



## A new species of *Uleiorchis* (Gastrodieae, Orchidaceae) from the Brazilian Amazon

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### Abstract

A new species of *Uleiorchis* from Serra dos Carajás National Forest, Pará, Brazil, is described. This is the fourth species of this mycoheterotrophic genus. The species is illustrated, its affinities with related species are discussed, and a key to the species of the genus is presented. The new species differs from *U. ulei*, *U. pratënsis* and *U. liesneri* by the extremely elongated pedicel, the ligulate lip with a distal round dilatation, and by the elliptic, smooth stigmatic zone.

**Key words:** Eastern Amazon, Orchid, Floresta Nacional de Carajás, mycoheterotrophic

### Introduction

*Uleiorchis* Hoehne (1944: 129) is a small genus of terrestrial, mycoheterotrophic orchids with three species. *Uleiorchis ulei* (Cogniaux 1895: 244) Handro (1958: 175) is a widely distributed species occurring from Honduras to southern Brazil, from sea level to 600 m (rarely above), whereas *U. liesneri* Carnevali & Ramírez (1993: 105) is only known for the type collection, from Venezuela, growing above 1,000 m (Born *et al.* 1999). *Uleiorchis pratënsis* M.E.Engels & E.C.Smidt in Smidt *et al.* (2015: 262) is known from few collections in the Atlantic Rain Forest of Serra da Prata, southern Brazil, growing from 30 to 400 m.

The first orchid inventory from the Carajás National Forest was published by Silveira *et al.* (1995). This montane range hosts a large number of endemic taxa (Secco & Mesquita 1983, Silva 1991, Silva *et al.* 1996, Cabral *et al.* 2012), and several new orchid species were discovered from this area (Castro & Campacci 1993, Salazar & Silva 1993, Menezes & Tadayesky 1997).

During the activities of an orchid rescue in the expansion area of the N5 iron ore mining in the Carajás National Forest in 1998, a new mycoheterotrophic species of *Uleiorchis* was collected, but it remained undescribed. The aim of this paper is to describe this new species of *Uleiorchis*, which is illustrated and compared with the other species of the genus.

### Material and methods

The new species was collected in the N5 iron ore mining, in the Carajás National Forest, Pará State, Brazil. The collection and preparation of the botanical material are in accordance with the methods described by Fidalgo & Bononi (1989). The description and illustrations are based on fertile material, and the descriptive terminology was based on Hoehne (1944, 1945), Carnevali & Ramírez (1993), and Born *et al.* (1999).

Collections of the herbaria IAN and MG were consulted. The type specimens of the new species were deposited in the MG and IAN herbaria.

*Uleiorchis longipedicellata* is unique within the genus in its lip shape. It is similar to *U. liesneri*, because the pedicel elongates after anthesis, reaching its maximum length at fruit maturity. The two species differ, however, by the length of the pedicel (2 mm to 227 mm long after the fruit development in *U. longipedicellata* vs. 3–4 mm to 12 mm long in *U. liesneri*), by the stigmatic zone (glabrous in *U. longipedicellata* vs. pubescent in *U. liesneri*) and the number of flowers per inflorescence (1–4 in *U. longipedicellata* vs. 1 in *U. liesneri*).

*Uleiorchis pratënsis* is related with *U. longipedicellata* as suggested by the pedicel elongation with the development of fruits, the number of flowers per inflorescence, and the glabrous stigmatic zone. The new species differs from *Uleiorchis pratënsis* by the length of the pedicel (2 mm to 227 mm long after the fruit development in *U. longipedicellata* vs. 2.2–3.0 to 93–124 long after the fruit development in *U. pratënsis*), and by its lip attachment to the floral tube (totally free *U. longipedicellata* vs. base attached to lateral sepals ca. 3/5 of the length in *U. pratënsis*).

With *Uleiorchis ulei*, the new species shares the presence of more than one flower per inflorescence (although exceptionally single-flowered in *U. longipedicellata*) and the color of the flowers. Yet *U. longipedicellata* presents pedicel elongation with the fruit development, while the pedicel length of *U. ulei* remains the same. The two species also differs by the stigmatic zone (glabrous in *U. longipedicellata* vs. covered with single trichomes in *U. ulei*).

The four species of the genus differ in their distribution as well. While the new species is endemic to the Carajás Range, Pará State, Brazil, from 500 to 690 m of elevation, *U. ulei* is widely distributed from Honduras to southern Brazil, from sea level to 600 m, while *U. pratënsis* is known for south Brazil, growing from 30–400 m, and *U. liesneri* is endemic to Venezuela, growing above 1000 m elevation.

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