

A NEW SPECIES OF DRYPETES (EUPHORBIACEAE)
FROM PANAMA

GRADY L. WEBSTER

Department of Botany, University of California, Davis 95616

Drypetes, which with about 200 species is one of the larger genera of Euphorbiaceae (Airy Shaw, 1966), is best represented in the Old World tropics; only about 20 valid species have been recognized from neotropical America. The genus is rather isolated in the Euphorbiaceae (Webster, 1967); together with the satellite (and scarcely distinct) genera *Neowawarea* and *Putranjiva*, it is referable to the tribe Drypeteae, which has no very close neighbors in subfamily Phyllanthoideae (Webster, 1975). The species of *Drypetes* are rather poorly understood, partly because the erratic flowering, dioecious flower distribution, and nondescript foliage make recognition of imperfect specimens difficult.

The elusiveness of *Drypetes* is indicated by the fact that the species here described, a tree 15–25 m high, was overlooked by many botanists on Barro Colorado Island—one of the best-explored localities in the tropics—until 1971, when it was collected by Dr. Thomas Croat and Dr. Robin Foster. Recently I have examined two sheets of what appears to be the same species from southern Venezuela; these collections were annotated by Dr. Paul C. Standley with a manuscript name. Since both of the Venezuelan specimens are pistillate, and it is not absolutely certain that they are conspecific with the Panamanian plants, it seems best to describe the species from the Panama specimens and to commemorate Dr. Standley's association with the plant by dedicating the specific epithet to him.

Drypetes standleyi Webster, sp. nov. sect. *Drypetitis*, ad *D. variabilem* Utt. accedens sed foliis chartaceis abrupte acuminatis, staminibus 8 vel 9 minoribus, pedicellis ♀ brevioribus; a *D. amazonica* Steyerm. differt antheris glabriusculis, foliis chartaceis integris.

Tree c. 15–25 m high; trunk c. 0.25–1.25 m diam., buttressed at base; twigs terete, minutely hispidulous when young (trichomes 0.1 mm long or less), glabrate and pale in age and prominently lenticellate. Leaves chartaceous; petioles glabrous or nearly so, flattened adaxially, mostly 5–10 mm long; stipules scarious, very inconspicuous (less than 1 mm long); blades nearly glabrous (slightly strigose on midrib beneath), elliptic to broadly lanceolate, rather abruptly short-acuminate at tip, asymmetrically cuneate at base, mostly 7–11 cm long, 2.5–6 cm broad, plumbaceous and somewhat lucent on both sides; midrib salient beneath, main lateral veins 7–9 on a side, distinctly raised beneath, brochidromous, veinlets forming a prominulous reticulum; margins entire. Staminate

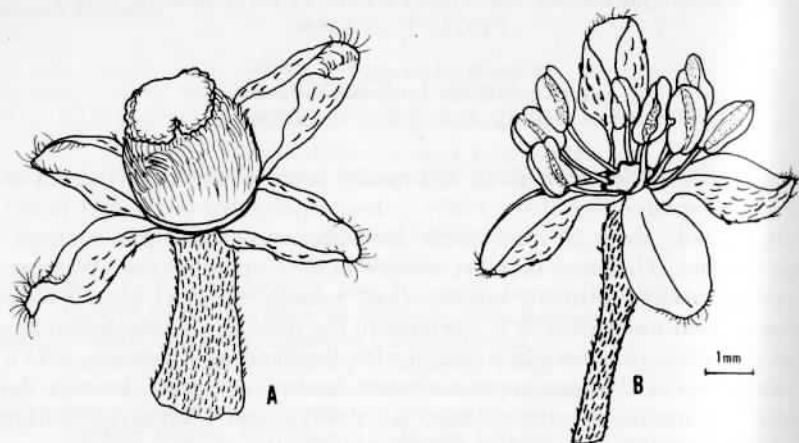


FIG. 1. Flowers of *Drypetes standleyi*. A, pistillate flower (Foster & Croat 2307). B, staminate flower (Croat 14849).

