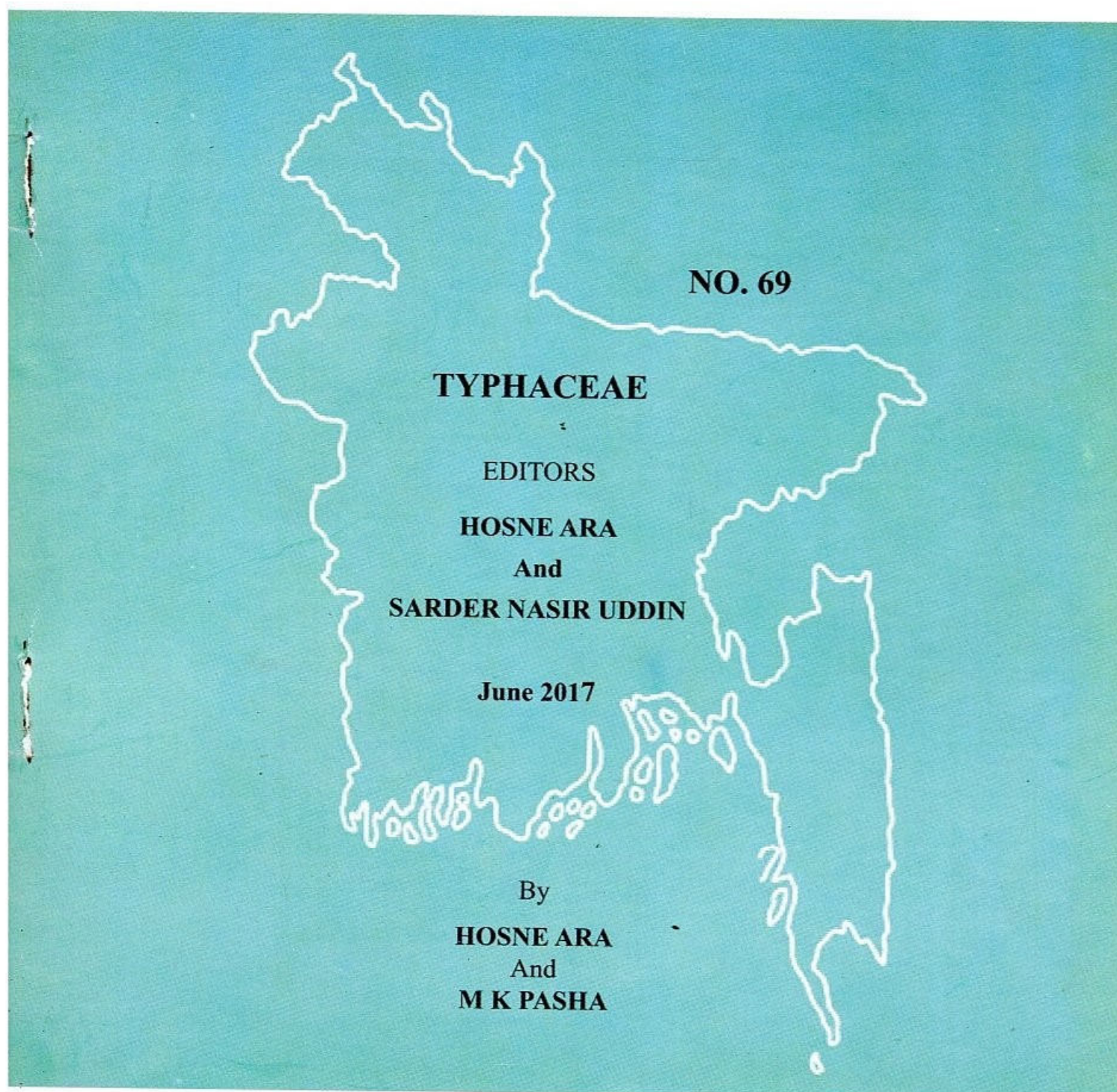


FLORA OF BANGLADESH



BANGLADESH NATIONAL HERBARIUM
MINISTRY OF ENVIRONMENT AND FOREST
GOVT. OF THE PEOPLE'S REPUBLIC OF BANGLADESH

FLORA OF BANGLADESH

NO. 69

TYPHACEAE

EDITORS

HOSNE ARA

And

SARDER NASIR UDDIN

June 2017

