

A NEW SPECIES OF SYMPLOCOS (SYMPLOCACEAE) FROM MEXICO

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Symplocos, last treated monographically by Brand (1901), continues to yield numerous novelties of local distribution from montane regions of the neotropics. My purpose here is to describe another local endemic that came to my attention in the course of field studies in Oaxaca.

Symplocos austromexicana Almeda, sp. nov. Frutex ad 2 m altus. Folia glabra, integra, petiolata, ovata vel elliptico-ovata, ad basem acuta, ad apicem obtusa vel rotundata. Lamina (0.6–)1.0–1.7(–2.0) cm longa et 0.5–0.9 cm lata. Inflorescentia uniflora; calyx 2–3 mm longus, lobis ovatis vel suborbiculatis, ciliolatis et glandulosis; corolla violacea, cylindrico-campanulata, 6–7 mm longa, glabra, lobis oblongis, obtusis et 2.5–3.5 mm latis. Stamina 24–30, triseriata. Stylus glaber, 5–7 mm longus; stigma capitata, trilobata. Fructus glaber, drupaceus, 9–12 mm longus. Fig. 1.

Robust shrub 2 m tall, perhaps attaining arborescent dimensions. Older branches glabrate, terete, minutely striate to rugulate; upper branchlets moderately covered with spreading, basally pustulate, brown trichomes mostly less than 1 mm long; immature branchlets thinly strigillose with apical buds typically white-strigose. Petioles shallowly canaliculate, thinly strigose to glabrous, (1–)2–3(–4) mm long. Principal leaves entire, coriaceous, ovate to elliptic-ovate, (0.6–)1.0–1.7(–2.0) cm long and 0.5–0.9 cm broad, apically obtuse to rounded, basally acute, glabrous on both surfaces; median nerve impressed but evident above, primary and secondary veins prominulous, evident beneath as a slightly bullate, openly reticulate network. Flowers solitary, erect or nodding, axillary, borne along distal branchlets; pedicels terete, strigillose to sericeous, 2–4 mm long, sometimes bearing 3–5 sessile, caducous bracts; these oval or oblong but varying to triangular or subulate, apically obtuse, rounded, or acute, 1.0–1.5 mm long and 0.5–1.0 mm broad, margins ciliate, otherwise glabrous with a granular, vernicose luster. Bracts evenly spaced along the floral pedicel or congested and then closely subtending the ovary and calyx lobes. Calyx 4–5 lobed; the lobes imbricate, ovate to suborbicular, 2–3 mm long, 1–2 mm wide at the base, glabrous on both surfaces, margins erose, often ciliate and provided with brown globular glands. Corolla sympetalous, glabrous, cylindric-campanulate, 6–7 mm long, 6–8 mm in apical diameter at anthesis, 6–7 lobed, purple or lavender; lobes fused basally for about 1 mm and adnate to the filament tube for the basal half of the corolla, imbricate, biseriate, oblong, apically

