

A NEW RECORD OF *HALOPHILA BECCARII* ASCHERS FROM INDIAN COAST

A. G. UNTAWALE and T. G. JAGTAP

National Institute of Oceanography, Dona Paula - 403 004, Goa.

ABSTRACT

Halophila beccarii Aschers, a sea grass has been reported for the first time in India along Mandovi estuary, Goa. This species is found in the intertidal region of the fringing mangroves, where wave action is minimum.

During the study of mangrove ecosystem in 1976, we came across a brackish water plant at St. Pedro near Raibandar, Goa, along the Mandovi estuary (Fig. 1). The plant was identified as *Halophila beccarii* Aschers and subsequently confirmed by the Director, Royal Botanical Gardens, Kew, London and Botanical Survey of India, Pune, India.

In India, the distribution of sea grasses in general and *Halophila* sp. in particular, has not received much attention. Gamble and

Fischer (1928) have reported the presence of *H. ovalis* Gand. It has been collected by the author (A.G.U.) from Beyt Shankhodhar near Port Okha in 1970-71. Vartak (1966) also did not notice any *Halophila* species from the Goa region. Hooker (1885) has described only one species *H. ovata* Gand in his Flora of British India. However, he has mentioned that '.....Some collection from Trimen from Ceylon was received among which *Halophila beccarii* Aschers was present. Thus, occurrence of this particular species has not been reported so far from the Indian coastline.

The plant was found growing in a small patch in the mangrove swamp, where the substratum was silty clay and is influenced by the tides. The salinity in this brackish water region ranges from 5‰ to 35‰ during different seasons. Some of the dominant mangrove species in the vicinity are *Rhizophora mucronata* (L.), *Avicennia officinalis* (L.), *Sonneratia acida* (L.) and *Kandelia rheedii* (W & A). The patch of *H. beccarii* Aschers was present behind the mangrove trees at such a site where wave or current action seems to be minimum.

H. beccarii is a small submerged, creeping plant belonging to the family Hydrocharitaceae (Fig. 2). Most of the plant except leaves always remain underground. The slender creeping rhizome gives out hairy rhizoids at each node. Leaves in whorls of 3 to 10 grow in the

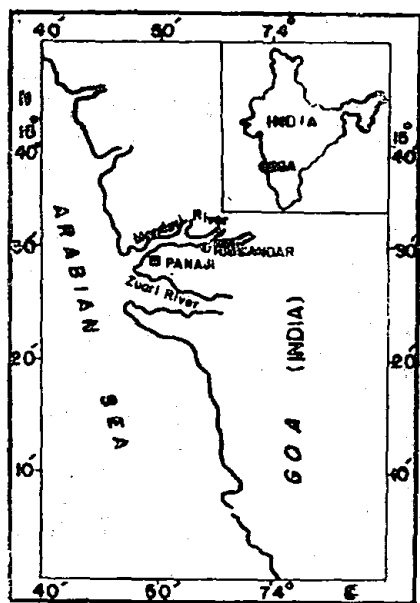


Fig. 1. Map of Goa showing location of *H. beccarii* Aschers along the Mandovi estuary.

