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Authors: Carranza, Eleazar, and McDonald, J. Andrew

Source: *Lundellia*, 2004(7) : 1-4

Published By: The Plant Resources Center, The University of Texas at Austin

URL: <https://doi.org/10.25224/1097-993X-7.1.1>

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Ipomoea cuprinacoma (CONVOLVULACEAE): A NEW MORNING GLORY FROM SOUTHWESTERN MEXICO

Eleazar Carranza¹ and J. Andrew McDonald²

¹Instituto de Ecología, Centro Regional del Bajío, Pátzcuaro, México

²Section of Integrative Biology and Plant Resources Center, University of Texas, Austin, Texas 78712

Abstract: A new species of morning glory from southwestern Mexico, *Ipomoea cuprinacoma* (Convolvulaceae), is described. The species is assigned to *Ipomoea* series *Arborescentes* with other stout lianas and trees, and distinguished from *I. populina* on the basis of slender stems, canescent peduncles and leaf blades, exclusively axial inflorescences, and long, pale-coppery seed hairs.

Resumen: Se describe una especie nueva del suroeste de México, *Ipomoea cuprinacoma* (Convolvulaceae), la cual se ubica con otras lianas y árboles en *Ipomoea* series *Arborescentes*. *Ipomoea cuprinacoma* se distingue de *I. populina* por sus tallos incipientes delgados, pedúnculos y láminas canescentes, inflorescencias exclusivamente axiales, y comas seminales de color cobre pálido.

Keywords: *Arborescentes*, Convolvulaceae, Flora of Mexico, *Ipomoea*.

Ongoing plant collection programs of the Instituto de Ecología in Pátzcuaro, Mexico, continue to uncover new species from southwestern Mexico. A morning glory that ranges from Jalisco to eastern Guerrero, *Ipomoea cuprinacoma* E. Carranza & J.A. McDonald, is described herein and allied with *I. populina* House, a common liana of *Ipomoea* series *Arborescentes* (Choisy) D.F. Austin.

Ipomoea cuprinacoma E. Carranza & J.A. McDonald, sp. nov. (Fig. 1).

TYPE: MEXICO. MICHOACÁN: Mpio. Penjamillo, 2 km W of Penjamillo, E. Carranza G. 5608 (HOLOTYPE: IEB; ISOTYPES: ENCB, MEXU, TEX.)

Ipomoea populina House primo aspectu maxime simili, sed caulibus apicem versus gracilibus, 1–2 mm latis, canis, laminis infra canis vel dense puberulis, sepalis inaequalibus, coma cuprina seminibus differt.

LIANAS twining, trailing, robust; stems ligneous, branching, 2–14 m long, to 5–7 cm wide at base, 1–2 mm at tips, new growth canescent, old growth glabrous or scarcely pubescent, striate, sparingly papil-

lose. **LEAVES** simple, petiolate; petioles 2.6–11 cm long, 1–2 mm in diameter, tomentose, tomentulose or sparsely pubescent; blades ovate or ovate-elongate, (4.5–) 7–14 (–19) cm long, 4.0–10.5 cm wide, entire, acuminate at apex, truncate or cordate at base, chartaceous, green and densely to sparsely pilose above, canescent or densely pilose below, the hairs simple, T-shaped, 3 or 4-branched. **CYMES** axillary, simple, mono- or dichasial, flowers 1–5; peduncles 0.3–5.5 cm long, 1–2 mm in diameter, smooth or striate, canescent during inception, becoming glabrous and lignescent during anthesis and fruition, secondary peduncles 0.3–1.2 cm long, 1–2 mm in diameter; pedicels 0.5–2.5 cm long, 1–2 mm in diameter during anthesis, elongating and thickening somewhat (ca. 3 mm in diameter) during fruition, canescent during inception, becoming glabrous during anthesis and fruition. **FLOWERS** diurnal; sepals unequal, persistent in fruit, ovate or broadly elliptic, outer 5.5–8 mm long, 4–6 mm wide, inner 8–12 mm long, 6–9 mm wide, with apex obtuse or truncate, glabrous, coriaceous, and with margins entire, scarious; corolla infundibular, 5.5–8 cm long, tube 3.5–5.0 cm long, the base constricted, 6–8