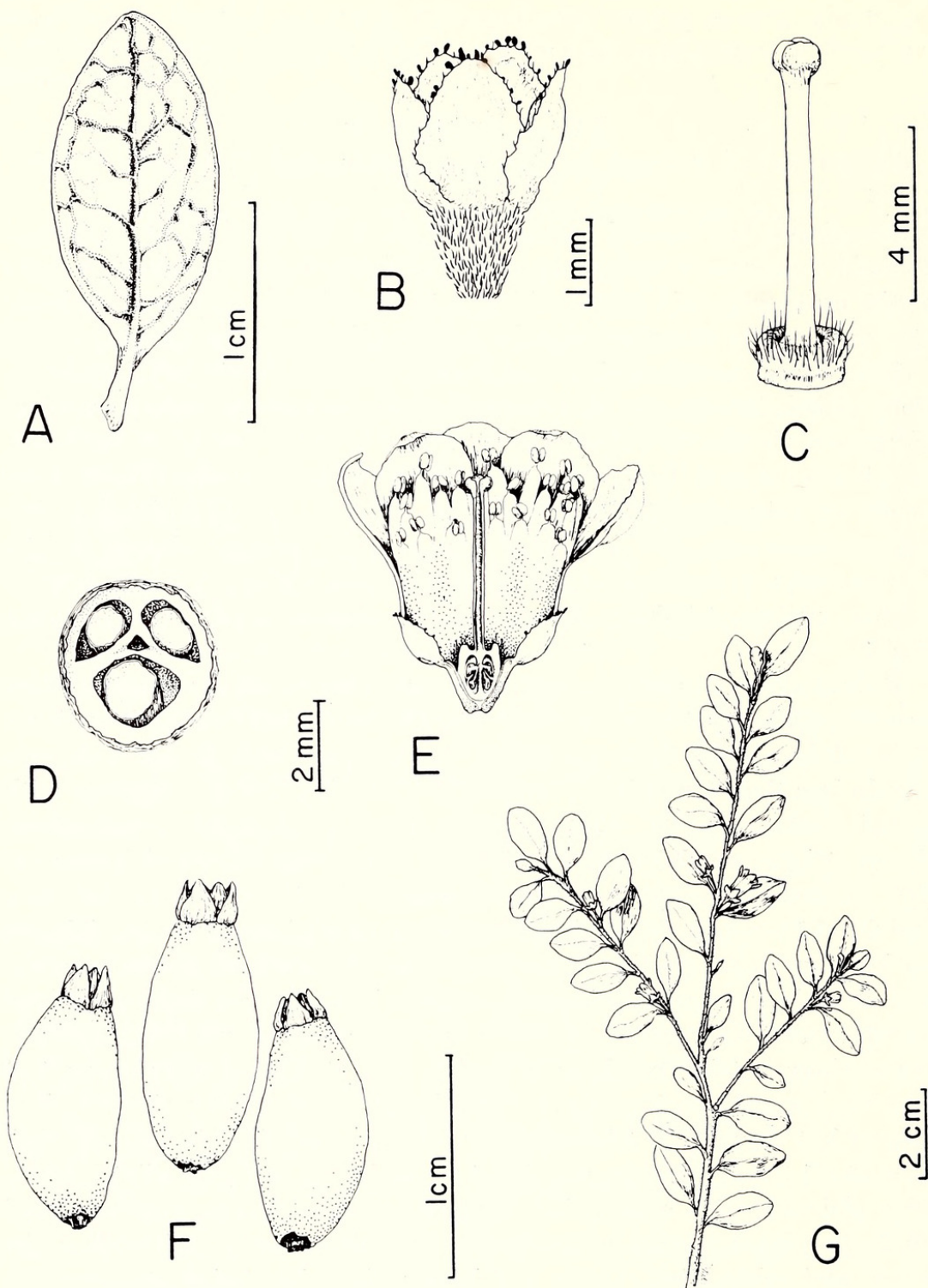


FIG. 1. *Symplocos austromexicana* Almeda. A, abaxial surface of a typical leaf; B, ovary and calyx lobes showing ciliate, glandular margins; C, style, stigma, and circular disc crowning the ovary; D, cross-section of ovary showing only one of two ovules in each locule; E, floral dissection showing half-inferior ovary, imbricate corolla lobes (one lobe removed), filament tube and triseriate staminal arrangement; F, mature fruits with persistent calyx lobes; G, habit. (A-C,E,G from Almeda and Luteyn 1659; D,F from MacDougall 15.)

rounded, 2.5–3.5 mm wide, margins entire to erose-ciliolate. Stamens 24–30, triseriate; filaments white to lavender, connate to near their apices and forming a tube slightly shorter than the corolla but equalling or exceeding the style; free portions of the staminal filaments ligulate, glabrous, 0.5–2.0 mm long. Anthers globose, white, 0.5 mm long. Ovary half-inferior, finely strigillose, about 1 mm long at anthesis and crowned by a puberulent circular (nectariferous ?) disc surrounding the style base. Style linear, glabrous, 5–7 mm long; stigma capitate, shallowly to deeply trilobed. Fruit drupaceous, glabrous, carnose at maturity, broadly ovoid to oblong-ellipsoid, 9–12 mm long, 4–8 mm broad, trilocular with two ovules usually present in each locule.

TYPE: Mexico, Oaxaca, about 27 miles N of Ixtlan de Juarez off of Hwy. 175 in wet pine-hardwood forests, ca 2575 m, 20 Dec 1972, *Almeda and Luteyn 1659*. Holotype: DUKE.

