

A New Species of *Encyclia* Hook., *Encyclia holguinensis* Soto Calvo, Esperon and Sauleda, is Described for Cuba.

Manuel Alejandro Soto Calvo<sup>1</sup>, Pablo Esperon<sup>2</sup>, and Rubén P. Sauleda<sup>2</sup>

<sup>1</sup>Calle 38 entre 39 y 41 Rpto 26 de Julio, Nueva Gerona, Numero 3901, Cuba.

<sup>2</sup>6442 SW 107 Ct. Miami, Fl, 33173.

#### Abstract

A new species of *Encyclia* Hook., *Encyclia holguinensis* Soto Calvo, Esperon and Sauleda, is described from Holguin, Cuba.

In the spring of 2020, populations of an *Encyclia* species which did not correspond to any of the known species of *Encyclia* were discovered growing terrestrially in the xeromorphic spiny thickets on serpentine (Cuabales) of Ceja de Melones, Holguin, Cuba. These populations grow terrestrially on a substrate of leaf litter and at the base of the trees. It is sympatric with *Encyclia plicata* (Lindl.) Britton & Millsp, *Encyclia howardii* (Ames & Correll) Hoehne, *Encyclia oxypetala* (Lindl.) Schltr. and *Encyclia phoenicea* (Lindl.) Neumann.

When these populations were discovered, they were considered to possibly be a hybrid swarm or a hybrid with one of the sympatric species. The flowers are the size of *E. howardii* with the upturned broad lateral lobes and have the spatulate petals found in *E. howardii*. The pronounced fleshy pads on the labellum resemble the labellum of *E. plicata* and the callosity on the midlobe resembles that of *E. phoenicea*. Vegetatively it resembles *E. moebusii* and occurs in the vegetation formations on serpentinic areas where *E. moebusii* also occurs but, there are no reports of this species being previously found in the western Cuabales of Holguin. This species can be differentiated from the species previously mentioned or any nonsympatric *Encyclia*. The auricles are aligned to the front of the column and the terminal raceme of flowers is not similar to any of the species that originally were considered possible parents. In addition the lateral lobes of the labellum are truncate in this undescribed species.

We here describe this population as a new species:

***Encyclia holguinensis* Soto Calvo, Esperon & Sauleda, sp. nov.**

Type: Cuba, Province of Holguin, between the city of Holguin and Bahia de Nipe, in the cuabales of Ceja de Melones, growing in leaf litter and at the base of trees, 80-150 m.

Collector: Manuel Alejandro Soto Calvo, s. n. (Holotype: HAC).

