MATERIALS AND METHODS

Periodic explorations covering all seasons were carried out at least once a fortnight, particularly during and after the monsoon showers so as to collect fertile specimens. Each field-trip varied from 5 to 7 days in different localities. Details on the occurrence, habit, habitat and host plants, wherever possible, were noted. The specimens collected were processed following traditional methods as given below.

Plants growing firmly adhered to their substrata were scraped with the help of a knife or cut along with the substratum with a chisel. Any adhering extraneous material was washed off with care, without damaging the reproductive structures particularly in hepatics.

Collections made during or immediately after monsoon rains usually had excess water especially in mosses, which was carefully squeezed out between the hands without damaging the sporophytes. Plastic bags were used for keeping the collections and were stored in a refrigerator when they could not be examined immediately. Refrigerating them helped to keep them fresh for at least a couple of months. Collected specimens were carefully separated from each other and exposed in a packet made of some absorptive paper to air-dry. Plants were not pressed when they were being dried because such pressure can often rupture sporophytes and destroy some of their critical morphological features. Photographs were taken whenever necessary to show their habit and habitat using a Canon digital camera.

Many hepatics possess a number of taxonomic features such as the nature of oil bodies that should be observed while the specimen is fresh. It is indeed easier to study the structure of thalloid hepatics when fresh than dry. The nature of air pores, air chambers and mucilage cavities were observed and recorded by making free-hand cross sections on the stage of an Olympus dissection microscope using a razor blade. Sections were made by holding the specimens with a pair of delicate forceps on one hand while a sharp, razor blade was used to
cut thin sections. All sketches were made using a camera lucida and critical notes were made whenever needed. Determinations were made with the help of Gangulee’s Mosses of Eastern India and Adjacent Regions (1969 - 1980) and other related works especially recent revisions and monographs and also by comparing with protologues, types and/or authentic specimens as and when required. Materials that could not be determined were referred to experts.

Processed specimens were preserved in packets of dimensions 15 x 10 cm. Poisoning is not necessary as bryophytes are known to be good self insect repellents. However, naphthalene balls are used to keep the sporophytes from insect attacks.

Each packet was labelled with the following information: correct name (genus, species/subspecies/varieties, if any, and the author), habitat including substratum, elevation and general vegetation type in which it occurred, host plant (if an epiphyte), exact locality, name of the district etc., collector’s name, date of collection and collection number. The label was affixed to the outer flap of the packet. A stiff card was put in each packet to prevent the specimen from damage while handling. The packets were kept in steel herbarium racks. The specimens are deposited in the herbarium of Scott Christian College, Nagercoil (SCCN).

Authors of the plant names are abbreviated based on Brummit and Powell (1992) and titles of journals and books are based on B-(otanico)-P-(eriodicum)-H(untianum) (Lawrence & al., 1968), B-P-H/S (Bridson & Smith, 1991), Taxonomic literature ed. 2 (Stafleu & Cowan, 1976 - 1986) TL2 Supplements (Stafleu & Mennega, 1992 - 2000), (Dorr & Nicolson, 2008, 2009).

In the enumeration, each species is provided with the correct name and basionym if any. Efforts have been made to indicate the type for the correct name or its basionym wherever possible. This is followed by a detailed description, habitat, distribution and specimens examined with details.