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A New Species of *Epibator* Luer (Orchidaceae) is Described from the Bota Caucana, Department of Cauca, Colombia.

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## Abstract

A new species of *Epibator* Luer (Orchidaceae) is described from the Bota Caucana, Department of Cauca, Colombia.

## Introduction

A new species was discovered growing epiphytically in the area known as La Bota Caucana. It is a region in the southeast corner of the department of Cauca. The region owes its name to the shape of the region, which resembles a boot. The department of Cauca has a high diversity of microhabitats that has resulted in species richness and endemism. Several species have recently been discovered in the area, which are new to the flora of Colombia (*Telepogon stinae* Dodson & Dalström, *Telepogon bota-caucanensis* Uribe-Velez & Sauleda, *Stelis bota-caucanensis* Uribe-Velez & Sauleda, *Scelochilus colombianum* Uribe-Velez & Sauleda, *Acianthera caucanensis* Uribe-Velez, Sauleda & Szlachetko). Plants of this species have been cultivated in several collections and identified as belonging to the genus *Ophiodion* Luer.

The species resembles *Zootrophion* Luer, however vegetatively they are distinct. The new species is vine-like similar to species in the genus *Epibator* Luer. Luer distinguishes *Epibator* from *Zootrophion* and *Ophiodion* by the vine-like habit and that the inflorescence is produced at what appears to be the junction of the rhizome and the ramicaul, but this point is the site of proliferation of another ramicaul. Only the short, terminal part of the ramicaul is present between the inflorescence and the leaf-ramicaul abscission layer, the series of superposed ramicauls appearing to be an elongated rhizome.

The synsepal is saccate not box-like with rigid sides and a convex floor as in *Zootrophion*. The dorsal sepal is connate to the synsepal only at the apex and not connate at the base. The labellum is hinged from the column-foot, not fitted into a compartment within the floor of the synsepal.

The vegetative and floral differences between *Epibator* and *Zootrophion* would indicate that the two taxa evolved along independent ways (Luer, 1986).

*Epibator* is distinguished from *Ophiodion* by its vine-like habit. Additionally in *Epibator* the labellum is hinged from the column-foot not sessile.

The molecular data (Pridgeon & Chase, 2001) places the species of *Epibator* together and close to but not within the genus *Zootrophion*.

This species also resembles some species of the genus *Phloeophila* Hoehne & Schltr. Pridgeon *et al.* (2001), on the basis of DNA analysis, combined *Luerella* and *Ophiodion* into a broader circumscription of *Phloeophila*. Karremans & Vieira-Urbe (2020) based on the molecular analysis of Chumová *et al.* (2018) and Ponert *et al.* (2019) reestablished the three genera. Although there is a resemblance to *Phloeophila* the new species does not match the diagnostic characters of the genus *Phloeophila* as reestablished by Karremans & Vieira-Urbe (2020) and is thereby illuminated for consideration as a genus for the new species.

Flanagan *et al.* (2015) report that after the DNA-based redefinition of *Pleurothallidinae*, three more genera belonging to the *Lepanthes* affinity would be proposed on morphological grounds: *Epibator* Luer, *Expedicula* Luer, and *Panmorphia* Luer. Flanagan *et al.* (2015) segregated *Epibator* from *Zootrophion*, and stated that in fact DNA data showed that *Epibator* species form a monophyletic group sister to the other species of *Zootrophion*.

For the above reasons we choose to describe the new species in the genus *Epibator* and not *Zootrophion*. Plants of the World on Line list *Epibator* as a synonym of *Zootrophion* contrary to the DNA data and morphological evidence published.

***Epibator mejia* Sauleda, Uribe-Velez and Szlachentko, sp. nov.**

Type: Colombia, Department of Cauca, from La Bota Caucana. From cultivation. Collector unknown. 2018. Specimen made from collection of Esperanza mejia. (Holotype: HPUJ).

#### Etymology

This species is named in honor of Esperanza Mejia de Moreno who made this species available to us for study under the impression that was a new species. A native of the municipality of Salamina, Caldas, she has been growing ornamental plants since very young and has dedicated herself to the department of Quindio of which she states: “Quindio is my land because wherever I go there are different kinds of orchids, something that illuminates the region, which is a paradise of the nation”. Her passion for orchids and the department of Quindio in which she has been living for more than 60 years, lead her to create the book *Orquideas del Quindio* an excellent reference work with all the species photographed by her. In addition she is a national orchid judge and has one of the finest collections of orchids in Colombia. In Armenia, Colombia, in El Parque de la Vida a sendero (and area with paths) has been planted with orchids and named in her honor by the Orchid Society of Quindio.

