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Rediscovery of *Encyclia nematocaulon* (A. Rich.) Acuña (Orchidaceae) on Isla de la Juventud, Cuba.

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Abstract

The discovery of two populations of *Encyclia nematocaulon* (A. Rich.) Acuña in its natural habitat at Isla de La Juventud, Cuba is reported.

Epidendrum nematocaulon was described by Achille Richard in 1850 based on live material from Cuba. Of all the Cuban species of *Encyclia* Hooker described by Richard, *Epidendrum nematocaulon* is the only one, whose validity has never been disputed by later authors.

Although *Encyclia nematocaulon* (A. Rich.) Acuña was an accepted name there was a question concerning the country of origin of this species since it is common in Central America. The species was named *Epidendrum nematocaulon* by A. Richard, in Sagra, Historia Física, Política y Natural de la Isla de Cuba: Segunda parte: Historia Natural: Flora Cubana: Fanerogamia 11: 238, pl. 79. 1850. In the protolog Richard stated that the plant came from Cuba, but the plant flowered in cultivation in Paris “V. V cultum florentem in caldaris horti bot. Fac. Med. Paris” July 1844.

This species is commonly found from Mexico to Nicaragua. It seemed possible that the plant that flowered in Paris was not from Cuba. The apparent disjunct distribution of Cuba and Central America was questionable. However, the species is found on the coast of the Yucatan Peninsula of Mexico only 217 km from Cuba across the Yucatan Channel. Acuña (1938) reported the species from Cuba and made the transfer from *Epidendrum* to *Encyclia*. However, he states that his description is based on Richard’s description and that he had not studied material of this species.

The only reference to a collection made since the type collection is the specimen Osment, 20602 at HAC cited by Mújica & González (2015). Leon (1946) and Acuña list *Epidendrum nematocaulon* as an endemic with a yellow labellum from Cuba based on Richard without reference to any specific locality. Dressler and Pollard 1974 reported *E. nematocaulon* to be widespread, occurring in the Bahamas, Cuba, Guatemala, Honduras, El Salvador and Mexico. However, Sauleda and Adams (1982) excluded it from the Bahamas. Llamacho (2005) reported this species for the Guamuhaya mountains in Central Cuba and Aloma (2015) also reported it from the area of Guamuhaya without additional details.

Dressler and Pollard noted that the plant may be recognized by “the very warty (almost spiny) pedicel, ovary and capsule”. Ackerman (2014) states “Cuban plants lack these features. Given the distinctive difference between plants of these areas and the geographical isolation of the Cuban plants, we suggest that they should be treated as a distinct species. The appropriate name for continental populations should be *Encyclia xiphères* (Rehb. f.) Schltr.”.

In 2018 the senior author while investigating populations of *Encyclia* on the Isla de la Juventud (Isle of Pines) at Rancho Viejo in the area of Punta del Este discovered a population of *Encyclia*, which was vegetatively distinct from the other populations of known species of *Encyclia* found in the area. The population occurred in the ecotone between dry evergreen forests and mangrove. The plants in this population were growing on *Malpighia* sp.

Another population was discovered in 2019 by the senior author growing on *Bucida molineti* (M. Gomez) Alwan & Stance (*Bucida spinosa* Jenn.) at Sierra La Cañada. This population occurred in the gallery vegetation of a stream that crosses pinelands at about 80 m of elevation.



Location of second population discovered of *Encyclia nematocaulon* at Sierra La Cañada.



View of Sierra La Cañada, location of second population of *Encyclia nematocaulon* discovered.

POPULATIONS OF ENCYCLIA NEMATOCAULON ISLA DE LA JUVENTUD, CUBA



Legend

Encyclia nematocaulon

 Populations



Plants of both populations correspond to the type of *E. nematocaulon*. In addition, the Cuban plants and flowers are identical to the Central American plants. The “warty (almost spiny) pedicel, ovary and capsule” that Dressler and Pollard described are present in the Cuban plants. Ackerman (2014) suggested that the Cuban plants and Central American plants should be treated as a distinct species, *E. xiphères*, due to the lack of the warty pedicel on the Cuban plants, “the distinctive difference between plants of these areas and the geographical isolation”. Both the Cuban plants and the Central American plants all have the warty pedicel, vegetatively the plants are identical. *Encyclia xiphères* is considered a synonym of *E. nematocaulon* by Withner (1996) and an analysis of the illustration in Reichenbach’s *Refugium Botanicum* (1882) confirms Withner’s conclusion. In addition, in the protolog of *E. xiphères*, Reichenbach describes the pedicel with a wart like surface.



Illustration of *Epidendrum xiphères* in Reichenbach’s *Refugium Botanicum* (1882).

This is the first report of populations of this species in its natural habitat in Cuba. Ackerman (2014) stated that the ecology where this species grows in Cuba was unknown.



Encyclia nematocaulon (A. Rich.) Acuña from Isla de la Juventud, Cuba.



Encyclia nematocaulon from Isla de la Juventud, Cuba.



Holotype of *Epidendrum nematocaulon* A. Rich. (P). Nir (2000) cited the illustration in Sagra, R. de la, *Histoire physique, politique et naturelle de l'île de Cuba*, vol. 12: t. 79(1850) as a lectotype and Withner (1996) also states that the plate in Sagra's work is the type.



Encyclia nematocaulon from Yucatan Peninsula, Mexico.



Encyclia nematocaulon from Yucatan Peninsula, Mexico. Warty seed capsule and flowers demonstrating color change of older flowers. Leon (1946) lists *Epidendrum nematocaulon* as an endemic with a yellow labellum.



Encyclia nematocaulon in situ, Isla de la Juventud, Cuba.



Encyclia nematocaulon in situ, Isla de la Juventud, growing on *Bucida molineti* (M. Gomez) Alwan & Stance (*Bucida spinosa* Jenn.).



Encyclia nematocaulon from near town of Providencia, Veracruz., Mexico. Photographs courtesy of Hector Cacho Gorgua.

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