

26. CUCUMIS Linnaeus, Sp. Pl. 2: 1011. 1753.

黄瓜属 huang gua shu

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

Herbs, scandent or creeping, annual. Stem and branches scabrous, hispid. Tendrils slender, simple. Leaf blade almost orbicular, reniform, or cordate-ovate, undivided or palmately 3–7-lobed. Plants monoecious, rarely dioecious, or flowers hermaphroditic. Male flowers fascicled or solitary; calyx tube campanulate, 5-lobed; segments subulate; corolla rotate or subcampanulate, 5-lobed; segments oblong or ovate; stamens 3, free, inserted on corolla tube; anthers oblong, one 1-celled, two 2-celled; anther cells linear, reflexed or curved; connective produced; rudimentary ovary glandular. Female flowers solitary or fascicled; calyx and corolla as in male flowers; staminodes 3, subulate; ovary cylindrical; ovules numerous, horizontal; style short; stigmas 3–5. Fruit polymorphic, fleshy, indehiscent, smooth or verrucose. Seeds numerous, compressed, emarginate.

About 32 species: tropical and temperate regions, most species in Africa; four species in China.

- 1a. Fruit smooth; ovary hairy 1. *C. melo*
- 1b. Fruit and ovary muriculate or verrucose or sparsely tuberculate, not hairy.
 - 2a. Fruit oblong or cylindrical, (5–)10–50 cm 2. *C. sativus*
 - 2b. Fruit oblong, smaller than 5 cm.
 - 3a. Fruit oblong, at least twice as long as broad, muricate 3. *C. hystrix*
 - 3b. Fruit obovoid, only slightly longer than broad, sparsely obscurely tuberculate 4. *C. debilis*

1. *Cucumis melo* Linnaeus, Sp. Pl. 2: 1011. 1753.

甜瓜 tian gua

Plants creeping. Stems and branches scabrous, puberulent, or hispid. Tendrils filiform, puberulent. Petiole 7–12 cm, setose; leaf blade suborbicular or reniform, 6–15 × 6–15 cm, papery, abaxially hispid, adaxially scabrous, undivided or 3–7-lobed, dentate; sinus truncate or rounded. Plants monoecious or flowers bisexual. Male flowers 1 or 2 to several, fasciculate; pedicels filiform, 0.5–4 cm, pubescent; calyx tube narrowly campanulate, 3–8 mm, densely hispidulous to white villous; segments subulate or linear, 2–4 × 0.4–1.2 mm; corolla yellow; tube 1–2 mm; segments ovate-oblong to broadly ovate or obovate, 3–24 × 2.5–20 mm, obtuse; anther cells flexuous. Female flowers solitary; ovary ellipsoid or fusiform, 4–11 × 2–5 mm, densely white lanate, villous or puberulent; style 1–2 mm, stigmas 3, 2–2.5 mm. Fruit very variable in size, shape, color, odor, and taste. Seeds numerous, yellow-white, ovate-oblong, 4–8 × 2.4–4 mm, smooth, base rounded, apex acute, emarginate. Fl. and fr. May–Sep.

Farmlands, roadsides. Anhui, Jiangsu, Shandong, Xinjiang, C and E China; also cultivated throughout China [native to Old World tropics and subtropics; introduced in New World tropics; widely cultivated in tropical and temperate countries].

- 1a. Ovary densely villous or white lanate, with spreading hairs; (cultivated) fruit sweet 1a. subsp. *melo*
- 1b. Ovary very shortly and densely puberulent, hairs appressed; (cultivated) fruit not sweet 1b. subsp. *agrestis*

1a. *Cucumis melo* subsp. *melo*

甜瓜(原亚种) tian gua (yuan ya zhong)

Cucumis bisexualis A. M. Lu & G. C. Wang.

Ovary and young fruit pilose or lanate, with spreading

hairs; fruit in cultivated forms fragrant and sweet.

Farmlands, roadsides. Anhui, Jiangsu, Shandong, Xinjiang; also cultivated throughout China [native to Old World tropics and subtropics; introduced in New World tropics; widely cultivated in tropical and temperate countries].

The fruit is used as a refreshing dessert in summer; the plants are used medicinally.

1b. *Cucumis melo* subsp. *agrestis* (Naudin) Pangalo in Zhukovskii, Zemleled'ch. Turtsiya, 534. 1933.

菜瓜 cai gua

Cucumis melo var. *agrestis* Naudin, Ann. Sci. Nat., Bot., sér. 4, 11: 73. 1859; *Bryonia callosa* Rottler; *C. acidus* Jacquin; *C. callosus* (Rottler) Cogniaux & Harms.

Ovary and young fruit sericeous with short appressed hairs; fruit in cultivated forms mostly not fragrant and not sweet.

Farmlands, roadsides. C and E China; commonly cultivated in China [throughout Old World tropics; introduced in New World tropics; also commonly cultivated in E and SE Asia, rarely cultivated elsewhere].

The fruit is used as a vegetable (菜瓜 cai gua).

The forms cultivated in China belong to the 'Conomon' cultivar group (*Cucumis conomon* Thunberg, Nova Acta Regiae Soc. Sci. Upsal. 3: 208. 1780; *C. melo* var. *conomon* (Thunberg) Makino, Bot. Mag. (Tokyo) 16: 16. 1902).

