

on well developed individuals : rhizoids yellowish to reddish : leaves imbricated, obliquely inserted, widely spreading, very broadly orbicular, 1.9 mm. long, 3 mm. wide, antical lobe often a little smaller than the postical, broadly ovate, slightly decurrent, antical margin rounded, apex rounded to subacute, usually terminating in an apiculum consisting of a row of from one to four cells ; sinus (in explanate leaves) varying from obtuse to broadly and shallowly lunulate or truncate ; postical lobe orbicular, postical margin rounded, sometimes subcordate at base, more rarely short-decurrent, apex rounded to obtuse, sometimes apiculate ; margin repand, indistinctly crenulate from projecting cells, sometimes bearing one or two short teeth at about the middle of the antical lobe or near the postical base ; leaf-cells at the edge of leaf 0.025×0.021 mm., in the middle isodiametric, averaging 0.031 mm., slightly elongated at the base, trigones slightly bulging into cell-cavities ; verruculae of cuticle densely crowded, oval or circular in outline : underleaves with lanceolate or subulate long-attenuate divisions, each 1.4 mm. long, 0.17 mm. wide ; marginal cilia six to fifteen on each division, mostly two to twenty cells long and one to five cells wide at base ; cells of underleaf with more uniformly thickened walls than in leaf, trigones indistinct, cuticle verruculose : inflorescence dioicous ; ♀ bracts alternate in about three pairs, the innermost quadrate, 2 mm. long, with sharper lobes than in the leaves, both antical and postical commonly apiculate, marginal teeth more usual than on ordinary leaves : innermost bracteole often torn in two and carried down by the developing perigynium ; perianth ovate in outline, 2.7 mm. long, 1.4 mm. in diameter, one cell thick, irregularly lobed at the contracted mouth, the lobes short-ciliate on their margins with cilia from one to four cells long and one cell broad throughout ; perigynium cylindrical, hollow, rounded at the apex, 3 mm. long, 1.4 mm. in diameter, the wall about ten cells thick (0.25 mm.), somewhat thinner toward junction with perianth : calyptra about five cells thick (0.15 mm.) over capsule, thicker in lower part ; archegonia usually ten to sixteen : antheridia few in the axil of each ♂ bract. (*Plate I.*)