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Taxonomic notes on the spider genus *Messapus* Simon, 1898 (Araneae, Corinnidae), with the description of the new genera *Copuetta* and *Wasaka* and the first cladistic analysis of Afrotropical Castianeirinae

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Abstract

The Afrotropical sac spider genus *Messapus* Simon, 1898, presently placed in the Castianeirinae, is reviewed. The type material of the type species, *M. martini* Simon, 1898, clearly represents two different species, a corinnine female (here designated the lectotype) and a castianeirine male (the paralectotype). The female is redescribed and its corresponding male is described for the first time. As a result, *Messapus* is transferred to the Corinninae. *Corinna natalis* Pocock, 1898 is transferred to *Messapus*, while *Messapus secundus* Strand, 1907 is transferred to *Merenius* Simon, 1909. The new genus *Copuetta* **gen. nov.**, with the type species *C. maputa* **sp. nov.**, is established to accommodate the misidentified castianeirine male paralectotype of *M. martini*, and its matching female is described for the first time. *Castianeira kibonotensis* Lessert, 1921 **syn. nov.** is considered a junior synonym of *Copuetta lacustris* (Strand, 1916) **comb. nov.**, which is redescribed from both sexes and transferred from *Copa* Simon, 1885. A further eleven new species of *Copuetta* are described: *C. comorica* **sp. nov.**, *C. erecta* **sp. nov.**, *C. kakamega* **sp. nov.**, *C. kwamgumi* **sp. nov.**, *C. lesnei* **sp. nov.**, *C. litipo* **sp. nov.**, *C. lotzi* **sp. nov.**, *C. magna* **sp. nov.**, *C. naja* **sp. nov.**, *C. uzungwa* **sp. nov.** and *C. wagneri* **sp. nov.** Of these species, only *C. lacustris* and *C. magna* **sp. nov.** have large distribution ranges. Seven of the species are only known from the type locality and the remaining four have distributions restricted to one or two countries. A second new genus, *Wasaka* **gen. nov.**, is described for four new species with restricted distributions from East and Central Africa: *W. imitatrix* **sp. nov.**, *W. montana* **sp. nov.**, *W. occulta* **sp. nov.** (type species) and *W. ventralis* **sp. nov.** A first phylogenetic analysis focused on the Afrotropical Castianeirinae is presented. The results support the placement and transfer of *Messapus* (including *M. natalis* **comb. nov.**) and *Medmassa* Simon, 1887 in the Corinninae, and the monophyly of

a clade including the four cryptic lycosiform castianeirine genera from the Afrotropical Region (*Copa*, *Copuetta* **gen. nov.**, *Echinax* Deeleman-Reinhold, 2001 and *Wasaka* **gen. nov.**). The implications of the phylogenetic results are briefly discussed.

Key words: arboreal, *Copuetta*, cryptic, new species, *Wasaka*

Introduction

The sac spider subfamily Castianeirinae (Araneae: Corinnidae) generally comprises species of ant-mimicking spiders. Three distinctive exceptions to this general rule from the Afrotropical Region are the genera *Copa* Simon, 1885, *Messapus* Simon, 1898 and *Echinax* Deeleman-Reinhold, 2001. These spiders have pale or brown lycosiform colouration that makes them cryptic in their environments, which are predominantly leaf litter (*Copa*) and bark and foliage (*Echinax* and *Messapus*), respectively. Although these genera share similar colouration and markings, they can be separated on the basis of genitalic and somatic morphological differences, including eye arrangement and leg morphology.

The spider genus *Messapus* was established by Simon (1898) for a single species, *M. martini* Simon, 1898, from KwaZulu-Natal, South Africa. Subsequently, Strand (1907) described a second species (*M. secundus*) in the genus from Tanzania. However, neither author elaborated on the detailed morphology of the species they described, nor did they provide illustrations of the genitalia or habitus. Bosselaers and Jocqué (2000a) redescribed *M. martini* and provided the first figures of this species based on the syntype specimens. These illustrations gave the first indications that the syntype female and male may not be the same species, as the epigyne differed from typical castianeirine genitalia (see Reiskind 1969; Deeleman-Reinhold 2001; Haddad 2004) in having a horse-shoe shaped depression, while the male palp is typically castianeirine.

The taxonomic history of *Messapus* is complex. The genus was originally described in the Clubionidae: Micariinae by Simon (1898), who suggested that the genus may be closely related to *Castianeira* Keyserling, 1879. Lehtinen (1967) later transferred the Micariinae to the Gnaphosidae, where it is still placed today (Dippenaar-Schoeman & Jocqué 1997; Murphy 2007; Platnick 2013). In Reiskind's (1969) revision of the North and Central American Castianeirinae, he considered *Messapus* to be *incertae sedis*. However, most of the genera that were placed in the Micariinae by Lehtinen (1967) were later transferred to the Liocranidae by Platnick (1989), including *Messapus*. Following their recent redescription of *M. martini*, Bosselaers and Jocqué (2000a) transferred *Messapus* to Corinnidae: Castianeirinae, a placement confirmed in a subsequent phylogenetic analysis (Bosselaers & Jocqué 2002).

In this study, the type species of *Messapus* is redescribed and a lectotype female is designated from the type series. Through examination of recently collected material, the true male of *M. martini* is identified and described. These (re)descriptions, and the selection of the female as the lectotype of *M. martini*, support the placement of *Messapus* in Corinninae, which is backed by results from a phylogenetic analysis. The largest African species of Corinnidae, *Corinna natalis* Pocock, 1898, recently redescribed by Haddad (2005), is transferred to *Messapus*. Both species have mottled markings, somewhat similar genitalia, are arboreal, and construct a retreat of dense silk in fissures of tree trunks (Figs 1–6; Haddad 2005). The new castianeirine genus *Copuetta* **gen. nov.** is described to accommodate the misidentified paralectotype male of *M. martini* and a misplaced species of *Copa* (*C. lacustris* Strand, 1916), and twelve new species are described. All of the species in the genus have cryptic lycosiform colouration (Figs 7–13) and are primarily arboreal. A second new lycosiform genus, *Wasaka* **gen. nov.**, is described for four new species from tropical forests that forms a basal clade within the group of cryptic Afrotropical Castianeirinae (together with *Copa*, *Copuetta* **gen. nov.** and *Echinax*).

Most of the specimens examined in this study were collected in tsetse fly traps and by canopy fogging. Indeed, the vast majority of *Copuetta* **gen. nov.** and *Wasaka* **gen. nov.** species seem to be arboreal forest-dwellers. The rich undescribed diversity sampled using these two methods highlights the importance of canopy fogging in particular as a rich source of undescribed Corinnidae genera and species, as was the case in Afrotropical *Echinax* (Haddad 2012a) and the subfamily Trachelinae (Lyle 2008; Lyle & Haddad 2009, 2010).