

A NEW SPECIES OF *SOLENIDIUM* (ORCHIDACEAE) FROM ECUADOR

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ABSTRACT. A new species from Ecuador; *Solenidium portillae* (Orchidaceae: Oncidiinae) is described, compared with the other two accepted species in the genus, and illustrated. A brief history of the genus is presented and a key to the species is provided.

RESUMEN. Se describe y se ilustra una nueva especie del Ecuador, *Solenidium portillae* (Orchidaceae: Oncidiinae), comparándola con las otras dos especies aceptadas en el género. Se presenta una breve historia del género y se proporciona una clave de las especies.

KEY WORDS / PALABRAS CLAVE: Ecuador, new species, Orchidaceae, Oncidiinae, *Solenidium*.

The genus *Solenidium* was created by Lindley (1846) based on a plant collected by Jean Linden in the forests of Pamplona, Colombia, in 1842. The species was named *Solenidium racemosum* Lindl. (Fig. 1A). The generic name refers to the canaliculated basal part of the lip (Sweet 1973). Lindley distinguished the genus from *Oncidium* and *Brassia* by the "narrow stalked wartless lip, three-lobed anther-bed, and very peculiar pollen masses, which are bent down upon their caudicle, while in the anther". It was found again in the same area in 1847, by Funck and Schlim, who were plant collectors for the Linden nursery in Belgium. This species remained unknown in collections and cultivation until rediscovered in Venezuela in 1973. It was collected near the Colombian border by Roberto Mejía and his assistant, known as "Ojo del Aguila" [eagle's eye] for his ability to spot orchid plants (Dunsterville 1983). The next species in the genus was actually described first, as *Oncidium lunatum* Lindl. (Fig. 1B) (Lindley 1838), and later transferred to *Solenidium* by Kränzlin (1922). It was based on a plant imported from Demerara [Guyana] by Loddiges. A few other species have been added to the genus but they have subsequently been transferred to other genera. It is rather difficult to define this little genus and a certain disagreement among taxonomists regarding where it belongs in Oncidiinae is apparent through its history. Very recently and rather surprisingly, DNA sequence analysis revealed that its

closest relatives are members of the genus *Capanemia* Barb. Rodr. (N. Williams, pers. comm.). Indeed, when the flower morphology of this group of species is studied, certain similarities in the peculiar column structure can be observed. A more thorough treatment, however, will be presented elsewhere. A third species was discovered recently in Ecuador, by the industrious collectors of Ecuagenera, and is described here.

Solenidium portillae Dalström & Whitten, *sp. nov.*

FIG. 1C, 2

TYPE: ECUADOR: Carchi: Chical, 1500 m, originally discovered by the collectors of Ecuagenera, and flowered in cultivation in Gainesville, Florida, USA, *M. Whitten 1812* (Holotype: SEL).

Inter species generis *Solenidii* Lindl., labellum late ovatum differt.

Plant epiphytic. *Pseudobulbs* caespitose, blunt elliptic, ancipitous, more or less sulcate, unifoliate, ca. 4.5 x 2 cm, subtended basally by 3 to 4 distichous sheaths, the uppermost foliaceous. *Leaves* conduplicate, elliptic, acute, apiculate, ca. 10 x 2 cm. *Inflorescences* axillary, from the base of the uppermost sheaths, arching, 10 to 12 flowered, to 15 cm long racemes; bracts adpressed, scale-like 0.3-0.7 cm long. *Pedicel* with *ovary* 1.4-1.7 cm long. *Flowers* slightly campanulate, sepals and petals greenish yellow with red brown markings, lip white with red pur-