flowers in axillary clusters subtended by scarious bracteoles; pedicels 7–11 mm long, densely hispidulous; sepals 4, recurved, oblong-spathulate, marginally ciliate, appressed-hirsutulous on the back, glabrous or nearly so within, c. 2.5–3 mm long, 1.7–2.2 mm broad; disk somewhat fleshy, 1–1.5 mm across, glabrous; stamens 8 (rarely 9), filaments 1–2 mm long; anthers linear-oblong, glabrous (sometimes obscurely and very sparsely pubescent), (1.0–) 1.2–1.6 mm long; pistillode absent. Pistillate flowers axillary, 1–4 per cluster; pedicels stout (0.6–1 mm thick), straight, densely hispidulous, 2–6 mm long; sepals 4, deciduous, broadly obovate, minutely strigose on the back, glabrous within, marginally ciliate, 2.8–4.4 mm long, 2.5–3.2 mm broad; disk strigillose-ciliate, 2.0–2.3 mm across; ovary globose or ellipsoidal, c. 2 mm across, densely whitish-tomentose, 1-locular; stigma sessile or nearly so, reniform, glabrous, c. 1.7–2.5 mm across. Fruits somewhat compressed, strongly reticulate-wrinkled, appressed-hirsutulous, scarcely beaked, 2–2.2 cm long, 1.3–1.5 cm across; endocarp lignified, c. 1.5 mm thick with a pronounced obtuse ventral carina within; ovule attached apically by an elliptical scar, mature seeds not observed.

TYPE: Panama, Canal Zone, Barro Colorado Island, E of Armour Trail, 31 May 1971, *R. Foster & T. B. Croat* 2307 (pistillate; holotype, DAV; isotypes DUKE, MO, and to be distributed). Paratype (staminate flowers): Barro Colorado Island, Armour Trail, 31 May 1971, *T. B. Croat* 14849 (DAV, MO) (Fig. 1).

ADDITIONAL COLLECTIONS. PANAMA. Canal Zone: Barro Colorado I., 300 m E of Armour Trail, *Croat 14843* (DAV, MO); S of big trees on Armour Trail, *Croat 16516* (DAV, MO); S of Zetek 11, *Foster 1122* (DAV, DUKE). VENEZUELA. Apure: Las Piedras, alrededor de Puerto Paez, *J. Velez 2635* (VEN; fruits immature and determination somewhat uncertain). Bolivar: en los rebalsos de Guayape, Bajo Caura, *L. Williams 11986* (VEN).

Drypetes standleyi clearly belongs in sect. *Drypetes* (sect. *Hemicyclia* auct.) because of its small stipules, staminate flowers without pistillode, and unilocular ovary (Pax & Hoffmann, 1922; Webster, 1967). In the treatments of neotropical *Drypetes* by Monachino (1948) and Jablonsky (1967), the plants from Barro Colorado would key out to the South American species *D. amazonica* Steyrm. or *D. variabilis* Uitt., while in the revision by Pax and Hoffmann (1922) they would be close to the West Indian species *D. dussii* Kr. & Urb. or *D. glauca* Vahl. At first, it appeared that the Panamanian plants could be accommodated in *D. variabilis*, but they clearly differ in the thinner less rigid leaves and in a number of reproductive characters: smaller staminate sepals, stamens mostly 8 (occasionally 8 in *D. variabilis*, but usually 7), shorter fruiting pedicels, densely tomentose ovary, and wrinkled fruits. The differences between *D. standleyi* and its near congeners may be summarized in the following key:

