

A new species of *Drymonia* (Gesneriaceae) from the eastern slopes of the Ecuadorian Andes

JOHN L. CLARK

Department of Biological Sciences, The University of Alabama, Box 870345, Tuscaloosa, AL 35487-0345, USA; e-mail: jlc@ua.edu

Abstract. A new species, *Drymonia ignea* (Gesneriaceae, tribe Episcieae), is described from the eastern slopes of the Ecuadorian Andes from the provinces of Tungurahua, Napo, and Morona-Santiago. It differs from other species of *Drymonia* by the presence of an urceolate corolla, quadrangular stem, and cucullate calyx lobes.

Key Words: Gesneriaceae, *Drymonia*, taxonomy, Ecuador.

Resumen. Se describe una nueva especie, *Drymonia ignea* (Gesneriaceae, tribo Episcieae), de la vertiente oriental de los Andes Ecuatorianos, provincias de Tungurahua, Napo y Morona-Santiago. Esta nueva especie se diferencia de otras especies de *Drymonia* por la presencia de corola urceolada, tallo cuadrangular y lóbulos del cáliz cuculados.

The flowering plant family Gesneriaceae is a member of the order Lamiales (APG III, 2009) and is primarily pantropical with extensions into the subtropics and temperate regions (Weber, 2004; Skog & Boggan, 2006). The family contains ca. 150 genera and ca. 3500 species (Weber, 2004). *Drymonia* Mart., with 74 species, is the third largest genus of Gesneriaceae in the Neotropics, after *Columnnea* L. (272 species) and *Besleria* L. (200 species) (Weber, 2004). *Drymonia* ranges from Mexico to Bolivia, including Brazil, French Guiana, and the Caribbean with the highest species diversity in Colombia with 31 species (Clavijo & Clark, 2008) and Ecuador with 30 species (Clark et al., 2006). *Drymonia ignea* is described here and differs from other congeners by the presence of urceolate (urn-shaped) corollas; facultative epiphytic habit; conduplicate calyx with cucullate lobes; and corolla uniformly bright yellow to yellow with red lobes.

***Drymonia ignea* J. L. Clark, sp. nov.** Type: Ecuador. Tungurahua: Cantón Baños, parroquia Río Verde, sector Machay, forested trail (from Baños-Puyo highway) towards Cascada de San Miguel via San Agustín, 01°23'05"S, 78°16'50"W, 1800–2200 m,

23 Dec 2000 (fl), J. L. Clark, E. Narvaez & J. Vargas 5713 (holotype: US; isotypes: BRIT, CAS, K, MO, NY, QCA, QCNE). (Figs. 1, 2)

A *Drymonia* aliis speciebus calycum lobis cucullatis, corollis urceolatis differt.

Facultative epiphytic climber; rarely terrestrial, stems erect, to 2 m long, subwoody to herbaceous, quadrangular, glabrescent below, sparsely pubescent above. *Leaves* opposite, nearly equal in a pair; petioles terete, 2–7 cm long, densely pubescent, blade papyraceous when dry, ovate to elliptic, 8–18 cm long, 3–10.5 cm wide, base rounded to obtuse, apex acute, margin serrate, adaxially dark green, uniformly covered with pustulose trichomes, abaxially dark red, rarely green to reddish-green, sparingly to densely pilose (especially on veins). *Inflorescence* epedunculate, reduced cyme, appearing fasciculate, with 2–6 flowers per node, at or near stem apices; bracteoles caducous, 0.5 cm wide, 1.0 cm long. *Flowers* not resupinate; calyx lobes 5, basally connate for 3–5 mm, lobes erect at anthesis, reflexed in fruit, equal, ovate, 1.5–2.0×0.5–1.0 cm, apex acute, margin serrulate, uniformly yellow to yellow with red

