THE SEA-GRASSES OF KRUSADI ISLAND IN THE GULF OF MANAAR, INDIA

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Sea-grasses are a small group of marine angiosperms remarkable in their habit, occurrence in restricted areas and morphological features. Collections of sea-grasses are being made since 1964 from Ennore, Kovalam, Tuticorin and Krusadi Island (Tamil Nadu) for detailed study. This account deals with Krusadi Island.

Krusadi Island being located in between Palk Bay and the Gulf of Manaar forms an ideal centre for marine biological investigations. Krusadi Island which is about 2.5 km long and about 0.4 km at its broadest part is situated in the Gulf of Manaar approximately between 9° 14'-9° 15' N and 79° 10.5'-79° 14.5' E, south of Rameswaram, is a part of the Ramanathapuram District of Tamil Nadu, India.

The interesting phanerogamic vegetation of this area has been reported by Chandrasekaran et al. (1946). They included five species of sea-grasses. Chacko et al. (1955), recorded three genera and six species. Subsequently Rao, Aggarwal and Mukherjee (1963) recorded five species.

Sauvageau (1890-91) who studied the morphology of leaves of many sea-grasses and other aquatic plants found that many of these vegetative characters can be used as criteria to distinguish the species. The rare occurrence of flowers in some of the marine angiosperms has also been revealed by Taylor (1928), and Phillips (1960). Hartog (1964) remarked that in sea-grasses the vegetative characters are more reliable and important for identification. Out of 234 shoots of Cymodocea serrulata observed by Kirkman (1975) only nine had male flowers and none was with female flowers.

In preparing the following key, critical studies were made on the specimens represented in Madras Herbarium (MH) along with our collections now deposited in the Post Graduate Centre of Madras University, Coimbatore. The locality for all is Krusadi Island.


Submerged herbs with creeping rhizomes. Internodes 2.0-3.5 cm long. Roots 2 at each node. Leaves 10-15 x 0.2-0.3 cm, alternate, linear, entire, glabrous, obtuse at apex, 8-11-nerved, sheathing at the base. Sheaths stipular, cylindric, 2.0-3.5 cm long, transparent, 10-14-nerved.


Submerged herbs with creeping rhizomes. Internodes 2.0-2.5 cm long. Roots 1-2 at each node. Leaves 20.25 x 0.8-1.0 cm., alternate,
ARTIFICIAL KEY

1a. Leaves terete
1b. Leaves not terete.

2a. Leaves filiform
2b. Leaves not filiform.

3a. Leaves narrowly linear, ribbon shaped.
   4a. Rhizome covered with persistent, black fibrous strands; leaves 50-90 cm long
   4b. Rhizome not covered with fibrous strands; leaves up to 20 cm long.

5a. Leaves 2-3 mm wide, entire at apex; leaf-scars forming closed rings
5b. Leaves 5-7 mm wide, minutely toothed at apex; leaf-scars forming open rings

3b. Leaves not as above.

6a. Leaves elliptic-oblong to oblong-elliptic, margins entire
6b. Leaves linear to oblong-elliptic, margins serrulate

Syringodium isoetifolium 7
Ruppia maritima 6

Enhalus acoroides 3
Cymodocea rotundata 1
Cymodocea serrulata 2
Halophila ovalis 4
Halophila stipulacea 5

Distichous, linear flat, obtuse and denticulate at apex, 15-22-nerved, sheathing at base. Sheaths 3.0-3.5 cm long, pinkish, stipular, 2 auriculate, transparent, 18-20-nerved.


Submerged herbs with creeping rhizomes. Rhizomes 1.0-1.5 cm thick, roots unbranched, 15-22 cm long, densely covered by persistent, black fibrous strands of the decayed leaves. Leaves 65-80 × 1.5-1.8 cm, narrowly linear, ribon shaped; apex obtuse, often distorted, enclosed in threes in a basal sheath; sheaths 20-25 × 2.5 cm white, stipular, 25-30-nerved.


Submerged herbs with slender creeping rhizomes. Internodes 1-4 cm long, roots usually one at each node, unbranched, scales transparent, faintly keeled. Leaves 1.0-3.5 × 0.5-1.0 cm in pairs at each node from the hyaline scale, elliptic oblong to oblanceolate, glabrous, membranous, lateral nerves 10-15 pairs. Petioles 0.5-5.0 cm long.

Specimens examined: In flowers, 3.2.1978, Rajeshwari, M. and Lakshmanan, K. K. 12; in flowers, 24.2.1959, Krishnamurthy, V. 7946.


Submerged herbs with slender creeping rhizomes. Internodes 1-2 cm long. Roots usually one at each node. Leaves 3.6 × 0.25-0.8 cm long, linear to oblong elliptic, green, serrulate, glabrous. Petioles 0.5-1.5 cm long.

Note: This specimen has been included on the authority of Chacko et al. (1955) and Hartog (1957). The authors could not collect any specimen and it is not represented in MH.


Submerged herbs with slender creeping rhizomes. Internodes 2-4 cm long. Roots 2-4 at each nodes. Leaves 4-12 cm long, alternate, filiform, sheathing at the base. Sheaths 1.5-3.0 cm stipular, transparent, 8-14-nerved.


Submerged herbs with creeping rhizomes. Internodes 1.5-3.0 cm long. Roots 2-4 at each node. Leaves 15-29 cm long, alternate, terete, distichous, toothed at apex, sheathing at the base. Sheath 3.5-4.0 × 0.4-0.6 cm, stipular, auriculate, white, transparent, 7-10-nerved minutely toothed at tip.


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