



FIGURE 2. *Seegeriella crothersii*. Photo of the flowers from the plant that served as the holotype. Scale bar = 5 mm. Photo by F. Pupulin.

inflorescence, provided with short secondary, apically 2-flowered branches (vs. simple, subumbellate, few-flowered in *S. pinifolia*), the diminutive size of the lip, approximately half of the length of the sepals and petals, provided with comparatively short lateral lobes (vs. subequal to the sepals, the lateral lobes long), and the color of the perianth, provided with greenish yellow sepals and white lip (vs. concolorous white).

Dodson (2004) recorded *Seegeriella pinifolia* from Ecuador on the basis of a plant grown at Ecuagenera in Gualaceo and photographed by A. Hirtz. However, the photographs published in Dodson (2004: 949) seemingly show a species different from both *S. pinifolia* and *S. crothersii*. The depicted plant has simple, distichous, 1- to 2-flowered inflorescences, and the flowers have distinctly greenish-yellow sepals and petals, and yellow lip (vs. inflorescence subumbellate and white perianth in *S. pinifolia*). The voucher for the photograph is kept at SEL (W.E. Higgins pers. comm. 2009), and it is possible that its direct study would reveal the existence of another, still undescribed species of *Seegeriella*.

KEY TO THE SPECIES OF *SEGERIELLA*

1. Leaves subulate; inflorescence racemose, subcapitate; lip as long as the lateral sepals *S. pinifolia*
- 1'. Leaves laterally flattened; inflorescence paniculate, the lateral branches 2-flowered; lip half the length of the lateral sepals *S. crothersii*

ACKNOWLEDGMENTS

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STUDIES OF *ENCYCLIA* (ORCHIDACEAE) IN GUATEMALA

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ABSTRACT. Three new *Encyclia* (Orchidaceae) species from Guatemala are described and *Encyclia* species reported for Guatemala are listed.

Key words: Orchidaceae, Epidendroideae, Epidendreae, Laeliinae, *Encyclia*, taxonomy

INTRODUCTION

During an examination of *Encyclia* specimens collected in Guatemala, Department of Alta Verapaz, Municipalities of San Cristobal, Santa Cruz Verapaz, and Cobán, Archila found three specimens that did not match any of the *Encyclia* species reported for Guatemala (TABLE 1). Further investigation revealed that these specimens represented three new species which are herein described. A drawing of *Encyclia incumbens* (Lindl.) Mabb. is included for comparison since it is sympatric with these new species (FIGURE 1D).

TAXONOMIC TREATMENT

Encyclia archilae W.E.Higgins sp. nov. TYPE: Guatemala—Alta Verapaz: Santa Cruz Verapaz, 1400 m, growing in a liquidambar-oak forest, collected by Fredy and Oscar Archila, May 1990. *F. Archila* 215 (Holotype: BIGU) FIGURE 1A.

Species haec Encyclia amanda (Ames) Dressler, *columna differt, incisura apicalis, labello differt nervus medius brevis.*

Plant epiphytic; *Leaves* 2 to 3, linear, apex emarginate, oblique, 25 cm long and 1.5 cm wide; *Pseudobulbs* ovoid 3.3 cm long and 1.8 cm in diameter; *Inflorescence* 51 cm long; *Flowers* yellow-green sepals and petals, labellum yellow-white; *Sepals:* Dorsal sepal linear-elliptical with acute apex, 1.1 cm long and

0.23 cm wide; Lateral sepals elliptical, acuminate, 1.12 cm in length and 0.26 cm wide; *Petals* linear spatulate, apex acute, 0.95 long and 0.26 cm wide; *Labellum* trilobed, with side-lobes linear with the apex acuminate reflex, covering column; of 0.36 cm long and 0.12 cm wide. The midlobe ovoid with the acute apex of 0.39 cm long and 0.35 cm wide, with three keels at center and two lateral keels at the base of the middle lobe. *Column* short capitate, bipartite at the tip, 0.5 cm long and 0.2 cm wide, with two small side lobes in the ventral part (wings). *Capsule* ovoid, 3.5 cm long and 0.8 cm in diameter.

