

NOTE ON *DAPHNOPSIS CRASSIFOLIA* (THYMELAEACEAE)

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AMONG A NUMBER OF SPECIES which were poorly or incompletely known at the time of my revision of the genus *Daphnopsis* (1959) was *D. crassifolia* (Poir.) Meissner. The description of this species necessarily was sketchy and incomplete because of the availability of relatively few and fragmentary specimens. I was not able to see fruiting material, for example, although it had been described previously. Since my publication, a relatively large number of specimens referable to this species have been rediscovered and examined. On the basis of new data drawn from recently examined herbarium material, the description has been recast and completed. In addition, these collections give the first precise knowledge of the range of the species (see MAP).

Daphnopsis crassifolia (Poir.) Meissn. in DC. Prodr. 14: 524. 1857.

Daphne crassifolia Poir. Encycl. Méthod. Bot. Suppl. 3: 316. 1813 (TYPE: *Nectoux s.n.* [♂]!).

Daphnopsis crassifolia var. *eggersii* Krug & Urb. Bot. Jahrb. 15: 350. 1892 (TYPE: *Eggers 2317* [♀]).

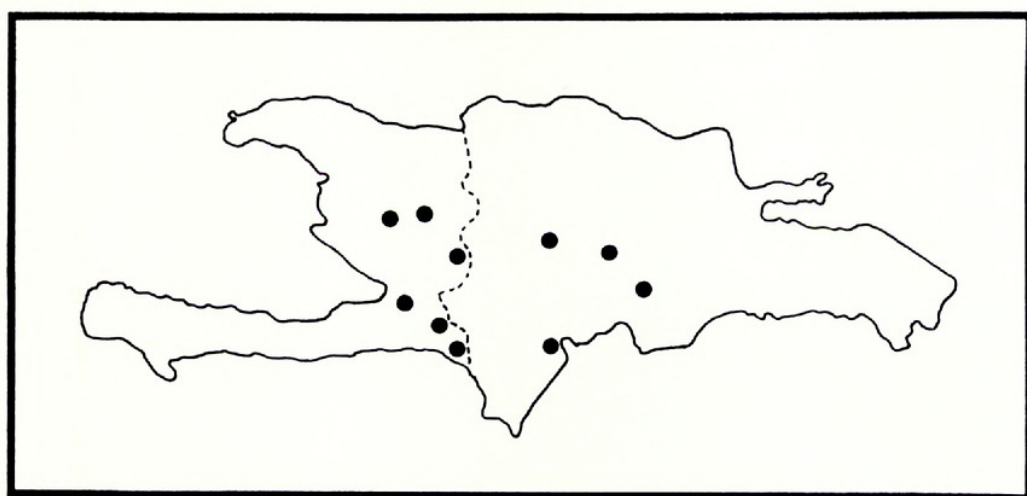
Hyptiodaphne crassifolia (Poir.) Urb. Symb. Ant. 2: 454. 1901.

Hyptiodaphne crassifolia var. *β. eggersii* (Krug & Urb.) Urb. *ibid.* 455.

Dioecious shrubs or trees, to 4 m. tall, the young branches terete, densely ochraceous-hirsute and glabrescent, rugose. Leaves simple, approximately whorled by irregular condensation of internodes or rarely alternate on very vigorous shoots, usually 3 or 4 per whorl; leaf blades rarely narrowly elliptic to elliptic to oblanceolate to obovate or very reduced and bractlike, the expanded blades 3–6 (–13.5) cm. long, 1–3.5 cm. broad, acute to acuminate or rotund and mucronulate at the apex, cuneate to subauriculate at the base, coriaceous, (sparsely) to densely ochraceous-sericeous and early glabrescent above and beneath, the costa plane to immersed above, elevated beneath, the primary lateral veins obscure above, prominent beneath, arcuate-ascending and forming a prominent submarginal vein; petiole 2–4 mm. long; exstipulate. Inflorescences borne terminally (but appearing axillary or extra-axillary) from young bracteate stems, umbelliform to subracemiform, hirsute, the primary peduncle 10–40 mm. long, the rachis 1–3 mm. long, the secondary peduncles 3–7 mm. long. Flowers unisexual, 4-merous, perigynous. Staminate flowers: 2–5 per inflorescence, white; pedicel obsolete to 0.5 mm. long; calyx tube tubular to broadly obconic, 7–10 mm. long, 2–4.5 mm. broad at the orifice, hirsute without, glabrous within; calyx lobes subequal, indefinitely papillate within, 2.5–4 mm. broad; petals connate into an obscure faucal annulus; antisepalous

