

GYMNANTHES Sw.

Monoecious (rarely dioecious) trees or shrubs; twigs with scanty latex; indumentum simple, not glandular, often absent; leaves alternate, petiolate, stipulate, pinnately veined, glandular or eglandular, entire or crenulate; inflorescences terminal or axillary, usually bisexual, spiciform or racemiform, with 1-several basal male and many distal female cymules, bracts glandular at base; male flowers mostly pedicellate, calyx of 1 or 2 reduced sepals (or obsolete); petals and disk absent; stamens mostly 2-5, filaments free or connate; female flowers sessile or pedicellate; sepals 3, valvate, entire; petals and disk absent; ovary 3-locular, locules 1-ovulate; styles unbranched, free or basally connate; fruits capsular; seeds smooth, carunculate.

This neotropical genus, as interpreted here, includes about 40 species, the majority South American. The generic boundaries between Gymnanthes and other genera of Hippomaneae such as Actinostemon have remained controversial, and their limits need to be defined by a careful monographic study. In Nueva Galicia there is only a single species. Hippomaneae.

Gymnanthes riparia (Schlecht.) Klotzsch, Arch. Naturgesch. 7:

181. 1841. Excoecaria riparia Schlecht. Linnaea 7: 386. 1832.
Gymnanthes schlechtendaliana Muell. Arg. Linnaea 32: 100. 1863.
Sebastiania schlechtendaliana (Muell. Arg.) Muell. Arg. in DC.
Prodr. 15, part 2: 1181. 1866.

In Nueva Galicia recorded mainly from the Sierra de Manantlán, in mesic forest with Lauraceae, Alnus, Dendropanax, Magnolia, et al., at 1500-1800 m; also in barrancas in pine and oak forests.

Jal., Col., Oax., Ver. (Zoncuantla and Jalapa, Schiede 50, formerly at B, destroyed; photographs of syntypes at G, W), Guatemala, El Salvador, Costa Rica, Panama.

Jal., Mpio. Mascota, 15-30 km N of Mascota (Anderson 5968); Mpio. Autlán, 4-10 km SE of Ahuacapán (McVaugh & Koelz 935); 5-6 km NE of Corralitos (Vázquez & Guzmán 4237, IBUG, WIS); Las Joyas, Cañada de las Juntas, (Vázquez 3777, IBUG); Mpio. Tecalitlán, Sierra del Halo, 15 mi SE of Tecalitlán (McVaugh 16202, McVaugh & Koelz 1259); Col., Mpio. Minatitlán, Cerro Grande (Cházaro 4471, WIS); Mich., Mpio. Aguililla, pass 15 km S of Dos Aguas (McVaugh 22769).

Monoecious tree 8-15 m high; twigs terete, glabrous or hirtellous and glabrescent; leaves elliptic or elliptic-oblong (sometimes obovate), 5-10 (-13) cm long, 2-4.5 cm broad, acuminate

(sometimes abruptly so), cuneate at base, pinnately veined; lateral veins mostly 8-12, straight and distally forming loops, tertiary reticulum prominent and raised on both faces; glabrous or glabrescent on both faces; margins generally remotely and obscurely crenulate (sometimes subentire), plane, with a few glands proximally associated with the teeth; petiole slender, 4-9 mm long; stipules 0.5-1 mm long, entire, glabrous or puberulent, deciduous; inflorescences axillary, thyrsoidal, axis glabrous or hirtellous, with 1-4 female flowers proximal to the cymes of male flowers; bracts of male cymules 0.5-1 mm long, deltoid, usually with a pair of sessile glands 0.5-1 mm across on margins at base, subtending (1-) 3 more or less pedicellate flowers; filaments glabrous or hirtellous, ca 0.5 mm long; anthers deltoid, 0.5-0.7 mm long; female pedicel only 1-3 mm long at anthesis but elongating to 12-25 mm long in fruit; sepals 3, ovate, entire, 0.5-1.5 mm long; petals and disk absent; ovary glabrous or minutely strigose; styles unlobed, 2-3 mm long, basally connate; capsule oblate, 3-lobed, smooth, glabrous or glabrescent, 12-17 mm in diameter, cocci ribbed on back; columella 9-10 mm long; seeds plump, ovoid, smooth but usually more or less longitudinally banded, 6-7.5 mm long, 5-6.5 mm thick, often with a micropylar beak, hilum distinct; caruncle swollen or flattened, ca 1 mm across.

The populations of Gymnanthes riparia in Nueva Galicia

Manantlán appear to be geographically isolated from the nearest known station near the Guerrero/Oaxaca border, but it seems likely that the gap will be filled in during future collecting. The assignment of our plants to Gymnanthes riparia must remain somewhat problematic because of the taxonomic problems in the Mesoamerican taxa. A second very similar species, Gymnanthes actinostemoides, was described from Veracruz by Mueller (Linnaea 32: 103. 1863; DC. Prodr. 15(2): 1184. 1866) based on Linden 1357 from Zacualpan. Despite Mueller's placement of the two species in different sections on the basis of an almost indiscernible character (the reduced male sepals), it is clear they are very close. Although I earlier (Ann. Missouri Bot. Gard. 75: 1130. 1988) applied the name G. actinostemoides to the Central American specimens of this complex, further study has shown that the variability in pubescence and leaf venation cannot be satisfactorily resolved for the recognition of separate species. I now concur with Burger & Huft (Fieldiana Bot. N.S. 36: 124. 1995) in applying the name G. riparia to the Costa Rican and Panamanian specimens, and perhaps all of the Mesoamerican specimens of this complex. It is probable that further study will indicate that G. actinostemoides may be synonymous with G. riparia.

The Nuevan Galician specimens of Gymnanthes riparia have been confused with Sebastiania jaliscensis McVaugh, a species that is vegetatively rather similar. However, Sebastiania jaliscensis is readily recognizable by its long-acuminate and longer petiolate

leaves, smaller fruits, and ecarunculate seeds.