TABLE 1. *Encyclia* species reported from Guatemala (Kew 2008).

<i>Encyclia adenocarpa</i> (Lex.) Schltr.
<i>Encyclia alata</i> (Bateman) Schltr.
<i>Encyclia ambigua</i> (Lindl.) Schltr.
<i>Encyclia asperula</i> Dressler & G.E.Pollard
<i>Encyclia bractescens</i> (Lindl.) Hoehne
<i>Encyclia ceratistes</i> (Lindl.) Schltr.
<i>Encyclia chloroleuca</i> (Hook.) Neumann
<i>Encyclia cordigera</i> (Kunth) Dressler
<i>Encyclia diota</i> (Lindl.) Schltr.
<i>Encyclia guatemalensis</i> (Klotzsch) Dressler & G.E.Pollard
<i>Encyclia hanburyi</i> (Lindl.) Schltr.
<i>Encyclia incumbens</i> (Lindl.) Mabb.
<i>Encyclia lineariloba</i> Withner.
<i>Encyclia nematocaulon</i> (A.Rich.) Acuña
<i>Encyclia oncidioides</i> (Lindl.) Schltr.
<i>Encyclia selligera</i> (Bateman ex Lindl.) Schltr.
<i>Encyclia tuerckheimii</i> Schltr.

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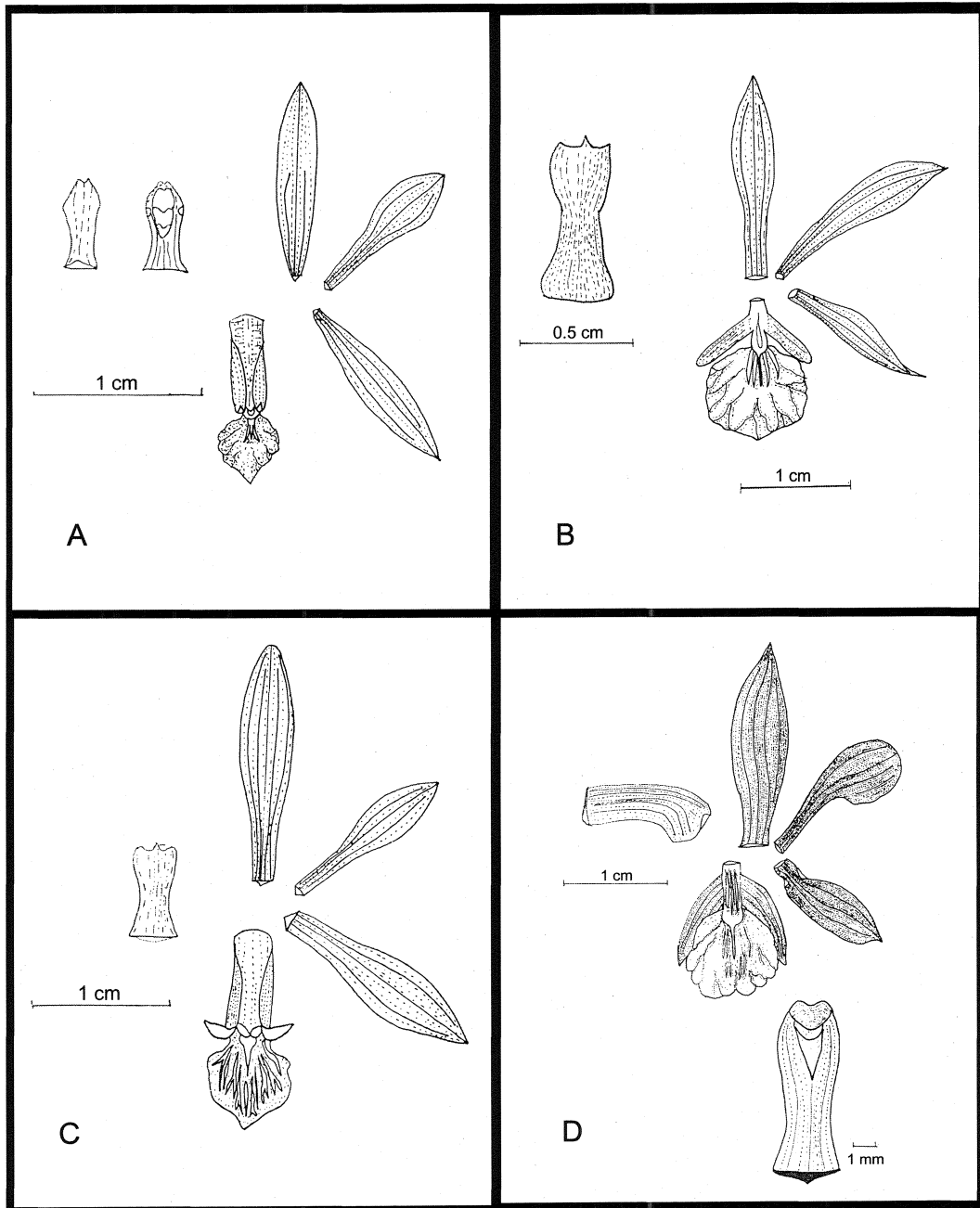


