

FLORA OF BANGLADESH

NO. 67

ACORACEAE

EDITORS

HOSNE ARA

And

SARDER NASIR UDDIN

June 2017

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BANGLADESH NATIONAL HERBARIUM
MINISTRY OF ENVIRONMENT AND FOREST
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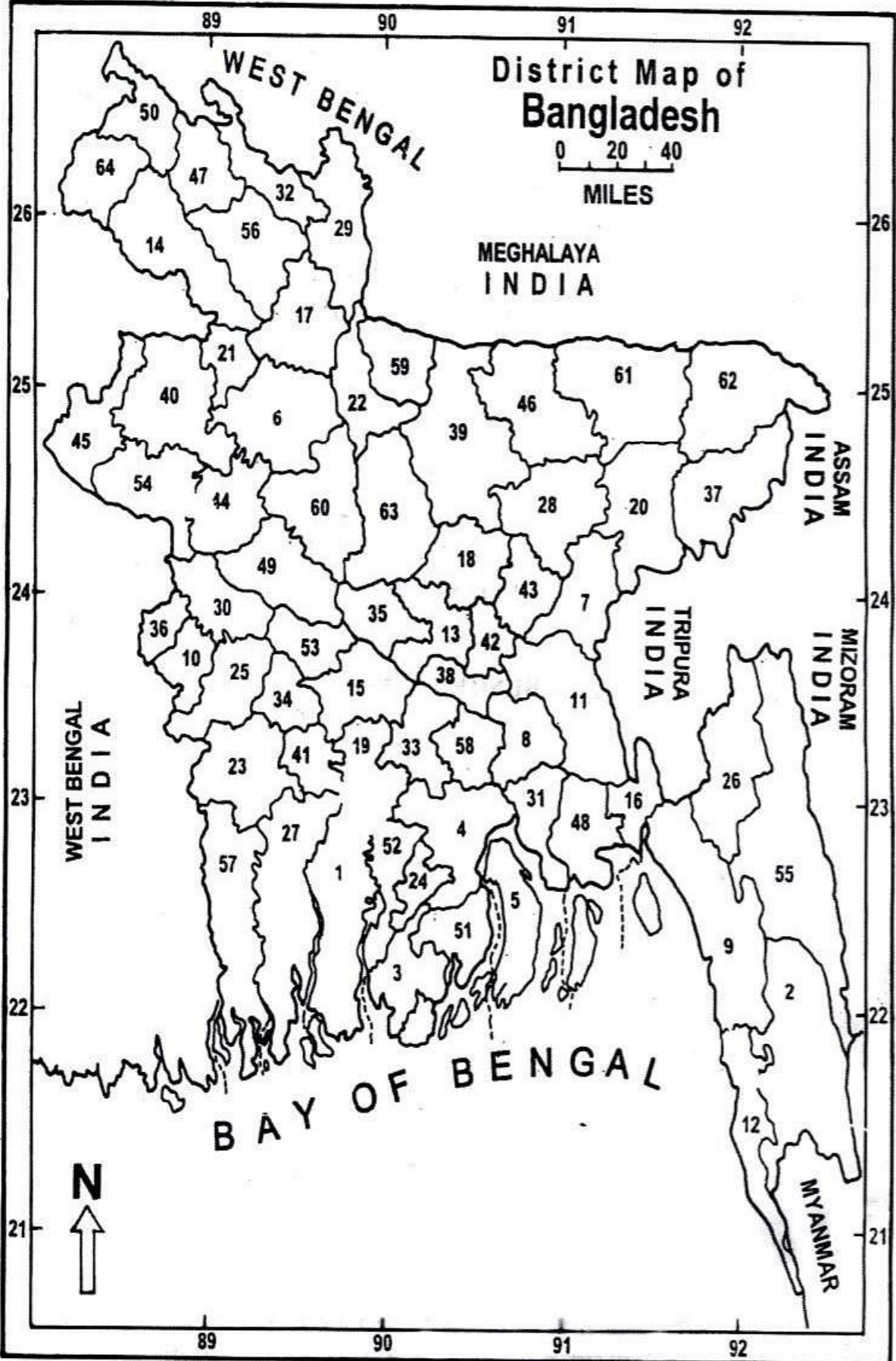
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List of Districts