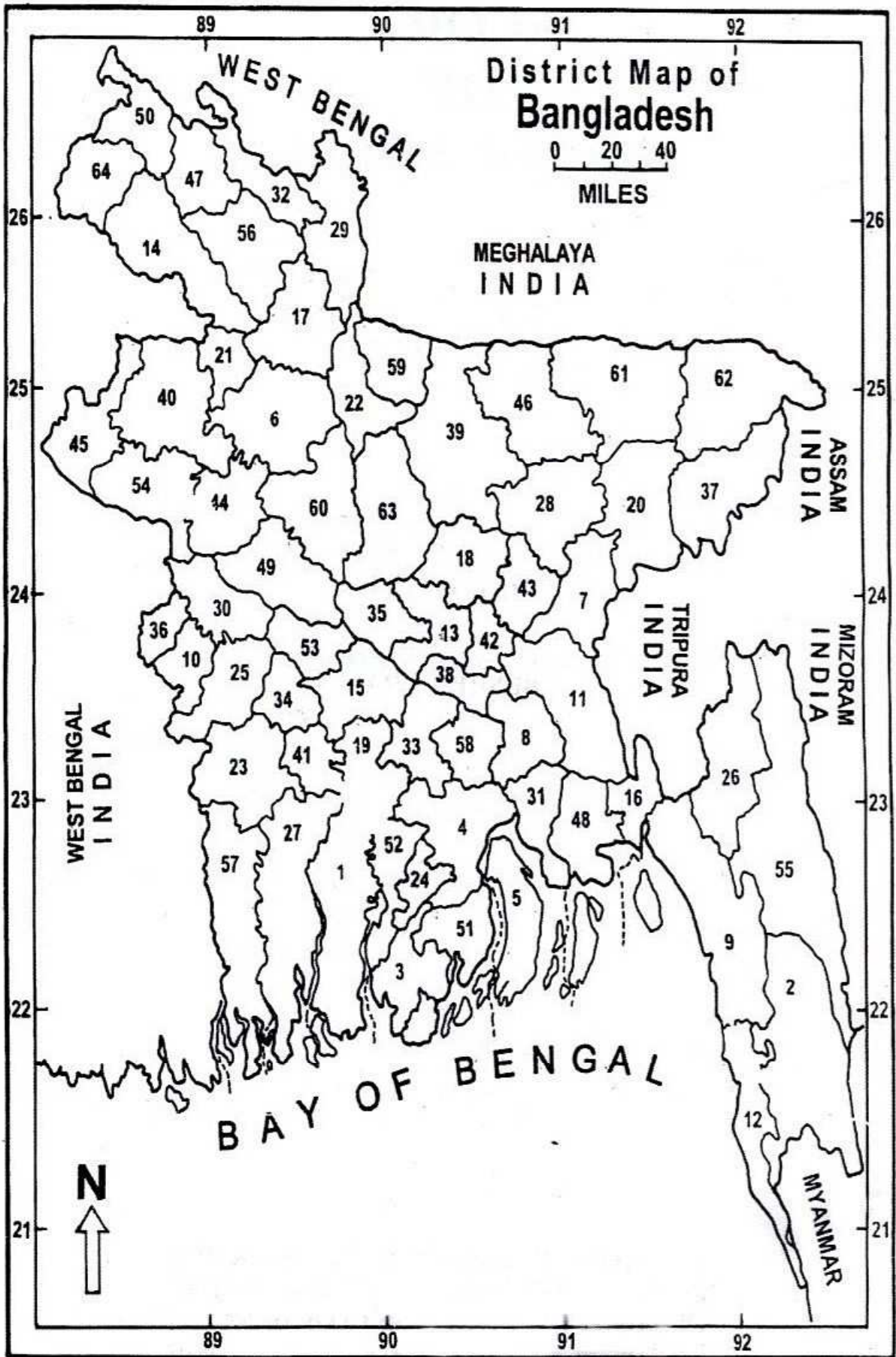
By

HOSNE ARA

And

M K PASHA

**BANGLADESH NATIONAL HERBARIUM
MINISTRY OF ENVIRONMENT AND FOREST
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List of Districts

The serial numbers correspond to those given in the map.