#### Diagnosis

*Epibator mejia* Sauleda, Uribe-Velez and Szlachentko is similar in habit to *Epibator serpentinus* (Luer) Luer and *Epibator ximena* Luer & Hirtz. However the flowers of *E. serpentinus* have a different color. They are deeply maroon-red, with some irregular whitish lines near the margins of sepals. The flower color of *E. ximena* and *E. mejia* is similar. The basic color is fleshy-white with red-wine dots, which are larger and close together towards apices. *Epibator mejia* and *E. ximena*

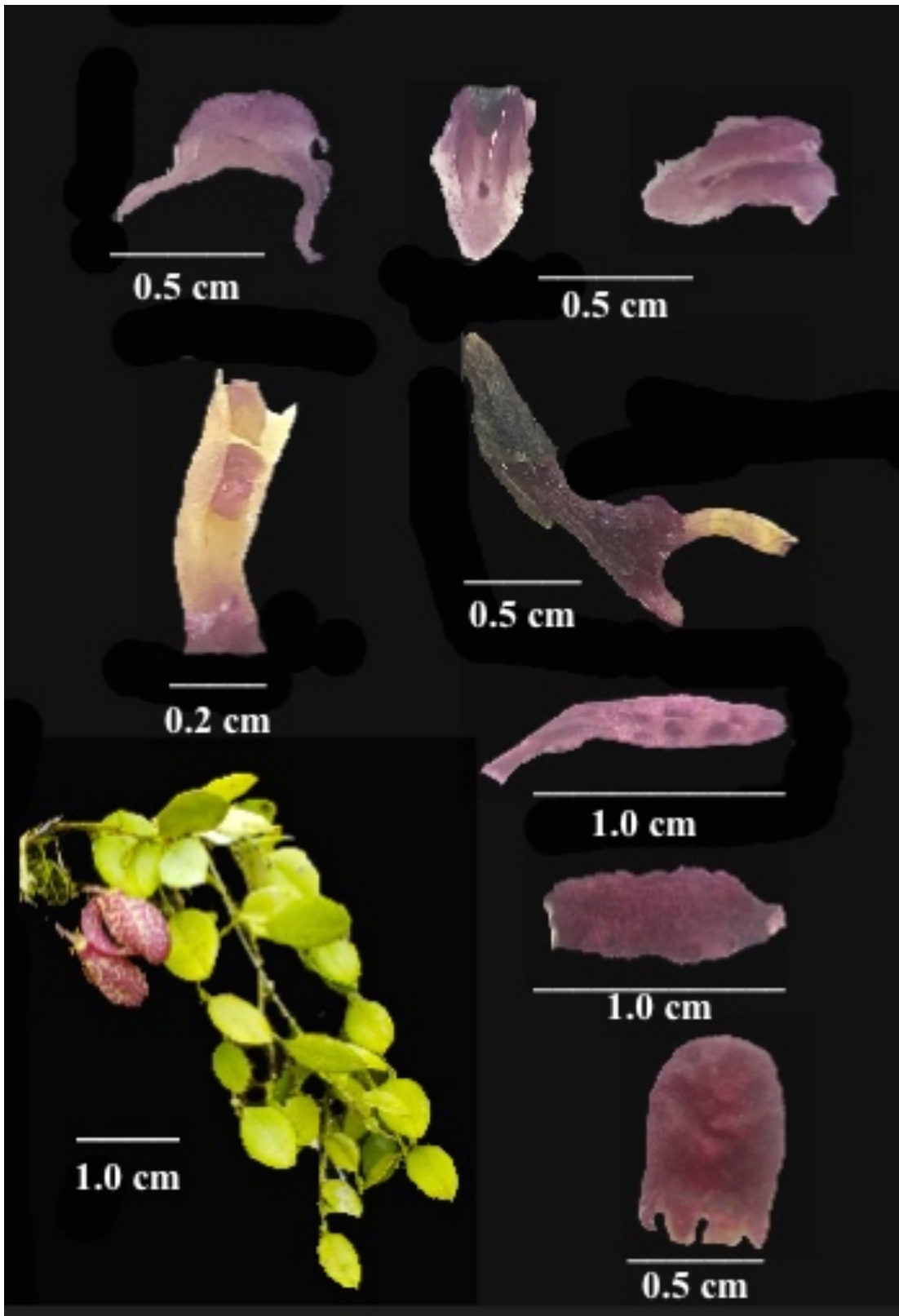
can be easily separated by the shape of the petals which are narrowly ligulate above linear base, with erose margins and rounded apex in *E. mejia* vs obliquely lanceolate above linear base, with acute apex and even margins in *E. ximena*. The labellum in *E. mejia* is erose-fimbriate along margins of lateral and middle lobes vs denticulate margins along middle lobe and even margins along lateral lobes in *E. ximena*.