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 |

ACORACEAE C. Agardh (1822)

Hosne Ara

Perennial herbs, glabrous, aromatic, growing in marshes or as emergent aquatics. Rhizome creeping, much branched, with specialized aromatic oil cells; roots on lower side and bearing leaves at apex. Leaves distichous, bases overlapping, unifacial, ensiform, not differentiated into petiole and blade, venation parallel. Inflorescence solitary, terminal, borne laterally on leaflike scape (usually interpreted as peduncle and spathe); continuous shoot arising in axil of leaf preceding inflorescence. Spathe much longer than spadix, erect, persistent. Spadix jutting out at an angle from peduncle, sessile, conoid, cylindrical and fingerlike or slender and tail-like, flowering from base to top. Flowers bisexual, with perigone, densely arranged, bractless, 3-merous; tepals 6, in 2 whorls of 3, thin; stamens 6, in 2 whorls of 3, free, filaments linear-oblong and flattened, anthers introrse, thecae globose-ellipsoid, dehiscent by longitudinal slit; gynoecium (pistil) obconic-cylindric, slightly exceeding tepals, ovary 2- or 3-locular, ovules several per locule, orthotropous, pendent on apical placenta. Fruit a few-seeded berry, oblong-obovoid with thinly leathery pericarp. Seed oblong to ellipsoid.

The family Acoraceae consists of about 1 genus and 2 species (Mayo *et al.*, 1997), the vast majority of them tropical or subtropical. In Bangladesh, it is represented by 1 genus and 1 species.

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

BCSIRH= Herbarium, Bangladesh Council for Scientific and Industrial Research

Acorus L., Sp. Pl.: 324 (1753).

Type species: *A. calamus* L.

Herb with creeping, much-branched rhizome. Leaves clustered, distichous, unifacial, ensiform, not differentiated into petiole and blade, parallel-veined, with basal sheath. Inflorescence solitary, terminal, borne laterally on leaf-like scape, continuation shoot arising in axil of leaf preceding spathe. Spathe much longer than the spadix, erect, persistent, not encircling the spadix, flat, leaf-like, apparently continuous with the peduncle appearing merely as a vertical extension of the leaf-like peduncle. Spadix sessile, cylindric, usually straight. Flowers bisexual, perigoniate, densely arranged, bractless, 3-merous, tepals 6 in 2 whorls, free. Stamens 6, filaments linear-oblong, free, flattened, anthers horseshoe shaped, thecae dehiscing by a longitudinal slit. Pistils with 2-3 locular ovary, ovules several per locule, pendent, orthotropous, placenta apical, stigma minute, sessile, punctate. Fruit a berry, oblong-obovoid, ripened berries reddish. Seed oblong to ellipsoid, testa light brown.

