

The Angiosperm Flora of Singapore Part 8 Cannaceae

N. TANAKA

Makino Herbarium, Graduate School of Tokyo Metropolitan University
1-1, Minamiosawa, Hatiouji City, Tokyo 192-0364, Japan

Canna L.

Sp. pl. 1 (1753) 1; Woodson & Schery, Ann. Mo. bot. Gdn 32 (1945): 74–80.

Erect, perennial herbs. *Leaves* alternate, distichous, the sheaths opening gradually and passing into a petiole and a large, oblong, acute or acuminate lamina with a distinct midrib. *Inflorescence* a terminal raceme. *Flowers* bisexual, asymmetrical; petals 3, basally connate with the innermost staminode (labellum), style and 1 petaloid stamen with a 1-celled anther attached to its margin; sepals 3, free, imbricate; staminodes excluding labellum 2–3; ovary inferior, trilocular, containing many anatropous ovules, subglobose. *Capsule* globose to ovoid, conspicuously warty, crowned by the persistent sepals. *Seeds* many per fruit.

Distribution — Native of South America, now naturalized or cultivated in the tropics and subtropics. Only *C. indica* is naturalized in Singapore.

Ecology — Most species inhabit forest margins, open fields or along streams and disturbed areas.

Uses — *C. edulis* and its allies are cultivated for their starchy rhizomes in the tropics. In Vietnam, noodles are made from the rhizome starch of *C. discolor*. In Middle America the leaves and raw tubers are fed to pigs (Morton, 1981). In W. Africa a fibre can be extracted from *Canna* species and is of a quality to substitute jute in the making twine and sacking. (Burkill, 1985). *Canna* spp. and hybrids are also commonly cultivated in the tropics and subtropics as ornamentals. *C. glauca* is also cultivated as an ornamental aquatic.

1. *Canna indica* L.

Sp. pl 1 (1753) 1; Ridl., J. Straits Brch R. Asiat. Soc. 33 (1900) 166;

H.T.W.Tan *et al.*, Gdns' Bull., Singapore 44 (1992) 128; I.M.Turner, Gdns's Bull., Singapore 45 (1993) 49; I.M. Turner, Gdns' Bull., Singapore 47 (1995) 515.