- | | |
|------------------|------------------|
| 1. Bagerhat | 33. Madaripur |
| 2. Bandarban | 34. Magura |
| 3. Barguna | 35. Manikganj |
| 4. Barisal | 36. Meherpur |
| 5. Bhola | 37. Maulvi Bazar |
| 6. Bogra | 38. Munshiganj |
| 7. Brahamanbaria | 39. Mymensingh |
| 8. Chandpur | 40. Naogaon |
| 9. Chittagong | 41. Narail |
| 10. Chuadanga | 42. Narayanganj |
| 11. Comilla | 43. Narsingdi |
| 12. Cox's Bazar | 44. Natore |
| 13. Dhaka | 45. Nawabganj |
| 14. Dinajpur | 46. Netrakona |
| 15. Faridpur | 47. Nilphamari |
| 16. Feni | 48. Noakhali |
| 17. Gaibandha | 49. Pabna |
| 18. Gazipur | 50. Panchagarh |
| 19. Gopalganj | 51. Patuakhali |
| 20. Habiganj | 52. Pirojpur |
| 21. Jaipurhat | 53. Rajbari |
| 22. Jamalpur | 54. Rajshahi |
| 23. Jessore | 55. Rangamati |
| 24. Jhalakati | 56. Rangpur |
| 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 |

TYPHACEAE A.L. de Jussieu (1789)

Hosne Ara¹ and M K Pasha²

Aquatic or marshy, erect perennial, monoecious herbs. Rhizome creeping, submerged, scaly, aerial stem erect, with or without nodes. Leaves radical or cauline, elongated. Inflorescence a terminal, cylindrical, superposed spike, male above and female below, parts separated or sometimes united. Flowers numerous, densely crowded. Male flowers: consisting of 1-3 stamens and surrounded by one or more hairs, some representing the perianth, anthers basifixed, linear. Female flowers: usually intermixed with clavate pistillodes, covered with hairs and bracts, or bracts absent. Ovary superior, 1-locular, stipitate, stigmas linear or lanceolate. Fruit a follicle, dehiscing longitudinally by a slit. Seeds striate.

The family Typhaceae consists of the single genus *Typha*, with about 16 species; distributed in the tropical and temperate regions (Sun & Simpson, 2010). In Bangladesh, this family is represented by a single genus and 2 species.

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

BFRIH= Herbarium, Bangladesh Forest Research Institute

BCSIRH= Herbarium, Bangladesh Council for Scientific and Industrial Research

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

² Department of Botany, University of Chittagong, Chittagong.

Typha L., Sp. Pl. 2: 971 (1753).

Lectotype: *T. latifolia* L.

Erect, marsh or aquatic perennial herbs. Leaves distichous with thick, spongy, long, open sheath. Inflorescence terminal in interrupted spikes. Flowers small, unisexual, densely crowded on terminal spadix, male and female flowers superposed. Male flowers: perianth reduced or absent, stamens usually 3, rarely 1-7, inserted on androphore like stalk. Female flowers: carpel 1 with fusiform ovary on gynophore. Fruit a follicle, small, fusiform.