Acorus calamus L., Sp. Pl.: 324 (1753). Hook. f., Fl. Brit. India 6: 555 (1893-reprint 1954); Engler, Pflanzenr. 21 (IV. 23B): 308-311 (1905); Fischer in Gamble, Fl. Pres. Madras 3: 1100 (1931-reprint 1967); Hu, Dansk Bot. Arkiv 23 (4): 414, 416 (1968); Rao & Verma, Bull. Bot. Surv. India 18 (1-4): 34 (1976); Nasir in Nasir & Ali (eds.), Fl. W. Pakistan 120: 3 (1978); Deb, Fl. Tripura State 2: 394 (1983); Balakrishnan, Fl. Jowai 2: 563 (1983); Naithani, Fl. Chamoli 2: 668-669 (1985); Nicolson in Dassanayake & Fosberg (eds.), Rev. Handb. Fl. Ceylon 6: 28-29 (1987); Karthikeyan *et al.*, Fl. India Enum. in Fl. India ser. 4: 5 (1989); Matthew, Excur. Fl. Central Tamilnadu, India: 537 (1991); Noltie, Fl. Bhutan 3(1): 158-159 (1994); Srivastava in Hajra & Verma (eds.), Fl. Sikkim 1: 185 (1996); Mayo *et al.*, Gen. Arac.: 289-290 (1997); Matthew, Fl. Palni Hills, S. India: 1375 (1999); Vaish in Singh *et al.* (eds.), Flora Madhya Pradesh 3: 185-186 (2001); Govaerts & Frodin, World Checkl. Bibliog. Araceae: 545-553 (2002); Ara in Siddiqui *et al.* (eds.), Encycl. Fl. Fauna Bangladesh 11: 20-21 (2007); Heng *et al.* (eds.), Fl. China 23: 2 (2010); Maity *et al.*, Fl. Kanchenjunga Biosp. Reser. Sikkim: 668 (2018); *Calamus aromaticus* Garsault, Fig. Pl. Méd.: t. 40 (1764); *Orontium cochinchinense* Lour., Fl. Cochinch.: 208 (1790); *Acorus cochinchinensis* (Lour.) Schott in Schott & Endlicher, Melet. Bot.: 22 (1832); *Acorus americanus* (Raf.) Raf., New Fl. 1: 57 (1836). Pl. I.

Bengali: *Bach, Gharbach, Mithabach*

English: Sweet Flag

Perennial herb up to 80 cm tall, rhizome stout, 4-20 cm long, 1-3 cm broad, aromatic, roots at lower side of rhizome. Leaves several, ensiform or linear, tufted at the tip of the decumbent branches, glabrous, 55-80 × 1-2 cm, midrib prominent, apex acuminate. Inflorescence on a leaf-like peduncle, up to 25-30 × 1.0-1.5 cm, sessile, cylindrical, slightly curved, light yellow in colour. Spathe mid-green, leaflike, 35-40 cm long, tapering and ending in a shortly acuminate tip, not enclosing the spadix. Spadix straight or slightly curved, erect, oblique, 4.5-6.5 × 0.6-1.5 cm, sessile, cylindrical, light yellow in colour. Flowers numerous, densely arranged, typically 3-merous. Perianth 3+3, narrow, oblong, as long as pistil with vaulted tips. Stamens 6, filaments elongate, 1.2-2.4 × 0.3-0.5 mm, anthers 0.5 mm long, creamy. Ovary as long as perianth, 1.5-3.5 × 0.8-2.3 mm, hexagonal-cylindric with conical, spongy apex, 2-3 locular, ovules 7-10 in each locule, stigma sessile, punctate. Fruit a berry with a few pendulous seeds, seeds obconical, 2 mm long. *Fl. & Fr.*: 4-8. *Marshy, open places at higher elevations.* 2n = 36 (Petersen, 1989).

