

ESCHWEILERA COSTARICENSIS (LECYTHIDACEAE): A NEW SPECIES FOR THE FLORAS OF COSTA RICA AND NICARAGUA

Eschweilera C. Martius ex DC. is the largest (ca. 90 species) and most poorly known genus of neotropical Lecythidaceae. The genus is characterized by zygomorphic flowers with coiled androecial hoods, absence of anthers and production of nectar in the androecial hoods, bilocular ovaries with basal placentation, seeds often with lateral arils, and lack of differentiated cotyledons (for illustrations of these features see figs. 9, 10G, 13, and 18 in Prance & Mori, 1979). The Central American species of *Eschweilera* provide examples of how poorly collected the species of *Eschweilera* are. Woodson (1958) included only four species of *Eschweilera* from Panama, whereas today we know of at least 14 from that country. Further north, species diversity of *Eschweilera* is markedly reduced. There are only three species in Costa Rica, two or possibly three in Nicaragua, one in Honduras, and one in Mexico. Most of these are known only from one or very few collections. The recently described *E. mexicana* (Wendt et al., 1985) is the first species of Lecythidaceae recorded from Mexico. It escaped collection until 1983 despite being common locally.

Although it might seem more appropriate to describe *E. costaricensis* in our forthcoming monograph of the zygomorphic-flowered genera of Lecythidaceae (Mori & Prance, manuscript), the need to have a name available for a treatment of the family for the Flora of Nicaragua (Prance & Mori, in press) mandates separate publication.

***Eschweilera costaricensis* Mori, sp. nov. TYPE:** Costa Rica. Heredia: Tropical wet forest along Guacimo ridge trail, La Selva Protection Zone, 275 m, 18 Jan. 1983 (fl), *Hartshorn 2555* (holotype, NY; isotypes, BM, CR, F, K, MO, PMA, US).

Ab *E. pittieri* venis impressis in pagina adaxiali foliorum et sine lobis calycis amplificatis in fructibus differt.

Understory tree, 5–10 m tall. Leaf-bearing branches 3–5 mm thick. Leaf blades elliptic to widely elliptic, 15–26 × 7–15 cm, glabrous, chartaceous, with 10–11 pairs of adaxially impressed lateral veins; apex long acuminate; base obtuse to rounded; margins entire; petiole 7–8 mm long.

Inflorescences simple racemes or weakly once-branched, terminal, in axils of uppermost leaves, or from branches, the principal rachis 1.5–3 cm long, pubescent, the pedicels ca. 7 mm long, pubescent. Flowers 3–4 cm in diam., calyx with 6, very widely ovate, obliquely oriented lobes, 6–7 × 5–7 mm, flat adaxially, convex abaxially, imbricate for ½ length; petals 6, widely elliptic to orbiculate, cream colored or light yellow. Hood of androecium 17 × 17 mm, forming double coil with slight beginning of triple coil; staminal ring with 169–181 stamens; filaments ca. 1 mm long, expanded towards apex; anthers 0.5 mm long. Hypanthium sulcate, pubescent; ovary 2-locular, with 6–9 ovules in each locule, ovules attached to a hemispherically shaped placenta arising from floor of locule; style obconical, oblique, 2 mm long, arising from umbonate ovary summit 1 mm high. Fruits cup-shaped, 2.5 × 4 cm (excluding operculum), the calycine ring inserted near apex of fruit base, supracalycine zone 0.5 cm wide, bearing persistent calyx lobes and pedicel when mature, pericarp 2–3 mm thick, with rough, lenticellate exterior surface; operculum umbonate, 2 cm high, umbo 5 mm high. Seeds triangular in cross section, ca. 20 × 15 mm, laterally arillate.

Distribution. Known only from wet forests in the Caribbean foothills of Costa Rica and Nicaragua where it is an occasional (0.1–1.0/ha) understory tree (Hartshorn, pers. comm.). Flowers have been collected in January and August and mature fruits have been gathered in January.

Additional specimens examined. NICARAGUA. RÍO SAN JUAN: Río Indio, Caño Negro, 4 Dec. 1982 (immature fr), *Araquistain 3424* (MO).

COSTA RICA. HEREDIA: La Selva Protection Zone, along Guacimo Ridge Trail, 300 m, 18 Jan. 1983 (fr, seed), *Hartshorn s.n.* (NY). LIMÓN: Hacienda Topeyco-Hacienda La Suerte, 29 km W of Tortuguero, 10°30'N, 83°47'W, 40 m, 22 Aug. 1979 (buds), *Davidson & Donahue 8632* (NY), 25 Aug. 1979 (fl), *Davidson & Donahue 8777* (NY).

Eschweilera costaricensis is most closely related to *E. pittieri* R. Knuth, which is relatively common and distributed from the Pacific coast of western Panama to the Magdalena Valley in the east and to the coastal forest of northern Ecuador in the west. *Eschweilera pittieri* does not

co-occur in the Caribbean forests of Costa Rica and Nicaragua with *E. costaricensis*.

Eschweilera costaricensis differs from *E. pittieri* by having impressed lateral veins on the adaxial leaf surface and fruits without knobby calycine protuberances.

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