DISTRIBUTION: Presently known only from north-central Oaxaca where it apparently occurs as an infrequent element of pine-hardwood forests between 2575 and 2880 m.

SPECIMENS EXAMINED: Oaxaca, near gap in Sierra Juarez above Valle Nacional at ca 2727 m, 26 Dec 1970, *Sharp #MEX-717* (NY); Comaltepec, near Paso Cerro Pelon at 2880 m, 2 Sep 1966, *MacDougall 15* (US); Cerro de Humo Chico, Comaltepec, Ixtlan, 8 Feb 1966, *MacDougall 19* (US).

The small glabrous leaves, basally pustulate cauline trichomes, solitary flowers, glabrous style, and trilocular ovary serve to distinguish this species from all congeners in Mexico. Although two ovules are generally produced in each locule of the ovary, only one seed appears to develop in any one fruit. Consequently, the drupaceous fruits often become conspicuously ventricose at maturity.

There is a striking vegetative resemblance between *S. austromexicana* and *S. ovalis* Wright ex Griseb., a species endemic to western Cuba. The leaves of both species are glabrous and coriaceous with entire, revolute margins and prominulous, openly reticulate abaxial venation. Despite these vegetative similarities, there appears to be no close relationship between these taxa since *S. ovalis* differs consistently in its modally obovate leaves, racemose or paniculate inflorescences, pentamerous flowers with free petals, 40–50 stamens in several unequal series, free filaments, and lack of a conspicuous disc surrounding the apex of the ovary.

The trilocular ovary and the well defined filament tube adnate to the sympetalous corolla allow provisional placement of *S. austromexicana* in subg. *Symplocos* (subg. *Eusymplocos* in Brand), subsect. *Pseudoalstonia* of Brand's monograph. Within this subgenus, the closest affinities of *S. austromexicana* appear to be with *S. quindiuensis* Brand, a Colombian species, and *S. speciosa* Hemsley, also known only from the mountains of Oaxaca. These three taxa share such characters as a sympetalous corolla, triseriate staminal arrangement, and linear style. *Symplocos quindiuensis*

sis and *S. speciosa* differ most notably from *S. austromexicana* in their larger lanceolate leaves (6–12 cm long) having long apiculate to caudate-acuminate apices and short-pedicellate flowers disposed in congested racemes or subsessile fascicles.

Virtually nothing is known about the breeding system or pollination biology of *Symplocos* but the flowers of most species possess all the earmarks of entomophily and in some cases ornithophily. The flowers of *S. austromexicana* are homogamous and pollen release is accompanied by a slight inward bending of the free portions of the filaments to form a cluster of anthers crowning or closely adhering to the receptive stigma. Copious pollen deposition on stigmas was even noted on several unexpanded flowers examined in the field. Despite these observations, lack of information on compatibility relationships precludes a definitive statement on the breeding system at this time.

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LITERATURE CITED

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THORNEA (HYPERICACEAE), A NEW GENUS FROM MEXICO AND GUATEMALA

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Several collections of two species originally placed in *Hypericum* were made by Breedlove during recent years in connection with his study of the flora of Chiapas. They are distinct enough to warrant generic status. We call the new genus *Thornea*.

Comparison of floral morphology of *Thornea* and *Triadenum* Rafin. (see Wood and Adams, 1976) indicates that they are related. We believe that *Thornea* is allied with *Triadenum* rather than with the large, variable, and widely distributed genus *Hypericum*.

Floral characters of *Thornea* and *Triadenum* show their strongest resemblance in arrangement of the stamens. Both genera have nine fertile stamens grouped in three fascicles of three each, alternating with three sterile staminodial fascicles (or fasciclodes, Robson, 1972). Petals of *Thornea* and *Triadenum* are light or dark pink and greenish-white with parallel striations. In both genera, the ovaries are 3-carpellate and develop into three nearly separate dehiscent capsules.



Almeda, Frank. 1976. "A NEW SPECIES OF SYMPLOCOS (SYMPLOCACEAE) FROM MEXICO." *Madroño; a West American journal of botany* 23, 365–368.

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