

FLORA OF BANGLADESH

NO. 73

CANNACEAE

EDITORS

HOSNE ARA
AND
SARDER NASIR UDDIN

June 2019

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MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE
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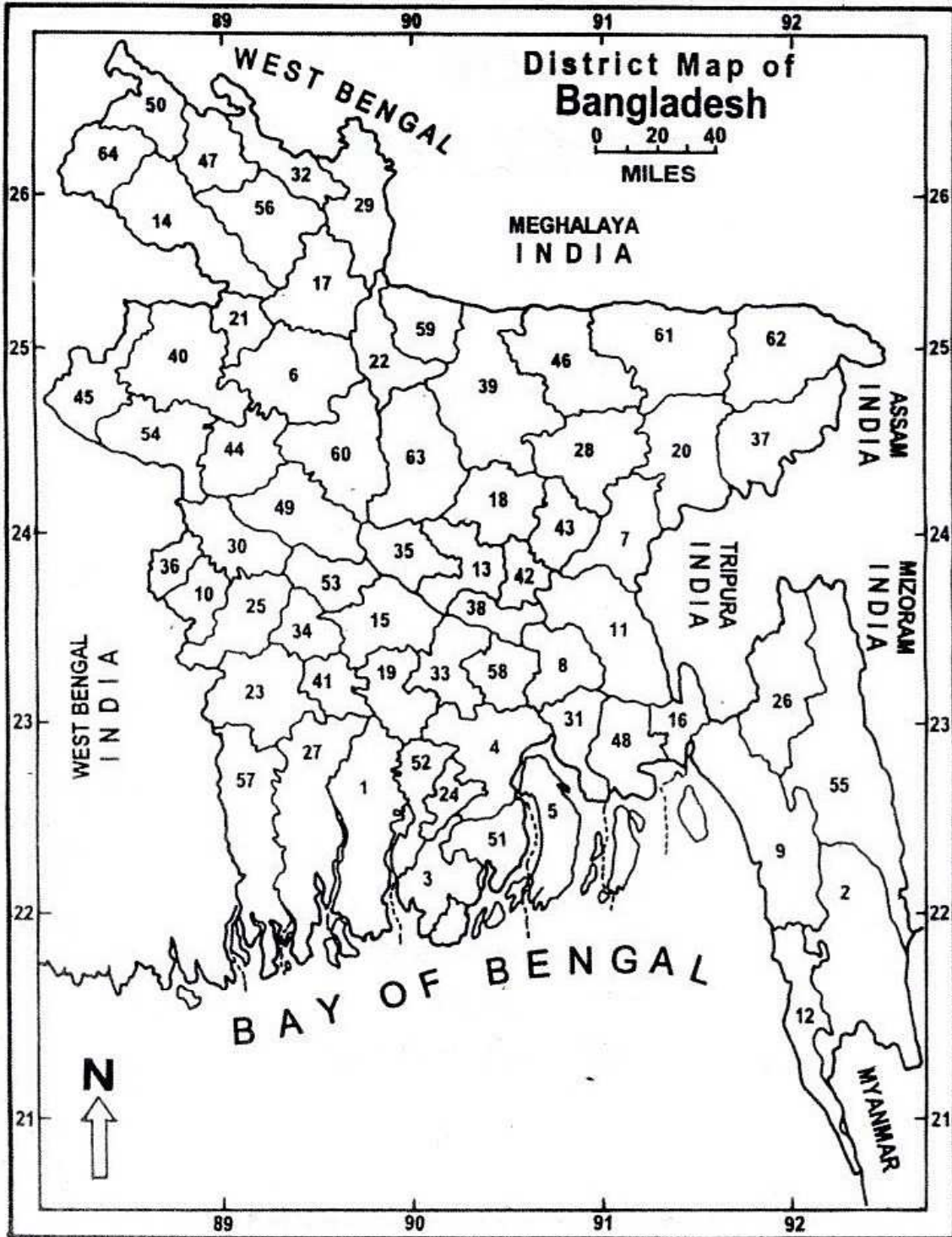
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List of Districts

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25.	Jhenaidaha	57.	Satkhira
26.	Khagrachhari	58.	Shariatpur
27.	Khulna	59.	Sherpur
28.	Kishoreganj	60.	Sirajganj
29.	Kurigram	61.	Sunamganj
30.	Kushtia	62.	Sylhet
31.	Lakshmipur	63.	Tangail
32.	Lalmonirhat	64.	Thakurgaon

CANNACEAE A.L. de Jussieu

Hosne Ara¹ and Md. Abul Hassan²

Glabrous, erect, perennial herbs with starchy rootstocks or rhizomes. Leaves large, spirally arranged, with a short, open sheath gradually passing into the petiole, blade expanded, simple, entire, rolled-up from one side to the other in bud, midrib prominent. Inflorescence terminal, usually openly branched. Flowers showy, bisexual, epigynous, irregular, fundamentally trimerous. Sepals 3, green or purplish, not petaloid, free, spirally arranged, persistent in the fruit. Petals 3, one smaller than the other 2. Stamens half functional, others petaloid, outermost of the inner staminal cycle is the labellum. Carpels 3, syncarpous, ovary inferior, 3-celled, style petaloid, stigma papillate, placentation axile. Fruit usually a warty capsule.

