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A Study of *Palmorchis powellii* (Ames) C. Schweinf. & Correll in Colombia.

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#### Abstract

A review of the reports of *Palmorchis powellii* (Ames) C. Schweinf. & Correll in Colombia is presented.

The genus *Palmorchis* Barb. Rodr. (Gen. Spec. Orchid. 1: 169. 1877) is represented by 37 species in the American Tropics of which 18 Species are found in Colombia (WCSP, 2008).

*Palmorchis powellii* (Ames) C. Schweinf. & Correll (Bot. Mus. Leafl. 8: 119. 1940) was first reported for Colombia by Ortiz (1995). Ortiz (1995) in the list of species makes reference to an illustration in Orchids of Panama, page 145. This illustration is copied from an illustration on the type of *P. powellii* at AMES. However, there is a question as to what exactly Ortiz saw. In his archive the drawing and picture labeled *P. powellii* are copied from Misas (2005). The illustration shows an oval labellum, which does not represent *P. powellii*. In addition, the picture, which Ortiz reproduces in his archive, is also a picture from Misas (2005) which shows a flower with erect yellow keels which *P. powellii* does not have. The type illustration of *P. powellii*, the drawing in Misas (2005), and the picture in Misas (2005) do not match. In the reference of Ortiz (1995) he cites the type illustration, but it is not clear if he saw the true *P. powellii* or the *Palmorchis* pictured in Misas (2005). The *Palmorchis* pictured in Misas (2005) closely resembles *Palmorchis deceptoria* Veryret & Szlach. *Palmorchis deceptoria* has 3 long thickened yellow lamellae while *P. powellii* has 5 white lamellae (Parizaca & Mintenegro, 2018).

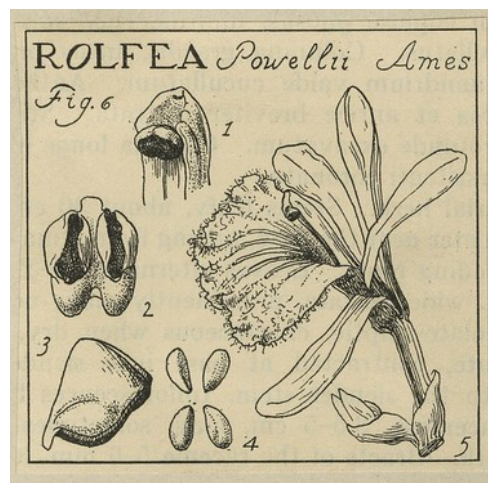


Illustration of *Palmorchis powellii* (Ames) C.Schweinf. & Correll from holotype at AMES.

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Holotype of *Palmorchis powellii* (Ames) C. Schweinf. & Correll at AMES.



