
铁苋菜属tie xian cai shu

丘华兴Chiu Hua-hsing, Kiu Hua-shing, Kiu Hua-xing); Michael G. Gilbert

Herbs, shrubs or trees, mostly monoecious, sometimes dioecious; indumentum of simple or sometimes gland-tipped hairs. Leaves alternate; stipules lanceolate or subulate, sometimes minute, deciduous; leaf blade simple, margins crenate or dentate, rarely subentire; venation pinnate or palmate. Inflorescences axillary or terminal, mostly unbranched, bisexual or unisexual, sexes very diversely arranged, mostly bisexual with male flowers in fascicles distally along slender axis, base with 1 to few female flowers, mostly enclosed within prominent leafy bracts. Male flowers sessile; sepals 4, valvate, membranous; petals absent; disk absent; stamens often 8; filaments free; anthers 2-locular, anther-thecae pendulous and vermiciform; pistillode absent. Female flowers 1–3 per bract, often sessile; bracts often dentate or lobed, accrescent in fruit; sepals 3–5, shortly connate, imbricate; ovary (2 or)3-locular; styles mostly free, laciniate. Fruit a capsule 2- or 3-lobed, small. Seeds subglobose or ovoid, smooth; caruncle and aril absent.

About 450 species: widely distributed in tropical and subtropical regions; 18 species (seven endemic, two introduced) in China.
15b. Stipules lanceolate, pilose.

17a. Female bracts 10–12 mm, dentate, pilose ................................................................. 8. A. schneideriana

17b. Female bracts ca. 6 mm, denticulate, glabrous ............................................................. 9. A. matsudae


热带铁苋菜  mă yè tiě xiān cài

Acalypha australis var. lanceolata Hayata; A. chinensis Roxburgh; A. indica Linnaeus var. minima (H. Keng) S. F. Huang & T. C. Huang; A. minima H. Keng; A. pauciflora Hornemann; Urtica gemina Loureiro.

Annual herbs, 0.2–0.5 m tall, monoecious. Branchlets pilose. Stipules lanceolate, 1.5–2 mm; petiole 2–6 cm; leaf blade oblanceolate, ± rhombic-ovate, or broadly lanceolate, 3–9 × 1–5 cm, membranous, abaxially pilosulose along veins, adaxially glabrous, base cuneate, rarely obtuse, crenate, apex shortly acuminate. Inflorescences axillary, rarely terminal, unbranched, 1.5–5 cm, pilosulose, bisexual; peduncle 0.5–3 cm; female bracts proximal, 1 or 2, ovate, cordate, accrescent to 1.4–2.5 × 1–2 cm in fruit, pilose, margin crenate; male portion distal, short to almost capitulate, slender; bracts ovate, ca. 0.5 mm. Male flowers 5–7 per bract; pedicel ca. 0.5 mm; calyx segments 4, ca. 0.5 mm; stamens (7 or)8. Female flowers 1–3 per bract, sessile; sepals 3, narrowly ovate, 0.5–1 mm, pilose; ovary pilose; styles 3, ca. 2 mm, 5–7-laciniate. Capsule 3-locular, ca. 4 mm in diam., pilose and tuberculate. Seeds subovoid, 1.5–2 mm, smooth. Fl. and fr. Apr–Dec.

Grasslands, slopes, cultivated areas; below 100–1200(–1900) m. Throughout China except Nei Mongol and Xinjiang [Japan, Korea, Laos, Philippines, E Russia, Vietnam; naturalized in N Australia and E India].


裂苞铁苋菜  lè bāo tiě xiān cài

Acalypha brachystachya Hornemann; A. conferta Roxburgh; Nanocnide clossii H. Léveillé & Vaniot.