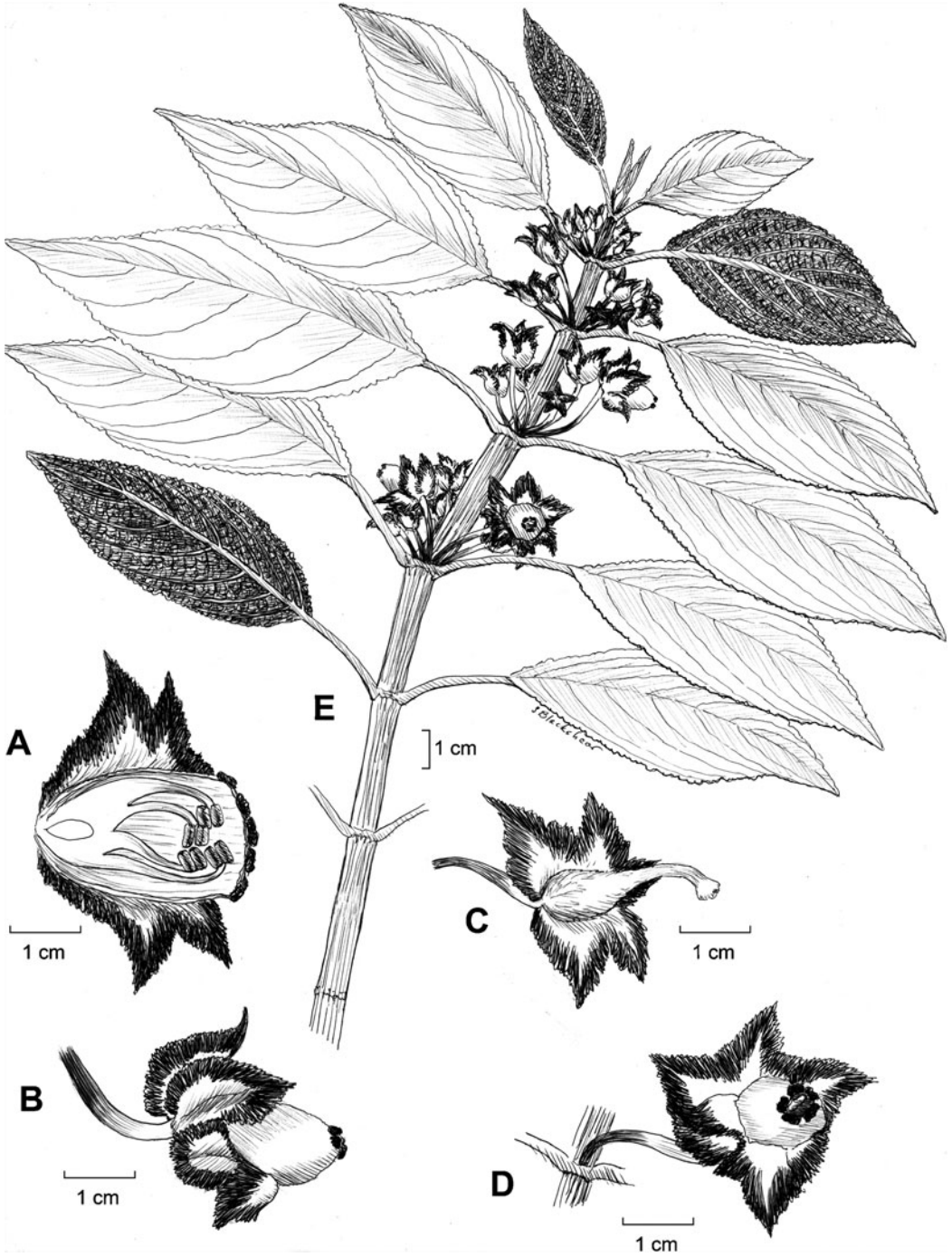


FIG. 1. *Drymonia ignea*. A. Corolla opened to show filaments connate at base. B. Lateral view of flower. C. Corolla removed to show mature ovary and calyx. D. Front view of flower. E. Habit. (Drawn from *J. L. Clark et al. 5735, US.*)

