

THE BANGLADESH JOURNAL OF BOTANY (Bangladesh J. Bot.)

ISSN 0253-5416 (print), 2079-9926 (online)

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Each issue	US\$ 30.00 + 5.00 (Postage)	US\$ 30.00 + 8.00 (Postage)
Each volume (4 issues)	US\$ 120.00 + 10.00 (Postage)	US\$ 120.00 + 16.00 (Postage)

In Bangladesh, Tk. 500.00 for one issue and Tk. 2000.00 for each volume.

Published by the Chief Editor, Bangladesh Journal of Botany, c/o. Department of Botany, University of Dhaka, Dhaka-1000, Bangladesh, on behalf of the Bangladesh Botanical Society on 27 September, 2026. Fax: 880-2-8615583, website: <www.bdbotsociety.org>, E-mail: <bdbotsoc@gmail.com>

Printed by: SRL Printing Press, 12, Babupura, Nilkhet, Dhaka-1205, Bangladesh
Cell: 01552-388130, 01612-388130

THE BANGLADESH JOURNAL OF BOTANY

(Bangladesh J. Bot.)

ISSN 0253-5416 (print), 2079-9926 (online)

Vol. 55

No. 3

September 2026

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Crawford RMA 1993. Changing perspective of flood-induced injury in higher plants. *In: Plants for the Environment*, Khan MS, Khan MAA, Hadiuzzaman S and Aziz A (Eds), pp. 85-93. Proc. 7th Bot. Conf., 13-14 Dec., 1992. Bangladesh Bot. Soc., Dhaka.

Islam AS and Rashid A 1960. First successful hybridization between the two jute yielding species, *Corchorus olitorius* (Tossa) × *C. capsularis* (White). *Nature* **185**: 258-259.

Alam A, Yeasin M and Ahmed A 2024. Carbon pool and respiration of rhizosphere soils of different mangrove plant species distributed in the Bangladesh Sundarbans. *Bangladesh J. Bot.* **53**(1):131-140.

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(Bangladesh J. Bot.)

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No. 3

September 2026

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The Society gratefully acknowledges the financial support received from the **Ministry of Science and Technology**, Government of the People's Republic of Bangladesh and the **University of Dhaka** towards the publication of this Journal.

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