Annual herbs, 0.5–1 m tall, monoecious. Branchlets pubescent. Leaves often ± apically clustered into flat rosette; stipules triangular, ca. 1 mm; petiole slender, 1.5–3.5 cm; leaf blade rhombic-ovate or subovate, 2.35 × 1.5–2.5 cm, membranous, pilosulose along veins, base cuneate, margin serrate, apex acute; basal veins 5. Inflorescences axillary, unbranched, 2–7 cm; pilosulose, bisexual; peduncle short; female bracts proximal, 3–7, 1- or 2-flowered, ovate-cordate, ca. 5 mm, margin crenulate, longitudinally many veined, pilose or subglabrous; distal male portion short, slender; bracts ovate-triangular or broadly triangular, ca. 0.5 mm; allomorphic female flower at apex. Male flowers 5–7 per bract; pedicel ca. 0.5 mm; sepals 4, ovate, ca. 0.4 mm; stamens 8. Female flowers sub-sessile; sepals 3, triangular, ca. 0.5 mm, ciliate; ovary pilose; styles 3, 2.5–3 mm, 5-laciniate. Capsule 3-locular, ca. 2 mm in diam., pilosulose. Seeds ovoid, ca. 1.5 mm, minutely punctulate. Fl. and fr. May–Oct.

Grasslands, wastelands; between 100 m. E Hainan, S Taiwan [Cambodia, India, Indonesia, Japan, Malaysia, Philippines, Sri Lanka, Thailand, Vietnam; tropical Africa; naturalized in tropical America].


1894.


铁苋菜  tiě xiān cài

Acalypha australis var. lanceolata Hayata; A. chinensis Roxburgh; A. indica Linnaeus var. minima (H. Keng) S. F. Huang & T. C. Huang; A. minima H. Keng; A. pauciflora Hornemann; Urtica gemina Loureiro.

Annual herbs, 0.2–0.5 m tall, monoecious. Branchlets pilose. Stipules lanceolate, 1.5–2 mm; petiole 2–6 cm; leaf blade oblong-ovate, ± rhombic-ovate, or broadly lanceolate, 3–9 × 1–5 cm, membranous, abaxially pilosulose along veins, adaxially glabrous, base cuneate, rarely obtuse, crenate, apex shortly acuminate. Inflorescences axillary, rarely terminal, unbranched, 1.5–5 cm, pilosulose, bisexual; peduncle 0.5–3 cm; female bracts proximal, 1 or 2, ovate, cordate, accrescent to 1.4–2.5 × 1–2 cm in fruit, pilose, margin crenate; male portion distal, short to almost capitulate, slender; bracts ovate, ca. 0.5 mm. Male flowers 5–7 per bract; pedicel ca. 0.5 mm; calyx segments 4, ca. 0.5 mm; stamens (7 or)8. Female flowers 1–3 per bract, sessile; sepals 3, narrowly ovate, 0.5–1 mm, pilose; ovary pilose; styles 3, ca. 2 mm, 5–7-laciniate. Capsule 3-locular, ca. 4 mm in diam., pilose and tuberculate. Seeds subovoid, 1.5–2 mm, smooth. Fl. and fr. Apr–Dec.

Grasslands, slopes, cultivated areas; below 100–1200(–1900) m. Throughout China except Nei Mongol and Xinjiang [Japan, Korea, Laos, Philippines, E Russia, Vietnam; naturalized in N Australia and E India].


裂苞铁苋菜  lè bāo tiě xiān cài

Acalypha brachystachya Hornemann; A. conferta Roxburgh; Nanocnide clossii H. Léveillé & Vaniot.

Annual herbs, 0.2–0.8 m tall, monoecious. Stems slender, pubescent and sparingly hairy. Stipules lanceolate, ca. 5 mm; petiole 2.5–6 cm; leaf blade ovate or rhombic-ovate, 2.5–5.5 × 1.5–3.5 cm, membranous, base cuneate, sometimes cuneate, margin crenate, apex acute to acuminate; basal veins 3–5. Inflorescences axillary, 1–3 together, 0.5–0.9 cm, pilose, 5-laciniate; peduncle almost absent; female bracts 3–5, ca. 5 mm, 3–5-lobed, middle lobes oblong, lateral lobes smaller, 1-flowered; distal male portion short to almost capitulate; bracts ovate, ca. 0.2 mm; apex sometimes with allomorphic female flower. Male flowers fascicled; pedicel ca. 0.5 mm; calyx ca. 0.3 mm in diam. in bud, pilose; stamens 7 or 8. Female flowers: pedicel short; sepals 3, suboblong, ca. 0.4 mm, ciliate; ovary pilose and hirtellous; styles 3, ca. 1.5 mm, 3–5-laciniate. Capsule 3-locular, ca. 2 mm in diam., pilose and tuberculate. Seeds ovoid, ca. 1.2 mm, minutely reticulate. Fl. May–Dec.

