

NEW AND NOTEWORTHY SPECIES OF DAPHNOPSIS (THYMELAEACEAE)
FROM MEXICO AND CENTRAL AMERICA

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Daphnopsis is a genus of about 55 species, native to tropical and subtropical regions of the New World. It is the largest neotropical genus of Thymelaeaceae, and is closely related to the neotropical Schoenobiblus. The genus has been revised and updated by Nevling (1959, 1960, 1961, 1963, 1967, 1978) and an additional species has been described by Laclette (1977).

Species of Daphnopsis are shrubs or small trees. Plants are dioecious and flowers are usually borne in terminal or axillary umbelliform racemes. They have a conspicuous hypanthium and petals are often absent or highly reduced. There is often a conspicuous disk at the base of the pistil or pistillode.

The following new species are published in preparation for various floristic treatments.

Daphnopsis megacarpa Nevling & Barringer, sp. nov. TYPE: MEXICO. Veracruz: Cerro Vaxin al lado S de V6lcan San Martin Tuxtla, 1150 m, 15 June 1972, Beaman 6181 (Holotype: F! Isotype: XAL).

Species Daphnopsis radiata affinis sed inflorescentiis feminae bracteatis, drupa solitaria 1.5-2.0 cm longa 8-12 mm lata.

Tree to 5 m tall; young stems sericeous, glabrescent, light brown, without conspicuous lenticels. Leaves alternate; petioles 5-10 mm long, slightly winged, glabrous; lamina elliptic, 10-20 cm long, 3-6 cm wide, membranous, glabrous, the base attenuate, the apex acuminate, the venation pinnate, prominent below, with a well defined submarginal vein. Pistillate inflorescence compact, umbellate; primary peduncle 5-8 mm long, bracteate, the bract linear, 3 mm long, densely sericeous, caducous. Pistillate flowers not seen. Drupe ovoid, green turning white, 1.5-2.0 cm long, 8-12 mm wide, slightly 4-angled, only one per inflorescence.

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2) Brooklyn Botanic Garden, 1000 Washington Ave., Brooklyn, NY 11225.

Additional specimens studied: MEXICO. Veracruz: San Andres Tuxtla, Lado N de Laguna Encantada Beaman 5325 (F, MEXU); Estacion Biológica Los Tuxtlas, Calzada 96 (F, MEXU); Estacion Biológica Los Tuxtlas, Rosas & Villapando 1405 (F, UNAM); Estacion Biológica Los Tuxtlas, Cerro Vigía, Gentry, Lott, et al. 32207 (A, MEXU, MO); Hidalgotitlan, 5 km SE de La Escuadra [17-16°N, 94-36 W], Vazquez et al. 1723 (F); San Andres Tuxtla, Estacion Biológica Los Tuxtlas [18-35 N, 95-01 W], Villegas 27 (F, MEXU).

Daphnopsis megacarpa is a distinctive species known from fruiting specimens collected between 450 and 1250 m in the Tuxtla range of southern Veracruz, Mexico. The pistillate inflorescences are unique because of the small, caducous bracts. The fruits are among the largest recorded for the genus and are borne one to an inflorescence. This species might be confused with some forms of D. americana, but it differs from that species by the pedicels less than 3.5 mm long. Vegetatively, it resembles D. radiata Donn.-Sm. but the large fruits distinguish it from that species. Daphnopsis costaricensis also has large fruits, but it can be distinguished from D. megacarpa by its very large, obovate leaves. We have not been able to locate flowering material of this species.

A specimen from Tlapacoyan, Nee & Hansen 18561, has staminate flowers and cannot be easily compared to the fruiting specimens from the Tuxtlas. It has similar vegetative features and comes from wet forest but it may represent a distinct, undescribed species. More collections are needed to clarify this problem.

Daphnopsis witsbergeri Nevling, Matekaitis & Barringer, sp. nov.

TYPE: EL SALVADOR. Achuachapan: Finca San Benito, Cerro La Piedra, del Filo, 13°54' N, 89°55' W, 980 m., 28 Aug. 1979, Witsberger 721 (Holotype: F!).

Species D. americana affinis, sed hypanthio infundibuliformi, antheris alternisepalo sessilis, pistillo glabro.