FIGURE 1. Line drawings of specimens by Fredy Archila. A. *Encyclia archilae* W.E.Higgins (FA-215) B. *Encyclia delacruzii* W.E.Higgins & Archila (FA-187) C. *Encyclia ibanezii* Archila & W.E.Higgins (FA-422) D. *Encyclia incumbens* (Lindl.) Mabb. (FA-199).

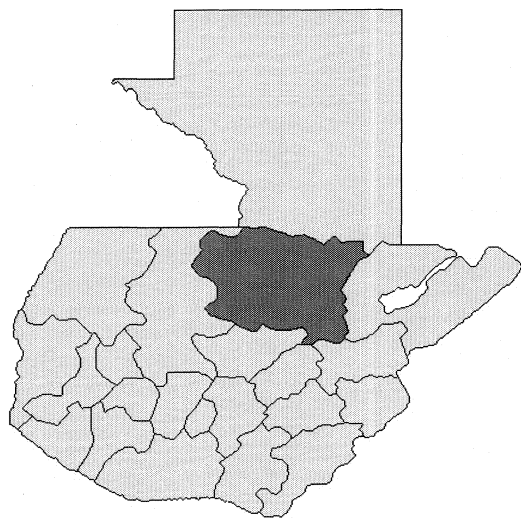


FIGURE 2. Map of Guatemala showing Department of Alta Verapaz.

Etymology. Named for Fredy and Oscar Archila, who collected the plant.

Encyclia delacruzii W.E.Higgins & Archila sp. nov. TYPE: Guatemala—Alta Verapaz: Municipality of San Cristobal, Aldea Baleu, 900 m, April 1990; FA-187, (Holotype: BIGU). FIGURE 1B.

Species haec Encyclia incumbens (Lindl.) Mabb. *columna differt sine curvatura apicalis, labello similis.*

Plant epiphytic; **Leaves** 1 or 2, linear acuminate, 33 cm long and 1 cm wide; **Pseudobulbs** ovoid globose, 3.7–4.5 cm long and 2 to 3.2 cm in diameter; **Inflorescence** 55 cm long; **Flowers** white with pink spots; **Sepals:** Dorsal sepal oblanceolate–spatulate, with acute apex, 1.71 cm long and 0.38 cm wide,

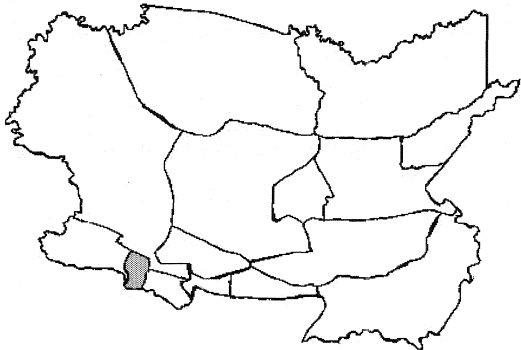


FIGURE 3. Map of Alta Verapaz showing Municipality of Santa Cruz Verapaz.