Grasslands on mountain slopes, roadsides, streambeds, terraced fields, usually in disturbed areas; 100–1900 m. Anhui, S Gansu, Guangdong, Guangxi, Guizhou, Hebei, Henan, Hubei, Hunan, Jiangsu, Jiangxi, S Shaanxi, Sichuan, Taiwan, Yunnan [Bhutan, India, Indonesia, Malaysia, Nepal, Sri Lanka, Vietnam; tropical Africa].

Deciduous shrubs, 1–1.5 m tall. Branchlets whitish pubescent; branches slender, reddish, glabrescent. Stipules triangular, 2–2.5 mm; petiole 1–5 cm, pilose; leaf blade ovate, narrowly ovate, or rhombic-ovate, 2.5–10 × 1.5–3.5 cm, membranous, both surfaces pilose along veins, base cuneate or obtuse, margin coarsely serrate, apex acuminate or ciliate-acuminate; basal veins 3. Spikes axillary, commonly bisexual, 4–6 cm; slender peduncle 3–10 mm, pilosulous; base with 1 female flower, distally with male flowers, sometimes entirely male, or shortened inflorescence with only 1 female flower; female bracts cupulate, fruiting accrescent, ca. 5 × 8 mm, 11-denticulate, pilose; male bracts subovate, ca. 1 mm, pilose. Male flowers 3–9, fascicled; pedicel ca. 1 mm; sepals 4, ovate, ca. 0.8 mm; stamens 8. Female flowers sessile; sepals (3 or)4, subovate, 1–1.2 mm, acute, puberulent; ovary hairy; styles 3, 4–5 mm, laciniate. Capsule 3-locular, ca. 3 mm in diam., pilose and scattered tuberculate. Fl. Apr–Aug.

- Mountain valleys or slopes, gullies, thickets; 100–1700 m. S Gansu, Guangxi, Guizhou, W Hubei, S Shanxi, Sichuan, C and NE Yunnan.


Deciduous shrubs, 1–2 m tall. Younger branchlets pubescent; branches elongated, brownish, glabrous. Stipules subulate, 1.5–3 mm; petiole 3–6 cm; leaf blade ovate-oblong, 9–15 × 5–8.5 cm, lightly papyraceous, both surfaces pilose along midvein, base obtuse, margin coarsely serrate, apex acuminate or acute; basal veins 3. Spike 1, rarely 2, axillary, commonly bisexual, slender, 5–14 cm, pilosulous; peduncle 5–8 mm; base with 1 (or 2) female flowers, distally with male flowers, sometimes entirely male; female bracts broadly ovate, fruiting accrescent, 6–10 × 5–12 mm, 7–9-denticulate, subglabrous; male bracts narrowly ovate, ca. 1 mm. Male flowers 7–13, fascicled or glomerate; pedicel ca. 1.5 mm; sepals 4, ovate, ca. 1 mm, acute; stamens 8. Female flowers sessile; sepals 3, narrowly ovate, ca. 1 mm, acute, somewhat ciliate; ovary subglobose, densely setulose; styles 3, ca. 6 mm, pectinate-lacinulate. Capsule 3-locular, ca. 4 mm in diam., scattered very short softly setiform. Seeds ovoid, ca. 2 mm, grayish, smooth. Fl. Apr–Dec, fr. Jun–Dec.

- Mountain valleys or slopes, gullies, thicklets; below 100 m. NW Guangdong, SE Guangxi.


Deciduous shrubs, 1–4 m tall. Branchlets yellowish tomentose or sericeous when young; branches elongated, reddish, glabrous. Stipules lanceolate, 3–6 cm, pilose, deciduous; petiole 1.5–6 cm, pilose; leaf blade ovate or broadly ovate, 3–11 × 2–7 cm, membranous, both surfaces pilose, base cuneate, margin coarsely serrate, apex acuminate; basal veins 3. Spike axillary, often unisexual, rarely bisexual, slender, 3–6 cm, pubescent, peduncle 5–7 mm; flowers entirely male, rarely base with 1 female flower; female inflorescence abbreviated with only 1 flower, peduncle often ca. 1 mm; female bracts suborbicular, 3–4 mm, fruiting accrescent, 5–7 mm, 7–11-denticulate, pilose; male bracts loose, lanceolate, ca. 1 mm, pilose. Male flowers 7–15, fascicled or glomerate; pedicel ca. 1 mm, pilose; sepals 4, 2.5–3.5 mm, ca. 15-pectinate-lacinulate. Capsule 3-locular, ca. 2.5 mm in diam., softly many echinate, with pilose hairs, ca. 1 mm. Seeds ovoid, ca. 2 mm. Fl. Mar–Aug, fr. Jul–Sep.