stamens inserted at the orifice, subexserted, the alternisepalous inserted 2–3 anthers' lengths below the orifice, included, the anthers oblong, about 1 mm. long, 0.5 mm. broad, sessile; disc of irregular lobes, free, 1–3.5 mm. tall, glabrous; pistillode tenpin-shaped, 0.75–1.5 mm. tall, glabrous. Pistillate flowers: 2 or 3 per inflorescence, white; pedicel 1–1.5 mm. long; calyx tube more or less tubular, 4–8.5 mm. long, 2 mm. broad at the orifice, hirsute without, glabrous within; calyx lobes unequal, indefinitely papillate within, the outer 3–4.5 mm. long, 2.5–3.5 mm. broad, the inner 2.5–3 mm. long, 2 mm. broad; petals connate into an obscure faucal annulus; staminodia 8, papilliform, minute; disc of 4 lobes, the lobes irregularly shaped, free, 1–2 mm. tall, glabrous; gynoecium single, tenpin-shaped, 4.5–5.5 mm. long, the ovary 1-locular, glabrous, the single ovule anatropous, the style ca. 1.5 mm. long, thick, the stigma capitate, obscurely bilobed, included or very rarely exserted. Drupe ellipsoid, ca. 15 mm. long, 10 mm. in diameter, glabrous.

Endemic to the island of Hispaniola where it is abundant on lateritic soils, according to Ekman. It has been collected along river banks, in thickets and woods from 600 to 2000 m. altitude. Flowering is known from January through May and October; fruiting in April and May. The tough fibrous bark is used, according to Holdridge, for making rope. It is known locally as *mahaut* (Holdridge) and *jayao* (Jaquez).



Map of Hispaniola showing distribution of *Daphnopsis crassifolia*.

Dominican Republic. AZUA: Sierra de Ocoa, San José de Ocoa, Loma del Rancho, *Ekman H11641* (US, ♂). BARAHONA: Barahona, *Fuertes 891* (A, sterile); Firme Noche Buena, *Fuertes 1433* (A, NY, ♂), *1498* (A, NY, US, ♂). BENEFactor: Piedra del Aguacate, n. of Río Arriba, *Howard & Howard 9436* (A, ?). LA VEGA: prope Constanza, *Von Türckheim 3103* (GH, ?; NY, ♂, ♀; US, ♂, ♀). Without precise locality: Pico de Igua, *Jaquez 2028* (US, ♀). **Haiti.** ARTIBONITE: Massif du Nord, Hinche, *Ekman H11641* (NY, ♂); Massif des Bahos, Pte- Rio de l'Artibonite, Perodin, bridge above Ingrand, *Ekman H3454* (US, ♂). OUEST: vicinity of Mission, Fonds Varettes, *Leonard 3905*

(GH, NY, US, ♂); Massif de la Selle, Petionville, top of Mt. Tranchant, *Ekman H1159* (US, ♀); Massif des Cahas group, Las Caobas [Cahobas], Belladire [Belladère], Morne Lagoume-Hire (?), *Ekman H5627* (NY, ♂); Massif de la Selle, group Crête-a-Piquants, Port-au-Prince, Morne, Bercy, erupt., *Ekman H5910* (NY, ♂); Gros Cheval, Mornes des Commissaires, *Holdridge 951* (GH, MO, NY, US, ♀). Without precise locality: La Revellue (?), collector unknown *s.n.* (c, ♀); "Saint-Domingue," *Nectoux s.n.* (p-holotype of *Daphne crassifolia*, ♂).