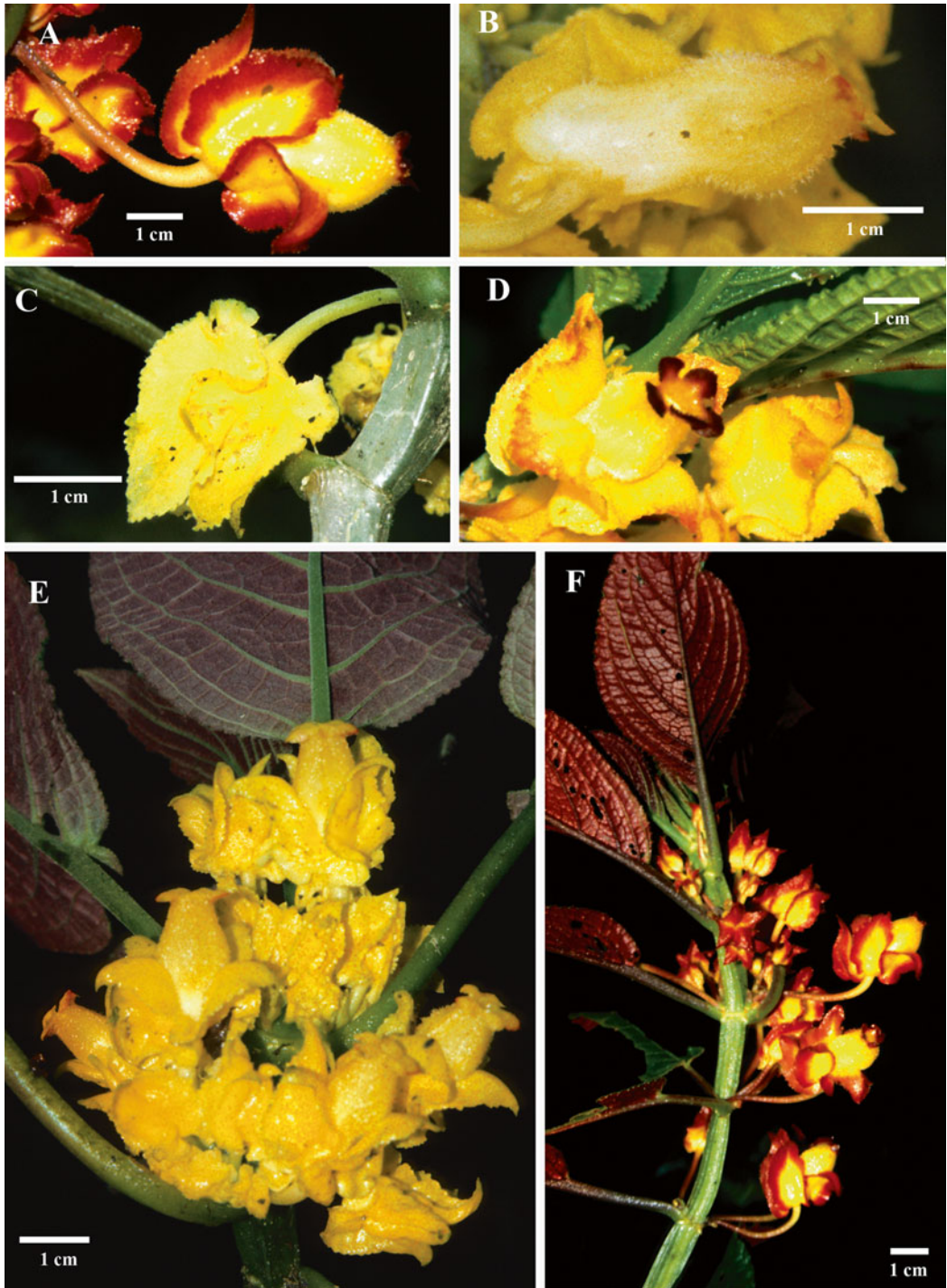


FIG. 2. *Drymonia ignea*. A., B. Lateral views of flower. C. Calyx. D. Front view of corolla. E., F. Inflorescence. (A, F from *J. L. Clark et al.* 5713, US; B, E from *J. L. Clark et al.* 5941, US; C from *J. L. Clark* 5902, US; D from *J. L. Clark & Duran* 6044, US.)

margins, inside and outside sparsely sericeous; corolla urceolate or urn-shaped, throat tightly constricted, posture erect in calyx; 2.5–3.0×0.6–1.0 cm; outside uniformly bright yellow to bright yellow with red lobes, covered with dense pilose yellow pubescence, nectary a single-lobed dorsal gland, glabrous; stamens 4, didynamous, included; filaments ca. 1.5 cm long, connate and adnate to the base of the corolla tube, sparsely pilose; anthers longer than broad, ca. 2 mm long, ca. 1.5 mm wide, dehiscing by longitudinal slits; staminode not observed; ovary superior, 0.5–1.0×0.5 cm, style 1.0–1.2 cm long, sparsely sericeous, stigma included and stomatomorphic. *Fruits* not seen.

Distribution.—*Drymonia ignea* is known from the eastern slopes of the Ecuadorian Andes in the provinces of Tungurahua, Napo, and Morona-Santiago, from 1400 to 2800 meters.

Phenology.—Flowering in January, March, August and December.

Etymology.—The specific epithet, *ignea*, is derived from Latin for fire because of the flowers' resemblance to a flame (i.e., bright yellow with red corolla lobes and red margins on the calyx).

Conservation and IUCN Red List category.—*Drymonia ignea* is known from recently documented populations in Ecuador. According to the IUCN Red List criteria for estimated range, area of occupancy and population size (IUCN, 2001), and considering the uncertain future of habitat conservation along the eastern slopes of the Ecuadorian Andes, *Drymonia ignea* should be listed in category NT (Nearly Threatened).

