

CORIARIACEAE

马桑科 ma sang ke

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Shrubs decumbent or subshrubby herbs; branchlets ribbed. Leaves opposite or verticillate, entire; stipules caducous, minute. Flowers small, bisexual or unisexual, solitary or arranged in a raceme. Sepals 5, imbricate. Petals 5, valvate, smaller than sepals, fleshy, keeled within, enlarged and enclosing carpels after anthesis and forming a pseudodrupe. Stamens 10 in 2 series, free and opposite to petals; anthers exerted, large, 2-celled, longitudinally dehiscent. Carpels 5–10, free; ovary superior; ovule 1 per locule, pendulous, anatropous; styles 5, free, linear; stigma recurved. Pseudodrupe (capsule) obovate, red to black when mature; endosperm thin or absent, embryo erect.

One genus and ca. 15 species: China and Himalayan region to Japan, Philippines, and Pacific islands (New Zealand); Central and South America (Mexico to Chile), Mediterranean region; three species in China.

Ming Tien lu. 1980. Coriariaceae. In: Cheng Mien & Ming Tien lu, eds., Fl. Reipubl. Popularis Sin. 45(1): 62–66.

1. CORIARIA Linnaeus, Sp. Pl. 2: 1037. 1753.

马桑属 ma sang shu

Morphological characters and geographical distribution are the same as those of the family.

- 1a. Subshrubby herbs; inflorescence terminal 3. *C. terminalis*
1b. Shrubs; inflorescence axillary.
2a. Leaf blade elliptic or broadly elliptic, apex acute; male flower with sterile pistils 1. *C. nepalensis*
2b. Leaf blade ovate-lanceolate, apex acuminate; male flower without sterile pistils 2. *C. intermedia*

1. *Coriaria nepalensis* Wallich, Pl. Asiat. Rar. 3: 67. 1832.

马桑 ma sang

Coriaria kweichowensis Hu; *C. sinica* Maximowicz; *Morus calva* H. Léveillé.

Shrubs decumbent, 1.5–2.5 m tall, with horizontally spreading branches; branchlets tetragonous or narrowly 4-winged; young branches purplish red, puberulent or glabrescent; old branches purplish brown, with clearly prominent lenticels; bud scales purplish red, ovate or ovate-triangular, 1–2 mm, membranous, glabrous. Leaves opposite; petiole purple, 2–3 mm, puberulent, inflated into pad at base; leaf blade elliptic or broadly elliptic, 2.5–8 × 1.5–4 cm, papery to thinly leathery, both surfaces glabrous or puberulent on midrib and lateral veins, 3-veined to apex, veins raised abaxially, slightly impressed adaxially, base rounded, margin entire, apex acute. Inflorescences axillary. Male inflorescence 1.5–2.5 cm, densely multiflorous, flowers opening before leaves, rachis glandular puberulent; bracts and bracteoles ovate-orbicular, ca. 2.5 × 2 mm, membranous, translucent, concave, margins fringed denticulate upward; pedicel ca. 1 mm, glabrous; sepals ovate, 1.5–2 × 1–1.5 mm, margins translucent, fringed denticulate; petals ovate, very small, ca. 0.3 mm; filaments linear, ca. 1 mm, elongating in anthesis, 3–3.5 mm, anthers oblong, ca. 2 mm; sterile pistils small. Female inflorescence with flowers opening at same time that leaves appear, 4–6 cm, rachis glandular puberulent; bracts purplish, ca. 4 mm; pedicel 1.5–2.5 mm; sepals same as in male flower; petals small, fleshy; stamens short, filaments ca. 0.5 mm; carpels 5, compressed, auriculate, ca. 0.7 × 0.5 mm, styles ca. 1

mm, stigma purplish red. Fruit red to dark purple or purplish black when mature, subglobose, 4–6 mm in diam. Seeds ovoid-oblong. Fl. Feb–May, fr. May–Aug. $2n = 40$.