KEY TO THE SPECIES

1. Plant up to 2 m long and 12 mm wide, leaf rounded behind; in spike male and female parts separated by short naked space **domingensis**
- Plant up to 4 m long and 25 mm wide, leaf angular behind; in spike male and female parts usually confluent **elephantina**

Typha domingensis Persoon, Syn. Pl. 2: 532 (1807). Bakshi, Fl. Murshidabad dist.: 334 (1984); Polhill, Fl. Trop. E. Africa-Typhac. 2 (1971); Sarma & Sarkar in Singh & Rao, Fl. Palamau Dist. Jharkand: 623-625 (2002); Pasha in Ahmed *et al.*, Encycl. Fl. Fauna Bangladesh 12: 451 (2008); Sun & Simpson, Fl. China 23: 162 (2010); *Typha angustata* Bory & Chaub., Nouv. Fl. Pélop. 4 (1838); Hook. f., Fl. Brit. India 6: 489 (1893-reprint 1954); Prain, Beng. Pl. 2: 1102 (1903-reprint 2004); Heinig, List Chittagong: 74 (1925); Fischer in Gamble, Fl. Pres. Madras 3: 1096 (1931-reprint 1967); Datta & Mitra, Bull. Bot. Soc. Beng. 7 (1&2): 81 (1953); Subramanyam, Aquatic Ang.: 74 (1962); Gandhi in Saldanha & Nicolson (eds.), Fl. Hassan Dist.: 759-760 (1976); Haines, Bot. Bihar & Orissa 5: 876 (reprint 1978); Bennet, Fl. Howrah Dist.: 23 (1979); Wadhwa & Chowdhery, Fl. Himachal Pradesh 3: 726 (1984); Sharma *et al.*, Fl. Karnataka: 296 (1984); Verma in Verma *et al.* (eds.), Fl. Raipur, Durg & Rajnandgaon: 393 (1985); Omer & Hashmi in Nasir & Ali (eds.), Fl. W. Pakistan 177: 5-7 (1987); Vajravelu, Fl. Palghat Dist.: 530 (1990); Matthew, Excur. Fl. Central Tamilnadu, India: 536 (1991); Pandey in Shetty & Singh, Fl. Rajasthan 3: 863-864 (1993). Pl. 1.

Bengali: Hogla, Kam

English: Cat Tail

A perennial rhizomatous herb, robust, erect, up to 2 m long and 12 mm wide. Leaves distichous, up to 2 m long, linear, often topping the stem up to c 12 mm wide, spongy, rounded behind, flat above. Spike cylindrical, up to 1.5 cm in diameter, the female part 10-25 × 1.0-2.5 cm, separated by a short naked space from the male section on the top, light brown at maturity. Male flowers of 3-stamens, rarely 2, the anthers 1.4 mm, borne on a single stalk made up of fused filaments. Female flowers with spatulate bracteoles, the stalked ovary bearing a linear stigma. Stalk 3-6 mm, styles 0.5-1.5 mm, stigma 0.8-1.5 mm, broader than style. Sterile flowers with truncate or stigma-less ovary, interspersed among the female flowers. Fruit fusiform. Seeds wind-borne. *Fl. & Fr.*: 6-8. *Swamps, marshes, bank of ponds, sometimes forming a mass thickets.* 2n = 30 (Kumar and Subramaniam, 1986).

Bhola: Charfassion, 27 ii 1989, *Huq, Mia & Rahman* H. 9091 (DACB). **Chittagong:** Near Bottalibazar, 04 i 1977, *Mohammed Yusuf* 69 (BCSIRH). **Dhaka:** Aricha ghat, 8 i 1976, *Huq, Rahman & Mia* H. 2116 (DACB). **Jessore:** Bengal, 15 vi 1874, *C.B. Clarke* (CAL); lower Bengal, *S. Kurz* 5167 (CAL). **Jhalakati:** Jhalakati-Chankhati, 3 iii 1985, *Huq & Mia* H. 6694 (DACB).

North-Africa, South Europe and India.

Leaves are used for fencing and roof of huts in rural areas, also used in preparing mats. The rootstock is used as astringent and diuretic (Pasha, 2008).