The precise locality at which the holotype of this species was collected by Nectoux is unknown; consequently, it has not been mapped. Nectoux was "Jardinier en chef du Jardin du Roi" (Nectoux, 1791) in what is now Haiti. I have been unable to ascertain to what extent he travelled and collected.

Ekman's number *H11641* is a split collection, part collected in the Dominican Republic and part in Haiti. Both localities have been mapped.

The included stigma is an unusual feature of the pistillate flower of this species. The only exception I have seen, in which the stigma is exserted, is on *Von Türckheim 3103* (US). In this specimen the gynoecium is of average size, but the calyx tube is relatively short for the species, and this may account for the exsertion of the stigma.

Krug and Urban's *Daphnopsis crassifolia* var. *eggersii* is based on an Eggers specimen (2317) which is larger in respect to petiole length and leaf size than var. *crassifolia*. They give the following measurements for var. *crassifolia*: petiole 2 mm. long; leaf blade 3–3.5 cm. long, 1.3–1.7 cm. broad. In contrast, for var. *eggersii* they give: petiole 3–4 mm. long; leaf blade 5–8 cm. long, 2–3 cm. broad. These are the only contrasts, for var. *crassifolia* was known from staminate material and var. *eggersii* only from fruiting material. The measurements of leaf and petiole may be applied successfully to separate *Nectoux s.n.* (type of var. *crassifolia*) from a few specimens (the holotype of var. *eggersii* (Eggers 2317), was destroyed at Berlin and I have not located an isotype); but many specimens display enough variability on a single branchlet to overlap significantly the measurement ranges given for the two varieties. I believe that the leaf variation exemplified by this species is of a phenotypic, rather than of a genotypic nature.

In 1901, when Urban erected the genus *Hyptiodaphne* to accommodate *Daphne crassifolia* Poir. (= *Daphnopsis crassifolia* (Poir.) Meissn.), he indicated as one of the main features of the new genus the orthotropous ovule attached basally in the ovary. Unfortunately, there was (and is) little or no information available concerning ovule position and attachment within the genus *Daphnopsis* except that the ovules are anatropous. Domke has figured (1934, figs. 39a,b,c) several ovules from plants referable to *Daphnopsis crassifolia* which show, quite strikingly, considerable variation in ovule attachment. The ovules, however, are always of the anatropous type. A pistillate flower (*Holdridge 951*, GH) was cleared and stained to recheck this point. The ovary wall is heavily vascularized with veinlets composed of short and sinuous tracheary elements. The ovular

trace is developed poorly, but the trace and ovule position is nearly identical with that figured by Domke in *Fig. 39b*. If Urban based his observation on sectioned material he may have sectioned the ovule at right angles to the attachment, thus leading to the false impression of an orthotropous ovule (demonstrated in Domke's *fig. 39c*). Regardless of these difficulties, a slight shift in ovule position alone is not enough to warrant recognition of *Hyptiodaphne*.

LITERATURE CITED

- DOMKE, W. Untersuchungen über die systematische und geographische Gliederung der Thymelaeaceen. *Bibliot. Bot.* 27(111): 1-151. 1934.
- NECTOUX, M. Observations. *Mém. d'agric. d'econ. rurale et domestique* 110-123. 1791. [Reference incomplete; seen only as a separate.]
- NEVLING, L. I., JR. A revision of the genus *Daphnopsis*. *Ann. Missouri Bot. Gard.* 46: 257-358. 1959.



Nevling, Lorin I. 1962. "Note on *Daphnopsis crassifolia* (Thymelaeaceae)." *Journal of the Arnold Arboretum* 43(3), 344–347.
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