



First record in Colombia of *Microscapus hymenaeae* Costa Lima, 1950 (Coleoptera: Curculionidae: Cryptorhynchini)

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Introduction

The monotypic genus *Microscapus* was described by Lima (1950) based on specimens that emerged from pods of *Hymenaea* sp. (Fabales: Fabaceae) collected in the localities of Cantareira (state of São Paulo) and Santa Luzia (state of Minas Gerais), Brazil. The sole species of the genus is *M. hymenaeae* Costa Lima, 1950, and has been recorded from Bolivia (department of Beni; Whitehead 1975), Brazil (states of Goiás, Minas Gerais, Mato Grosso, and São Paulo; Barreto et al. 2020), Panama (Province of Coclé; Whitehead 1975), and Venezuela (state of Barinas; Whitehead 1975) in association with pods of *Hymenaea courbaril* L. (Whitehead 1975; Barreto et al. 2020) and *H. stigonocarpa* Mart. ex Hayne (Lewinsohn 1980). Despite the documented occurrence of *M. hymenaeae* in three neighboring countries (Panama, Brazil, and Venezuela) (Lima 1950; Whitehead 1975), this weevil had not been previously reported in Colombia (Wibmer and O'Brien 1986).

There are five species of *Hymenaea* L. in Colombia: *H. courbaril*, *H. intermedia* Ducke, *H. martiana* Hayne, *H. oblongifolia* Huber, and *H. parvifolia* Huber (Raz and Agudelo-Zamora 2023). Of these, *H. courbaril* (commonly known as 'algarrobo' in Colombia) is the most widely distributed according to the available records (Raz and Agudelo-Zamora 2023), occurring at elevations between 30 and 2000 meters in the departments of Amazonas, Antioquia, Atlántico, Bolívar, Boyacá, Cauca, La Guajira, Magdalena, Meta, Quindío, Santander, and Vichada (Raz and Agudelo-Zamora 2023). In May of 2023, pods of *H. courbaril* exhibiting holes presumably caused by insects were collected in the vereda Guayabal, municipality of Sopetrán, department of Antioquia, Colombia (6°30'41"N, 75°42'26"W). Subsequently, the pods were transferred to the

Museo Entomológico Francisco Luis Gallego (MEFLG) at the Universidad Nacional de Colombia Sede Medellín, Antioquia, where they were monitored for the emergence of individuals. Identification of emerging material was conducted using the descriptions and photographs presented in Lima (1950) and Lewinsohn (1980).

Results and Discussion

A total of 30 adult specimens of *Microscapus hymenaeae* Costa Lima (Fig. 1) were obtained from the pods collected in Sopetrán. These specimens were deposited at the Museo Entomológico Francisco Luis Gallego under the catalog numbers MEFLG 63090–63119. The species is easily recognizable due to the constriction in the anterior half of the pronotum and the oblique band of whitish scales directed towards the humeral region in the anterior half of the elytra. The association with pods of the genus *Hymenaea* is also a factor that facilitates the identification of the species (Whitehead 1975).

It was not possible to conduct direct biological observations of *M. hymenaeae* in the municipality of Sopetrán. However, Lewinsohn (1980) asserted that in Brazil, females of this weevil initiate the colonization of the host plant when the pods of *Hymenaea* have fallen to the ground, and that they prefer to oviposit on the face of the pod that is in contact with the soil. The seeds of *H. courbaril* possess a hard seed coat and are encased in a dry, yellowish pulp (Orozco-Cardona et al. 2010; Flores and Benavides 1990). The larvae of *M. hymenaeae* primarily feed on this pulp, which is sufficient for the development of regular adults of the species. Larvae are also capable of feeding on damaged seeds. Additionally, seeds may be consumed if they have undergone partial softening due to the initial imbibition process or the effect of fungal microorganisms (Lewinsohn 1980). The

consumption of damaged, softened, or previously colonized seeds suggests that the hard seed coat, a distinctive trait of *H. courbaril* seeds, may be difficult for larvae to penetrate, especially the first instars (Lewinsohn 1980).

Despite the presumed wide occurrence of *M. hymenaeae*, there is a paucity of information about this species (Barreto et al. 2020). To date, the known distribution of this weevil in Colombia includes the municipality of Sopetrán in the department of Antioquia. Nevertheless, it is likely that its range extends considerably further afield, following the natural distribution of *H. courbaril*, which has been recorded in 12 out of the 32 departments of Colombia (Raz and Agudelo-Zamora 2023). Similarly, it is conceivable that *M. hymenaeae* is associated with other species of the genus *Hymenaea* present in Colombia, as has been documented in Brazil, where this weevil has been identified in both *H. courbaril* and *H. stigonocarpa* (Lewinsohn 1980).

Material

https://data.canadensys.net/micropublications/resource?r=specimen_32

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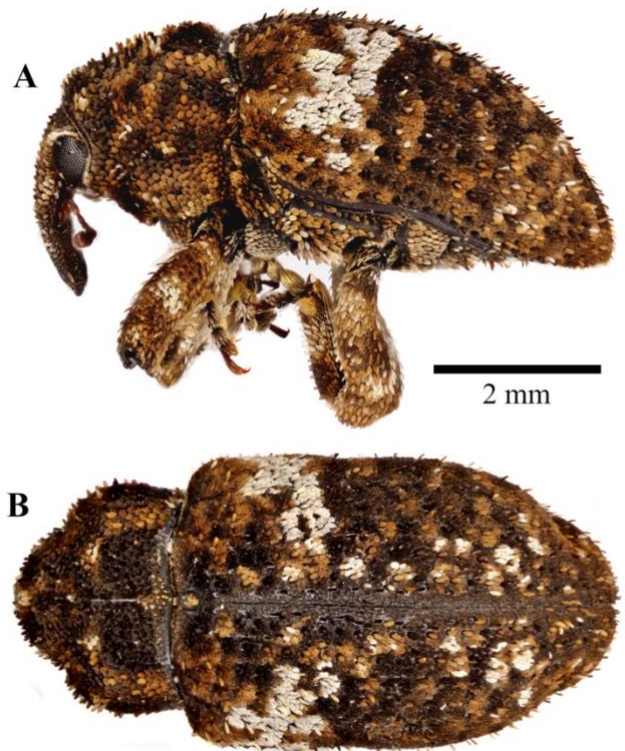


Fig 1. Habitus of *Microscapus hymenaeae*, specimen MEFLG 63090: A) Lateral view B) Dorsal view.