Rocky limestone hills or ravine thickets; 700–2200 m. NW Guangxi, SW Sichuan, Yunnan [N Thailand].


Deciduous shrubs, 1–3 m tall. Branchlets grayish pubescent when young; branches brownish, elongated, glabrous. Stipules lanceolate, 1.5–2.5 mm, pilose; petiole 0.4–2 cm, pilose; leaf blade oblong-ovate or subelliptic, 1.5–7 × 0.7–3.5 cm, papyraceous, both surfaces pilose, or adaxially pilose along midvein, base obtuse or broadly cuneate, margin serrate, apex acuminate; basal veins 3. Spike axillary, unisexual, rarely bisexual, slender, 2.5–4 cm, puberulent, peduncle ca. 5 mm; flowers entirely male, rarely base with 1 female flower; female inflorescence shorter, with 1 (or 2) female bracts, peduncle ca. 5 mm, after flowering 1.5–2.5 cm, slender, puberulent; female bracts cordate or rounded-ovate, 10–12 mm, 7–15-denticulate, pilose; male bracts loose, ovate, ca. 1 mm. Male flowers 5–7, fascicled; pedicel ca. 1 mm; sepals 4, ovate, ca. 1 mm, acute, glabrous; stamens 8. Female flower subseriate; sepals 3, ovate, ca. 1 mm, acute, puberulent; ovary densely hairy; styles 3, 2–3 mm, ca. 11-denticulate. Capsule 3-locular, ca. 3 mm in diam., pilose, sometimes scattered verruciform-setaceous. Seeds ovoid, ca. 2 mm, smooth. Fl. May–Aug.

- Mountain valleys or rivers ravin rhivine, springsides, thickets, forest margins; 1700–2800 m. SW Sichuan, NW Yunnan [N Thailand].

9. Acalypha matsudai Hayata, Icon. Pl. Formos. 9: 100. 1920 [“matsudai”].

Deciduous shrubs, 3 m tall. Branchlets purplish, glabrescent. Stipules lanceolate, ca. 2 mm, pilose; petiole 1–2 cm, pilose; leaf blade oblong-ovate or narrowly elliptic, 5–8 × 2–4 cm, lightly papyraceous, adaxially glabrescent, abaxially pilose along veins, base broadly cuneate or obtuse, margin serrate, apex acuminate; basal veins 3. Spike axillary, bisexual, 3–5 cm; peduncle ca. 1.5 cm; base with 1 female flower, otherwise flowers male; female bracts suborbicular, fruiting accrescent, ca. 6 × 10 mm, ca. 10-denticulate, pilose; male bracts ovate, ca. 0.2 mm. Male flowers 5 or 6, fascicled; pedicel ca. 0.5 mm; sepals 4, subovate, ca. 0.5 mm; stamens 8. Female flower...
subsessile; sepals 3, subtriangular, ca. 1 mm; ovary hairy; styles 3, laciniate. Capsule 3-locular, ca. 2.5 mm in diam., pilose. Seeds ovoid, ca. 2.5 mm, smooth. Fl. Jul.–Aug.

- Hills, thickets; below 100 m. S Taiwan.