Typha elephantina Roxb., *Fl. Ind.* ed. 1832, 3: 566 (1832). Hook. f., *Fl. Brit. India* 6: 489 (1893-reprint 1954); Prain, *Beng. Pl.* 2: 1102 (1903-reprint 2004); Heinig, *List Chittagong*: 74 (1925); Datta & Mitra, *Bull. Bot. Soc. Beng.* 7 (1&2): 81 (1953); Haines, *Bot. Bihar & Orissa* 5: 875-876 (reprint 1978); Omer & Hashmi in Nasir & Ali (eds.), *Fl. W. Pakistan* 177: 5 (1987); Pandey in Shetty & Singh (eds.), *Fl. Rajasthan* 3: 864 (1993); Noltie, *Fl. Bhutan* 3(1): 177 (1994); Pasha in Ahmed *et al.*, *Encycl. Fl. Fauna Bangladesh* 12: 451-452 (2008); Sun & Simpson, *Fl. China* 23: 162 (2010). Pl. II.

Bengali: *Hogol, Hoogla, Hogla*

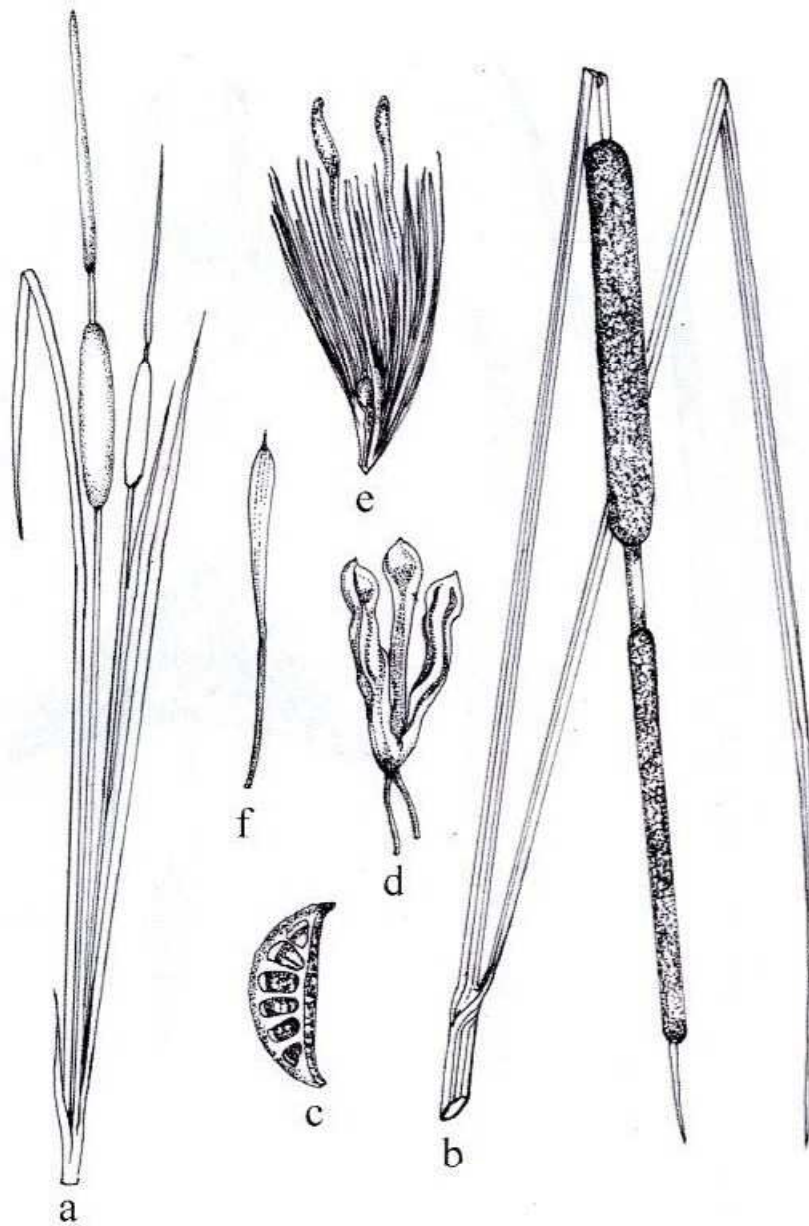
English: Cat Tail, Elephant Grass, Indian Reed