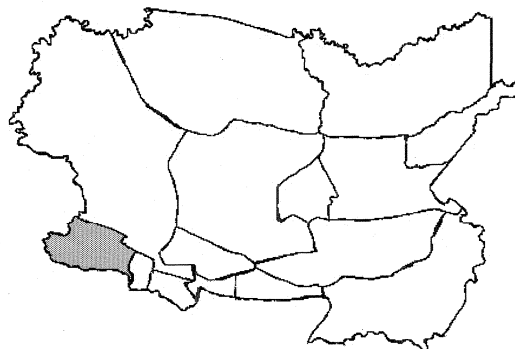


FIGURE 4. Map of Alta Verapaz showing Municipality of San Cristobal.

Lateral sepals obliquely linear-elliptical, apex aristate, 1.41 cm long and 0.3 wide; **Petals** obliquely oblanceolate, with acuminate apex, 1.8 cm long and 0.35 cm wide; **Labelium** trilobed, lateral lobes linear-rounded oblong, 0.56 cm in length and 0.13 cm wide. Midlobe irregularly orbicular with slightly-crimped margins and obtuse apex, with 5 veins at the base as a central projection of callus on labelium and 2 to each side of the center. **Column** subcapitata, straight, without bending apical, 0.72 cm long and 0.3 cm. **Capsule** not seen.

Etymology. Named for René de la Cruz, an eminent environmental researcher in Cobán Guatemala.

Encyclia ibanezii Archila & W.E.Higgins sp. nov. TYPE: Guatemala—Alta Verapaz: Coban, 1300 m. April 2000. *F. Archila* 422 (Holotype: BIGU) FIGURE 1C.

Species haec Encyclia aenicta Dressler & Pollard, *columna differt dente medius prominens.*

Plant epiphytic; leaves linear, acute 23.5 cm

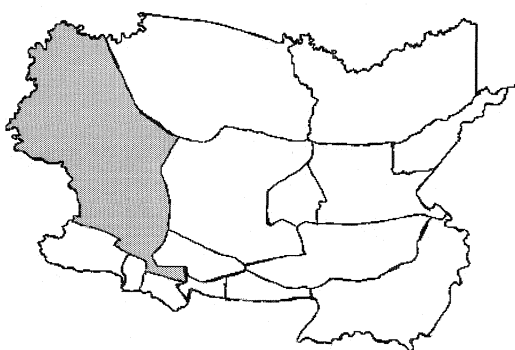


FIGURE 5. Map of Alta Verapaz showing Municipality of Cobán.

long, 1.2 cm wide; *Pseudobulbs* orbicular-oval 4.7 cm long and 2 cm in diameter; *Inflorescence* 20 cm long; *Flowers* Sepals and petals brown, labellum yellow with purple keel. *Sepals*: Dorsal sepal oblanceolate, with the apex rounded 1.68 cm long and 0.4 cm wide. Lateral sepals oblanceolate-spatulate, with acuminate apex, 1.6 cm long and 0.41 cm wide. *Petals* spatulate with acute apex, 1.3 cm long and 0.3 cm wide. *Labellum* trilobed with 2 side lobes and central lobe linear acuminate irregularly obovate with apex acute, margins crimped, rich veins of purple. Side lobes 0.55 cm long and 0.2 cm wide,

central lobe 0.65 cm long and 0.61 cm wide. *Column* oblong-capitate, apex truncated, small central triangle projection 0.7 cm long. *Capsule* not seen.