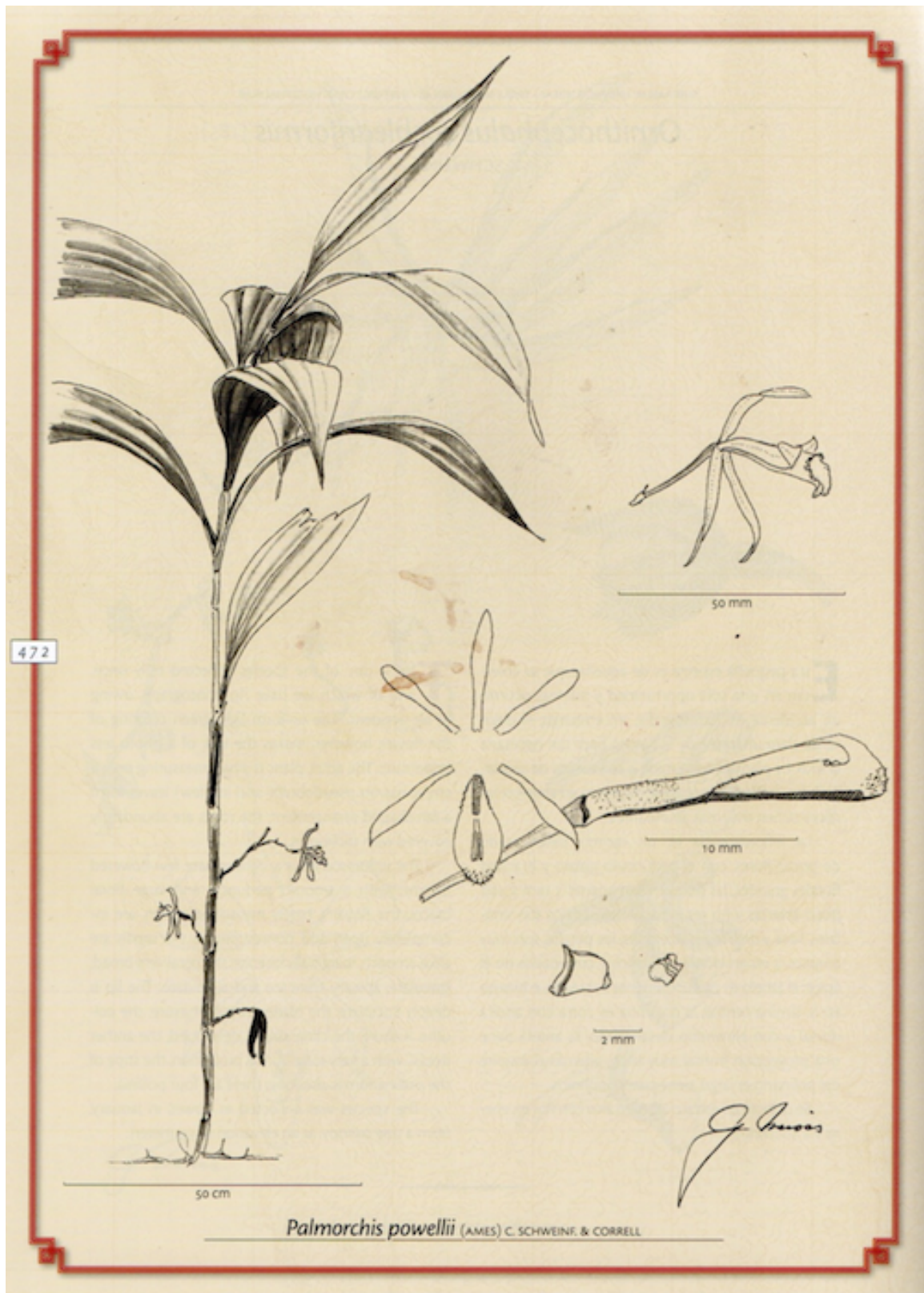


Illustration of *Palmorchis powellii* (Ames) C. Schweinf. & Correll (*Palmorchis deceptoria* Veryret & Szlach.) from Misas, G. U. 2005. Orquídeas de la Serranía del Baudó.



Illustration of *Palmorchis powellii* (Ames) C.Schweinf. & Correll (*Palmorchis deceptoria* Veryret & Szlach.) from Misas, G. U. 2005. Orquídeas de la Serranía del Baudó.

Most of the lists of the species of orchids found in Colombia, list *P. powellii* as being found in Choco. At the University Nacional de Colombia herbarium there are numerous specimens collected in Choco or Amazonas with one specimen collected in Boyaca. The specimens were only identified as *Palmorchis*. At HPUJ there is a specimen labeled *P. powellii* collected by Ortiz-Valdivieso no. 4427. However, all of the material from Choco and Amazonas appears to be *P. deceptoria*.



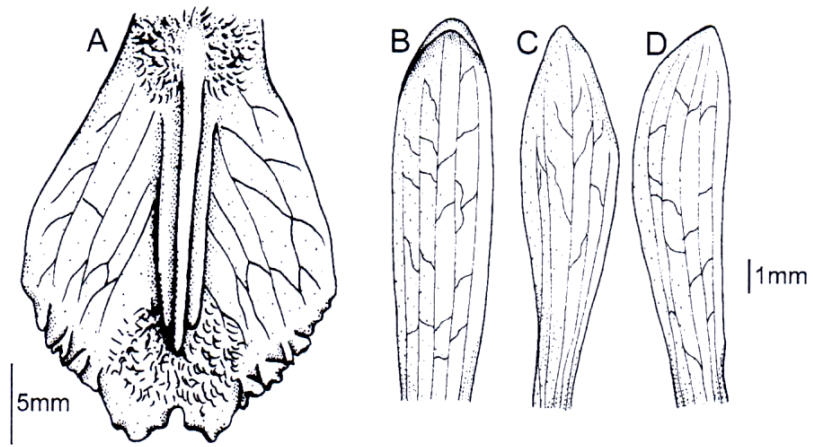


Fig. 5. *Palmorchis deceptoria* VEYRET & SZLACH.: A lip. – B dorsal sepal. – C petal. – D lateral sepal. – Redrawn by P. BARANOW from VEYRET & SZLACHETKO 1995.



*Palmorchis powellii* (Ames) C.Schweinf. & Correll. Labellum and column from plant collected in Bioparque Universidad de la Paz, Finca Santa Lucía, at edge of Río Zarzal by Giselle Fonseca Vergel.

The first report, which is verifiable, is by Vergel & Niño (2017). A research project which sought to highlight the native herbaceous species found in the tropical humid forest relict of the Santa Lucia Research Center in Barrancabermeja, Department of Santander. The project is important for reporting the first verifiable record of *P. powellii* in Colombia.



*Palmorchis powellii* (Ames) C.Schweinf. & Correll.