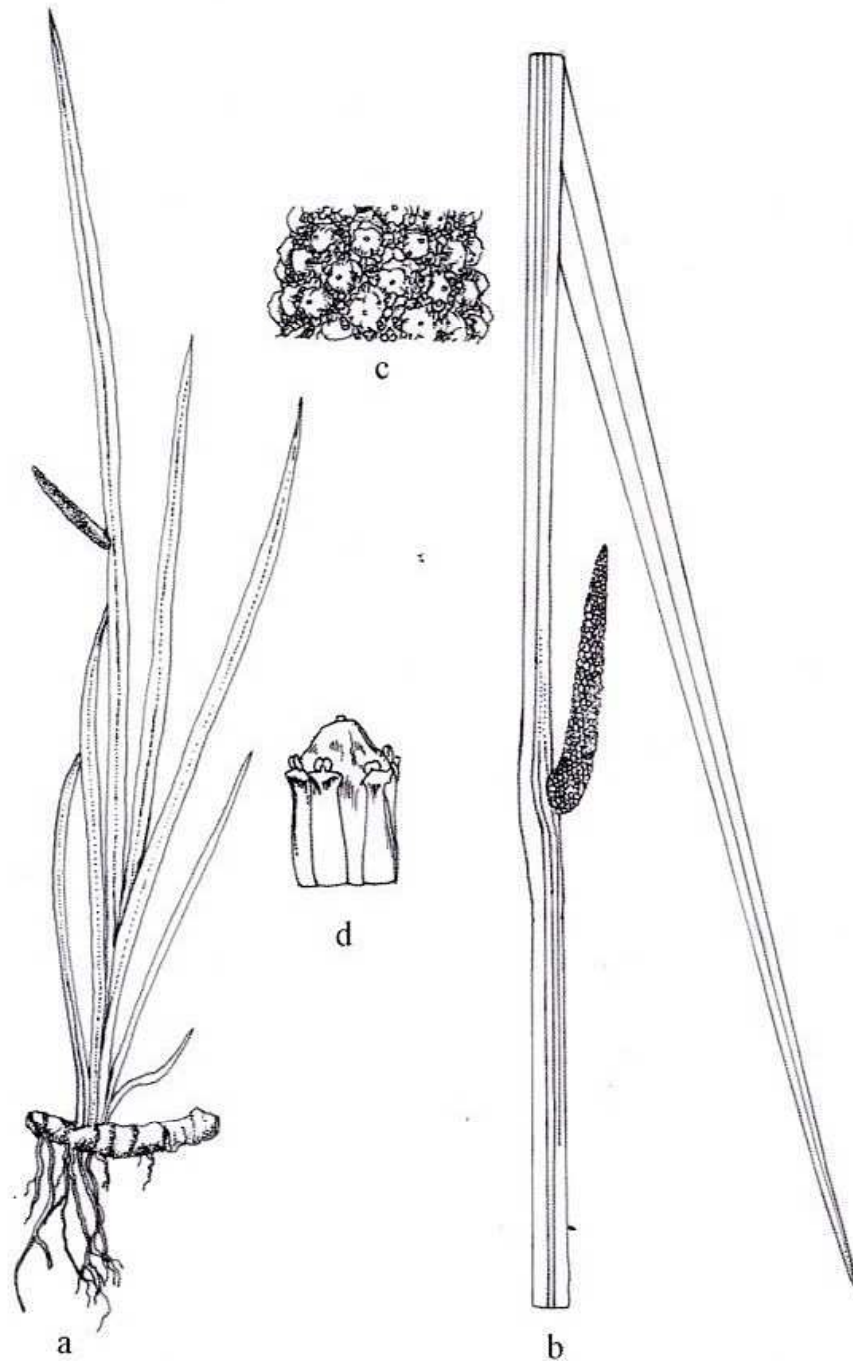
Chittagong: BCSIR Lab. Campus, 08 iii 1977, *Mohammed Yusuf* 99 (BCSIRH); 11 iv 1979, *Mohammed Yusuf* 210 (BCSIRH); 02 iii 2002, *Mohammed Yusuf* 1482, 1483 (BCSIRH). **Dinajpur:** Parbatipur near railway station, 16 x 1976, *Huq, Rahman & Mia* H. 2669 (DACB). **Sylhet:** Khadim nagar, 13 iv 1987, *Mia, Huq & G. Zaman* M. 1407 (DACB).

North and Central America, Europe and Asia.

The taste of the rhizome is pungent, bitter and heating. It is used as emetic, laxative, diuretic, carminative, expectorant, alexiteric, emmenagogue and anthelmintic, and helps to improve memory, appetite and voice. It serves as a tonic for the brain and also helps to cure diseases of the mouth and throat. It is useful in abdominal pain, inflammation, fever, epilepsy, bronchitis, delirium, asthma, hysteria, tumours, rat-bite, worms in the ear, pains in the liver and the chest, kidney troubles, leucoderma, general weakness, toothache and chronic diarrhoea in children (Ara, 2007).

The rhizomes are chewed as an expectorant. The Chinese people believe that the root of the plant is beneficial for the treatment of cancer (Kirtikar and Basu, 1918).

PL. I



Pl. I. *Acorus calamus* L., a. b) habit sketch ($\times 5$); c) detail of spadix ($\times 4$); d) flower with perigone ($\times 7$).

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