## Diagnosis

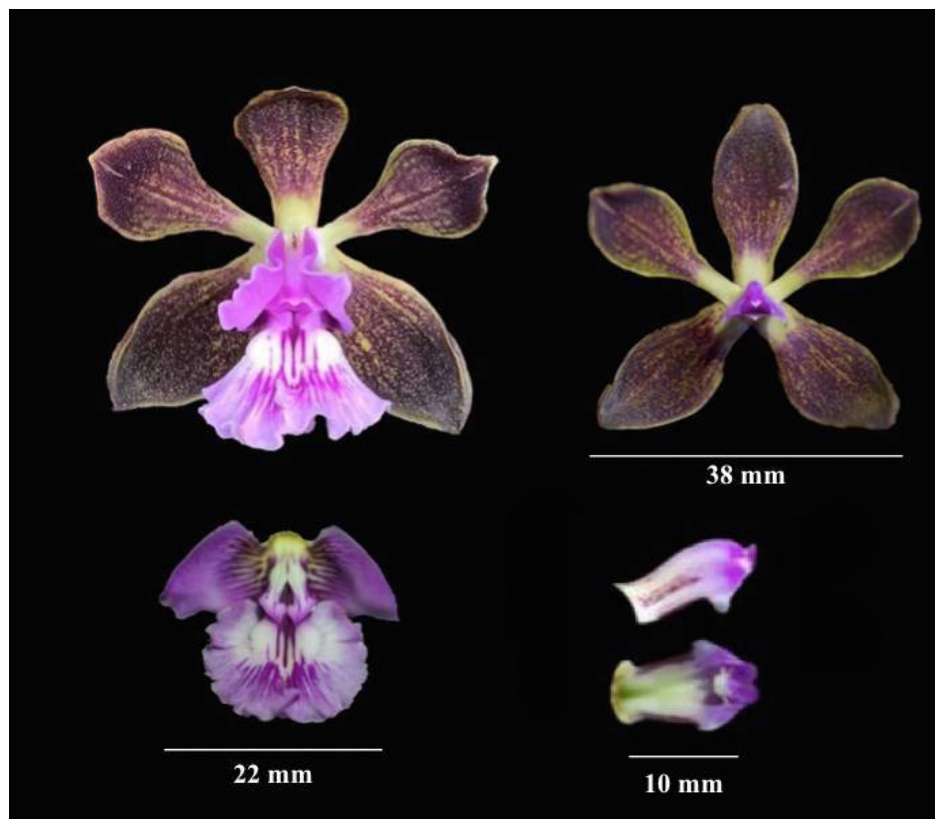
*Encyclia holguinensis* Soto Calvo, Esperon & Sauleda is similar to *E. howardii*, *E. phoenicea* and *E. plicata* but has distinctive characters that differentiate it from the three species. The auricles of the column of *E. holguinensis* differs from *E. howardii* and *E. plicata*. In *E. howardii* the triangular auricles project forward and are parallel to the anther while the position of the auricles in *E. plicata* is 3-4mm behind the anther and the auricles are apically truncate. The apex of the auricles in *E. phoenicea* are also truncate differing it from *E. holguinensis*. *Encyclia holguinensis* also differs in the position of the auricles, which are in an intermediate position to that of *E. plicata* and *E. howardii*. The callus on the labellum of the *E. holguinensis* also differs. In *E. howardii* the callus is two lamellae that merge below the column, apparently closing the access to the pollinator channel, and then it becomes “an elliptic sulcate callus on the isthmus”..., which is “divided and extended nearly to the apex of the mid-lob as three thickened nerves” (Ames and Correll, 1943). While on *E. plicata* the two lamellae end abruptly and separately leaving a broad pollinator channel. The callus of *Encyclia holguinensis* ends abruptly as in *E. plicata*, but the ends of the lamellae converge to the center as in *E. howardii* to the point where it almost closes the pollinator channel. *Encyclia holguinensis* also differs from *E. phoenicea* and *E. plicata* in the edge of the callus both of which have rounded edges, while in *Encyclia holguinensis* the callus edge is sharp. In addition, the apex of the lateral lobes of the labellum in *E. holguinensis* are truncate and the petals are broadly spatulate differentiating it from the other species.

## Description

Plant epiphytic, rhizomatous, to 45 cm tall; roots many, thick, canescent; primary stem or rhizome short, stout, creeping, enclosed by imbricating scarious sheaths; secondary stems modified into pseudobulbs, erect, clustered, obovate, to 5 cm long, 2.5 cm thick, basally enclosed by scarious sheaths, 2 leaved at apex; leaves coriaceous, linear to linear-lanceolate, acute, to 28 cm long, 2.5 cm wide; inflorescence to 40 cm tall, unbranched, peduncles slender, erect, distantly several-sheathed, to 15 flowers; floral bracts lanceolate, acute, concave, to 2 mm long, 1 mm wide; ovary pedicellate, slender, to 2.8 cm long; sepals reddish-brown becoming greenish-white basally, elliptic, subacute to obtuse, to 3 cm long, 5 mm wide; petals reddish-brown becoming greenish-white basally, spatulate, obtuse, to 2.8 cm long, 4 mm wide; labellum free from column, deeply 3-lobed, to 2.5 cm long, 2.5 cm wide, light purple to white with radiating purple lines, lateral lobes triangular, acute, basally embracing column, apex flared, mid lobe rounded, with fleshy pads on each side in front of column, callosity under column is two erect keels that end abruptly, the ends of the lamellae almost close the pollinator channel; column white to light purple, apically purple, short, to 1 cm long, 5 mm wide, with membranaceous slightly incurved auricles, anther purple.