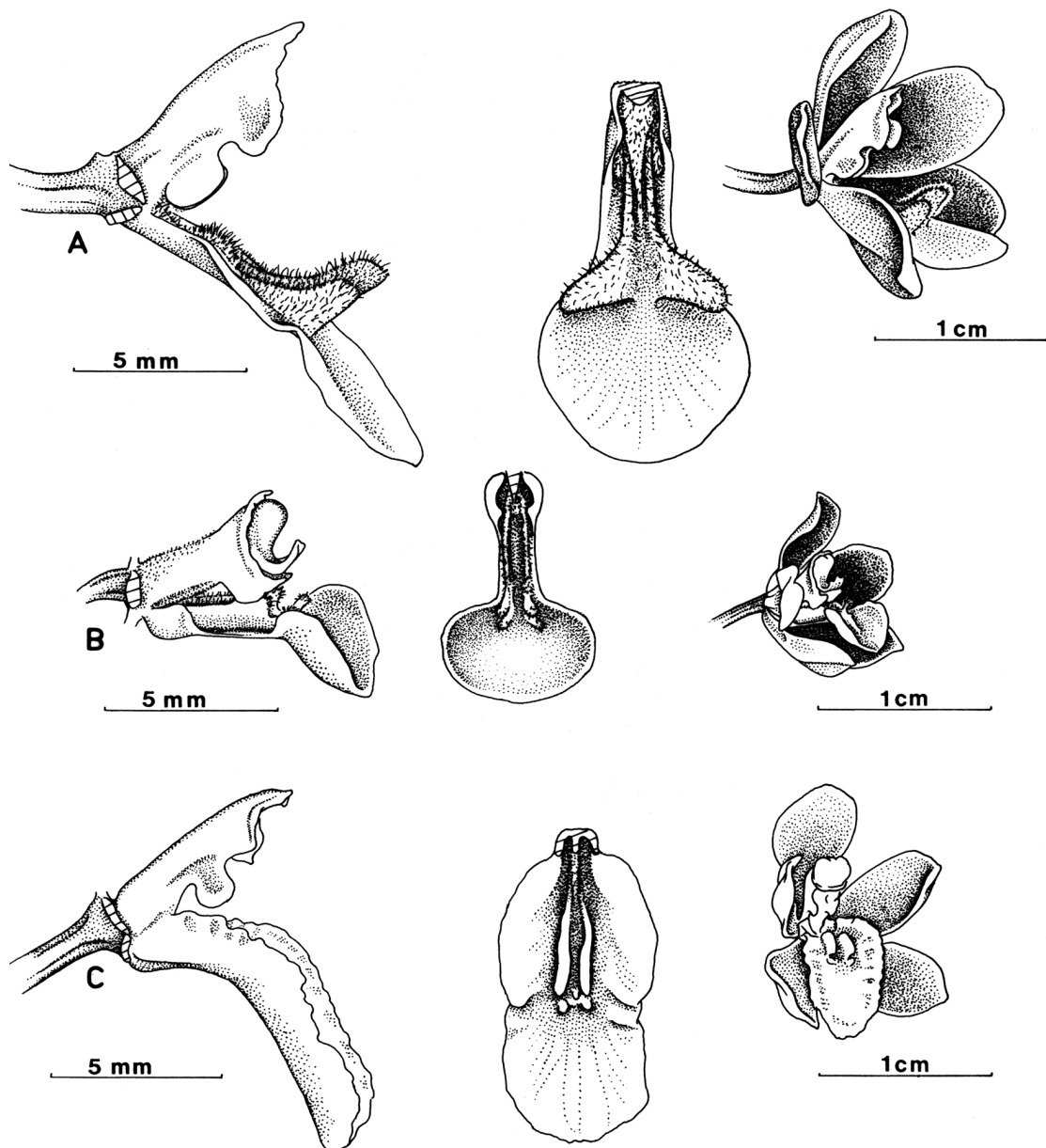


Fig. 1. A. *Solenidium racemosum* Lindl.; column and lip, lateral view; lip, dorsal view; flower, semi-lateral view. B. *Solenidium lunatum* (Lindl.) Kränzl.; column and lip, lateral view; lip, dorsal view; flower, semi-lateral view. C. *Solenidium portillae* Dalström & Whitten; column and lip, lateral view; lip, dorsal view; flower, semi-lateral view. ILLUSTRATION VOUCHERS: A, *Linden 1264* (K-L, W). B, SEL 85-1156. C, *M. Whitten 1812* (SEL).

ple specks and spots along the margins, column whitish with red purple stripes and spots and yellow apices of the lateral lobes, anther cap light yellow; *dorsal sepal* slightly unguiculate, rounded obovate, entire, ca. 1 x 0.5 cm; *lateral sepals* similar, slightly oblique ca. 1 x 0.4 cm; *petals* obovate, acute, entire,

slightly oblique basally, ca. 1 x 0.4 cm; *lip* rigidly attached to the base and lateral flanks of the column and through a short, central, longitudinal, fleshy keel, rounded, ovate to weakly trilobate, lateral lobes indistinct, erect, slightly undulate, lamina slightly curved away from the column, shallowly concave, slightly