海南铁苋菜 hai nan tie xian cai

Shrubs, ca. 2 m tall. Branchlets appressed puberulent when young; branches brownish, pilose. Stipules narrowly triangular; petiole 5–12 mm, appressed pilose; leaf blade elliptic or subrhombic-oblong, 3.5–7.5 × 1.5–3 cm, lightly papyraceous, both surfaces pilose, base cuneate, margin crenate, apex obtuse; venation pinnate, lateral veins ca. 5 pairs. Spike axillary, bisexual or unisexual, 5–8 cm, slender; peduncle ca. 5 mm, puberulent; base with 1 female flower, distally with male flowers or entirely male, or female inflorescence abbreviated, only 1 flower, peduncle ca. 2 mm; female bracts suborbicular, 7–8 × ca. 10 mm, 5–6-denticulate, ciliate; male bracts subovate, ca. 0.5 mm. Male flowers 17–21, glomerate; pedicel ca. 1 mm; sepals 4, glabrous; stamens 8. Female flowers subsessile; sepals 3; ovary hairy; style 2–3 mm, 7–8-laciniate. Capsule 3-locular, ca. 4 mm in diam., softly echinate, ca. 2 mm. Seeds ovoid, 2.5 mm. Fl. Jun–Aug.

- Dry thickets; below 100 m. Fujian (cultivated), W Hainan [Laos, Malaysia (peninsular), S Myanmar, Thailand, Vietnam].


红穗铁苋菜 hong sui tie xian cai

Shrubs, 1–3 m tall. Branchlets grayish tomentulose when young. Stipules triangular, 6–10 mm, pilose; petiole 4–8 cm; leaf blade broadly ovate or ovate, 8–20 × 5–14 cm, papyraceous, base broadly cuneate, obtuse, or subcordate, margin coarsely serrate, apex acuminate or acute; basal veins 3–5. Plants dioecious. Only female flowers known. Female flowers 3–7 in each bract, fascicled, subsessile; bracts scattered, ovate-rhombic, ca. 1 mm, entire; sepals (3 or)4, subovate, ca. 1 mm, acute, puberulent; ovary subglobose, densely hirtellous; styles 3, 5–7 mm, laciniate, crimson or red-purple. Fl. Feb–Nov.

Cultivated in gardens; below 100–200 m. Fujian, Guangdong, S Guangxi, Hainan, Taiwan, S Yunnan [widely cultivated, origin possibly Bismarck Archipelago].

This species is cultivated as an ornamental.


尖尾铁苋菜 jian wei tie xian cai

Acalypha grandis Bentham var. kotoensis (Hayata) Hurusawa; A. grandis var. longiacuminata (Hayata) Hurusawa; A. kotoensis Hayata; A. longiacuminata Hayata.

Small trees, ca. 4 m tall. Young branchlets grayish tomentulose. Stipules narrowly lanceolate, 4–12 mm, pilose; petiole 5–10 cm, pilose; leaf blade broadly ovate or ovate, 8–20 × 5.5–12 cm, papyraceous, abaxially tomentulose along veins, and vein axils bearded, base obtuse or subtruncate, sometimes slightly cordate, margin crenate, apex acuminate or long acuminate; basal veins 3–5. Plants dioecious, rarely monoecious. Inflorescences axillary. Male flowers glomerate; spikes 10–20 cm, pilosulose; bracts lax, ovate, ca. 0.5 mm; pedicel ca. 1 mm; sepals 4, ca. 0.3 mm; stamens 8. Female flowers 1 in each bract; spikes 10–30 cm, slender; bracts lax, ovate, ca. 1 mm, acute, pilose; sepals 3, ovate, ca. 1 mm, pilose; ovary pubescent, often bilocular; styles 2(or 3), 2–3 mm, 15–20-laciniate. Capsule 2(or 3)-locular, 3–4 mm in diam. Seeds

Acalypha evrardii Gagnepain.
ovoid, ca. 2 mm. Fl. year-round.

Forests; below 100–200 m. S Taiwan [Indonesia, Philippines].

花莲铁苋菜 hua lian tie xian cai

_Acalypha hontauyuensis_ H. Keng.

Shrubs, ca. 3 m tall. Branchlets pubescent. Petiole 8–20 cm, pilose; leaf blade ovate, 10–20 × 8–15 cm, slightly papyraceous, abaxially glabrescent, vein axils bearded, base obtuse, subtruncate to subcordate, margin crenate or subentire, apex caudate-acuminate; basal veins 5. Plants dioecious. Only female flowers known. Female flowers subsessile, 1 in each bract; spikes axillary, 10–25 cm; peduncle 1–5 cm; bracts lax, ovate, ca. 1 mm, pilose; sepals 3, ovate, ca. 1 mm; ovary 3-locular, pubescent; style 2.5–5 mm, laciniate. Capsule 3-locular, ca. 4 mm in diam. Seeds ovoid, ca. 2 mm. Fl. Jul–Aug.

