

5. GIRARDINIA Gaudichaud-Beaupré, Voy. Uranie, Bot. 498. 1830.

蝎子草属 xie zi cao shu

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Herbs annual or perennial, armed with stinging hairs. Stems sympodial, upper stem often zigzag, often 5-angled. Leaves alternate, petiolate; stipules caducous, intrapetiolar, connate, often broad, foliaceous; leaf blade 3-veined, margin dentate or lobed; cystoliths punctiform. Inflorescences in axillary pairs or solitary, cymes, panicles or spikes, unisexual (plants monoecious or dioecious); male inflorescence often long, flowers clustered on rachis of spikes, dichotomous cymes, or panicles; female glomerules lax or dense on rachis of scorpioid cymes, spikes, or panicles. Male flowers: perianth lobes 4 or 5, valvate; filaments inflexed in bud; rudimentary ovary conspicuous. Female flowers: perianth lobes 4, 2 or 3 lobes connate into a tube, 2 or 3-toothed, split to base on 1 side, sometimes also with a small bristle-like segment; staminodes absent. Ovary straight, ovoid; stigma subulate, papillose on 1 side; ovule orthotropous. Achene often large, slightly oblique, often compressed, verrucose; persistent stigma usually reflexed; pedicels simple or swollen. Seeds with thin or no endosperm; cotyledons broad.

About two species: N Africa, Asia, Madagascar; one species in China.

The stem fibers are used to make ropes, nets, and coarse cloth and the plants are used as febrifugal medicines. The stinging hairs are very strongly irritating.

1. *Girardinia diversifolia* (Link) Friis, Kew Bull. 36: 145. 1981.

大蝎子草 da xie zi cao

Herbs, annual or perennial, dioecious or monoecious. Stems often woody at base, straight, branched or not, 5-angled, 25–200 cm tall; stems and petioles spreading pubescent and armed with stinging and stigose hairs. Stipules oblong-ovate, 1–3 cm, sparsely strigose abaxially; petiole 2–15 cm; leaf blade light green, elliptic, ovate or obovate in outline, sometimes 3-lobed, 5–25 × 4–23 cm, herbaceous, 3-veined, lateral veins 3–5 each side, anastomosing before margin, abaxially sparsely pubescent and with armed stinging and setulose hairs, adaxially sparsely appressed strigose and armed with short stinging hairs, base cordate or subtruncate, margin usually 3, 5, or 7-lobed or, rarely, regularly serrate or sometimes doubly serrate at leaf base, apex short acuminate or acute; cystoliths minutely punctiform. Glomerules densely armed with stinging hairs. Male inflorescences in proximal axils, spicate, cymose-racemose or subpaniculate, 5–11 cm; female ones in distal axils of stem or in same axils as male, sometimes solitary, racemelike or paniculate, rarely long spicate, 1–28 cm, strigose and spreading hirsute. Male flowers subsessile or pedicellate, in bud 1 mm; perianth lobes 4, ovate, concave, setulose abaxially, apex acute, stamens 4; rudimentary ovary cupular. Female flowers ca. 0.5 mm; perianth lobes unequal, the larger connate lobe cymbiform, 0.4 mm, enlarged to 1 mm at fruit, sparsely strigillose on outside, apex 3-toothed, the smaller lobe linear. Achene dark brownish to gray-brown, subcordate to broadly ovoid, slightly compressed, 1.5–3 mm in diam., conspicuously verrucose. Fl. Sep–Oct, fr. Oct–Nov.

Forest margins, shady moist places, along streams, disturbed places, near villages; (?100–)300–2800 m. Chongqing, Gansu, Guizhou, Hebei, W Henan, Hubei, NW Hunan, Jiangxi, Jilin, Liaoning, E Nei Mongol, S Shaanxi, Sichuan, Taiwan, S Xizang, Yunnan, Zhejiang [Bhutan, India, Indonesia, Korea, Malaysia, Nepal, Sikkim, Sri Lanka; Africa (including Madagascar)].

