

1. *CORDIA* Linnaeus, Sp. Pl. 1: 190. 1753.

破布木属 po bu mu shu

Trees or shrubs. Leaves alternate, rarely opposite, usually evidently petiolate, margin entire or serrate, rarely lobed. Cymes mostly corymbose, ebracteate. Flowers bisexual, frequently heterostylous or ± functionally unisexual. Calyx tubular or campanulate, enlarged after anthesis, persistent. Corolla white, yellow, or orange-red, campanulate to funnellform, usually (4- or) 5(-8)-lobed; lobes antrorse or recurved. Stamens usually well developed; filaments often pubescent at base. Ovary 4-loculed, glabrous; ovule 1 per locule. Style twice 2-cleft, each branch with a spatulate or capitate stigma. Drupes ovoid, globose, or ellipsoid, frequently with watery or sticky fleshy mesocarp and bony endocarp, rarely with corky mesocarp or nutlike without fleshy mesocarp. Seeds 1–4, without endosperm; cotyledons plicate.

About 325 species: mostly in tropics of North and South America, poorly represented in Africa and Asia; five species in China.

- 1a. Corolla orange, more than 3 cm; mesocarp corky, fruit enclosed by accrescent tubular calyx 1. *C. subcordata*
- 1b. Corolla white or pale yellow, less than 2 cm; mesocarp mucilaginous to watery, sticky, fleshy, fruit subtended but not enclosed by persistent cupular calyx.
 - 2a. Calyx with prominent longitudinal veins 2. *C. kanehirai*
 - 2b. Calyx without longitudinal veins.
 - 3a. Leaf blade densely pubescent abaxially; cymes terminal, extra-axillary 3. *C. furcans*
 - 3b. Leaf blade glabrous abaxially or only veins and vein axils pubescent; inflorescences at apices of leafy lateral branches.
 - 4a. Leaf blade oblong to ovate; calyx lobes irregularly angular; inflorescences crowded in glomerules 4. *C. cochinchinensis*
 - 4b. Leaf blade ovate to elliptic; margin of calyx somewhat undulate; inflorescences widely spaced, in flat-topped cymes 5. *C. dichotoma*

1. *Cordia subcordata* Lamareck, Tabl. Encycl. 1: 421. 1792.

橙花破布木 cheng hua po bu mu

Trees to ca. 3 m tall; bark yellow-brown; branchlets glabrous. Petiole 3–6 cm, glabrous; leaf blade ovate to narrowly ovate, 8–18 × 6–13 cm, abaxially densely cottony in vein axils, adaxially ± spotted, base obtuse to rounded, rarely cordate, margin entire to subundulate, apex acuminate to acute. Cymes opposite leaves, ca. 12 cm wide at anthesis. Pedicel 3–6 mm. Calyx cylindrical, ca. 13 × 8 mm, leathery; lobes irregular, short. Corolla orange, funnellform, 3.4–4.5 cm; throat ca. 4 cm wide; lobes divaricate, orbicular. Drupes ovoid or obovoid, ca. 2.5 cm, with corky mesocarp, enclosed by enlarged persistent calyx. Fl. Jun.

Sandy, open woodland. Hainan (Yaxian Xian), Nanhai Zhudao [India, Indonesia, Thailand, Vietnam; Africa (E coast), Pacific Islands].

2. *Cordia kanehirai* Hayata, Icon Pl. Formosan. 6: 31. 1916.

台湾破布木 tai wan po bu mu

Trees small, dichotomously branched; branchlets light brown, terete, pubescent when young, glabrous in age. Petiole 1.5–3 cm; leaf blade lanceolate, 8–14 × 2.5–5 cm, densely appressed pubescent when young, glabrous in age, base cuneate to rounded, margin entire or inconspicuously serrate, apex acuminate to mucronate. Cymes terminal and lateral, widely spaced, 3–6 cm wide. Calyx cylindrical, 4–5 mm, densely strigose, margin with 5 small teeth, with 10 longitudinal veins. Corolla white; lobes tuberculate adaxially, ca. as long as tube. Stamens inserted above middle of corolla tube, slightly exserted. Drupes ellipsoid, straight, ca. 12 × 8

mm, subtended by persistent calyx; endocarp forming an elongated pyrene, irregularly wrinkled, tuberculate.

Taiwan [Japan].

Cordia kanehirai has been misidentified as *C. cumingiana* Vidal (of the Philippines), but it differs from that by having much narrower leaves.

3. *Cordia furcans* I. M. Johnston, J. Arnold Arbor. 32: 5. 1951.