* Near seashores, thickets; below 100 m. Taiwan (Hualian, Lan Yu).

台灣铁苋菜 tai wan tie xian cai

_Acalypha formosana_ Hayata; _A. grandis_ Bentham var. _formosana_ (Hayata) Hurusawa.

Shrubs, ca. 3 m tall. Branchlets hirsute. Stipules ovate, ca. 8 mm, acuminate, pubescent; petiole 8–10 cm, pilose; leaf blade broadly ovate or orbicular-ovate, 18–23 × 13–15 cm, slightly papyraceous, both surfaces sparsely hirsute, base obtuse to subcordate, margin serrulate, apex caudate-acuminate; basal veins 5. Plants monoecious. Spikes unisexual, axillary. Male flowers glomerate; inflorescences 16–20 cm; peduncle ca. 1 cm, pubescent; bracts lax, ovate, ca. 0.7 mm, pilose; sepals 4, ca. 0.5 mm, pilose; stamens 8. Female flowers sessile, 2 in each bract; inflorescences 5–9 cm; peduncle ca. 1 cm, densely pubescent; bracts broadly ovate, 3–3.5 × ca. 5 mm, 10-denticulate, pilose; sepals 3, ovate, ca. 0.5 mm, acute, pilose; ovary hirsute; styles 3, 2.5–3 mm, 5-laciniate. Capsule 3-locular, ca. 2.5 mm in diam., pilose. Fl. Jul–Aug.

* Mountain slopes, thickets; 100–200 m. Taiwan.

屏东铁苋菜 ping dong tie xian cai

_Acalypha grandis_ Bentham var. _akoensis_ (Hayata) Hurusawa.

Shrubs, ca. 3 m tall. Young branchlets densely pubescent; branches reddish, glabrescent. Stipules lanceolate, ca. 12 mm, pilose; petiole 6–9 cm, densely pubescent; leaf blade ovate, 12–16 × 8–11 cm, slightly papyraceous, adaxially pilose, abaxially pubescent along veins, base subcordate to cordate, margin serrulate, apex caudate-acuminate; basal veins 5. Plants monoecious. Spikes unisexual, axillary. Male flowers glomerate; inflorescences 16–20 cm; peduncle ca. 1 cm, pubescent; bracts lax, ovate, ca. 0.7 mm, pilose; sepals 4, ca. 0.5 mm, pilose; stamens 8. Female flowers sessile, 2 in each bract; inflorescences 5–9 cm; peduncle ca. 1 cm, densely pubescent; bracts broadly ovate, 3–3.5 × ca. 5 mm, 10-denticulate, pilose; sepals 3 or 4, ovate, ca. 0.5 mm, ciliate; ovary hirsute; styles 3, 2.5–3 mm, 5-laciniate. Capsule 3-locular, ca. 2.5 mm in diam., pilose. Fl. Jul–Oct.

* Near seashores, thickets; below 100 m. Taiwan (Hualian, Lan Yu).

红桑 hong sang

Shrubs, 1–3 m tall, monoecious. Young branchlets pubescent. Stipules narrowly triangular, ca. 8 mm; petiole 2–3 mm, pilose; leaf blade broadly ovate, 10–18 × 6–12 cm, often colored or red- or purple spotted, abaxially pilose along veins, base obtuse, margin coarsely crenate, apex acuminate; basal veins 3–5. Inflorescences axillary, unbranched, unisexual. Male flowers glomerate; inflorescences pendulous, 16–20 cm; peduncle ca. 1 cm, pubescent; bracts lax, ovate, ca. 1 mm, pilose; sepals 3 or 4, ovate, ca. 0.5 mm, ciliate; ovary hirsute; styles 3, 6–7 mm, 9–15-laciniate. Capsule 4 mm in diam., sparsely villous. Seeds globose, ca. 2 mm in diam., smooth. Fl. year-round.

Cultivated in gardens, parks; below 200 m. Most provinces of S China [widely cultivated as an ornamental; native to Melanesia].

Some cultivars of _Acalypha wilkesiana_ are recognized, most notably ‘Marginata’ (金边红桑 jin bian hong sang), cultivated in S China, with leaf blades ranging to ovate-rhombic, red to pink at the margin.