



Revision of the *ocellatus* species-group of the genus *Plumarius* Philippi 1873 (Hymenoptera, Chrysididae, Plumariidae), with description of three new species from Argentina

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Abstract

This contribution presents the study of species-group of *Plumarius* Philippi 1873, as the result of a survey of the morphological variation in males. The group is characterized by the large ocelli and transverse head. It consists of the following three new species: *P. culminatus* Diez, Fidalgo & Roig-Alsina, **sp. nov.**, *P. ocellatus* Diez, Fidalgo & Roig-Alsina, **sp. nov.**, and *P. stangei* Diez, Fidalgo & Roig-Alsina, **sp. nov.** A characterization of the group, descriptions, and illustrations are provided.

Key words: Chrysididae, Plumariidae, *Plumarius*, taxonomy, Neotropic Region

Introduction

Plumariidae is a small group of wasps within the superfamily Chrysididae. The females are wingless and have subterranean habits, while the males are winged and highly attracted to light at night. These wasps are of particular interest because they represent one of the basal lineages of Hymenoptera Aculeata. The family includes seven genera, four of which are monotypic: *Myrmecopterina* Day 1977, *Maplurius* Roig-Alsina 1994, *Mapluroides* Diez, Fidalgo & Roig-Alsina 2007, and *Pluroides* Diez, Roig-Alsina & Fidalgo 2010. Two other genera have a few described species: *Myrmecopterina* Bischoff 1914 (Enderlein 1914 as *Archihymenidae* Enderlein (Brues 1924)), and *Plumaroides* Brothers 1974 (Diez & Fidalgo 2012), while *Plumarius* Philippi 1873 is a species-rich genus with sixteen described species (Nagy 1973, Perez-D'Angello 1975, Papp 2000, Pentead-Dias & Scatolini 2003, Quintero & Cambra 2010, Diez *et al.* 2012), five of which comprise the *hirticornis* group (Diez *et al.* 2012), and numerous undescribed species.

The genus *Plumarius* is distributed from northeastern Brazil, Ecuador, Peru and Paraguay, to the south of Argentina and Chile (Evans, 1966; Bradley, 1972; Nagy, 1973; Brothers, 1974; Pentead-Dias & Scatolini, 2003; Quintero & Cambra, 2010). These wasps vary considerably in size, with specimens measuring from 2.4 mm to about 13 mm in length. Their color varies from yellowish brown to dark brown and to black.

The present contribution deals with the study of the *ocellatus* species-group, as the result of an extensive survey of the morphological variation present in male *Plumarius*, which has uncovered many useful characters to distinguish between its numerous species.

Methods

All studied specimens are males. Specimens are deposited in: Museo Argentino de Ciencias Naturales “Bernardino Rivadavia”, Buenos Aires, Argentina (MACN); Instituto Argentino de Investigación de Zonas Áridas, Mendoza,