A robust herb, up to 4 m tall and 25 mm wide. Leaves wider, up to 3 cm wide, angular behind, flat above. Female spike about 12-20 × 2.0-2.5 cm. Female flowers with bracteolate, rachis clothed with short hairs, appearing triangular in cross-section, female part of the spike 10 mm thick, confluent with the upper male section, about 16-25 cm long, brown to dark brown at maturity, female flowers interspersed among the sterile flowers, ovary clavate, stalk 3.5 mm, style 1-2 mm, stigma 1 mm. *Fl. & Fr.*: 6-9. *Muddy banks and canals in tidal region.*

Chittagong: Near Patiya, 22 viii 1987, *M.K. Alam* 5931 (BFRIH); Sandip, 9 ii 1988, *Mia & Mahfiz* 1443, 1487 (DACB). **Jessore:** South Jessore, 22 v 1879, *C.B. Clarke* 469 (CAL). **Patuakhali:** Kolapara thana, Mohipur, 24 vii 1998, *M. Sultana* 133 (DACB).

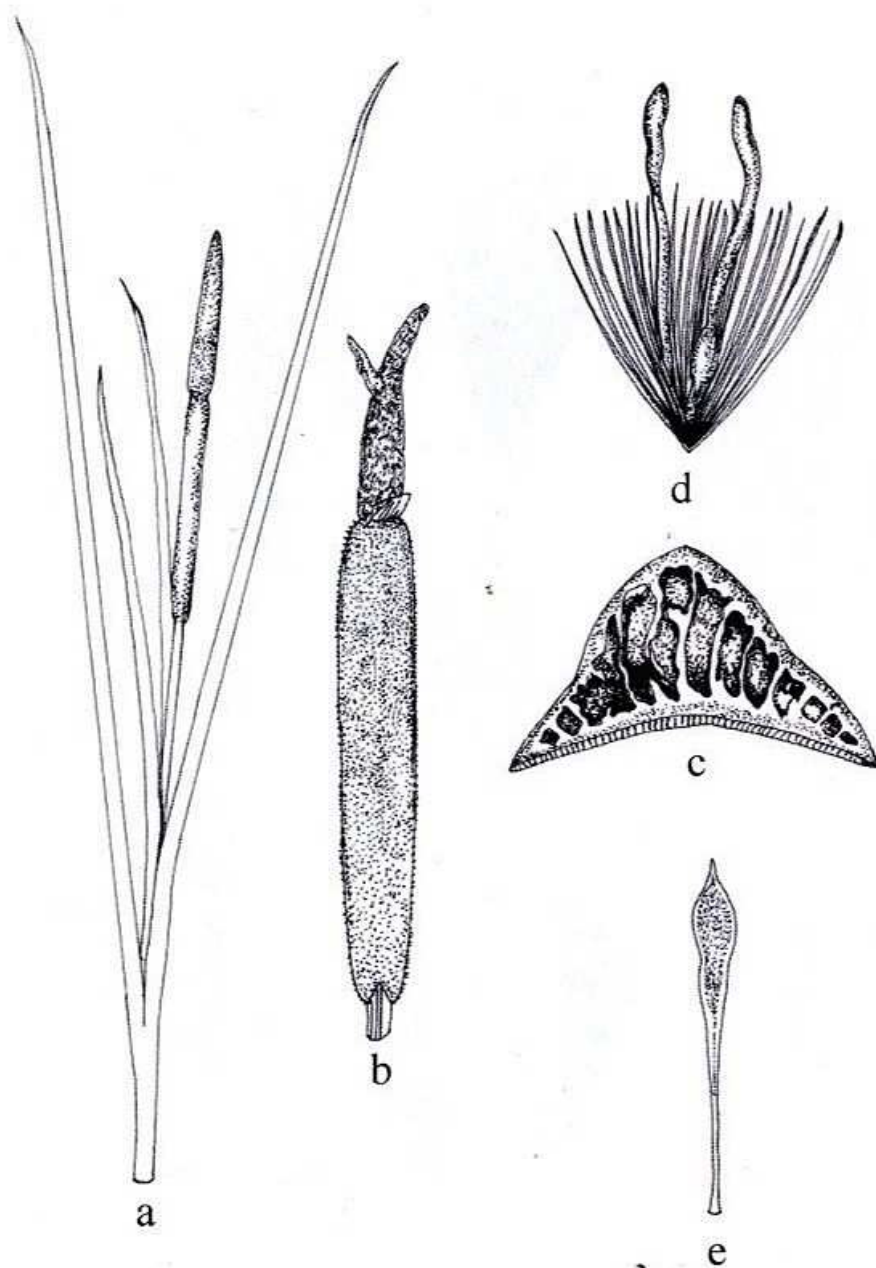
Africa, Middle-East, Central Asia and South Asia.