Thickets, mountain slopes; 200–3200 m. Gansu, Guangxi, Guizhou, Henan, Hong Kong, Hubei, Hunan, Jiangsu, Shaanxi, Sichuan, Xizang, Yunnan [Bhutan, India, Kashmir, Myanmar, Nepal, Pakistan].

2. *Coriaria intermedia* Matsumura, Bot. Mag. (Tokyo) 12: 62. 1898.

台湾马桑 tai wan ma sang

Coriaria japonica A. Gray subsp. *intermedia* (Matsumura) T. C. Huang; *C. summicola* Hayata.

Shrubs small, 1–2 m tall, much branched; branchlets purplish red, 4-angled, lenticular-lenticellate; bud scales ovate, 2–3 mm, membranous. Leaves opposite; petiole to 1–2 mm, inflated into pad at base; leaf blade ovate-lanceolate, (2.5–)3.5–6.5(–7) × (1–)1.3–2.2(–3) cm, membranous or papery, both surfaces glabrous, 3-veined to apex, veins raised abaxially, slightly impressed adaxially, lateral veins slightly impressed adaxially, base broadly cuneate or subrounded, margin entire, apex acuminate. Raceme axillary, 2–4 cm, with numerous triangular bud scales at base. Pedicel 2–3 mm. Sepals ovate-orbicular, ca. 2.5 × 2 mm, margin fringed denticulate at apex, apex obtuse. Petals linear-oblong, small, 0.5–1 × ca. 0.5 mm. Filaments linear, ca. 5 mm, inflexed; anthers linear-oblong, ca. 2.5 mm. Female flowers with or without sterile stamens; carpels 5, laterally compressed, auriculate, ca. 0.7 × 0.5 mm, adaxially ± united at middle part; styles erect, ca. 1 mm; stigma pink, ca. 1.5 mm. Fruit red when

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mature, globose, 3–4 mm in diam. Fl. Jan–Apr, fr. May–Nov. $2n = 40$.

Forests, thickets; below 2500 m. Taiwan [Philippines].

3. *Coriaria terminalis* Hemsley, Hooker's Icon. Pl. 23: t. 2220. 1892.

草马桑 *cao ma sang*

Coriaria terminalis var. *xanthocarpa* Rehder & E. H. Wilson.

Herbs subshrubby, 0.5–1 m tall; branches few; branchlets tetragonous or slightly narrowly winged, purplish glandular pubescent. Leaves sessile or shortly petiolate; leaf blade: lower ones broadly ovate or almost orbicular, 4–6(–7.5) × 3–5 cm, upper ones or those on lateral branches ovate-lanceolate or oblong-lanceolate, 2.5–4 × ca. 1.5 cm, papery, both surfaces glan-

dular pubescent, basally (3–)5–9-veined, base cordate and semi-amplexicaul or subrounded, margin glandular ciliate, apex acute or rounded, mucronate at tip. Raceme terminal, 12.5–21 cm; rachis purplish red, white glandular pilose. Flowers small, unisexual and plant monoecious; bracts purple, lanceolate, 3–4 mm. Pedicel 3–6 mm, elongated to 1.2 cm at fruiting, glandular pilose. Sepals broadly ovate, ovate, or ovate-lanceolate, 2.5–3 × 1.3–2.5 mm, outside grayish white punctulate, margins translucent, apex acuminate or acute. Petals ovate, small, 1–1.5 × ca. 0.6 mm, fleshy, enlarged after anthesis. Filaments linear, ca. 0.8 mm; anthers oblong, 2–2.5 mm. Carpels 5, laterally compressed, ca. 1 mm; styles short; stigma ca. 2 mm. Fruit purplish red to black when mature, 2.5–3 mm in diam. Fl. May–Jun, fr. Jul–Sep. $2n = 40$.

Thickets on mountain slopes; 1800–3700 m. W Sichuan, S and SE Xizang, NW Yunnan [Bhutan, India, Nepal].