## **59.** NAUCLEA Linnaeus, Sp. Pl., ed. 2, 1: 243. 1762.

乌檀属 wu tan shu

Chen Tao (陈涛); Charlotte M. Taylor

Bancalus Kuntze.

Trees, unarmed; buds strongly compressed with stipules erect and pressed together [rarely subconical]. Raphides absent. Leaves opposite, usually with domatia; stipules caducous or persistent, interpetiolar, generally elliptic or obovate. Inflorescences terminal and sometimes also axillary, capitate with heads 1–5, globose, and solitary to fasciculate, many flowered, pedunculate, bracteate; peduncles articulate and often bracteate near middle. Flowers sessile, fused by their ovaries, bisexual, monomorphic. Calyx limb 4- or 5-lobed. Corolla white to yellow, funnelform to salverform, inside glabrous; lobes 4 or 5, imbricate in bud. Stamens 4 or 5, inserted in upper part of corolla tube, exserted; filaments short; anthers basifixed. Ovary 2-celled, ovules numerous in each cell, pendulous to horizontal on Y-shaped axile placentas attached to upper third of septum; stigma fusiform, exserted. Infructescences with fruiting heads each comprising a globose multiple fruit (i.e., syncarp). Fruit (i.e., fruitlets, arising from one flower) baccate, fleshy or fibrous, with calyx limb deciduous; seeds numerous, small, ovoid or ellipsoid, sometimes slightly compressed, without aril.

About ten species: tropical Africa, Asia, and Australia; one species in China.

The wood of several Nauclea species is strong and used for lumber.

The S Asian species *Nauclea orientalis* (Linnaeus) Linnaeus is occasionally cultivated; this can be recognized by its elliptic-oblong leaves 6–12 cm wide, its flowering heads 15–20 mm in diam. across the calyces, and its fruiting heads to 5 cm in diam. Both *N. officinalis* and *N. orientalis* species are encountered and occasionally confused in cultivation with the more commonly cultivated *Neolamarckia cadamba*, which has free (i.e., distinct or separate) flowers and free dehiscent fruit (see p. 255).

**1. Nauclea officinalis** (Pierre ex Pitard) Merrill & Chun, Sunyatsenia 5: 188. 1940.

乌檀 wu tan

*Sarcocephalus officinalis* Pierre ex Pitard in Lecomte, Fl. Indo-Chine 3: 26. 1922.

Trees, apparently evergreen, to 12 m tall; branchlets angled and rather flattened becoming terete, puberulent to glabrescent. Petiole 10–15[–20] mm; leaf blade drying papery, elliptic to broadly elliptic or infrequently ovate or obovate, 7- $11[-15] \times 3.5-7[-10]$  cm, glabrous, adaxially dark brown and matte to shiny, abaxially pale brown and matte, base cuneate to obtuse, apex shortly acuminate with tip slightly blunt; secondary veins 5-7 pairs, usually with tiny foveolate domatia in abaxial axils; stipules caducous, obovate to elliptic, 6–10 mm, glabrous, smooth, rounded. Inflorescences terminal, puberulent to glabrous; peduncles 1-3.5[-4.5] cm, in lower part articulate, bearing caducous bracts 2-4 mm; flowering heads 1-3, 5-6 mm in diam. across calyces, ca. 15 mm in diam. across corollas. Calyx limb deeply lobed; lobes 5, oblanceolate to spatulate, ca. 1 mm, glabrescent, fleshy, rounded to subtruncate. Corolla color unknown, narrowly funnelform, glabrous outside and apparently inside; tube 3–4 mm; lobes 5, ligulate to elliptic, 1-1.5 mm, obtuse to rounded. Stigmas 1.5-2 mm, exserted for ca. 3 mm. Fruiting heads (i.e., multiple fruit) yellow, 9-15 mm in diam., fleshy, with surface rough (i.e., pitted with calyx limb scars); seeds ca. 1 mm, with testa shiny black, foveolate. Fl. summer, fr. Jul, Sep.

Forests at middle elevations. Guangdong, Guangxi, Hainan [Borneo, Cambodia, Indonesia (Sumatra), Laos, Malaysia, ?Philippines, Thailand, Vietnam].

Fl. China 19: 249. 2011.