Mature dried leaves are used to make mats, partition of room and fencing of huts. Widely used as soil binder. Pollen grains, locally known as '*Hogoler gura*' are collected by using fine cloths, which are then used in making cakes in Patuakhali and Barisal districts of Bangladesh (Pasha, 2008).



Pl. I. *Typha domingensis* Persoon, a,b) a flowering branch ($\times 11$); c) transverse section of leaf blade ($\times 1$); d) male flower ($\times 25$); e) female flower ($\times 16$); f) bract ($\times 2$).

PL. II



Pl. II. *Typha elephantina* Roxb., a) a flowering branch ($\times 23$); b) inflorescence ($\times 2$); c) transverse section of leaf blade ($\times 2$); d) female flower ($\times 8$); e) bract ($\times 2.5$).

INDEX

Cat Tail 3, 4

Elephant Grass 4

Hogla 3, 4

Hogol 4

Hoogla 4

Indian Reed 4

Kam 3

Typha L. 2

Typha angustata Bory & Chaub. 2

Typha domingensis Persoon 2

Typha elephantina Roxb. 4

Typha latifolia L. 2

LIST OF FAMILIES PUBLISHED

	Fl. No.		Fl.No.
Acoraceae	67	Martyniaceae	1
Aizoaceae	34	Malvaceae	54
Alangiaceae	68	Menispermaceae	51
Annonaceae	52	Menyanthaceae	49
Asclepiadaceae	48	Molluginaceae	17
Averrhoaceae	18	Moringaceae	2
Avicenniaceae	31	Nymphaeaceae	9
Basellaceae	2	Ochnaceae	3
Bixaceae	35	Onagraceae	6
Buddlejaceae	13	Orobanchaceae	21
Burmanniaceae	38	Oxalidaceae	15
Burseraceae	36	Pedaliaceae	2
Butomaceae	2	Periplocaceae	47
Cannabidaceae	14	Phytolaccaceae	1
Capparaceae	57	Plumbaginaceae	42
Caricaceae	1	Polemoniaceae	2
Cassythaceae	43	Pontederiaceae	24
Casuarinaceae	1	Potamogetonaceae	40
Ceratophyllaceae	10	Punicaceae	22
Combretaceae	50	Rhamnaceae	61
Commelinaceae	4	Rhizophoraceae	7
Convolvulaceae	30	Ruppiaceae	19
Costaceae	45	Sabiaceae	62
Cuscutaceae	55	Salicaceae	20
Dichapetalaceae	23	Sapindaceae	59
Dilleniaceae	56	Solanaceae	53
Dipterocarpaceae	25	Sonneratiaceae	12
Elatinaceae	39	Sphenocleaceae	5
Flagellariaceae	3	Stemonaceae	41
Fumariaceae	3	Stylidiaceae	32
Gesneriaceae	65	Tiliaceae	64
Haloragaceae	8	Trapaceae	27
Hydrocharitaceae	28	Tropaeolaceae	3
Hydrocotylaceae	44	Turneraceae	3
Hydrophyllaceae	1	Typhaceae	69
Juncaceae	29	Urticaceae	66
Lamiaceae	58	Vitaceae	63
Linaceae	26	Xyridaceae	46
Lecythidaceae	60	Zannichelliaceae	11
Loranthaceae	33	Zygophyllaceae	16

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