*Encyclia holguinensis* Soto Calvo, Esperon & Sauleda.



*Encyclia holguinensis* Soto Calvo, Esperon & Sauleda.



*Encyclia howardii*



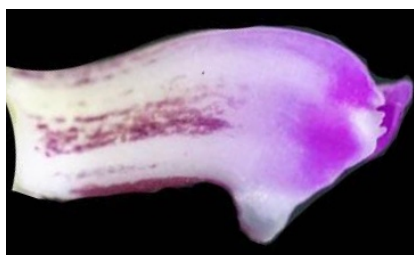
*Encyclia plicata*



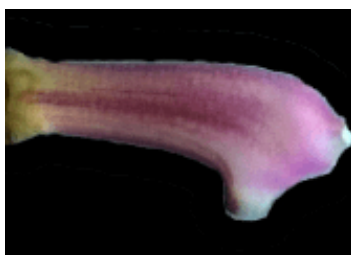
*Encyclia phoenicea*



*Encyclia holguinensis*



*Encyclia holguinensis*



*Encyclia phoenicea*



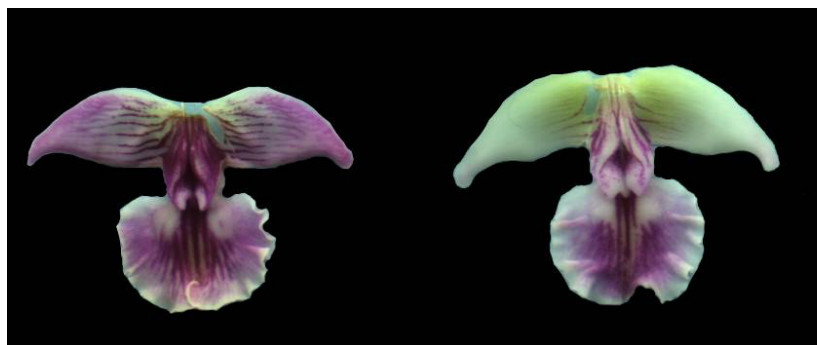
*Encyclia plicata*



*Encyclia howardii*



*Encyclia plicata*

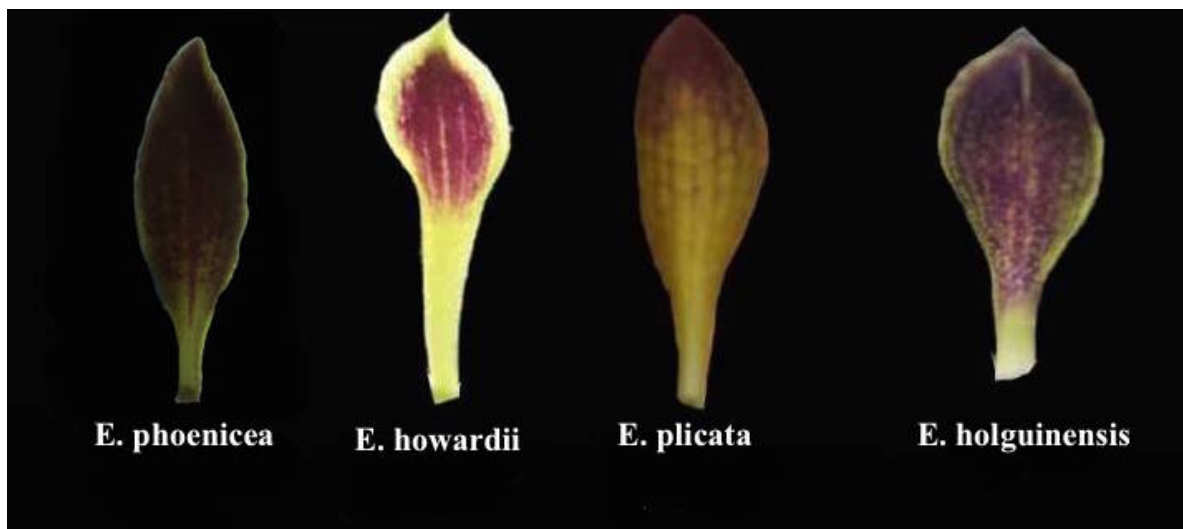


Variation in labellum of *Encyclia plicata*



*Encyclia phoenicea*





Comparison of petals.



