



The *Calliopsis* (Hymenoptera; Andrenidae; Panurginae) of Chile with the description of a new species

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Abstract

Calliopsis rigormortis Dumesh & Packer, new species is described from high altitude in Maule Province in central Chile. It appears to be an *Adesmia* (Fabaceae) specialist and its specific name refers to its death posture which is similar to that found in other small bees that visit the same genus of plant. A key to the Chilean species of the genus is provided.

Key words: bee, Panurginae, Maule, Region VII, key, death posture, floral relations, biogeographic regions

Introduction

The subgenus *Calliopsis* (*Liopoeum*) is readily differentiated from other subgenera of *Calliopsis* in the male by the elongate hairs on the hind basitarsus, the lack of a ridge separating the basal and apical areas of the labrum and the expansion of metatarsomeres 2–4. The females has the apical hair fringe on sternum 6 broken medially and the hind tibial spur bears sparse but usually coarse teeth.

Four species are known in the subgenus, two in Chile and two in Argentina. The purpose of this paper is to describe a new species from Chile and to discuss some interesting aspects of its morphology that seem to relate to its floral specialization. As *C. (Liopoeum)* is the only subgenus of *Calliopsis* known for Chile, this paper also presents a key to the species of that genus for the country.

Material and methods

Specimens of a distinctive panurgine bee were found in Chile in January 2009. Images of both sexes were sent to Luisa Ruz (Pontificia Universidad Católica de Valparaíso [PUCV], Chile), Arturo Roig-Alsina (Museo argentino de Ciencias Naturales of Buenos Aires, Argentina) and Jack Neff (Central Texas Melittological Institute, Austin, Texas, USA) in an attempt to identify it. All three noted that they had not seen the species previously. Further comparisons with material at PCYU (Packer collection York University), reference to Michener (2007) and discussion with the aforementioned melittologists and Jerry Rozen (American Museum of Natural History, New York, USA) revealed that the specimens represented a new species of *Calliopsis* subgenus *Liopoeum*.

Metasomal terga and sterna are referred to as Tx or Sx, respectively, and antennal flagellomeres as Fx. MOD (median ocellar diameter) is used for reference to hair length. Puncture diameter and puncture interspace distance are denoted as “d” and “i”, respectively, and are used to describe puncture density (*i.e.*, $i > d$). Ratios of length to breadth are referred to as l:b, or vice versa. Terminalia were relaxed in a 10% KOH solution and further examined in glycerine.

All photographs were taken using a Visionary Digital BK Plus imaging system using a Canon EOS 40D digital SLR camera and processed with Adobe Photoshop ©.

In the descriptions we concentrate on characteristics that vary among Chilean species in the genus.