Although the main diagnostic characters of *Phloeophila* do not match *E. mejia* flowers of *E. mejia* are superficially similar to *Phloeophila pleurothallopsis* (Krzl.) Pridgeon & M. W. Chase and *Phloeophila alphonsiana* L. F. Matthews, but these species are caespitose plants, where *Epibator mejia* is a long-repent vine-like plant. Flower segments of *E. mejia* are different. *Epibator mejia* has petals that are ligulate above linear base, more or less falcate above the lower third, the labellum is deeply 3-lobed near the middle, lateral lobes are obliquely elliptic, very prominent, long-clawed, apex is ligulate, margins are unevenly erose-fimbriate, the central part of the labellum is prominently thickened, sulcate along the midvein.

While considering flower forms, *E. mejia* can be confused with *Phloeophila alphonsiana* L. F. Matthews, but *E. mejia* has sagittate petals, widest near the apical third, labellum is 3-lobed above the basal third, and lateral lobes are obliquely ligulate.

#### Description

Plant epiphytic, long-repent, forming a tangled mass, to 50 cm long: ramicauls slender, creeping, prostrate or pendent, rooting from an annulus below the abscission layer, to 0.5 cm long, enclosed by 3-4 appressed tubular sheaths; leaves coriaceous, elliptical, obtuse to 0.75 cm long, 0.5 cm wide; inflorescence usually a solitary flower; flowers fleshy-white with red-wine dots, which are larger and closer together towards apices, borne on a slender, pendent peduncle, to 1 cm, from the annulus below the abscission layer; flower bracts tubular to 0.3 cm long; ovary pediculate to 0.5 cm long; dorsal sepal broadly lanceolate, acute, to 1.0 cm long, 0.4 cm wide, connate to the synsepal apically for 0.3 cm, free at the base, creating a widely patent lateral opening, lateral sepals completely concave, deeply saccate, inflated, rounded, to 0.75 cm long, 0.5 cm wide; petals narrowly ligulate above linear base, with erose margins and rounded apex, to 1.0 cm long, 0.3 cm wide; labellum is hinged to the column foot, deeply 3-lobed near the middle, lateral lobes are obliquely elliptic, very prominent, long-clawed, apex is ligulate, margins are unevenly erose-fimbriate, the central part of the labellum is prominently thickened, sulcate along the midvein, to 0.75 cm long, 0.5 cm wide; column white, slender, semiterete, to 0.5 cm long, 0.2 cm wide, dentate at the apex; column foot 0.2 cm long.



*Epibator mejia* Sauleda, Uribe-Velez and Szlachentko.



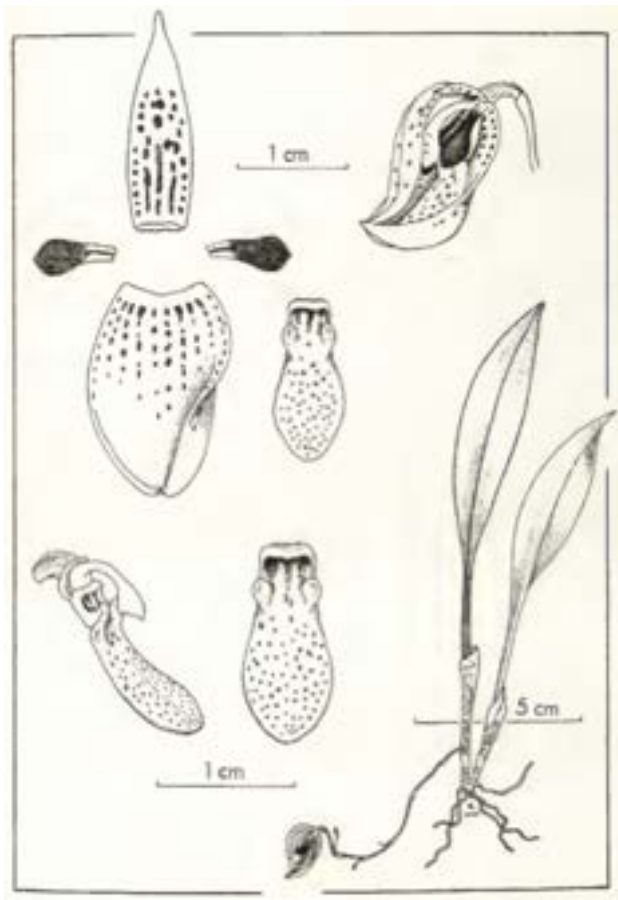
*Epibator mejia* Sauleda, Uribe-Velez and Szlachentko.