Shrubby tree to 6 m tall; young stems sparsely sericeous, glabrescent; older stems with reddish-brown cortex, the lenticels prominent, white. Leaves alternate; petioles 4-5 mm long, terete, glabrous; lamina narrowly elliptic, 3.5-6.7 cm long, 1.0-1.7 cm wide, subcoriaceous, glabrous, the base cuneate, the margin slightly revolute when dry, the apex obtuse to rounded, the venation prominent above and below. Staminate inflorescences terminal or lateral capitula, the

lateral capitula often opposite a leaf; primary peduncles 4-8 mm long, sericeous; rhachis 1-2 mm long; secondary peduncles minute. Staminate flowers 7-12 per inflorescence, green; pedicels 1-2 mm long, sericeous; hypanthium, 3.5 mm long, campanulate-funnelform, sericeous outside, glabrous within, strongly veined; calyx lobes reflexed, 2-2.5 mm long, very obscurely papillate within; stamens 8, obdiplostemonous, the antisepalous whorl inserted on the calyx lobes, exserted, the alternisepalous whorl inserted about 1 mm below the mouth of the hypanthium, included, the filaments 1-2 mm long, glabrous, the anthers ovoid, 0.5-0.7 mm long; disk tubular, free, undulate, to 0.5 mm long; pistillode, 1 mm long, glabrous, on a gynophore 0.5 mm long. Pistillate inflorescences in capitula; primary peduncles 6-8 mm long, sericeous; rhachis 1-2 mm long; secondary peduncles minute. Pistillate flowers 5-8 per inflorescence; pedicels 1 mm long, sericeous; hypanthium barrel-shaped, 2 mm long, sericeous outside, glabrous within; calyx lobes spreading, 1 mm long, obscurely papillate within; staminodia 8, papilliform; disk annular, free, less than 1 mm long; pistil 1-1.5 mm long, slightly sericeous above, the gynophore 0.1-0.2 mm long, the style slightly eccentric, about 1 mm long, the stigma capitate, exserted. Drupe globose, 6 mm diam., green, the style persistent.

Additional specimens studied: EL SALVADOR. Achuachapan: Finca San Benito, Cerro La Piedra del Filo, 13°54' N, 89°55' W, 28 Aug. 1979, Witsberger 722 (F); same locality, 23 Oct 1978, Davila s.n. (F).

Common name: "Chilindrón de tierra fría."

Daphnopsis witsbergeri is a member of subgenus Daphnopsis. It is known from a single locality in the province of Achuachapan, El Salvador. It appears to be most closely related to D. americana but is distinguished from that species by its funnelform hypanthium, subsessile anthers, and glabrous pistillode on a short gynophore.

Daphnopsis costaricensis Barringer & Grayum, sp. nov.

TYPE: COSTA RICA. Puntarenas, Osa Peninsula, ridge between Quebrada Banegas and Río Riyito, ca. 7 km W of Rincón de Osa, 100-300 m, 8° 41'N, 83° 33'W, 8 Oct 1984. Grayum, Schatz, Herrera, Valerín, & Chavarria 4094 (holotype: MO!).

Species insignis foliis grandis obovatis 15-27 cm longis, floris 1.0-1.3 cm longis albos tubulato-infundibuliformis, drupis 2.4 cm longis.

Few branched shrub to 2 m tall; young growth glabrous, older growth with a light brown cortex, lenticels not prominent. Leaves alternate; petiole 3-7 mm long, glabrous, very slightly winged; lamina oblanceolate to ovate, 15-27 cm long, 5.5-9.0 cm wide, glabrous, dark green above, silvery green below, subcoriaceous, the base cuneate, the apex obtuse to acuminate, the venation prominent below, without a well-developed marginal vein. Staminate inflorescence umbelliform, the umbellules capitate; primary peduncle 0-0.5 mm long; rhachis 3-5 mm long; secondary peduncle 10-12 mm long, finely sericeous, glabrescent, bracts sericeous, lanceolate. Staminate flowers 8-14 per head, white; pedicel 1.0-1.5 mm long; hypanthium tubular-funnelform, 10-13 mm long, striate, sparsely sericeous outside, glabrous within, 1 mm wide at base, 3-3.5 mm wide at the mouth, with a thickened faucal annulus within; lobes reflexed, the apex rounded, apiculate, the mucra densely sericeous; stamens yellow, 8, the antiseipalous whorl sessile, borne on the lobes, the alterniseipalous whorl borne at the mouth of the hypanthium; disk 4-lobed, 0.5 mm long; pistillode bottle-shaped, 1.5-2.0 mm long, the stigma clavate. Pistillate flowers not seen. Drupe ovoid, white, 2.4 cm long, 1.6 cm wide.