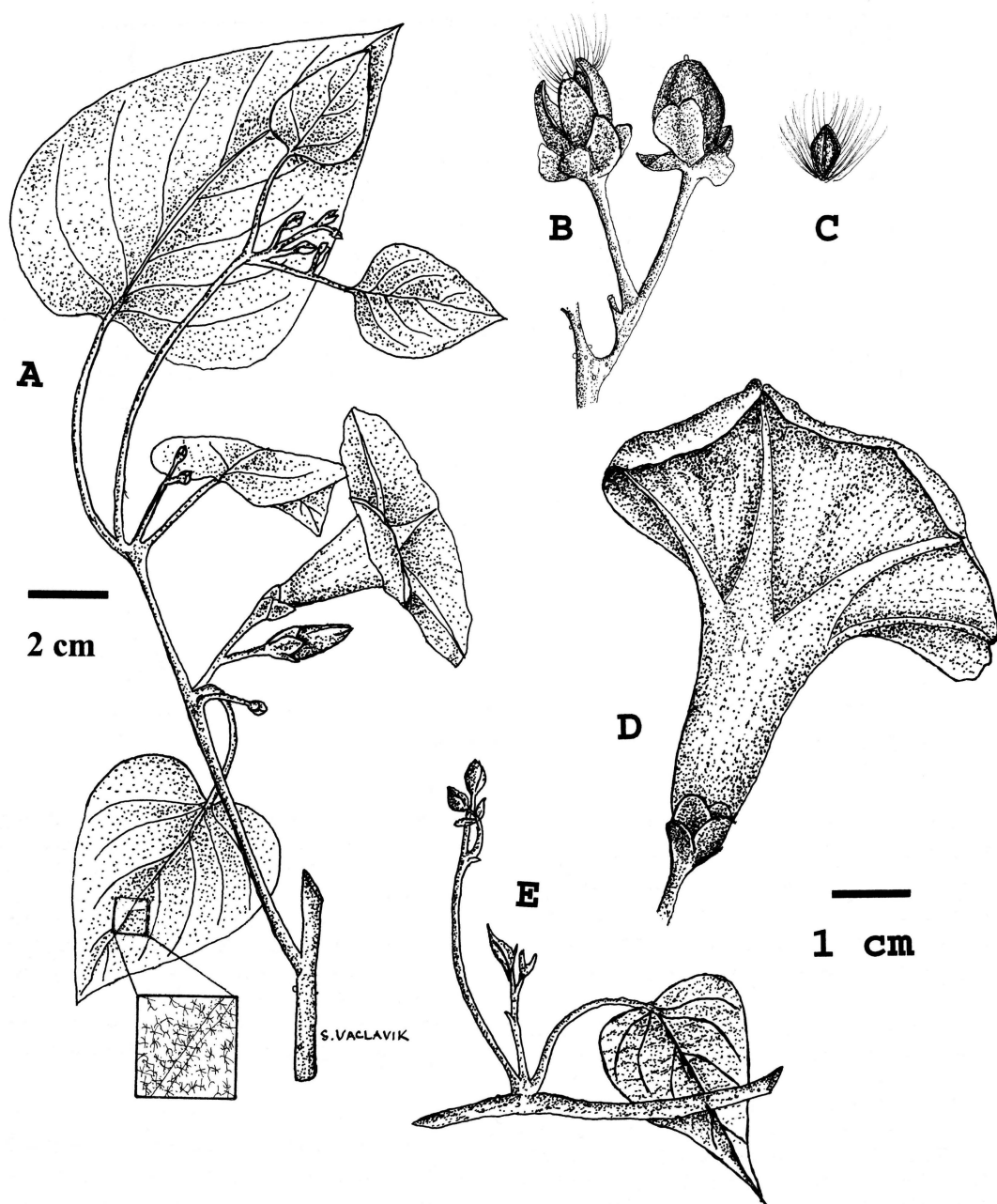


FIG. 1. *Ipomoea cuprinacoma*. Drawings by Ms. Susan Vaclavik are based primarily on the holotype and isotypes (E. Carranza G. 5608). A. Growth habit of fertile shoots. B. Infructescence. C. Mature seed. D. Flower. E. Slender new stem growth.

