Two new gall-inducing genera and species of Eriococcidae (Hemiptera) on Malvaceae and Anacardiaceae from the Neotropics.

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Abstract
This paper describes two new genera and species of gall-inducing Eriococcidae from the Neotropics: Eriogalloccoccus isaias Hodgson & Magalhães gen. & sp. nov. from Brazil, which forms tall conical galls on the leaflets of Pseudobombax grandiflorum (Malvaceae), and Dromedaricoccus hansoni Hodgson & Miller gen. & sp. nov. from Costa Rica, in bulbous swellings on the young stems, petioles and underside of the mid-veins of leaflets of Astronium graveolens (Anacardiaceae). The adult female, adult male, pupa, 2nd-instar male and crawler of E. isaias are described and illustrated but only the adult female and adult male of D. hansoni are described and illustrated. Keys are provided for the identification of (i) all eriococcid genera now known from the Neotropics as recognised by Hodgson & Miller (2010) based on the morphology of the adult female and (ii) all Neotropical genera based on adult males for which this stage is known.

Keywords: Sternorrhyncha, Coccoidea, taxonomy, identification, immatures, host-plants.

Introduction
The family Eriococcidae or felt scales is the fourth largest family of scale insects (Hemiptera: Sternorrhyncha: Coccoidea) (Ben-Dov et al. 2010). It is most abundant in the Southern hemisphere, particularly in New Zealand and Australia but is almost certainly as abundant in South America which is less well studied. The status of the family in South America has been recently reviewed by Kozár (2009) and Hodgson & Miller (2010), although they used slightly different generic concepts. Kozár (2009) concluded that 67 species of Eriococcidae in 27 genera were known from the Neotropical Region whilst Hodgson & Miller (2010) considered that there were 72 recognisable species in 24 genera known from South America (i.e., minus Central America and the rest of the Caribbean). However, Kozár’s placement of some of the species differed from that of Hodgson & Miller and further species have been described since Kozár’s paper was published.

There is mounting evidence that the family Eriococcidae is non-monophyletic – indeed, molecular analyses by Cook et al. (2002) and Cook & Gullan (2004) suggest that there are three major lineages in the Eriococcidae sensu lato. The fauna currently known from the Neotropics falls into two of these lineages, that which is basically Gondwanan in origin (encompassing Australia, New Zealand and South America) and the more widespread acanthococcid clade (Cook & Gullan, 2004; Kondo et al., 2006). Clearly, therefore there are likely to be major changes in the classification of this family in the near future.

For a recent history of the study of this family in South America, see Hodgson & Miller (2010). What is striking about the eriococcid genera currently known from the Neotropics is the high percentage of species that induce galls. The present paper describes two further gall-inducing genera and species from the Neotropics, one from Costa Rica which induces bulbous swellings on the twigs, petioles and main leaf veins of Astronium graveolens (Anacardiaceae), and the other from Brazil where it induces tall conical galls on the upper leaf surface of Pseudobombax grandiflorum (Malvaceae).

Materials and methods
Recently collected specimens were slide mounted in the usual way (see Henderson & Hodgson (2000)) except that all specimens were left in cold KOH (about 20°C) for 3-4 days.