Additional specimen studied: COSTA RICA. Puntarenas: Osa Peninsula, NW of airfield, about 5 km W of Rincon de Osa, 50-200 m, moist forest with open understory, 9-12 Jan 1970, Burger & Liesner 7314 (F).

Daphnopsis costaricensis is known only from the Osa peninsula of Costa Rica. It is distinctive because of its large, obovate leaves, white, tubular flowers, and large fruits. It is easily distinguished from D. americana ssp. caribaea, the only other Costa Rican species, by these characters. It is best classified in subgenus Daphnopsis, but it is not closely related to any other Central American species. Like many other species found on the Osa Peninsula, its affinities seem to be with species from the lowland forests of western Colombia and Ecuador.

Daphnopsis correae Barringer & Nevling, sp. nov.

TYPE: PANAMA. Panama, region of Cerro Jefe, 1000 m, edge of forest, 3 Oct. 1969, Correa, Dressler, Escobar, & Lewis 1612 (Holotype: MO!).

Species insignis foliis obovatis obtusis subtus glaucis, floris bicoloribus, staminodiis 8, disco cupulato.

Shrub to 2 m tall; young growth glabrous, older growth with reddish-brown cortex, lenticels white. Leaves alternate; petioles 5-7 mm long, glabrous, dark brown, flattened above; lamina ovate

to obovate, 9-13 cm long, 4.5-6.0 cm wide, glabrous, glaucous below, coriaceous, the base cuneate, the margin recurved when dry, the apex obtuse to rounded, the venation prominent below. Pistillate inflorescence umbelliform; primary peduncle 1-4 mm long, glabrous; rhachis 1-2 mm long; secondary peduncles 4-5 mm long, glabrous; flowers 15-20 per head, the pedicel 1-2 mm long; hypanthium green, 2-3 mm long, 1 mm wide at the base, 1.5-2.5 mm wide at the mouth, sericeous outside, glabrous within, the lobes 1-2 mm long, rounded, brown, sericeous outside, thick, with a longitudinal ridge above the stamens; staminodes 8, the upper whorl subsessile, less than 1 mm long, the alternisepalous whorl attached at the mouth, sessile, the anthers less than 1 mm long; disk cupuliform, 0.7 mm long, glabrous, lobulate; ovary subglobose, the style 1 mm long, the stigma clavate. Drupes pinkish-red.

Additional specimen studied: PANAMA. Panama: Cerro Jefe, cloud forest, 850-900 m, Sytsma 1422 (MO). Canal Zone: between Fort San Lorenzo and Fort Sherman near Pavon road junction with road 82. 22 Oct. 1974. Mori & Kallunki 2733 (F, MO).

Daphnopsis correae is distinctive because of its bicolored flowers, pinkish-red fruits, and leaves with glaucous undersides. It is classified in subgenus Daphnopsis, but does not appear to be closely related to any of the other Central American species in that subgenus. It can be distinguished from all other Panamanian Daphnopsis by its umbelliform inflorescence, green and brown flowers, glaucous leaves, and shrubby habit. It is currently known from specimens collected near Cerro Jefe and in the Canal Zone, but material recently collected in Chiriqui Province may also represent this species.

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Literature cited

- Laclette, P. P. H. 1977. Sobre uma Nova Especie de Thymelaeaceae Daphnopsis aemygdioi. Bol. Mus. Nac. Rio de Janeiro, Bot. 46: 1-15.
- Nevling, L. I., Jr. 1959. A Revision of the genus Daphnopsis Ann. Missouri Bot. Gard. 46: 257-358.
- . 1960. Nomenclatural changes in Daphnopsis (Thymelaeaceae). J. Arnold Arb. 41: 412-415.

- . 1962. Note on Daphnopsis crassifolia (Thymelaeaceae). J. Arnold Arb. 43: 344-347.
- . 1963. Notes on Daphnopsis (Thymelaeaceae). J. Arnold Arb. 44: 402-418.
- . 1967. Thymelaeaceae, in B. Maguire, Botany of the Chimanta Massif. II. Mem. New York Bot. Gard. 17: 452-453.
- . 1978. A new species of Daphnopsis (Thymelaeaceae) from Ecuador. Selbyana 2: 308,309.