Etymology. Named for Helmuth Ibañez, a notable orchid grower in Cobán.

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STUDIES ON THE FLORA OF THE GUIANAS: THE GENUS *PITCAIRNIA* (BROMELIACEAE)

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ABSTRACT. Two species of *Pitcairnia* occurring in the Guianas are proposed to become synonyms (*Pitcairnia leprieurii* Baker = *Pitcairnia rubiginosa* Baker and *Pitcairnia incarnata* Baker = *Pitcairnia caricifolia* Mart. ex Schult. & Schult.f.). *Pitcairnia semijuncta* Baker is resurrected as a recognized species and two inselberg species are proposed as new. Descriptions and drawings of the newly described species are provided, as well as an identification key to the 15 *Pitcairnia* species that occur in or are expected to occur in the Guianas.

Key words: Bromeliaceae, *Pitcairnia*, new species, taxonomy, Guianas

INTRODUCTION

In preparation for future installments of the Bromeliaceae treatment for the Flora of the Guianas project, a herbarium study of the genus *Pitcairnia* was undertaken at the Utrecht University Herbarium (U), where I was at first assisted by a student, Aletta van der Berg. The work proved to be a little bit more complex than expected beforehand and presented some problems. Some species complexes, like *Pitcairnia nudalgeyskesii*, *Pitcairnia leprieurii/rubiginosa*, and *Pitcairnia incarnata/caricifolia* were studied thoroughly and are listed below.

Reported Species

The following *Pitcairnia* species are included here because they were already known from the Guianas (Smith & Downs 1974) or from its neighborhood and were therefore expected to occur there:

- *Pitcairnia brittoniana* Mez is known to occur in Guyana from only one collection, but several collections near the border in Venezuela (Bolivar) are known.
- *Pitcairnia caricifolia* Mart. ex Schult. & Schult.f. var. *caricifolia* is newly recorded for French Guiana (and Amapa, Brazil) and has its distribution through all of the Guianas, with most of its collections throughout Guyana and near the coast of the border area between Surinam and French Guiana (and one on the border with Amapa, Brazil). Although not new, a description of this variety is presented below too.
- *Pitcairnia ctenophylla* L.B.Sm. (endemic to Venezuela: Bolivar) and *P. heterophylla* (Lindl.) Beer have not yet been collected in the Guianas, but would be expected to grow

in the Mt. Roraima area as some specimens have been found on Auyan- and Chimantá-Tepui (Venezuela: Bolivar).

- *P. semijuncta* Baker (not *P. incarnata* Baker, see discussion below) is newly recorded for Suriname and French Guiana. It is endemic to the Guianas with one record in N Guyana, one in NE Suriname, and two in coastal (NE & NW) French Guiana.
- *P. maidifolia* (C.Morren) Decne. ex Planch. has been collected, mainly in C & W Guyana and one collection in C Suriname.
- *P. nuda* Baker grows in C Suriname and SC Guyana.
- *P. geyskesii* L.B.Sm. grows more to the S in the border area between Suriname and Brazil and French Guiana on rocky outcrops (inselbergs).
- *P. cremersii* Gouda grows on rocky outcrops in C & E French Guiana
- *P. saxosa* Gouda grows also on rocky outcrops (savanne roche) in SE French Guiana in the border area with Brazil.
- *P. patentiflora* L.B.Sm. is not yet known from the Guianas, but from the neighboring Venezuela, Amazonas, Rio Negro, and Brazil (Pará) and therefore it is included in the treatment.
- *P. rubiginosa* Baker has been collected only in N & C French Guiana.
- *P. sastrei* L.B.Sm. & Read is endemic to C & E French Guiana.
- *P. sprucei* Baker is known in the Guianas from only two collections, one in Central Guyana and one in the border area of E French Guiana with Brazil.

The *Pitcairnia incarnata/caricifolia* Complex

The *Pitcairnia incarnata/caricifolia* complex: *Pitcairnia semijuncta* was treated as a synonym