

Sleumer H. O. 1935. Olacaceae. Schoepfioideae, pages 30-31 (total 5-32) in Engler A, Harms H, eds. Die Natürlichen Pflanzenfamilien, vol. Edition 2, Part 16b. Leipzig: Wilhelm Engelmann.

### Subfam. III. **Schoepfioideae** Engl.

Engler in E. P. 1. Aufl. 1. Nachtr. (1897) 145. *Schoepfiaeae* Engl. in E. P. 1. Aufl. III. 1. (1894) 233. *Schoepfiaceae* van Tiegh. in Bull. Soc. Bot. France XLIII. (1896) 549.

Calyx not recognizable, but, if present, united above with the cup-shaped, truncated floral axis. Bract and bracteole usually moved up the pedicel, formed into a cup-shaped covering. Ovary inferior, 3-locular below, with 3 stepwise (geradläufigen), pendulous, integumentless ovules, their micropyles turning downward, one per chamber hanging down.

23. **Schoepfia** Schreb. Gen. (1789) 129 (*Codonium* Rohr ex Vahl in Skrivt. Naturh. Selsk. Kjøbenhavn II. [1792] 206, t. 6; Symb. III. [1794] 36; *Haenkea* Ruiz et Pavon, Fl. Per. III. [1802] 8, t. 231; *Diplocalyx* A. Rich. in Sagra, Hist. fis. Cuba XI. [1850] 81, t. 54; *Ribeirea* F. Allemão, Trab. Comm. Sc. Expl. Bot. Rio de Janeiro [1864] 29, 39; *Schoepfiopsis* Miers in Journ. Linn. Soc. XVII. [1878] 75). – Floral axis and the ovary adnate. Calyx not perceptible (see the description of the Subfamily). Petals 4-6, internally in the middle often with a hair bundle, united into a hollow bell-like crown, with the apex recurved. Stamens 4-6, usually 5, the crown increased, narrowly, upwards somewhat free; Anthers extrorse, sessile, ovate. Ovary with a fleshy, epigynous disk, with 3 ovules hanging down from the point of the placenta; Style thin, filiform, with a 3-lobed stigma. Pseudocarp drupe-like, with a crusty or parchment-like interior layer; Seed with a very small embryo at the apex of the endosperm. Shrubs or trees (probable root parasites) with entire, leather-like leaves and quite large, fragrant, white or yellow, usually heterostylous flowers in short, axillary racemes.

Important Special Literature: Roxburgh, Fl. Ind. ed. Carey 11. (1824) 188. A. de Candolle, Prodr. IV. (1830) 319. Siebold u. Zuccarini in Abh. Akad. München IV. 3. (1846) 135. – Miers in Journ. Linn. Soc. XVII. (1878) 68, t. 1. – Valetton, Crit. overz. Olacin. (1886) 123. Engler in Mart. Fl. Brasil. XII. 2. (1872) 34; in E. P. 1. Aufl. III. 1. (1894) 233. – Pierre, Fl. Forest. Cochinch. (1892) t. 265b. Urban, Symb. Antill. V. (1907) 177. – Gagnepain in Lecomte, Fl. Indo-Chine I. (1911) 820. Schneider in Sargent, Pl. Wilson. III. (1916) 321. – Goldman in Contr. U. S. Nat. Herb. XVI. (1916) 324. Herzog in Meded. Rijks Herb. Leiden N. 29 (1916) 4. – Standley in Contr. U. S. Nat. Herb. XXIII. (1922) 236. C. S. Sargent, Manual of the trees of North America, 2. ed. (1926). 305. (Hsen-Hsu) H u, Prodr. Fl. sinens. II. (1929) 12. Craib, Fl. Siam. enum. I. (1926) 272.

Type species: *Sch. Schreberi* Gmelin. The species designation is drawn from Johann David (born Wunsiedel 8 March 1752, died Ansbach 10 September 1800; Verf. of *Materia medica americana, potissimum regni vegetabilis* 1787).

Over 30 species in the tropics of the Old and New world, which are distributed as follows:

Section I. *Codonium* (Vahl) Endl. Gen. (1839) 744 (*Codonium* Vahl l. c.; *Haenkea* Ruiz

et Pavon l. c.; *Diplocalyx* A. Rich. l. c.). Few-flowered spikes, which form sessile, axillary umbels, which are provided with imbricately arranged bracts at the base. The bract and the two bracteoles of the individual flowers form a 3-lobed involucre and at the same time are fused with the pedicel. - About 26 species in tropical America: *Sch. californica* Brandeg. on the Mexican California peninsula, *Sch. angulata* Planch., *Sch. mexicana* DC., *Sch. parvifolia* Planch. and *Sch. Pringlei* Robins. in Mexico, *Sch. vacciniiflora* Planch. in Guatemala, *Sch. lucida* Pulle in Surinam, *Sch. brasiliensis* DC., *Sch. obliquifolia* Turcz. (Fig. 18D), *Sch. quintuplinervis* Turcz. and *Sch. velutina* Sandw. as well as 4 further species in Brazil mentioned by Glaziou, *Sch. tetramera* Herzog (and *Sch. obliquifolia* Turcz.) in Bolivia, *Sch. flexuosa* Roem. et Schult. and *Sch. Schreberi* Gmelin in Peru; furthermore 11 species in the West Indies: *Sch. chrysophylloides* Planch. (also in Florida, Guatemala), *Sch. cubensis* Britt. et Wils., *Sch. didyma* Wright, *Sch. obovata* Wright (= *Sch. pallida* (van Tiegh.) Engl., also in the Bahamas) and *Sch. stenophylla* Urban on Cuba, *Sch. haitiensis* Urban et Britton and *Sch. olivacea* Urban on Haiti, *Sch. angustata* Urban, *Sch. Harrisii* Urban and *Sch. multiflora* Urban on Jamaica (Fawcett and Rendle, Fl. Jamaica III. 1. [1914] 86), *Sch. arenaria* Britton on Puerto Rico.

Section II. *Euschoepfia* Engl. in E. P. 1. Aufl. 1. Nachtr. (1897) 145. Flowers in simple, axillary racemes, whose stalk is surrounded at the base by imbricately arranged bracts. Bracts and bracteoles as with Sect. I. 4 species in tropical Asia: *Sch. fragrans* Wall. (Fig. 18, A-C) with gold-yellow, strongly fragrant flowers, in Nepal, Bengal, Siam and Yunnan, *Sch. acuminata* Wall. in the Khasia mountains, Burma and Siam, *Sch. Miersii* Pierre in Cambodia and *Sch. Griffithiana* Valet. in Bengal.

Section III. *Schoepfiopsis* (Miers) Engl. l. c. 145 (*Schoepfiopsis* Miers in Journ. Linn. Soc. XVII. [1878] 75, t.2). - Flowers solitary, axillary spike, at whose base no scales leaves stand. Bracts fused with the pedicel, bracteoles absent. - 4 species in Eastern Asia: *Sch. jasminodora* Sieb. et Zucc. in Japan and China (Hupeh, Szechuan, Yunnan), *Sch. chinensis* Gard. et Champ. in Hong Kong and Kweichow, *Sch. gibbosa* (van Tiegh.) English with Macao, *Sch. Griffithii* (van Tiegh.) English in the Himalayas.

Fig. 18. A-C *Schoepfia fragrans* Wall. A branch piece. B flower close-up with half the perianth (i the involucre). C Ovary in longitudinal section. - D Pseudodrupe of *Sch. obliquifolia* Turcz. - From E.P. 1. Aufl.