*Encyclia holguinensis* Soto Calvo, Esperon & Sauleda in situ at Ceja de Melones, Holguin, Cuba.



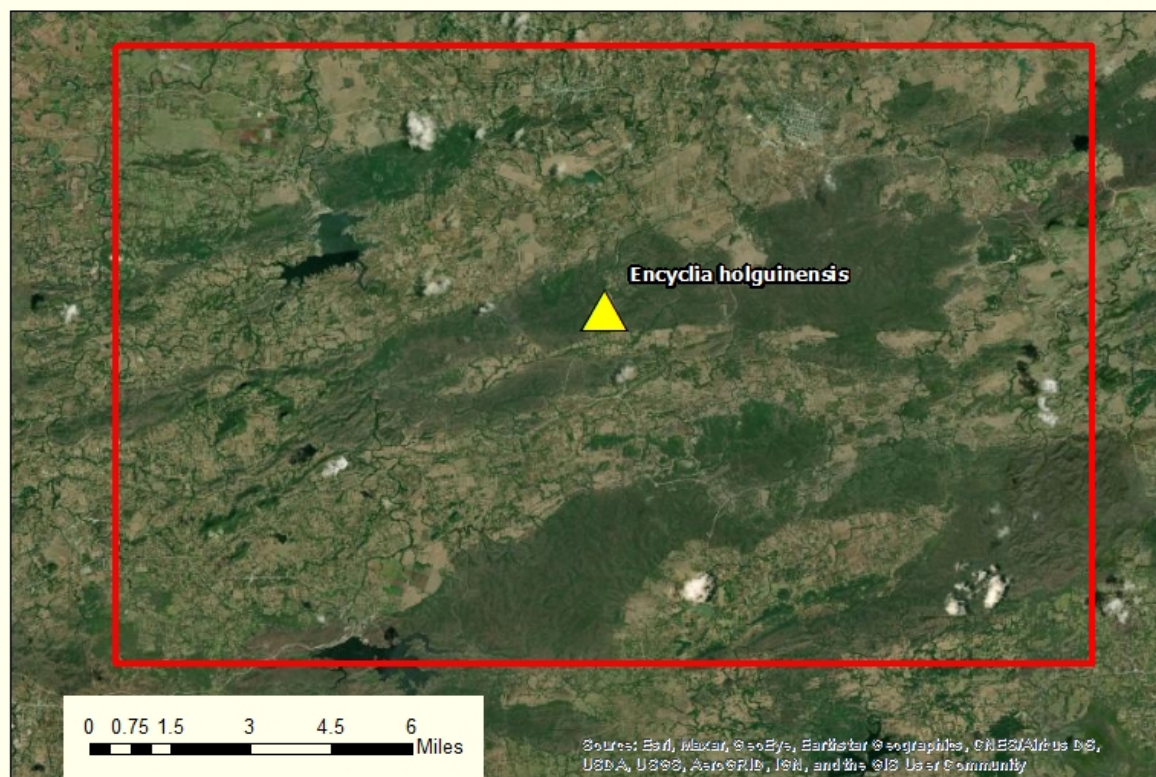
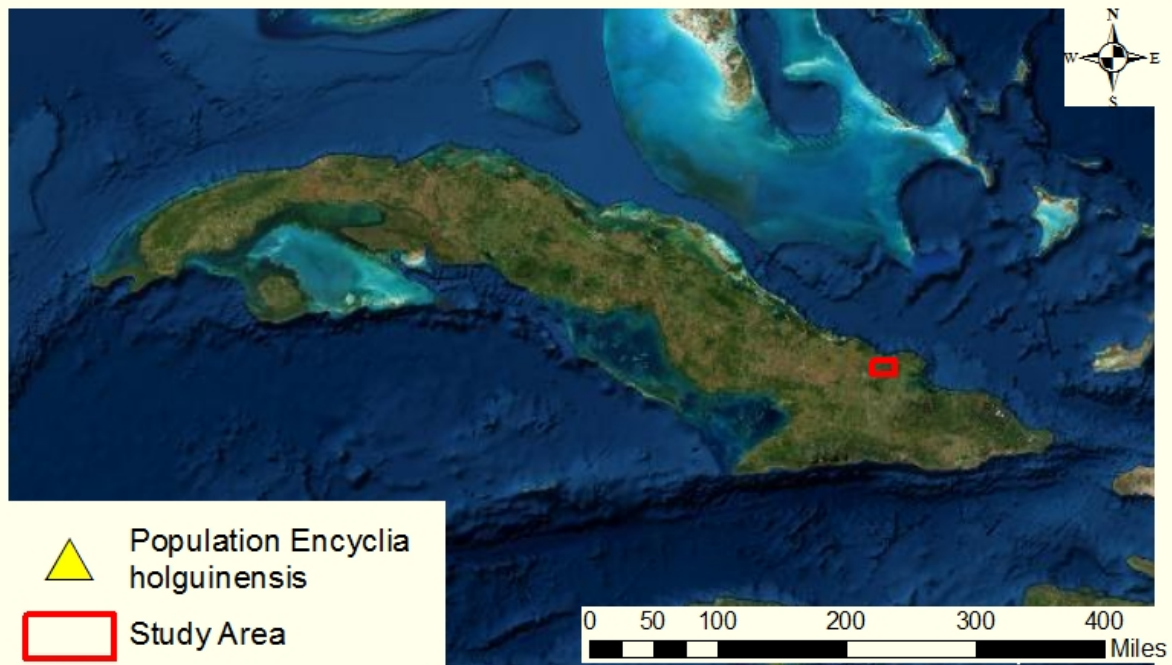
Habitat of *Encyclia holguinensis* Soto Calvo, Esperon & Sauleda at Ceja de Melones, Holguin, Cuba.



*Encyclia holguinensis* Soto Calvo, Esperon & Sauleda holotype in preparation.



# LOCALITY OF ENCYCLIA HOLGUINENSIS AT CEJA DE MELONES, HOLGUIN, CUBA



## Literature Cited

Ames & Correll, 1943. Bot. Mus. Leaf., Harvard Univ. 11:2-7, pl. 1.

Ackerman, J. D. 2014. Orchid Flora of the Grater Antilles. Volume 109. Memoirs of the New York Botanical Garden, New York, NY.

Capote, R. and Berazain, R. 1984. Clasificación de las formaciones vegetales de Cuba. Revista del Jardin Botánico Nacional 5: 27-76.

Sauleda, R. P. and Pablo Esperon. 2013. A New Species of *Encyclia* Hooker From Eastern Cuba. New World Orchidaceae – Nomenclatural Notes, Nomenclatural Note – Issue No. 5. ePublished.

Sauleda, R. P. and Pablo Esperon. 2016. The Genus *Encyclia* Hook. in the Bahama Archipelago – Species, Hybrids and Introgression Hybrids. New World Orchidaceae – Nomenclatural Notes, Nomenclatural Note – Issue No. 26. ePublished.