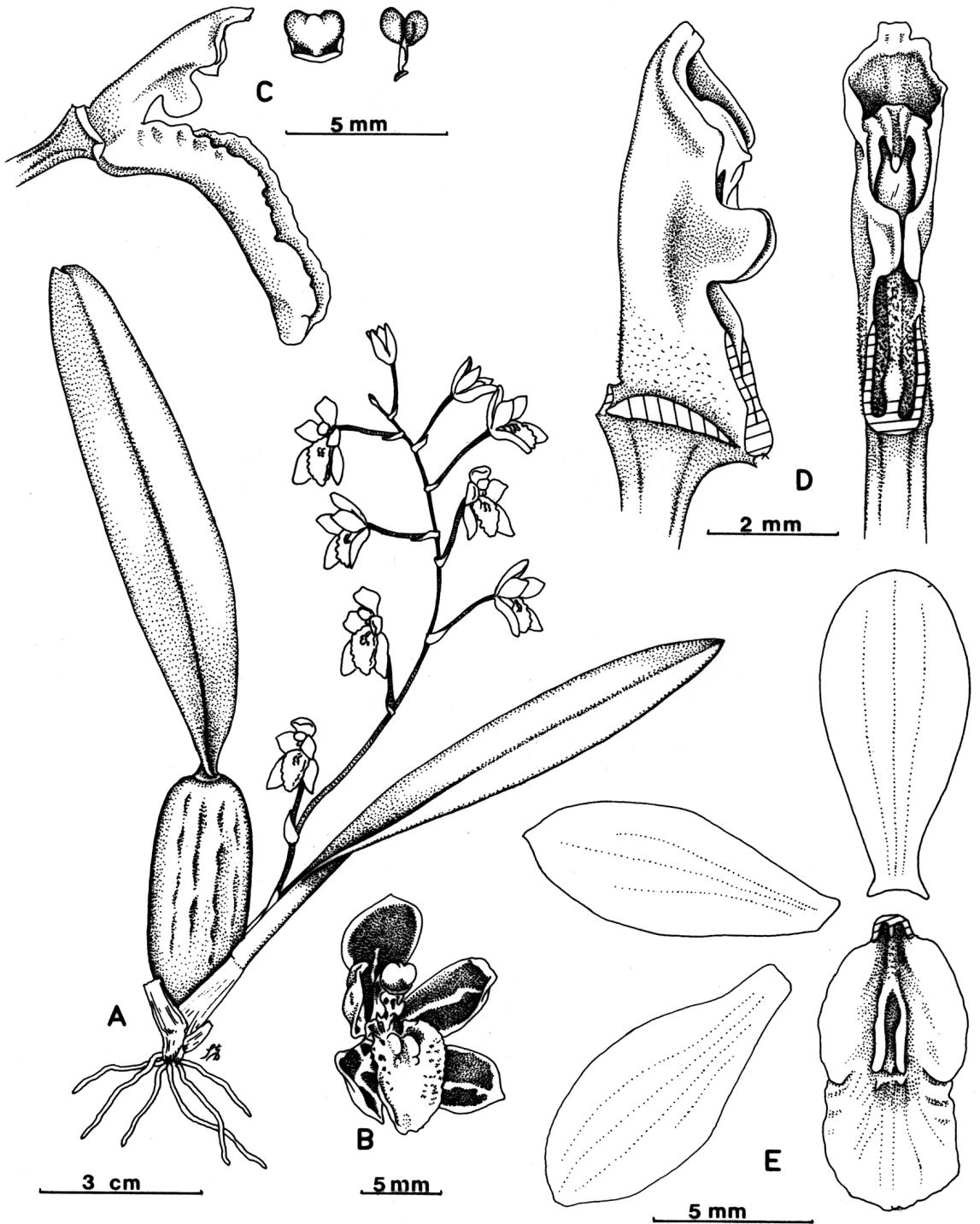


Fig. 2. *Solenidium portillae* Dalström & Whitten. A. Plant habit. B. Flower, semi-lateral view. C. Column and lip, lateral view; anther cap and pollinarium, dorsal view. D. Column, lateral and ventral view. E. Floral diagram. ILLUSTRATION VOUCHER: M. Whitten 1812 (SEL).

undulate, obtuse to praemorse, 0.9 x 0.5 cm; callus of a central, fleshy, pubescent short keel with two glabrous, longitudinal, fleshy keels emerging from *ca.* 0.2-0.3 cm above the base and extending onto the base of the lamina, terminating bluntly, with a pair of small, fleshy knobs above and some additional minor median denticles; *column* shortly clavate, pubescent basally and ventrally, canaliculated ventrally, with a pair of two distinct, rounded lobes and a well developed, entire anther hood, 0.6 cm long; *anther cap* bilobulate, with an intermediate lobule, broadly and shortly rostrate with a revolute edge; *pollinarium* of two, cleft, pyriform pollinia on a narrowly elongate obovate, *ca.* 0.13 cm long stipe on a flat viscidium.

This species is placed in *Solenidium* because of great morphological similarities in plant habit and the flower morphology, particularly the column, anther

cap and pollinarium structure.

Solenidium portillae is distinguished from the other two species in the genus by the broadly ovate and shallowly concave lip.

HABITAT: An epiphyte in wet, lower to middle elevation cloud forests on the western slopes of the Andes in northern Ecuador and probably Colombia.

FLOWERING SEASON: August, in cultivation.

PARATYPES: A color transparency of a single flower, by Rodrigo Escobar, Medellín (SEL) without any additional information, indicates that this species may possibly also be found in Colombia.

ETYMOLOGY: Named in honor of José Portilla, owner of the orchid nursery Ecuagenera in Gualaceo, who have contributed substantially to the knowledge of the orchids in Ecuador.

KEY TO THE SPECIES OF *SOLENIIDIUM*

- 1a. Column of the flower with a pair of rounded, basal ventral lobes; lip narrowly cuneate basally..... *S. racemosum*
- 1b. Column of the flower with ventral lobes, or wings, in the middle or near the apex; lip sub-saccate with basal lobes clasping or fused to the basal and lateral flanks of the column 2
 - 2a. Column with apical, hatchet-shaped wings; lip strongly pandurate to hatchet shaped and with the apex of the callus pilose..... *S. lunatum*
 - 2b. Column with rounded, ventral lobes in the middle; lip broadly ovate and apex of the callus glabrous *S. portillae*

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