



Redescription of *Neotyphloceras chilensis* Jordan, new status (Siphonaptera: Ctenophthalmidae: Neotyphloceratini)

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Abstract

Neotyphloceras crassispina chilensis Jordan is elevated to species status based on comparison of its morphology with other species and subspecies of the genus. *Neotyphloceras chilensis* is redescribed from specimens from Region IV of Coquimbo, Chile. A key for identification of species and subspecies of *Neotyphloceras* is provided.

Key words: fleas, *Neotyphloceras crassispina chilensis*, *Neotyphloceras chilensis* stat. nov., taxonomy, South America

Introduction

The genus *Neotyphloceras* Rothschild includes two species, *Neotyphloceras rosenbergi* (Rothschild) and *Neotyphloceras crassispina* Rothschild. Three subspecies were recognized in the latter species, distinguishable by differences in the length and shape of the fixed process of the clasper, and the distance of the most distal seta to its apex (Jordan 1936; Hopkins & Rothschild 1966). These subspecies are *Neotyphloceras crassispina crassispina* Rothschild, *N. crassispina hemisus* Jordan, and *N. crassispina chilensis* Jordan. Moreover, Smit (1968) proposed to distinguish females on the basis of the number and location of the upper lateral seta of tergum VIII. However, this characteristic was not considered subsequently, and subspecific identification of females was based on accompanying males (Hastriter 2001; Lareschi *et al.* 2010).

According to Hastriter (2001), the distribution of *N. crassispina* subspecies extends from northern Peru to central Bolivia, and south through central Chile and western Argentina, as also noted by others (Smit 1968; Sanchez *et al.* 2009; Lareschi *et al.* 2003, 2010). The modified segments of *Neotyphloceras* species and subspecies are very complex and they have never been studied in sufficient detail to determine the validity of the subspecific taxa (Hastriter 2001), which has been questioned (Beaucournu & Castro 2003). Based on a comparative study of specimens of both sexes of all species and subspecies of *Neotyphloceras*, which includes modified segments, we raise *N. c. chilensis* to species status and redescribe it based on specimens from the IV Region of Coquimbo, Chile.

Materials and methods

Fleas from Region IV of Coquimbo, Chile, stored in 96% ethanol were mounted in Canadian balsam, examined, drawn using a microscope equipped with a drawing tube, photographed, and then deposited at Colección de Entomología del Museo de La Plata (MLP), Argentina. Measurements are presented in millimeters (mm) as mean values \pm the standard deviation followed by range values in parentheses. For comparative purposes, we examined photographs of the holotypes and paratypes of all species and subspecies of *Neotyphloceras* deposited at the