



Esophyllas, a new genus of erigonine spiders from southern California (Araneae: Linyphiidae: Erigoninae)

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Abstract

We erect a new genus, *Esophyllas* **n. gen.**, to place two litter dwelling species of erigonine spiders from southern California the type species, *E. vetteri* **n. sp.** and *E. synankylis* **n. sp.** A detailed genus diagnosis is presented as well as comprehensive morphological descriptions, artist illustrations, and SEM images for each species. We also provide data on habitat affinities, phenology, and distribution, including a distribution map figure. For tentative phylogenetic placement both species were scored for the characters in the data matrix of Miller & Hormiga (2004) and subsequently entered into the expanded matrix of Frick *et al.* (2010). The analysis places *Esophyllas* **n. gen.** within the “distal erigonines” as sister to *Scirites* Bishop and Crosby in a polytomy with *Tapinocyba* Simon 1884 and *Abacoproeces* (L. Koch). Data from morphological comparisons with taxa not included in the expanded matrix do not strongly support these relationships but instead suggest that *Esophyllas* **n. gen.** is more closely related to *Phlattothrata parva* (Kulczyn’ski 1926). However, in light of the extent of character divergence from the above genera we contend that the true sister group to *Esophyllas* **n. gen.** either has not yet been described or is among the vast number of phylogenetically untested taxa.

Key words: *Phlattothrata*, *Tapinocyba*, *Crosbyarachne*, *Scirites*, oak leaf litter, mountain spiders

Introduction

Following completion of two arthropod studies within coastal sage scrub plant communities of southern California (Prentice *et al.* 1998; 2001), we calculated that 9.5% of the spider species from Diegan coastal sage scrub and 6.5% of those from Riversidian coastal sage scrub were undescribed. Of these approximately 47% and 37%, respectively, were linyphiid species. Although a few taxa in families other than Linyphiidae have since been described, only one of the unknown linyphiid species has to date been described, *Ceraticelus artemisiae* Prentice & Redak. Independent collection efforts, primarily from oak leaf litter in the mountains, hills, and the wooded flats of southern California, have resulted in the discovery of more than 20 additional new linyphiid taxa. In an overview of some of the major North American museum holdings as well as two substantial private collections, Dupérré & Paquin (2007) estimated the number of undescribed North American linyphiid taxa to be somewhere between a conservative count of 200 (actual counts) and a liberal count of 500.

Unfortunately, there is a paucity of North American linyphiid systematists and taxonomists to deal with the multitude of undescribed species and many of the prominent systematists seem to be placing more emphasis on higher-level phylogenetics. Several genera, especially some of the most speciose taxa, such as *Meioneta* Hull (and *Agyoneta* Hull), are greatly in need of revision both because of the disagreement on synonymy and the vast number of undescribed species (in California alone) that could be included in one or the other genus, depending on accepted genus definitions. Other less speciose genera, such as *Ceraticelus* Simon and *Tapinocyba* Simon need revision because of inadequate genus definitions and obvious character discrepancies between the type species and the included members. In order to contribute to the documentation of biodiversity, addition of taxa for future phylogenetic analyses, and identification of possible indicator species, the importance of even single species descriptions cannot be underestimated.