Symphyodon complanatus Dixon (Symphyodontaceae: Moss) a new record for Kerala (India)

K.P. Rajesh, 1&2 B. Mufeed & 1&2 C.N. Manju
1Department of Botany, The Zamorin’s Guruvayurappan College, Kozhikode-673014, Kerala, India
2Malabar Botanical Garden, GA College PO, Kozhikode-673014, Kerala, India
Emails: kprajesh.botany@gmail.com, manjucali@gmail.com

Introduction

The genus Symphyodon was established by Montagne (1841) for a single species. The generic name refers to the fact that the endostome segments are partially adnate to the exostome teeth. Symphyodon Mont. is a Pleurocarpic moss genus mostly epiphytic, primarily distributed in the tropical and the subtropical areas of the world. There are 15 valid species nearly restricted in southern and southeastern Asia (He and Snider, 2000). The genus is characterized by having echinate capsules, distally roughened or papillose setae, and prorate leaf cells. The sterile plants of Symphyodon are, usually confused with members of distant genera such as Glossadelphus Fleisch. (Sematophyllaceae) and Taxiphyllum Fleisch. (Hypnaceae). However, it is easy to distinguish when it produces the sporophyte.

When the genus was established, Montagne (1841) did not assign it to a family. It was Mu?ller (1851) who transferred Symphyodon perrottetii Mont., the type species of the genus, to Neckera Hedw. of Hypnoideae (Hypnaceae), allying it with Neckera angusta C. Mu?ll. under the section Entodon (C. Mu?ll.) C. Mu?ll. Later Mitten (1859), however, recognized Symphyodon as a section under the genus Stereodon Mitt. of Hypnaceae. Jaeger (1878) placed Symphyodon in the family Cylindrotheciaceae (= Entodontaceae). Brotherus (1907) initially placed Symphyodon in the family Entodontaceae, but later (1925) followed Fleischer (1923), in placing in its own family, the Symphyodontaceae. Brotherus’ (1925) treatment of Symphyodon was the first detailed assessment of the genus on a world wide basis. He recognized 14 out of the 17 species published up to 1925. Since then, some of the Symphyodon taxa have occasionally been treated in regional floras (such as Bartram, 1939; Gangulee, 1976; Horikawa and Ando, 1964).

Gangulee (1976) reported nine species and one variety from India, which is evidently a centre of distribution. Symphyodon perrottetii Mont. is the most widely distributed species of the genus, which was recorded from Kerala also (Manju et al., 2008). During our recent explorations in the lowlands and midlands of Kozhikode district, we could collect one interesting rare species of the genus, viz., S. complanatus Dix. In Southern India, it was collected by Foreau from Palni hills of Tamil Nadu (He and Snider, 1992). It was not recorded earlier from Kerala, and hence is reported here.


Plants yellowish-green, semi robust, creeping, up to 10 cm, branching bi or tri pinnately erect or suberect, shoots complanate. Leaves dimorphic, stem leaves larger than branch leaves, complanate, spreading, oblong-ovate to oblong-lingulate, up to 2 mm long and 0.7 mm wide, apices obtuse to rounded; branch leaves small, complanate, elongate-ovate to lingulate, ±1.28×0.45 mm, apices rounded; all leaves with margins coarsely serrate in upper half, serration formed by row of enlarged cells, sometimes incurved on one side at base; costae unequal, Leaf cells narrow elongate with papillae on upper angles, apical leaf cells shorter than adjacent cells; median cells linear, 55–70 x 3.5–4.5 mm; alar cells differentiated, irregularly rectangular to quadrate, of 2-4 rows extending 3–5 cells up margins. Perichaetial leaves sheathing at base, gradually narrowed to long acumen, cells porose, thick walled. Seta long, upto 3 cm long, capsules erect, cylindric, asymmetric, ca 3.1 x 1.2 mm, spores ca 17 mm in diameter, finely papillose. (Fig. A-I).

Microhabitat: On small rocks near stream in forests.
Fig. 1. Symphyodon complanatus A. Habit, B. Leaf, C. Leaf apex, D. Leaf marfin, E. Marginal cells enlarged, F. Leaf cells, G. Leaf base, H & I. Peristome teeth

Specimens examined: Kerala, Kozhikode district, Anakkampoyil, KP Rajesh 1302, 1306 (ZGC); Thusharagiri hills (400 m), Mufeed 312 (ZGC).

Distribution: It is distributed in India (Eastern Himalaya, Arunachal Pradesh, Darjeeling and Tamil Nadu). The present collection is a new record of occurrence for Kerala State. Endemic to India.

Note: S. complanatus is similar to S. scabrisetus in several features, but the former is characterized by marginal cells being large and forming serrations compared to the dentate margins of the latter.

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References