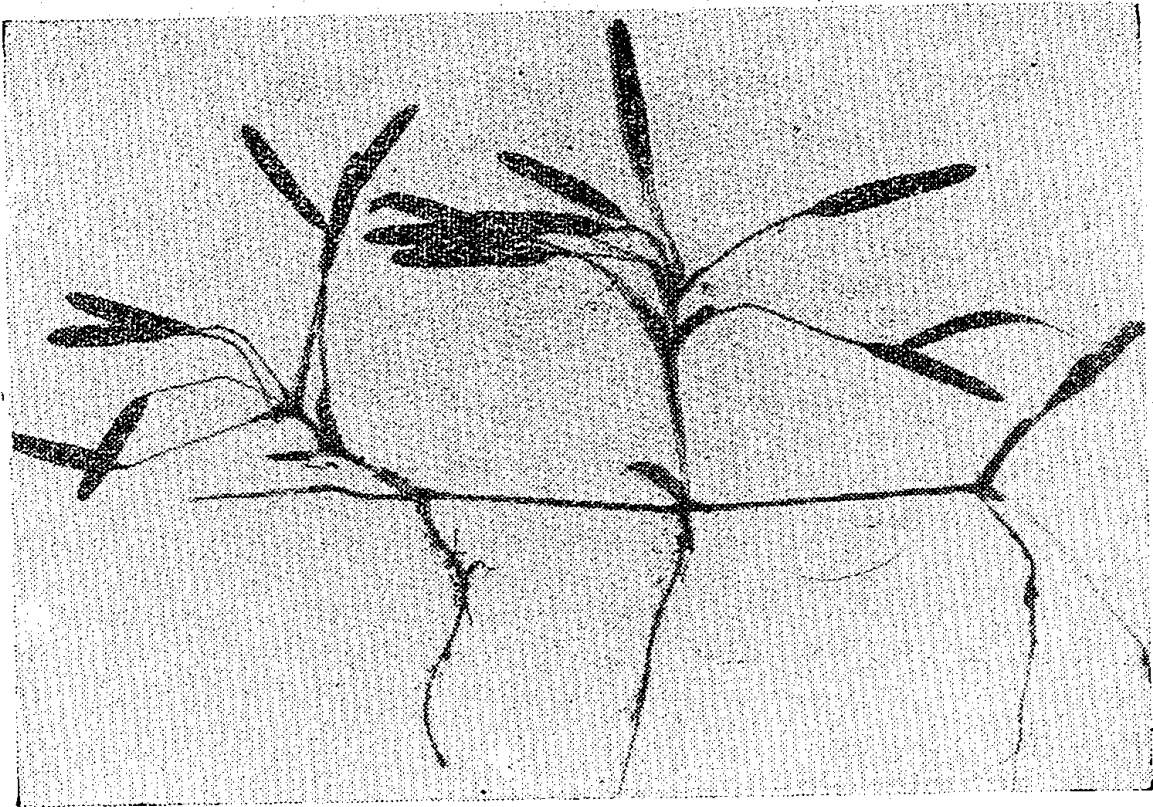


Fig. 2. A photograph showing morphological characters of *H. beccarii* Aschers such as leaves, rhizome, rhizoides, branching etc.

axil of a hyaline convolute scale at each node. The elongated leaves arise from the common stalk which in turn is in the axil of hyaline convolute scale. Leaves which are 1.2 cm long are stipulate with a long petiole (0.4 to 1.3 cm) and 0.15 cm broad lamina. Leaf margin is more or less entire. However, small epidermal spines numbering 7 to 12 are present on the margin. Four convergent veins unite at the apex to form a pointed or acute apex (Fig. 3). At flood tides when the plant gets submerged, the leaves are able to float because of long petiole. So far flower and fruits of the plant have not been seen.

This species might have migrated along the west coast of India from Ceylon or from any other place along the Indian Coast, where it has established itself earlier. As transportation of the plant fragments is a

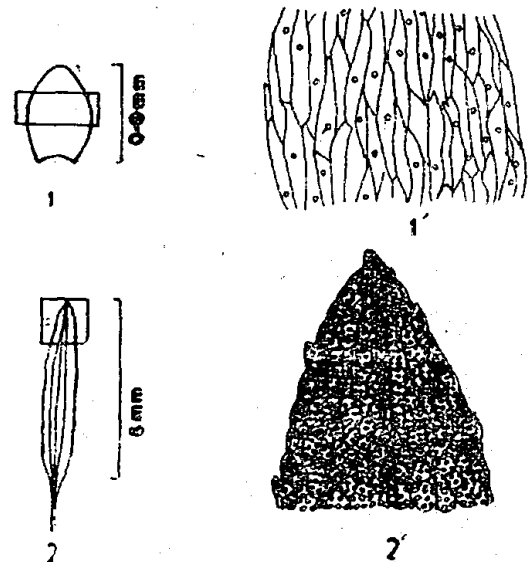


Fig. 3. 1-1'- Internodal scale and its microscopic.
2-2'- leaf and its microscopic structure.
(1' & 2' - diagrammatic representation)

A new record of Halophila beccarii Aschers from Indian coast

common phenomenon and has been explained as 'one jump migration' by Lipkin (1972), its transport to Goa seems a possibility.

ACKNOWLEDGEMENT

Authors wish to record their sincere thanks to Director, Royal Botanical Garden,

Kew (England); Regional Botanist, Botanical Survey of India, Western Zone, Pune; and Dr. Y. Lipkin, University of California, U. S. A. for the confirmation of species. We are also thankful to Dr. S. Z. Qasim, Director, National Institute of Oceanography, Goa, for his corrections.

REFERENCES

- COOKE, T., 1908. *Flora of Bombay Presidency*. Botanical Survey of India, Calcutta, Vol. III: 169-173.
- GAMBLE, J. and C. E. C. FISCHER, 1928. *Flora of Madras*. Botanical Survey of India, Calcutta, Vol. III: 1304-1305.
- HOOKE, J. D., 1885. *Flora of British India*. L. Reeve & Co., London, Vol. 5: 658-664.
- LIPKIN, Y., 1972. Marine algal and sea grass flora of the Suez Canal. *Israel Journal of Zoology*, 21: 405-445.
- VARTAK, V. D., 1966. *Enumeration of plants from Gomantak India*. Maharashtra Association for the Cultivation of Sciences, Pune.