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Description of five new spiders from Canada (Araneae: Linyphiidae)

NADINE DUPÉRRÉ[1] & PIERRE PAQUIN[2,3]

[1]*12 Chemin Saxby Sud, Shefford, Québec, J2M 1S2, Canada. E-mail: dupere.nadine@videotron.ca*
[2]*Cave and Endangered Invertebrate Research Laboratory, SWCA Environmental Consultants, 4407 Monterey Oaks Boulevard, Building 1, Suite 110, Austin, Texas, 78749, U.S.A. E-mail: ppaquin@swca.com*
[3]*Corresponding author*

Abstract

The number of undescribed Linyphiidae in North America is estimated to range from 200 to 500 species. To further taxonomic knowledge and fill the basic need for species identification, we describe five new species collected in bio-inventories: *Agyneta sheffordiana* **new species**, *Oryphantes aliquantulus* **new species**, *Sisicus volutasilex* **new species**, *Tapinocyba cameroni* **new species** and *Tapinotorquis yamaskensis*, **new genus, new species.** We provide detailed morphological descriptions of males and females, distribution data and habitat affinities for each species. These new species show different situations for their generic placement, from an obvious assignment to a species-rich genus to the necessity to create a new genus. In attempting to assign *Tapinotorquis yamaskensis* to a known genus, we discovered that the only North American record of *Jacksonella falconeri* (Jackson 1908) is a misidentification of *Scirites pectinatus* (Emerton 1911).

Key words: North America, undescribed species, generic placement

Introduction

Linyphiidae is the most diverse spider family in North America, with over 950 species (Buckle *et al*. 2001). In addition, many species are sitting on museum shelves awaiting taxonomic descriptions, or are still undiscovered. Dondale (1979) estimated that 75 undescribed Linyphiidae occurred in Canada while Roth (1986) reported 40 undescribed species in *Agyneta* Hull 1911 alone. Although these numbers are outdated because several species have been described since, numerous species have also been discovered. Based on our research collection (CPAD), a brief overview of important North American collections (AMNH, CAS, CNC, MCZ) and one important private collection (DBC), we estimate that the number of undescribed Linyphiidae in North America ranges from a conservative 200 (actual counts) to an optimistic 500 species.

With that many undescribed species, several options could be used to document such diversity. Generic revisions and/or phylogenetic analysis that includes new taxa constitute valuable approaches but are not the quickest or most efficient way to generate species descriptions. Despite the outstanding development of systematics in recent decades, all species are far from being described and there is still an important need for resources that allow species level identification. Such data are central to biodiversity studies that use spiders as bio-indicators or in biogeographical contexts that require a phylogenetic framework of known related species. Despite potential flaws – such as species misplacement – species descriptions done without a generic revision have however the indisputable value of making the scientific community aware of the existence of new biological entities. In addition, it allows their identification for ecological studies and offer a first testable phylogenetic hypothesis provided by a generic placement. In this paper, we describe five species collected in

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