The family Cannaceae consists of the single genus *Canna* with about 10 to 20 species native to tropical and sub-tropical America (Delin and Kress, 2000). In Bangladesh, this family is represented by a single genus and a single species. A number of varieties grow in the different parts of Bangladesh.

References cited in the text

- Cronquist, A. 1981. *An Integrated System of Classification of Flowering Plants*. Columbia University Press, New York. pp. 1-1262.
- Delin, Wu and Kress, W. John (eds.). 2000. *Cannaceae. Flora of China*, Vol. 24 (Flagellariaceae through Marantaceae). Science Press, Beijing and Missouri Botanical Garden Press, St. Louis. p. 378.
- Ghani, A. 2003. *Medicinal Plants of Bangladesh (Second Edition)*. Asiatic Society of Bangladesh, Dhaka, Bangladesh. pp. 1-603.

¹Bangladesh National Herbarium, Mirpur-1, Dhaka-1216.

²Department of Botany, University of Dhaka, Dhaka-1000.

- Hassan, M.A. 2007. *Cannaceae*. In Siddiqui, K.U., Islam, M.A., Ahmed, Z.U., Begum, Z.N.T., Hassan, M.A., Khondker, M., Rahman, M.M., Kabir, S.M.H., Ahmad, M., Ahmed, A.T.A., Rahman, A.K.A. and Haque, E.U. (eds.). *Encyclopedia of Flora and Fauna of Bangladesh*, Vol. 11. *Angiosperms: Monocotyledons (Agavaceae - Najadaceae)*. Asiatic Society of Bangladesh, Dhaka. pp. 141-142.
- Kumar, V. and Subramariam, B. 1986. *Chromosome Atlas of Flowering Plants of the Indian Subcontinent*, Vol. 1. Dicotyledons. Botanical Survey of India, Calcutta, India. pp. 1-464.

Abbreviations used for the herbaria (other than the recognized acronyms)

DUSH= Dhaka University Salar Khan Herbarium

Canna L., Sp. Pl. ed. 1 (1753).

Lectotype: *C. indica* L.

Tall herbs, with simple leafy stem and perennial rootstocks or rhizomes. Leaves simple, large, oblong, acute. Inflorescence of terminal racemes. Flowers large, showy, bisexual. Sepals 3, free, oblong or lanceolate. Petals 3, united into a small tube. Stamens half functional, others staminode and petaloid. Carpels 3, united, ovary 3-celled, placentation axile, ovules many in each cell. Stigma capitate or papillate. Fruit a globose, warty capsule. Seeds large, globose.

Canna indica L., Sp. Pl. 1: 1 (1753). Haines, Bot. Bihar & Orissa 6: 1147 (1924); Gandhi in Saldanha & Nicolson (eds.), Fl. Hassan Dist.: 770-771 (1976); Hara *et al.*, in Enum. Fl. Pl. Nepal 1: 62 (1978); Ghazanfar in Nasir & Ali (eds.), Fl. Pakistan 145: 1 (1982); Bakshi, Fl. Murshidabad dist.: 316 (1984); Wadhwa & Chowdhery, Fl. Himachal Pradesh 3: 696 (1984); Srivastava in Hajra & Verma (eds.), Fl. Sikkim 1: 134-135 (1996); Delin & Kress, Fl. China 24: 378 (2000); Mudgal & Khanna in Singh *et al.* (eds.), Fl. Madhya Pradesh.: 99-100 (2001); Sarma & Sarkar in Singh & Rao (eds.), Fl. Palamau Dist. Jharkhand.: 598 (2002); Hassan in Siddiqui *et al.* (eds.), Encycl. Fl. Fauna Bangladesh 11: 141-142 (2007); *C. orientalis* Rosc., Monandr. Pl. t. 12 (1828); Bennet, Fl. Howrah Dist.: 116 (1979); Noltie, Fl. Bhutan 3(1): 212 (1994); *C. indica* L. var. *orientalis* (Rosc.) Baker in Hook. f., Fl. Brit. India 6: 260-261 (1892-reprint-1954); Prain,

