GONOLOBUS TAYLORIANUS (APOCYNACEAE: ASCLEPIADOIDEAE: GONOLOBINAE) IN FLORIDA, U.S.A.

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ABSTRACT

Gonolobus taylorianus is reported naturalized from Miami-Dade County, Florida. A key and photographs are provided to distinguish the three species of *Gonolobus* known from the continental United States.

RESUMEN

Se reporta *Gonolobus taylorianus* naturalizada en Miami-Dade County, Florida. Se presentan un clave y fotografias para distinguir las tres especies de *Gonolobus* conocidas de los Estados Unidos continentales.

Gonolobus taylorianus W.D. Stevens & Montiel is a Mesoamerican species distributed from Costa Rica to Guatemala (Stevens & Montiel 2002). Recent field work in southern Florida led to the discovery of a naturalized (sensu Nesom 2000) population of the species in Miami-Dade County. The population was discovered by Rex Renfro in 2017. Subsequent vouchers were prepared by Brett Jestrow, Rex Renfro, Alan Franck, Arian Farid, and Roger Hammer in the years 2017 and 2018 (see below). Initial site visits found the species either sterile or in fruit, precluding conclusive determination. In November 2018, flowers were observed, facilitating identification of the material to *G. taylorianus*. The species presently occupies an estimated 50 m^2 on a roadside, bordering an agricultural field in the Redland Agricultural District. The plants are growing along a field fence in association with other naturalized exotic plant species, many of which are listed by the Florida Exotic Pest Plant Council (FLEPPC; www.fleppc.org). These include *Jasminum fluminense* Vell. (Brazilian jasmine; FLEPPC Category I), *Momordica charantia* L. (balsam-apple; FLEPPC Category II), *Neyraudia reynaudiana* (Kunth) Keng ex Hitchc. (Burma reed; FLEPPC Category I), and *Syngonium podophyllum* Schott (arrowhead vine; FLEPPC Category I). The aggressive but native *Cissus verticillata* (L.) Nicolson & C.E. Jarvis (possum grape) is also present. The origin of this population of *Gonolobus taylorianus* remains unknown. The species is cultivated in Mesoamerica for its edible fruits (Stevens & Montiel 2002) and may have been introduced for this purpose.

Gonolobus taylorianus may also be represented by a second population in Miami-Dade County. A sterile voucher from Simpson Park (*J. Lange 57*, FTG) matches both living and herbarium specimens available to us. The taxon was observed sporadically throughout the park. Future surveys should focus on the area to obtain flowering material for conclusive identification.

The introduction of *Gonolobus taylorianus* to Florida brings the number of species in the genus in the continental United States to three. The two native species already in the flora are *G. arizonicus* (A. Gray) Woodson and *G. suberosus* (L.) R. Br. (Fig. 1). We provide an updated key below (modified from Stevens & Montiel 2002 and Krings 2008).