- Stamens 4, anthers only 0.5 mm long, glabrous; leaves crenate, cuspidate-acuminate; Guiana *D. fanshawei* Sandw.
- Stamens 4-12, anthers larger (or else pubescent).
- Stamens mostly 4-7; leaves entire or nearly so.
- Staminate flowers several per axil; sepals less than 1 mm broad; anthers less than 1 mm long, pubescent; fruiting pedicels 5-12 mm long; drupes 0.8-1.3 cm long, oblique at tip; leaves chartaceous; West Indies *D. alba* Poit.
- Staminate flowers 1-3 per axil; pistillate sepals more than 1 mm broad; anthers over 1 mm long, glabrous; fruiting pedicels 15-21 mm long; drupes 2-2.5 cm long, symmetrical; leaves coriaceous; northern South America *D. variabilis* Uitt.
- Stamens mostly 8-12 (rarely 7).
- Drupes 2.5-3 cm long; staminate sepals at least 3.5-4 mm long, glabrous except for marginal ciliae; anthers slightly pubescent; Martinique *D. dussii* Kr. & Urb.
- Drupes less than 2.5 cm long; staminate sepals 2.5-3.5 mm long, pubescent on the back.
- Anthers glabrous (or very nearly so), 1.2-1.6 mm long; leaves chartaceous, entire; Panama and Venezuela
. *D. standleyi* Webster
- Anthers distinctly pubescent, 2.0-2.4 mm long; leaves coriaceous, entire to crenate; Brazil *D. amazonica* Steyrm.

ACKNOWLEDGMENTS

I wish to thank Dr. Tom Croat and Dr. Robin Foster for providing the material from Barro Colorado Island, the Missouri Botanical Garden (MO) and the Instituto Botánico in Caracas (VEN) for loan of specimens, and Ms. Mary Breckon for making the drawings.

LITERATURE CITED

- AIRY SHAW, H. K. 1966. A dictionary of the flowering plants and ferns, by J. C. Willis. 7th ed. Cambridge Univ. Press.
- JABLONSKY, E. 1967. Botany of the Guayana highland—part VII: Euphorbiaceae. Mem. N.Y. Bot. Gard. 17:80–190.
- MONACHINO, J. V. 1948. Three new species of *Drypetes*. Phytologia 3:32–35.
- PAX, F., and K. HOFFMANN. 1922. Euphorbiaceae—Phyllanthoideae—Phyllanthaceae—Drypetinae. Das Pflanzenr. 147. XV. (Heft 81):227–280.
- WEBSTER, G. L. 1967. The genera of Euphorbiaceae in the southeastern United States. J. Arnold Arb. 48:303–430.
- . 1975. Conspectus of a new classification of the Euphorbiaceae. Taxon 24:593–601.

DARMERA, THE CORRECT NAME FOR
PELTIPHYLLUM (SAXIFRAGACEAE), AND A NEW
COMBINATION IN PELTOPHYLLUM (TRIURIDACEAE)

RUDOLF SCHMID and MELVIN D. TURNER¹

Department of Botany, University of California, Berkeley 94720

Current work by the senior author on vegetative and floral anatomy of Burmanniaceae, Petrosaviaceae, and Triuridaceae, which are obscure, mainly tropical families of achlorophyllous, saprophytic monocotyledons, has led to two realizations: (1) the long discarded triuridaceous name *Peltophyllum* Gardner (1843) must be used in preference to *Hexuris* Miers (1850), and (2) of particular relevance to horticulturists and to western North American botanists, the well-known saxifragaceous genus *Peltiphyllum* (Engler) Engler (1891) requires a substitute name.

In 1841 John Miers (see also his 1845 paper) described *Triuris* with a single species, *T. hyalina*. Later, George Gardner (1843, 1845) published a new genus and species, *Peltophyllum luteum*. Gardner's original description follows (1843: 176; 1845):

PELTOPHYLLUM, Gardner.

Flores dioici. *Masc.* ignoti. *Fœm.* *Perigonium* 6-partitum, coloratum, patens, persistens; laciniis ovatis, longè acuminatis; acumine plano. *Ovaria* plurima, in tori apice sessilia, adpressa, libera. *Styli* ad apicem incrassati, obliquè truncati. *Fructus* ignotus.

¹ Present address of MDT: Department of Botany, Duke University, Durham NC 27706.