1a. Leaf blade usually not lobed, rarely 3-lobed with lobes ca. 1/3 of overall length, margin coarsely dentate or double-dentate, teeth

gradually larger toward leaf apex; stipules 6–10 mm; male inflorescence unbranched, 1–2 cm; female inflorescence often in same axil as male, 2–6 cm 1b. subsp. *suborbiculata*

- 1b. Leaf blade 3–7-lobed, rarely lowermost leaves not lobed and then margin regularly serrate or double-serrate, teeth gradually smaller toward leaf apex; stipules 12–30 mm; inflorescences not as above, often more than 6 cm.
 - 2a. Leaf blade often deeply (3–)5–7-lobed, variable in overall shape but often broadly ovate; petiole and major leaf veins greenish; inflorescence 10–28 cm, branched or not, rarely 2–5 cm and scorpioid 1a. subsp. *diversifolia*
 - 2b. Leaf blade usually 3-lobed, often obovate; petiole and veins on abaxial leaf surface usually purplish; inflorescence unbranched, 4–8 cm 1c. subsp. *triloba*

1a. *Girardinia diversifolia* subsp. *diversifolia*

大蝎子草(原亚种) da xie zi cao (yuan ya zhong)

Urtica diversifolia Link, Enum. Hort. Berol. 2: 385. 1822; *Girardinia chingiana* Chien; *G. condensata* (Steudel) Weddell; *G. cuspidata* Weddell subsp. *grammata* C. J. Chen; *G. diversifolia* subsp. *ciliata* (C. J. Chen) H. W. Li; *G. formosana* Hayata; *G. heterophylla* (Vahl) Decaisne; *G. leschenaultiana* Decaisne; *G. longispica* Handel-Mazzetti; *G. longispica* subsp. *conferta* C. J. Chen; *G. palmata* Blume; *G. palmata* subsp. *ciliata* C. J. Chen; *G. suborbiculata* subsp. *grammata* (C. J. Chen) C. J. Chen; *G. vitifolia* Franchet; *U. buraei* H. Léveillé; *U. condensata* Steudel; *U. heterophylla* D. Don; *U. lobotifolia* S. S. Ying; *U. palmata* Forsskål.

Herbs perennial, dioecious or monoecious, many branched. Stipules oblong-ovate, 1–3 cm, Leaf blade elliptic, ovate or obovate in outline, base cordate or subtruncate, margin usually 3, 5, or 7-lobed or, rarely, regularly serrate or sometimes doubly serrate at leaf base. Male inflorescences cymose-racemose or

subpaniculate, 5–11 cm; female ones in distal axils of stem, 10–28 cm, 2.5–3 mm in diam.

Forest margins, along streams; 1500–2800 m. Gansu, Guizhou, Hubei, Jiangxi, S Shaanxi, Sichuan, Taiwan, S Xizang, Yunnan, Zhejiang [Bhutan, India, Indonesia, Malaysia, Nepal, Sikkim, Sri Lanka; Africa (including Madagascar)].

1b. *Girardinia diversifolia* subsp. *suborbiculata* (C. J. Chen) C. J. Chen & Friis, **comb. et stat. nov.**

蝎子草 xie zi cao

Basionym: *Girardinia suborbiculata* C. J. Chen, Acta Phytotax. Sin. 30: 476. 1992.

Herbs annual, monoecious, Leaf blade often suborbicular, rarely 3-lobed, base rounded or truncate, margin coarsely 8–13-dentate or doubly dentate, teeth gradually larger distally; petiole and veins on abaxial leaf face greenish. Male inflorescences spicate, 1–2 cm. Female inflorescences 1–6 cm, setulose in axil. Achene 2–2.5 mm, not elevated at base. Fl. Jul–Sep, fr. Sep–Nov.

Forest margins, partly shady moist places, along streams, disturbed places; (?100–)400–800 m. Hebei, W Henan, Jilin, Liaoning, E Nei Mongol, S Shaanxi [Korea].

1c. *Girardinia diversifolia* subsp. *triloba* (C. J. Chen) C. J. Chen & Friis, **comb. nov.**

红火麻 hong huo ma

Basionym: *Girardinia cuspidata* subsp. *triloba* C. J. Chen, Acta Bot. Yunnan. 4: 334. 1982; *G. suborbiculata* subsp. *triloba* (C. J. Chen) C. J. Chen.

Herbs annual, monoecious, Leaf blade obovate or broadly ovate, often 3-lobed, lobes triangular, terminal one 3–7 cm, lateral lobes 1.5–3 cm, base truncate or cordate, margin regularly

dentate or doubly dentate, petiole and veins on abaxial leaf face often purplish. Male inflorescences spicate, 1–2 cm. Female inflorescences 1–6 cm, often densely spreading hirsute. Achene 2–2.5 mm, not elevated at base. Fl. Jun–Aug, fr. Aug–Oct.

● Shady moist places in forests, along streams, near villages; 300–1800 m. Chongqing, S Gansu, Guizhou, Hubei, NW Hunan, S Shaanxi, Sichuan, Yunnan.