Beng. Pl. 2: 1047 (1903-reprint 2004); Heinig, List Chittagong: 70 (1925); Fischer in Gamble, Fl. Pres. Madras 3: 1045 (1928-reprint 1967); Datta & Mitra, Bull. Bot. Soc. Beng. 7 (1&2): 107-108 (1953); Gandhi in Saldanha & Nicolson (eds.), Fl. Hassan Dist.: 770-771 (1976). **Fig. 1.**

Bengali: *Sarbajoya, Kolabati*

English: *Indian Shot, Canna Lily, African Arrowroot*

A perennial rhizomatous herb, aerial stem light green to chocolate coloured, up to 120 cm tall and 3 cm across, glabrous. Leaves simple, spirally arranged, twice as long as broad or even longer, up to 40 × 15 cm, with a short open sheath gradually passing into the petiole, with a prominent midrib, leaf blade lanceolate or oblong to elliptic, entire. Inflorescence racemose, raceme simple, loose on a long scape. Flowers bracteate and bracteolate, bisexual, zygomorphic, epigynous, fundamentally trimerous. Calyx with 3 sepals, green or maroon, not petaloid, dissimilar in size, outer one the largest, glabrous, persistent in the fruit. Corolla of 3 petals, connate in a cylindrical corolla tube, lanceolate, red or variously coloured, glabrous, all equal in size, c 6 × 1 cm. Stamens 5, 1 partially perfect, others staminode, all petaloid, red, yellow or variously coloured, anther long, 2-thecal, staminodes large, unequal. Carpels 3, connate in a 3-celled ovary, ovary inferior, ovules 2 in each cell, placentation axile, style petaloid, adnate below to a staminal tube, free above, c 6 cm long, stigma long, flat. Fruit a capsule, warty outside. Seeds round, black. *Fl.* and *Fr.*: 4-11. *Wild forms prefer marshy places.* 2n = 18 (Kumar and Subramaniam, 1986).

Bagerhat: Shadgambuj to Bagerhat road 21 v 1986, *M.K. Mia* 1140 (DACB). **Chattogram:** Hazarikhil (West), 31 x 1987, *Huq & Mia* H. 8622 (DACB). **Cox's Bazar:** St. Martin's Island, 1 ii 1975, *Hassan, Huq & Khan* K. 4046 (DACB). **Dhaka:** Mollik bazar, 15 ii 1959, *M.S. Khan* 375 (DUSH); Balda garden, 23 i 1980, *Mahbuba, Zaman & Mia* M. 469 (DACB); Ramna park, 19 ii 1980, *Mahbuba Halim* 659, 661, 664, 678 (DACB); Dhaka Univ. Bot. Garden, 20 ii 1980, *Mahbuba Halim* 738 (DACB); Ramna park, 17 v 1980, *Mahbuba Halim* 863 (DACB); Demra, 28 v 1980, *Mahbuba Halim* 882 (DACB); Savar, 1985, *M. Moshiur Rahman* 28 (DUSH); Mirpur-10, 04 i 2014, *Emdadul*



Figure 1. *Canna indica* L., a) leaf; b) inflorescence; c) fruit.

Hoque Khokan EHK. 70 (DACB). **Kishoreganj**: Kishoreganj to Katabaira, 23 i 1979, *Mahbuba Halim* 364 (DACB). **Moulvibazar**: Bakamura, 11 x 1973, *Khan, Huq & Hassan* K. 3225 (DACB). **Patuakhali**: Galachipa to Ulania, 12 iii 1982, *Rahman & Mia* R. 1292 (DACB); Mirzaganj, Subidkhali, 25 vii 1998, *M. Sultana* 185 (DUSH); Kalapara, Kuakata, 04 ii 2007, *M. Sultana* 1625 (DUSH). **Sylhet**: Sarighat forest, 3 x 1983, *Huq, Rahman, Mia & Mahbuba* H. 6321 (DACB).

Tropical and sub-tropical regions of the world. In Bangladesh, it occurs in all parts of the country and is also planted in most gardens.

Planted in the gardens as an ornamental herb. The commonly cultivated garden cannas are mostly of hybrid origin with *C. indica* as a principal parent (Cronquist, 1981). The rootstock contains enzymes, triacontanol and mixtures of stigmaterol, betasitosterol and campesterol, beta-lectin and traces of alkaloids. Ethanolic extract of aerial parts is hypotensive and anti-inflammatory. Rootstock is diaphoretic, diuretic and demulcent (Ghani, 2003).

Seeds are used as beads and for making necklaces. Leaves are sometimes used as a wrapping material (Hassan, 2007).

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