

### CHAPTER III



### MATERIAL AND METHODS

The materials chosen for study were kindly given on loan by the Forest Herbarium of Royal Forest Department (B.K.F.) and the Bangkok Herbarium of the Department of Agriculture (B.K.). The specimens of 40 species belonging to 18 different genera within the Family Sematophyllaceae were observed on their morphological characters found in both the gametophyte and the sporophyte. Descriptions were written and tentative keys were made, as well as mapping of their geographical distributions in Thailand.

The specimens of the whole plants were examined first, with the un-aided eyes or the binocular microscope, then leaves from various parts of the stems and branches were dissected for detailed study by the usual freehand process. Permanent slides were made by using Hoyer's fluid as a mounting media.

The characteristic used for examining are:-

1. The whole plant
2. The branching or dividing of the stem
3. The length and width of the leaves.
4. Shape of the leaf, and leaf margin
5. Laminal leaf cells and basal leaf cells
6. Size, shape and position of capsule and peristome teeth (if present)