

**19. GYMNOPETALUM** Arnott, Madras J. Lit. Sci. 12: 52. 1840.

金瓜属 jin gua shu

Lu Anmin (路安民 Lu An-ming); Charles Jeffrey

*Scotanthus* Naudin; *Tripodanthera* M. Roemer.

Herbs, climbing, slender. Tendrils simple or 2-fid. Leaf blade ovate-cordate, angularly 3–5-lobed. Plants monoecious or dioecious. Male flowers solitary or in a raceme, ebracteate or bracteate; calyx tube elongate, tubular; segments 5, subulate; corolla white or yellow, rotate, 5-partite; segments oblong or obovate; stamens 3, inserted on middle of calyx tube; filaments short, free; anthers connate, one 1-celled, others 2-celled; anther cells conduplicate; rudimentary ovary erect. Female flowers solitary; calyx and corolla as in male flowers; staminodes 3, linear; ovary ovoid or oblong; ovules numerous, horizontal; placentae 3; style filiform. Fruit oblong or subglobose, acute or obtuse at both ends, indehiscent. Seeds obovate or oblong, compressed, marginate.

Four species: S Asia; two species in China.

- 1a. Leaf blade membranous, both surfaces slightly setose, 5-angular or 3–5-lobed or -partite, apex acuminate, margin dentate; fruit oblong-ovoid, acute at both ends, 10-ribbed ..... 1. *G. chinense*  
1b. Leaf blade papery, both surfaces densely setose and villous, undivided or undulate 3–5-lobed, apex obtuse, margin serrate; fruit subglobose, both ends obtuse, without ribs ..... 2. *G. scabrum*

**1. *Gymnometalum chinense*** (Loureiro) Merrill, Philipp. J. Sci. 15: 256. 1919. *monoicum* Gagnepain; *G. monoicum* var. *incisum* Gagnepain; *G. penicaudii* Gagnepain; *G. scabrum* var. *penicaudii* (Gagnepain)

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*Euonymus chinensis* Loureiro, Fl. Cochinch. 1: 156. 1790; *Bryonia cochinchinensis* Loureiro; *Gymnometalum cochinchinense* (Loureiro) Kurz; *G. heterophyllum* Kurz; *G. quinquelobatum* Merrill; *G. quinquelobum* Miquel; *Melothria touchanensis* H. Léveillé; *Momordica tubiflora* Roxburgh; *Scotanthus tubiflorus* (Roxburgh) Naudin, nom. superfl.; *Tripodanthera cochinchinensis* (Loureiro) M. Roemer.

Plants perennial. Stem and branches slender, hispid or villous, glabrescent. Petiole 2–4 cm; leaf blade ovate-cordate, 4–8 × 4–8 cm, membranous, 5-angular or 3–5-lobed; middle lobe larger, triangular, both surfaces scabrous, base cordate, apex acuminate. Plants monoecious. Male flowers solitary, or 3–8 in a raceme; peduncle slender, 10–15 cm; bracts leaflike, 1–2.5 cm, yellow-brown villous, 3-lobed; calyx tube tubular, elongate, ca. 2 cm; segments linear, ca. 7 mm; corolla white; segments oblong-ovate, 15–20 × 10–12 mm, ± villous; filaments ca. 0.5 mm; anthers ca. 7 mm. Female flowers solitary; pedicels 1–4 cm; ovary oblong, 10–12 × ca. 5 mm, yellow-brown villous, acute at both ends; style 5–8 mm; stigmas 3. Fruit orange, oblong-ovoid, 4–5 cm, smooth, 10-ribbed, acute at both ends. Seeds oblong, ca. 7 × 3–3.5 mm, both ends obtuse. Fl. Jul–Sep, fr. Sep–Dec.

Forests and thickets on mountain slopes; 400–900 m. Guangdong, Guangxi, Hainan, Yunnan [Bhutan, India, Indonesia, Malaysia, Myanmar, Nepal, Philippines, Thailand, Vietnam].

**2. *Gymnometalum scabrum*** (Loureiro) W. J. de Wilde & Duyfjes, Reinwardtia 12: 268. 2008.

风瓜 feng gua

*Trichosanthes scabra* Loureiro, Fl. Cochinch. 2: 589. 1790; *Cucumis integrifolius* Roxburgh; *Gymnometalum integrifolium* (Roxburgh) Kurz; *G. integrifolium* var. *penicaudii* (Gagnepain) W. J. de Wilde & Duyfjes; *G. leucostictum* Miquel; *G.*

Fl. China 19: 35–36. 2011.

W. J. de Wilde & Duyfjes; *Trichosanthes integrifolia* (Roxburgh) Kurz.

Plants annual. Stem and branches slender, villous. Petiole 1.5–3 cm, densely villous; leaf blade reniform or ovate-cordate, 6–8 × 6–8 cm, papery, undivided or undulate 3–5-lobed; lobes triangular, both surfaces scabrous, setose and villous, base cordate, margin serrate, apex obtuse. Plants monoecious. Male flowers solitary, or in a raceme; peduncle 4–6 cm, densely villous; bracts leaflike, divided, densely yellow-brown villous; calyx tube 1.5–2 cm; segments lanceolate, ca. 8 mm; corolla segments obovate, 18–20 × 10–12 mm; filaments ca. 0.4 mm. Female flowers solitary; pedicels 10–15 mm, densely villous; calyx and corolla as in male flowers; ovary ovoid-globose, ca. 10 mm, villous. Fruit orange-red when mature, subglobose, 2–3 cm in diam., smooth, not ribbed. Seeds narrowly oblong, ca. 9 × 3–3.5 mm, ca. 1.5 mm thick, both surfaces smooth, both ends obtuse. Fl. Jun–Sep, fr. Sep–Nov.

Mountain slopes and herbage; 400–800 m. Guangdong, Guangxi, Guizhou, Hainan, Yunnan [Cambodia, India, Indonesia, Laos, Malaysia, Myanmar, Philippines, Sri Lanka, Thailand, Vietnam].

Fl. China 19: 35–36. 2011.