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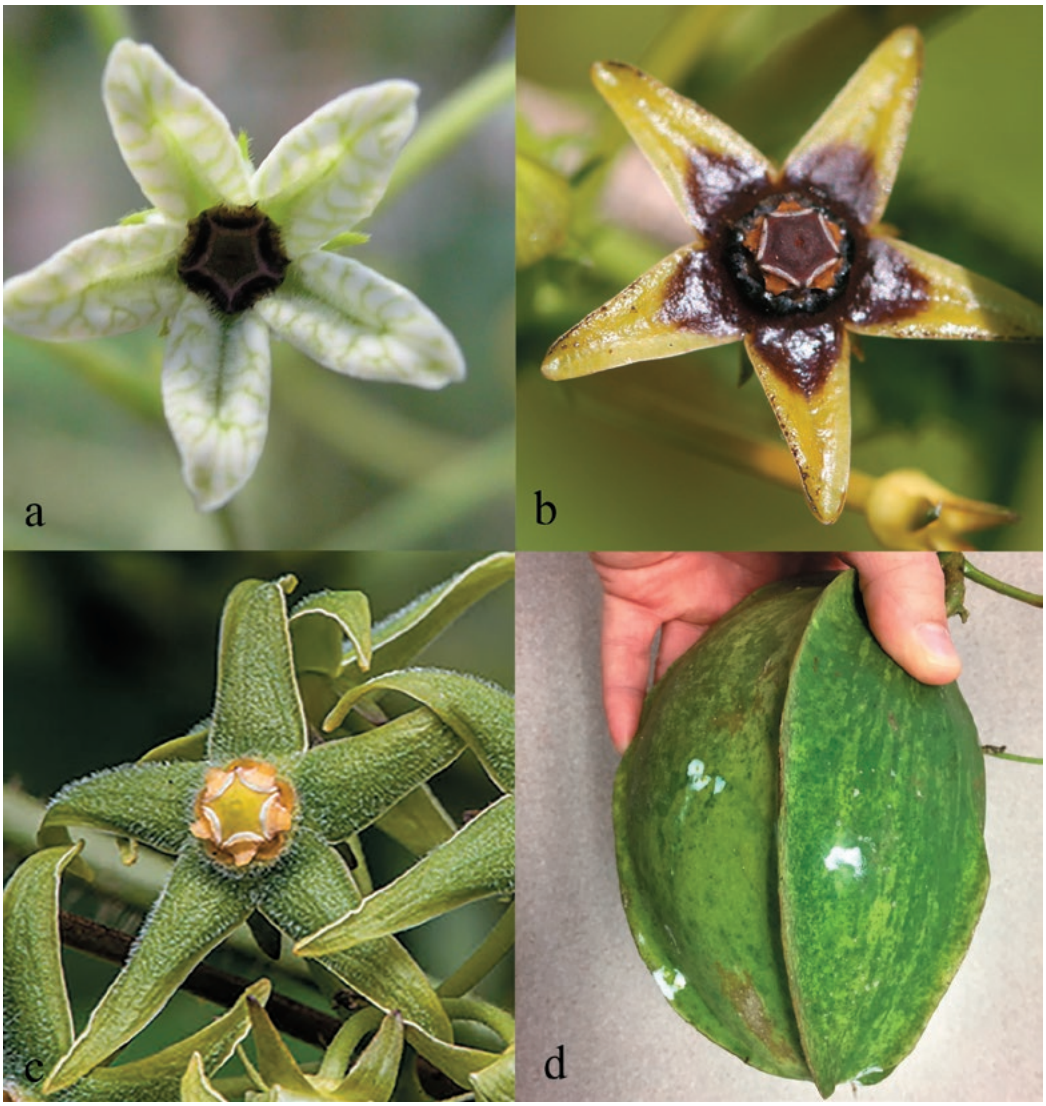

Fig 1. Native and naturalized (*) species of *Gonolobus* in the United States. A. *G. arizonicus* (photo: M. Fishbein; Sonora); B. *G. suberosus* (photo: A. Krings; North Carolina); C–D. *G. taylorianus (photo: R. Hammer [C.], B. Jestrow [D.]; Florida).

KEY TO *GONOLOBUS* IN THE UNITED STATES

1. Corolla white or yellowish, campanulate at base, tube 2.9–5.0 mm long; corolline corona (faucal annulus) absent; Arizona and n Mexico _____ **G. arizonicus**
1. Corolla green to yellowish-green, pale purple, green tinged centrally with purple, maroon, or brown, subcampanulate at base, tube to 2.7 mm long; corolline corona (faucal annulus) present; e US to Texas and Oklahoma.
   2. Pubescence of internodes ubiquitous, not in lines; calyx colleters 1 per sinus, calyx lobes 0.2–1 mm wide; corolline corona (faucal annulus) glabrous; follicles ovoid, < ½ as wide as long _____ **G. suberosus**
   2. Pubescence of internodes in 2 lines; calyx colleters 2 per sinus, calyx lobes 1.3–2 mm wide; corolline corona (faucal annulus) with unicellular hairs 0.1–0.3 mm long; follicles broadly ovoid to suborbicular, > ½ as wide as long _____ **G. taylorianus**

Voucher specimens: **U.S.A. FLORIDA: Miami-Dade Co.:** S side of SW 236th Street, just E of SW 197th Avenue, 25°32'47.6"N, 80°30'35.4"W, naturalized vine with white latex; roadside with *Jasminum* and *Cissus*, 1 Jul 2017 (st), *A.R. Franck 4264* (FTG, USF); S side of SW 236th Street, just E of SW 197th Avenue, 25°32'48"N, 80°30'35"W, fruit to 13 cm long, 10.5 cm wide, 9 cm tall, with 5 wings, wings to ca. 1 cm long, 18 May 2018 (fr), *A.R. Franck 4338 with A. Farid* (USF); S side of SW 236th Street, just E of SW 197th Avenue. 25°32'48"N 80°30'35"W, transplanted and cultivated in Homestead, Florida by Roger Hammer, 18 Nov 2018 (fl), *A.R. Franck 4437 with R. Hammer* (FTG, NCSC); N of Homestead, Redlands, just off Richard Road, on SW 236th Street, 25.54664°, -80.5103°, growing along a disturbed hedgerow with *Jasminum fluminense*, agriculture to the south and homesteads to the north, climbing to over 4 m, in fruit, no evidence of planting, likely naturalized, only seen along ~100 feet of the hedgerow, 17 Feb 2017 (fr), *B. Jestrow 2017-FL-01with R. Renfro* (FTG, USF).

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