mm in diameter, the throat 1.8–2.5 cm in diameter (in a pressed condition), white with a broad purple collar inside, glabrous, limb white, slightly 10-lobate, plical zones glabrous, interplical zones sparingly pubes-

cent; stamens unequal, included, 1.6–3.1 cm long, basally pubescent; style 3.4–4.2 cm long, glabrous; stigma subglobose, bilobate. FRUIT a broadly ellipsoid capsule, 1–1.7 (–2) mm long, 0.8–1.2 cm wide, 2-locular,

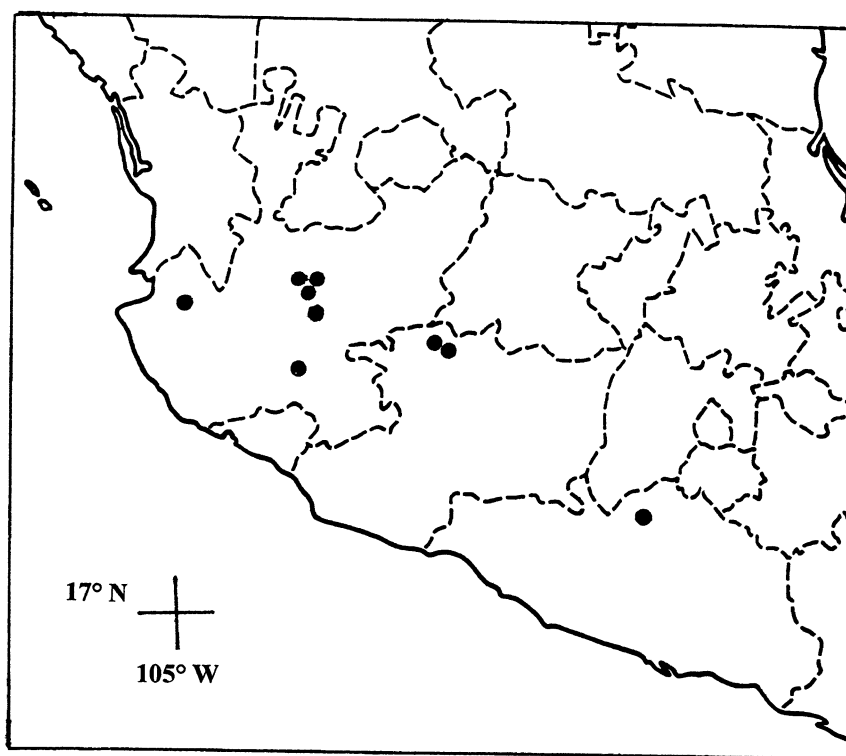


FIG. 2. Known distribution of *Ipomoea cuprinacoma*.

4-valvate, drying brown, lignescent, glabrous, the base of style persistent on apex until dehiscence; seeds (4)7–12 mm long, ellipsoid-triangular, glabrous, brown, bearing long hairs on outer margins, comas 1–1.4 cm long, shiny, pale brown or copper.

ADDITIONAL SPECIMENS EXAMINED: MEXICO. **GUERRERO.** Km 98.3 on Hwy. 51 from Iguala to Arceia, ca. 2 km W of Las Ceibitas, 1150 m, 2 Oct 1982, *H. Iltis, B. Benz & M. Burd* 28692 (IEB, TEX). **JALISCO:** Mpio. Guadalajara, Barranca of Huetitán, below Guadalajara Zoological Park, 1450 m, 4 Jul 1990, *M. Cházaro, J. J. Guerrero & S. Carvajal* 6265 (IEB, TEX); Mpio. Guadalajara, Barranca of Huetitán, below Guadalajara Zoological Park, 1400 m, 21 Aug 1990, *M. Cházaro & J. J. Guerrero* 6377 (IEB, TEX); Mpio. Jocotepec, 3 km S of Zapotitán de Hidalgo, 1880 m, 1 Jun 1986, *J.A. Machuca & S. Carvajal* 1467 (IEB, TEX); Mpio. Jocotepec, NW of Zapotitán in Arroyo de Huariche, 1800 m, 25 Aug 1991, *J.A. Machuca* 6722 (IEB, TEX); Mpio. Jocotepec, Barranca de Sayula, W of San Pedro Tesistán, 1450 m, 5 Jul 1992, *Machuca* 6882 (IEB, TEX); Mpio. Jocotepec, Barranca de Sayula, W of San Pedro Tesistán, 1750 m, 18 Jun 1995, *J.A. Machuca* 7320 (IEB); Sierra La Difunta,