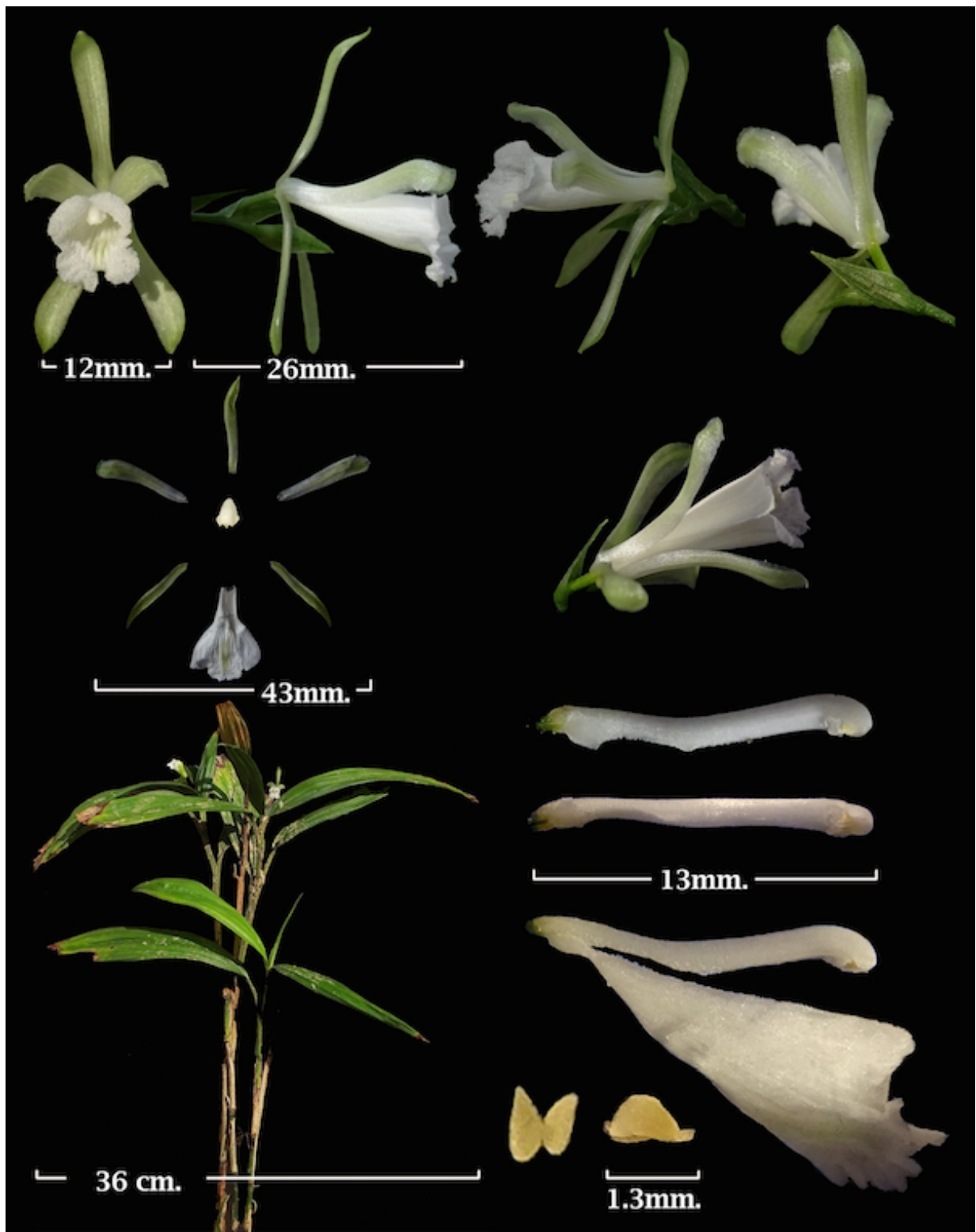
Photograph by Giselle Fonseca Vergel in Boletín de la Asociación Orquideológica de la Orinoquía, Vol. 1, No. 3. May 2018.



*Calathea* sp. from photograph by Giselle Fonseca Vergel in Boletín de la Asociación Orquideológica de la Orinoquía, Vol. 1, No. 3. May 2018

An interesting note is that in Vergel & Niño (2017) there is a photograph of a *Calathea* species that occurs in the same habitat and the flower is similar to *P. powellii*. A relationship between these two species may be a classic example of floral mimicry.

Visual mimicry is a case of natural selection, which has repeatedly evolved in a range of organisms (Joron & Mallet, 1998) and is common in the Orchidaceae. The evolution of mimicry may be a contributing factor behind speciation in butterflies and orchids (Johnson, 1994).



Icon of *Palmorchis powellii* (Ames) C. Schweinf. & Correll.  
 Plant collected in Bioparque Universidad de la Paz, Finca Santa Lucía, at edge of Río Zarzal.  
 Collected by Giselle Fonseca Vergel, photograph by Álvaro Díaz and icon by senior author.

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