二叉破布木 er cha po bu mu

Trees 5–15 m tall; bark gray. Petiole 3–6 cm; leaf blade ovate to elliptic, 5–15 × 4–12 cm, abaxially densely pubescent, rarely subglabrous, adaxially hispid, base rounded, rarely broadly cuneate or cordate, margin usually entire, rarely with inconspicuous obtuse teeth, apex obtuse. Cymes terminal and lateral; lateral cymes extra-axillary, 8–12 cm wide. Flowers sessile or nearly so, dimorphic, 4- or 5-merous. Calyx campanulate, ca. 5 mm, irregularly lobed; lobes 1–1.5 mm. Corolla white, 6.5–8.5 mm; tube 2.5–3 mm; throat with long white hairs; lobes oblong, 4–5.5 mm, recurved. Filaments ca. 3.5 mm in staminate flowers, 0.5–1 mm in bisexual flowers. Ovary ovoid. Style undeveloped, ca. 4 mm, first branches 1.5–2 mm, second branches 3–2.5 mm; stigma spatulate. Drupes red or pale red, ellipsoid, 5–8 mm in diam., glabrous or sparsely pubescent, surrounded by a lobed cupular persistent calyx. Fl. Nov, fr. Jun.

Open woodlands, roadsides; 100–1200 m. Guangxi, Hainan, Yunnan [India, Myanmar, Thailand, Vietnam].

4. *Cordia cochinchinensis* Gagnepain in Lecomte, Fl. Indo-Chine 4: 203. 1914.

越南破布木 yue nan po bu mu

Trees or climbing shrubs, 2–4 m tall. Petiole 1–2 cm; leaf blade oblong to ovate, 3–8 × 2–3.5 cm, adaxially sometimes densely spotted, base cuneate to rounded, rarely cordate, margin entire, apex obtuse to retuse; vein axils with tufts of short hairs. Inflorescences terminating lateral branches, in glomerules. Flowers bisexual, externally glabrous. Calyx cupular, 7–8 mm; lobes 4 or 5, irregular, angular. Corolla white or pale yellow, glabrous, 1.4–1.6 cm; tube ca. as long as lobes. Filaments 3.5–4.5 mm, glabrous or sparsely short pubescent, anthers ca. 1.5 mm. Style ca. 3 mm, first branches ca. 1 mm, second branches 3.5–5 mm. Drupes subglobose, 8–10 mm in diam., surrounded by persistent calyx. Fr. Aug–Dec.

Woods along beaches, arid sandy hills. Hainan (Yaxian Xian) [Thailand, Vietnam].

As noted by Johnston (J. Arnold Arbor. 32: 11. 1951), the description does not agree with that of the type of *Cordia cochinchinensis*. The true identity of the Chinese specimens is not clear at present.

5. *Cordia dichotoma* G. Forster, Fl. Ins. Austr. 18. 1786.

破布木 po bu mu

Varronia sinensis Loureiro.

Trees 3–4(–20) m tall. Petiole 2–5 cm; leaf blade ovate to broadly ovate or elliptic, 6–13 × 4–9 cm, sparsely pubescent or glabrous, base rounded to broadly cuneate, margin usually subundulate to undulate dentate, rarely entire, apex obtuse to mucronate. Inflorescences terminating leafy lateral branches, dichotomously branched into corymbose cymes, widely spaced, 5–8 cm wide. Flowers dimorphic, sessile. Calyx campanulate, 5–6 mm, 5-lobed; lobes unequal, triangular. Corolla white, ca. as long as calyx; lobes shorter than tube, margin somewhat undulate. Filaments of staminate flowers ca. 3.5 mm, filaments of bisexual flowers 1–2 mm. Rudimentary pistil globose. Style united portion 1–1.5 mm, first branches ca. 1 mm, second branches 2–3 mm; stigma spatulate. Drupes yellow or reddish, subglobose, 1–1.5 cm in diam., with sticky mesocarp, surrounded by persistent calyx. Fl. Feb–Apr, fr. Jun–Aug. $2n = 48, 50$.

Open woods on slopes, mountain streamsides. Fujian, Guangdong, Guangxi, Guizhou, Taiwan, SE Xizang, Yunnan [Cambodia, N India, Indonesia, Japan (Ryukyu Islands), Kashmir, Laos, Malaysia, Myanmar, Pakistan, Thailand, Vietnam; NE Australia, Pacific Islands].

The seeds contain oil, the fruit is used for medicine, and the wood is used for house construction and farm tools.