C. orientalis Roscoe, Monandr. pl. Scitam. (1826) t. 12; Ridl., Fl. Malay Penins. 4 (1924) 291.

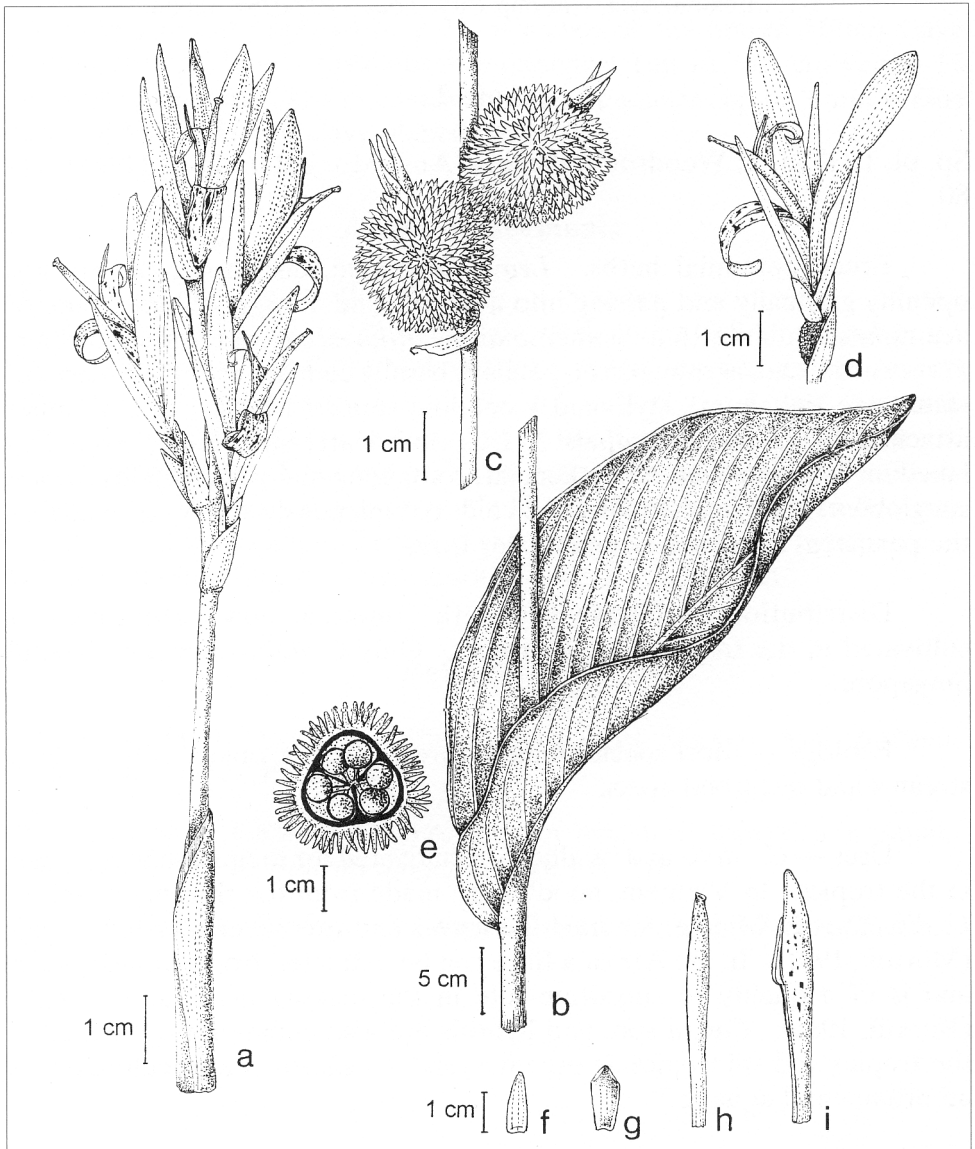


Figure 1. *Canna indica* L. a. Inflorescence. b. Leaf and part of stem. c. Two capsules on part of rachis. d. Flower. e. Cross section of ovary. f. Sepal. g. Floriferous bract. h. Style and stigma. i. Stamen.

Plants 1.5–2.0 m tall. *Laminas* green and glaucous on both surfaces, oblong to oblong-elliptic, 30–60 cm long, 15–25 cm wide, acute to shortly acuminate, margin membranous, gradually sheathing to the stem. *Inflorescence* spike-like. *Flowers* usually solitary, sometimes paired; petals 3, erect, red to reddish white, oblong-lanceolate, 4.0–4.5 cm long, narrowly acuminate; sepals 3, pale green, sometimes reddish or white, oblong-lanceolate, c. 1 cm long, glaucous; floriferous bracts green, sometimes reddish, oval-orbicular, 1.0–1.5 cm long, glaucous, persistent; staminodes 2–3, obovate to spathulate, 5.0–6.0 cm long; labellum reflexed, red-spotted yellow towards the base, often dentate at the apex; style yellowish basally, narrowly oblanceolate. *Capsules* green when unripe, subglobose, 3.0–3.5 cm long, 2.0–2.5 cm wide, conspicuously warty. *Seeds* black, globose, c. 5 mm in diam., hard; radicle dark brown to black.

Distribution — Singapore: naturalized along roadsides; Ponggol Road, Sungei Buloh Nature Park, Upper Thomson Road, Woodlands Road, etc. Thailand, Peninsular Malaysia, Borneo, Java, Japan, etc.

Ecology — In open field and forest margins.

Uses — Cultivated in beds as an ornamental. In Africa, the seeds are made into necklaces and rosaries (Purseglove, 1972) and also yield an attractive, evanescent purple dye (Burkill, 1985). In India, the stalks are chopped up and boiled in rice-water with pepper and fed to cattle as an antidote after eating poisonous grasses. The leaves are commonly used to wrap parcels (Burkill, 1985).

Acknowledgements

This work was supported by the Overseas Scholarship of Graduate Student of Nihon University.

References

- Burkill, H.M. 1985. *The Useful Plants of West Tropical Africa, 2nd ed., Vol. I*, Royal Botanic Gardens; Kew pp. 313–315.
- Morton, J.F. 1981. *Atlas of Medicinal Plants of Middle America: Bahamas to Yucatan*, Charles C. Thomas Publisher; Springfield, U.S.A. pp. 111–112.
- Purseglove, J.W. 1972. *Tropical Crops: Monocotyledons*, Longman Group Limited; London. pp. 92–93.