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## Taxonomic revision of *Plesianthidium* Cameron (Apoidea: Megachilidae: Anthidiini), an endemic southern African bee genus

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### Abstract

The southern African bee genus *Plesianthidium* Cameron is revised. It comprises twelve species. Two new species are described: *Plesianthidium* (*Spinanthidium*) *richtersveldense* sp. nov. (Namibia and South Africa) and *P.* (*S.*) *namaquaense* sp. nov. (South Africa). Two species, *Plesianthidium calvini* (Cockerell, 1932) and *P. rufocaudatum* (Friese, 1909), are reinstated as valid species. Keys for the identification of the species of *Plesianthidium* are given.

**Key words:** Afrotropical, pollinator, pollen collector

### Introduction

*Plesianthidium* Cameron comes from the Greek word *plesios* that means near, hence *Plesianthidium* is ‘near *Anthidium*’. It is endemic to southern Africa, occurring mostly in the western region of South Africa, a region that receives its rainfall in winter. A few records exist from south-western Namibia; it is possible that several more species occur in southern Namibia. The predominant vegetation biomes are Fynbos in the South, Nama-Karoo to the north of the fynbos (this area is known as Namaqualand) and the Namib Desert in Namibia, all are biodiversity hotspots. There are also a few unexpected distribution records from summer rainfall areas in South Africa.

*Plesianthidium* is composed of four subgenera (Michener & Griswold 1994, Michener 2007). These were viewed as genera by Pasteels (1984), except for *Spinanthidiellum* Pasteels that he deemed to be a subgenus of *Spinanthidium* Mavromoustakis. Earlier, Michener (1944) suggested that *Spinanthidium* could reasonably be synonymised with *Plesianthidium sensu stricto*. The nomenclatorial histories for the species of *Plesianthidium* are brief; detailed accounts are provided by Eardley and Urban (2010).

### Methods

To distinguish between members of the subgenera *Plesianthidium* (*Spinanthidiellum*) and *Plesianthidium* (*Spinanthidium*), the subgeneric abbreviation (*Sl.*) is used for the former and (*S.*) for the latter. In the descriptions and diagnoses, features that are similar in all or most species (*e.g.*, the mostly yellow or orange vestiture under the tarsi in pallid species) are not described. The long axis of the body is always used to describe length, as opposed to width that is 90° to the long axis (a narrow cross-band is therefore described as short). The long (vertical) axis of the face is referred to as face length. Metasoma terga and sterna are referred to as T and S, numbered from anterior to posterior, making the first metasomal tergum T1 and the first metasomal sternum S1. Measurements of body length are approximate due to the different positions in which specimens are preserved. They are given as an indication of size. Doubtful distribution records are included in the Material Examined, but omitted from the distribution maps. Distribution maps are simplified for clarity; each dot occurring in the middle of a quarter degree square. The grid coordinates used for drawing maps are included in Table 1.

Habitus photographs are all in dorsal view. The illustrations of the terga are dorsal views and the sterna are ventral views. The illustrations of the genital capsules are dorsal views. The shape of the distal end of the