Additional specimens examined: ECUADOR.

Morona-Santiago: Cantón Limón Indanza, main road between Gualaceo and Plan de Milagro, area known locally as Tinajillas, 03°00'19"S, 78°36'36"W, 2800 m, 10 Jan 2001 (fl), *J. L. Clark, F. Sanchez & L. Jost 5902* (BRIT, HA, MO, QCNE, US); Cantón Limón Indanza, area known locally as Agua Rica, along highway between Limón (General Leonidas Plaza Gutiérrez) to Gualaceo, 03°00'15"S, 78°29'29"W, 2000 m, 11 Jan 2001 (fl), *J. L. Clark, L. Jost & F. Sanchez 5941* (HA, MO, NY, QCNE, SEL US). **Napo:** Quijos, Sierra Azul (Agrícola Industrial Río Aragón), Cedroyacu, 00°41'S, 77°57'W, 2100 m, 26 Mar 1992 (fl), *A. Alvarez, G. Mosquera & L. Viteri 230* (QCNE, US); Cerro Huacamayos, on road Baeza-Tena, ca. 34 km from Baeza, 00°41'S, 77°50'W, 2000 m, 9–10 Aug 1980 (fl), *B.*

Ollgaard, S. Roth & C. Sperling 35831 (AAU, US). **Tungurahua:** Cantón Baños, parroquia Río Verde, sector Machay, forested trail from Machay (Baños-Puyo highway) to Río Verde, 01°23'05"S, 78°16'50"W, 1800–2200 m, 24 Dec 2000 (fl), *J. L. Clark, E. Narvaez & J. Vargas 5735* (AAU, F, K, NY, QCA, QCNE, US); Cantón Baños, parroquia Río Negro, near La Colonia Tigre San Jacinto, 01°20'48"S, 78°10'29"W, 1400 m, 18 Jan 2001 (fl), *J. L. Clark & V. Duran 6044* (NY, QCNE, SEL, US).

Drymonia has a wide range of morphological variation resulting from convergence in floral and fruit characters (Smith & Carroll, 1997; Zimmer et al., 2002; Clark & Zimmer, 2003; Roalson et al., 2005; Clark et al., 2006). The wide range in morphological variation of corolla shapes has made it a difficult genus to circumscribe. The two primary corolla forms in *Drymonia* are hypocyrtoïd ("pouched") and campanulate. *Drymonia ignea* is distinct from other congeners because the corolla shape is urceolate or urn-shaped (i.e., neither hypocyrtoïd nor campanulate). The corolla of *Drymonia ignea* has a tightly constricted throat like other congeners that are hypocyrtoïd, but the restriction is not associated with a ventral pouch. The only other species of *Drymonia* with an urceolate corolla shape are *Drymonia urceolata* Wiehler and *Drymonia crenatiloba* (Mansf.) Wiehler. *Drymonia urceolata* and *D. crenatiloba* differ by the terrestrial habit in contrast to the facultative epiphytic habit of *D. ignea*. Leaves of *D. ignea* are papyraceous while those of *D. urceolata* are succulent. Additional differences include the presence of poricidal anther dehiscence, uniformly colored corollas, and persistent bracts in *D. urceolata*. In contrast, *D. ignea* has longitudinal anther dehiscence, corollas with contrasting coloration, and caducous inflorescence bracts. The calyx lobes of *D. ignea* are folded in a conduplicate manner where each lobe is appressed to an adjacent lobe and folded lengthwise with the margin curved inward. The calyx lobes are stiff and difficult to flatten without tearing and appear cucullate (hooded).

Molecular sequence data generated from the nrDNA ITS region (Clark & Zimmer, 2003) strongly support the placement of *Drymonia ignea* within *Drymonia*. *Drymonia ignea* (listed as "*Drymonia* sp. nov. 3") was shown to be the sister-taxon to *Drymonia tenuis* in Clark and Zimmer (2005) and Clark et al. (2006).

Acknowledgments

Support for this study was provided by the National Science Foundation (DEB-841958 and DEB-0949169). I thank Christian Feuillet for providing the Latin diagnosis and help in selecting the specific epithet; Sue Blackshear for preparing the illustration; John R. Clark and an anonymous reviewer for helpful comments on the manuscript; and Laura Clavijo for providing the Spanish translation of the abstract. The discovery of this species was made possible by a Fulbright Graduate Study and Research Abroad Scholarship (2002–2003).

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