species of *Neofidelia* (Hymenoptera: Apoidea: Megachilidae) from Northern Chile

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Abstract

Neofidelia apacheta Dumesh and Packer, **sp. nov.**, *N. camanchaca* Dumesh and Packer, **sp. nov.**, and *N. submersa* Dumesh and Packer, **sp. nov.** are described from northern Chile. *Neofidelia apacheta* is known from large numbers of specimens and localities at moderately high elevation (1600–3200m). *Neofidelia camanchaca* is only known from the holotype male. *Neofidelia submersa* is known from the holotype male and a pair of paratypes in poor condition, all from a coastal fog oasis. Comparisons are made with the two previously described species of the genus. The collection of *N. apacheta* from so far north in Chile suggests that *Neofidelia* is likely to be found in southern Peru. A key for the five species of the genus is provided.

Key words: Atacama Desert, fog oasis, Andes, identification key, monolecy, floral hosts, Solanaceae, *Nolana*

Resumen

Neofidelia apacheta Dumesh y Packer, **sp. nov.**, *N. camanchaca* Dumesh y Packer, **sp. nov.**, y *N. submersa* Dumesh y Packer, **sp. nov.** se describen para el norte de Chile. *Neofidelia apacheta* es conocida por un gran número de ejemplares y localidades de elevación moderadamente alta (1600–3200m). *Neofidelia camanchaca* sólo se conoce por el holotipo macho. *Neofidelia submersa* se conoce por el holotipo macho y por un par de paratipos en mal estado, todos provenientes de un oasis de niebla costera. Se realizan comparaciones con las dos especies previamente descritas del género. La colecta de *N. apacheta* tan al norte en Chile sugiere que *Neofidelia* probablemente se encuentre en el sur de Perú. Se proporciona una clave para las cinco especies del género.

Introduction

Neofidelia profuga Moure and Michener (1955) was described as a new genus and species and was the first record of the bee tribe Fideliini (family Fideliidae at that time) from the New World. Rozen (1970) described a second species, *N. longirostris*. As currently known, the genus is endemic to Chile, with published records from Coquimbo in the south to near Chañaral in the north. It is currently considered to be the sister genus to the remaining Fideliini (Gonzalez et al., 2012) and to belong to its own subtribe, the Neofideliina (Engel, 2004). Here we describe three more species of *Neofidelia*; one collected in large numbers from numerous localities in northern Chile in 2012 and the others from much more restricted material. These records extend the range of the genus 1000km further north than previously indicated in the literature (Rozen, 1970).

Methods

Terminology follows Rozen (1970) and Michener (2007) with the following exceptions. The term metapostnotum is used for what these authors refer to as the dorsal surface of the propodeum and following Prentice (1998) the terms vertexal and frontal areas are used instead of vertex and frons. The male metafemur in *Neofidelia* is swollen