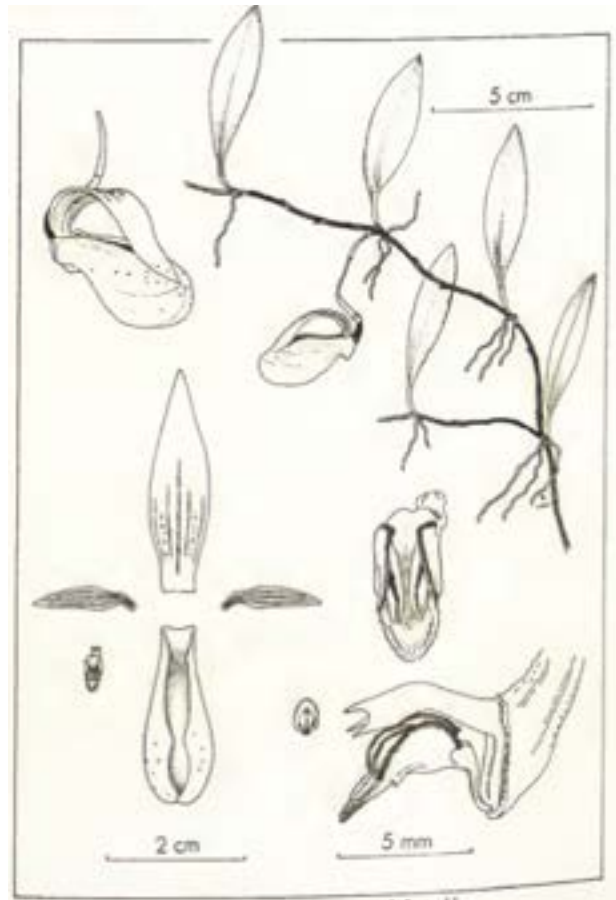
*Epibator mejia* Sauleda, Uribe-Velez and Szlachentko.



*Epibator mejia* Sauleda, Uribe-Velez and Szlachentko.



Type illustration of *Ophidion cunabulum* Luer from Luer (1986).

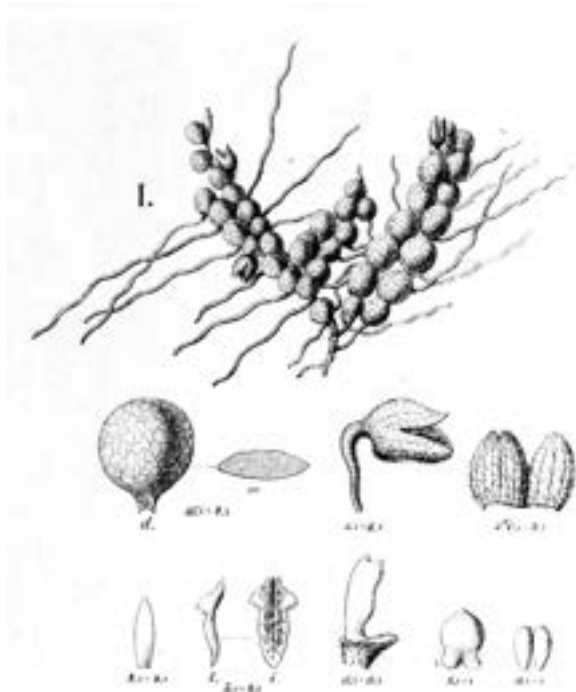


Type illustration of *Epibator hirtzii* from Luer (1986).

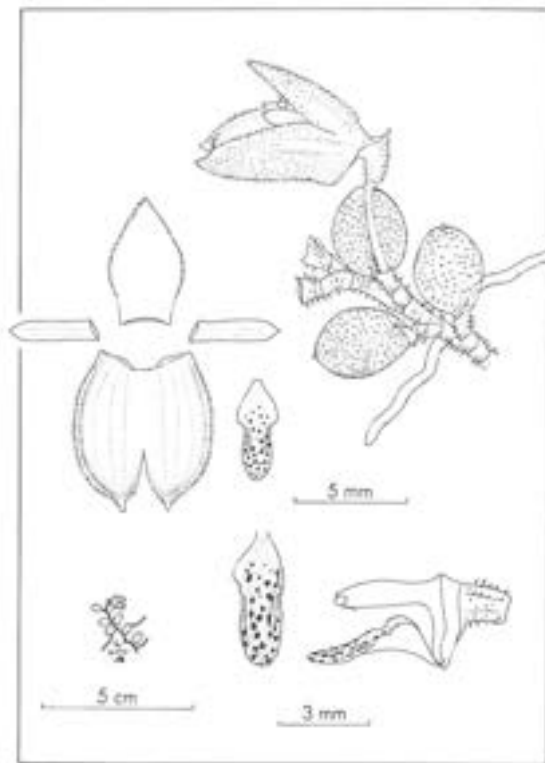


Illustration of type species of *Zoothrophion* Luer (*Zoothrophion atropurpureum* (Lindl.) Luer) from Luer (1986).





*Phloeophila* Hoehne & Schltr., type illustration from Arch.Bot. São Paulo 1: 199 (1926).



*Phloeophila nummularia* (Rehb. f.) Garay from Luer, Icones Pleurothallidarum XXXVII.

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