



Research note

Two additions to the Mexican orchid flora

Dos adiciones a la orquideoflora mexicana

Gerardo A. Salazar

Departamento de Botánica, Instituto de Biología, Universidad Nacional Autónoma de México, Apartado postal 70-367, 04510 México D. F., Mexico
✉ gasc@ibunam2.ibiologia.unam.mx

Abstract. Two species of Orchidaceae are recorded here for the first time in Mexico, namely *Cryptarrhena guatemalensis* and *Domingoa gemma*. *Cryptarrhena guatemalensis* is widespread in the Neotropics and can be distinguished from *C. lunata*, the only other species of the genus, by possessing pseudobulbs and narrowly triangular, attenuate apical labellum lobules. *Domingoa gemma*, previously known only from Guatemala and El Salvador, differs from the similar *D. purpurea* in the smooth, linear-lanceolate leaves and labellum lacking a prominent sac at the base. Both species are known in Mexico from single localities in the state of Chiapas.

Key words: Chiapas, *Cryptarrhena guatemalensis*, *Domingoa gemma*, new records, Orchidaceae.

Resumen. Se registran aquí por primera vez en México 2 especies de Orchidaceae, *Cryptarrhena guatemalensis* y *Domingoa gemma*. *Cryptarrhena guatemalensis* está ampliamente distribuida en el neotrópico y se distingue de *C. lunata*, la única otra especie del género, por presentar pseudobulbos y por los lóbulos apicales del labelo angostamente triangulares y atenuados. *Domingoa gemma*, previamente conocida sólo de Guatemala y El Salvador, difiere de *D. purpurea*, especie similar, en las hojas lisas, lineal-lanceoladas y el labelo sin un saco prominente en la base. En México sólo se conoce una localidad para cada especie y ambas se ubican en el estado de Chiapas.

Palabras clave: Chiapas, *Cryptarrhena guatemalensis*, *Domingoa gemma*, nuevos registros, Orchidaceae.

The Mexican orchid flora encompasses approximately 1 250 species and 168 genera, and it is considered one of the best known for a tropical country (Hågsater et al., 2005; Soto-Arenas et al., 2007). Nevertheless, the species inventory continues increasing as a result of both revision of species' limits in monographic studies of particular taxa (e.g. Cetzal and Carnevali, 2010) and collecting in previously unexplored areas (e.g. Salazar and de Santiago, 2007; Solano-Gómez and Salazar, 2007; Salazar et al., 2011; Solano-Gómez and Martínez-Ovando, 2011; Solano-Gómez et al., 2011). Here I note 2 further orchid species that had not been previously recorded for this country.

Cryptarrhena guatemalensis Schltr., Repert. Spec. Nov. Regni Veg. 10: 253. 1911.

Cryptarrhena acrensis Schltr., Notizbl. Bot. Gard. Belin-Dahlem 6: 126. 1914.

Cryptarrhena unguiculata Schltr., Repert. Spec. Nov. Regni Veg. 8: 103. 1921.

Cryptarrhena quadricornu Kraenzl., Pflanzenr. 4, 50: 314. 1922.

Cryptarrhena ghillanyi Pabst, Orchid. Rev. 79: 75. 1971.
Specimen examined. **Mexico.** Chiapas: municipio Ocosingo, Estación Chajul, camino a la sabana, 7 Jan 1999, S. Sinaca 1098bis (MEXU).

Distribution and habitat. This species was known previously from Belize, Guatemala, Nicaragua, Costa Rica, Panama, Guyana, Colombia, Ecuador, Peru, Bolivia and Brazil, from sea level up to 900 m in elevation. In Mexico it was found in a tropical rain forest at 160 m above sea level.

Remarks. *Cryptarrhena guatemalensis* is easily distinguished from *C. lunata* R. Br., the only other species of this genus, by the possession of distinct pseudobulbs and the narrowly triangular, attenuate apical labellum lobules (Figs. 1A, B). Conversely, in *C. lunata* there are no pseudobulbs and the apical lobules of the labellum are obliquely triangular-ovate to subquadrate (Ames and Correll, 1953). The last species is known from several locations in the Mexican states of Chiapas, Oaxaca, and Veracruz (Soto-Arenas and Solano-Gómez, 2007) and it is



Figure 1. A, Mexican specimen of *Cryptarrhena guatemalensis* (Sinaca 1098bis). B, close up of flowers of *C. guatemalensis*; the arrows point to the narrowly triangular apical lobes. C, leaf of *Domingoa gemma* from Chiapas (Beutespacher s.n.). D, flowers of the same plant. Scale bars= 1 cm. Photographer: G. A. Salazar.

also widespread, though uncommon, throughout Central America, the Antilles, Colombia and Ecuador.

Domingoa gemma (Rchb.f.) van den Berg et Soto Arenas, *Neodiversity* 2: 8. 2007.

Hartwegia gemma Rchb.f., *Gard. Chron.* 2: 8. 1878.

Scaphyglottis gemma (Rchb.f.) L. O. Williams, *Ceiba* 5: 156. 1956.

Nageliella gemma (Rchb.f.) Dressler, *Taxon* 15: 242. 1966.

Hartwegia purpurea Lindl. var. *angustifolia* Booth ex Lindl., *Edward's Bot. Reg.* 29: Misc. p. 45. 1843.

Nageliella angustifolia (Booth ex Lindl.) Ames et Correll, *Bot. Mus. Leaflet* 10: 80. 1942.

Domingoa angustifolia (Booth ex Lindl.) J. M. H. Shaw, *Orchid Rev.* 116 (suppl. 1280): 23. 2008.

Specimen examined. Mexico. Chiapas: km 4 between Motozintla and Niquivil, collected 16 Apr 2008, pressed in cultivation 16 Apr 2010, *C. R. Beutelspacher s.n.* (MEXU). *Distribution and habitat.* *Domingoa gemma* was previously known from Guatemala and El Salvador (as *Nageliella angustifolia*). It inhabits oak forests at 1 600-2 100 m elevation.

Remarks. Soto et al. (2007) sunk the genus *Nageliella* L. O. Williams in *Domingoa* Schltr. in order to achieve monophyly, since a phylogenetic analysis of subtribe Laeliinae based on nuclear ribosomal ITS DNA sequences recovered the 2 known species of *Nageliella* as nested in *Domingoa* (van den Berg et al., 2000). *Domingoa gemma* can be distinguished from *D. purpurea* (Lindl.) van den Berg et Soto Arenas, the most closely related species, by its proportionately narrower, linear-lanceolate leaves (vs. lanceolate to ovate), which when fresh are smooth (vs. rough), and the labellum lacking a prominent sac at the base (Figs. 1C, D).

The author thanks Dr. Carlos Rommel Beutelspacher Baigts for courtesies extended during study of his live orchid collection at Berriozábal, Chiapas, from which the specimen of *D. gemma* was pressed, and two anonymous reviewers for useful suggestions to the manuscript.

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