2. *Cucumis sativus* Linnaeus, Sp. Pl. 2: 1012. 1753.

黄瓜 huang gua

Plants scandent or creeping. Stem and branches angular, white hispid. Tendrils slender, simple. Petiole 10–16(–20) cm; leaf blade broadly ovate-cordate, 7–20 × 7–20 cm, membranous, margin 3–5-angular or -lobed; lobes triangular, dentate, apex acute or acuminate; sinus half-orbicular. Plants monoec-

cious. Male flowers fasciculate; pedicel filiform, 5–15 mm, puberulent; calyx tube narrowly campanulate, 8–10 mm, densely white pubescent; segments subulate; corolla yellow-white, ca. 2 cm; segments oblong-lanceolate, acute; anthers 3–4 mm; connective ca. 1 mm. Female flowers solitary or fascicled; pedicels pubescent, 1–2 cm; ovary fusiform, muricate. Fruit yellow-green, oblong or cylindrical, (5–)10–30(–50) cm, muricate, usually verrucose. Seeds white, small, narrowly ovate, 5–10 mm, emarginate, both ends acute. Fl. and fr. summer.

Forests, thickets, mountain slopes; 700–2000 m. Guangxi, Guizhou, Yunnan; also commonly cultivated in China [NE India, Myanmar, Nepal, Thailand; cultivated in all tropical and temperate countries].

- 1a. Fruit oblong or cylindrical, 10–30(–50) cm, muricate, usually verrucose 2a. var. *sativus*
1b. Fruit oblong or subglobose, 5–6 cm, smooth 2b. var. *hardwickii*

2a. *Cucumis sativus* var. *sativus*

黄瓜(原变种) huang gua (yuan bian zhong)

Fruit oblong or cylindrical, 10–30(–50) cm, muricate, usually verrucose.

Commonly cultivated in China [cultivated in all tropical and temperate countries].

2b. *Cucumis sativus* var. *hardwickii* (Royle) Gabaev, Ogurtsy, 47. 1932.

西南野黄瓜 xi nan ye huang gua

Cucumis hardwickii Royle, Ill. Bot. Himal. Mts. 1: 220. 1835; *C. sativus* f. *hardwickii* (Royle) W. J. de Wilde & Duyfjes; *C. sativus* [unranked] *hardwickii* (Royle) Alefeld.

Fruit oblong or subglobose, 5–6 cm, smooth.

Forests, thickets, mountain slopes; 700–2000 m. Guangxi, Guizhou, Yunnan [NE India, Myanmar, Nepal, Thailand].

3. *Cucumis hystrix* Chakravarty, J. Bombay Nat. Hist. Soc. 50: 896. 1952.

野黄瓜 ye huang gua

Cucumis muriculatus Chakravarty.

Plants scandent. Stem and branches angular-sulcate, scabrous, white hirsute. Tendrils filiform, simple. Petiole 6–10 cm; leaf blade broadly ovate or triangular-ovate, 6–13 × 6–10(–12) cm, irregularly 3–5-lobed; lobes triangular, base cordate, mar-

gin dentate, apex acute. Plants monoecious. Male flowers solitary or subfasciculate; calyx tube narrowly campanulate, ca. 6 mm; segments linear, 1–2 mm; corolla yellow; segments ovate-oblong, 5–6 × 3–4 mm; filaments ca. 1 mm; anthers ca. 2 mm. Female flowers solitary; pedicels ca. 5 mm; calyx and corolla as in male flowers; corolla 8–10 mm; ovary oblong-ovoid, ca. 10 × 4 mm, densely yellow-brown hispid; style 2–3 mm; stigmas 3-lobed. Fruit oblong, 4–5 × 1.5–2.3 cm, muricate, verrucose. Seeds narrowly ovate, 3–4 mm, both surfaces smooth, emarginate. Fl. Jun–Aug, fr. Aug–Sep.

Forests, thickets; 800–1500 m. W Yunnan [NE India, Myanmar, Thailand].

4. *Cucumis debilis* W. J. de Wilde & Duyfjes, Adansonia, sér. 3, 29: 241. 2007.

滇黄瓜 dian huang gua

Plants slender, probably annual, scandent. Stems and branches sparsely to densely minutely aculeate-hispid. Tendrils simple, sparsely aculeate. Petiole 3–5 cm; leaf blade subcircular in outline, 4–7 × 4–7 cm, 3–5-angular or -lobed, margin coarsely serrate-dentate; lobes broadly triangular, base deeply cordate, apex acute. Plants monoecious. Male flowers solitary or paired; calyx tube turbinate-campanulate, 5.5–6 mm; segments linear, ca. 3 mm; corolla yellow; segments elliptic 4–6 × ca. 3 mm; filaments slender, ca. 0.5 mm; anthers 2.5–3 mm. Female flowers solitary, sometimes coaxillary with male flowers; pedicels 30–35 mm; calyx and corolla probably similar to male flowers, details unknown. Fruit green, obovoid, sparsely obscurely tuberculate. Seeds unknown. Fl. and fr. Sep.

Yunnan [N Vietnam (ca. 1400 m)].

Fl. China 19: 48–50. 2011.