trail to Las Lajas, S of Tepatitlán, 1600 m, 21 Aug 1994, *J.A. Machuca* 7220 (IEB); Mpio. Zapopan, 0.5 km S of Hacienda del Lazo, 1050 m, 31 Jul 2001, *Carrillo-Reyes* 2319 (IEB); Mpio. Mascota, Km 1 on road from Mascota to Juanacatlán, 1430 m, 12 Aug 2001, *Carillo et al.* 2497 (IEB). **MICHOACÁN:** Mpio. Churintzio, Los Palos Amarillos Canyon, Sanguijuelas, *Labat* 1834 (IEB); Mpio. Penjamillo, 2 km W of Penjamillo, *E. Carranza et al.* 5790 (IEB); *E. Carranza & Silva* 5028a (IEB); Penjamillo, by banana plantation, *Díaz-Barriga & Pérez* 7242 (IEB).

Ipomoea cuprinacoma fits comfortably within *Ipomoea* series *Arborescentes*, in the company of other Mexican lianas and arborescent morning glories. Most members of this distinctive group are trees (McPherson, 1981), several of which occur as dominant elements in tropical deciduous forests of southern Mexico (i.e., *I. pauciflora* Mart. & Galeotti, *I. murcoides* Roem. & Schult., and *I. wolcottiana* Rose). Anatomical and phylogenetic analyses of this distinctive group reveal that arborescent growth habits

are derived in the genus (McDonald, 1991, 1992; McDonald and Mabry, 1992), suggesting that *I. cuprinacoma* and other lianas of the complex, such as *I. populina* and *I. praecana* House, may represent ancestral members of the group. The new species is most similar to *I. populina* on the basis of its thickened basal stems to 7 cm diameter, ovate leaves, simple axillary cymes, glabrous sepals, white corollas with purple-pigmented tubes, and ellipsoid-triangular seeds that present long hairs along their outer margins. The new species is distinguished from *I. populina*, however, by slender incipient stems (1–2 mm in diameter), leaf blades that are canescent or densely sericeous below, canescent primordial peduncles and pedicels, and exclusively axial inflorescences (Fig. 1). Seed hairs of the new species are also distinguished by their pale-coppery sheen, hence the species epithet, *cuprinacoma* ('copper-colored hair'). In contrast, new stem growth of *I. populina* is more fleshy and robust, the tips from 2–4 mm in diameter, and maintaining a chlorophyllous, glabrous or glabrescent condition. *Ipomoea populina* also presents laminas that are glabrous or only sparingly pubescent above and below, incipient peduncles and pedicels that are glabrous or sparingly pubescent (never canescent), flowers that are born terminally and in leaf axils, and white seed hairs.

As presently known, *Ipomoea cuprina-*

coma occurs sporadically from Jalisco to western Guerrero (Fig. 2). The southernmost limits of the new species approach the westernmost limits of *I. populina*, the latter of which ranges from western Guerrero to Nicaragua (McPherson, 1981). *Ipomoea cuprinacoma* is found in mountainous habitats from 1000–1900 m, and usually occupies tropical deciduous forests that are dominated by *Acacia*, *Bursera*, *Ceiba*, *Cordia*, *Heliocarpus*, and *Lysiloma*, or tropical deciduous oak forests that are ecotonal with this vegetation type.

ACKNOWLEDGEMENTS

The authors express gratitude to Ms. Susan Vaclavik for preparing the illustrations.

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