



On some Afrotropical species of *Aloencyrtus* (Hymenoptera: Encyrtidae): parasitoids of soft scales (Hemiptera: Coccidae)

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Abstract

Six new species of the encyrtid genus *Aloencyrtus* Prinsloo are described: *A. alox* sp. n., *A. habrus* sp. n., *A. hardii* sp. n., *A. johani* sp. n., *A. lindae* sp. n. and *A. vivo* sp. n.; three new synonyms are proposed: *A. ingens* (Annecke) **syn. n.** under *A. coelops* (Waterston), *A. niloticus* (Compere) **syn. n.** under *A. obscuratus* (Waterston) and *A. vitripennis* (Annecke) **syn. n.** under *A. claripennis* (Compere); diagnoses are provided for the 13 previously described Afrotropical species in addition to a key for the separation of females of the 19 species of the genus now known from the region; a parasitoid-host list is given.

Key words: Chalcidoidea, descriptions, new species, coccid parasitoids

Introduction

The encyrtid genus *Aloencyrtus* was erected by Prinsloo (1978) for 16 previously described African species, the majority of which were originally assigned to the genus *Coccidoxenus* Crawford, a junior synonym of *Trichomasthus* Thomson. Only two species have subsequently been described in *Aloencyrtus* in the ensuing 32 years, namely *A. elisavetae* Trjapitzin & Ruiz-Cancino from Mexico, which has since been transferred to *Trichomasthus* (Noyes, in press) and *A. indicus* Singh & Prasad from India. A further six Afrotropical species are here described as new and three previously described species, *A. vitripennis* (Annecke), *A. ingens* (Annecke) and *A. niloticus* (Compere) are treated as junior synonyms, bringing the present number of valid Afrotropical species of *Aloencyrtus* to 19.

This is the first detailed account of the genus since its description and it includes a key to the females of the 19 treated species, diagnoses of all previously described species, descriptions of the six new species and the addition of several new host and distributional records. The study is based on material that has accumulated in the South African National Collection of Insects over many years in addition to numerous specimens in the Natural History Museum, London.

This study does not represent a complete generic revision of *Aloencyrtus* because, as discussed below, the true generic limits of this taxon remain unresolved. Unfortunately, because of this situation a large number of specimens representing numerous undescribed species that were originally considered for inclusion were subsequently excluded from this study. It was decided that it would be better to leave the treatment of these species in abeyance until the generic limits of *Aloencyrtus* and certain allied genera of the encyrtine tribe Discodini can be reassessed through a robust phylogenetic analysis.

Unless stated otherwise, the specimens on which this study is based, including type material, are housed in the South African National Collection of Insects, ARC-Plant Protection Research Institute, Pretoria (SANC). The "T" numbers recorded in the Material Examined sections of the species treatments represent SANC accession book numbers. The following acronyms are used in the text: BMNH (The Natural History Museum, London, UK), USNM (National Museum of Natural History, Washington, D.C., USA).

Hosts. Species of *Aloencyrtus* appear to be exclusively parasitic in Coccidae of which 20 species in 9 genera are here recorded as hosts (Table 1). Included among these hosts are a number of well-known and widespread pests