Aim: Preparation of Herbarium specimen

Herbarium specimens must be prepared by using standard procedures. An ideal herbarium specimen should represent all parts of the plant.
A specimen meant for incorporation in a herbarium needs to be carefully collected, pressed, dried, mounted and finally properly labelled. This must include the location of collection, date, and field data, as well as the name of the collector and the collection number.

The standard procedure for preparation of herbarium specimens involves:
1) Fieldwork: collection and processing of specimens
2) Taxonomic identification
3) Indexing (classification according to a standard system) and documentation, and
4) Inclusion in herbarium.

Equipment: The items essential for collection include field notebook, bags, pencil, cutter, pruning shears, knife and a digging tool.

Field Notebook: A field notebook or field diary is an important item for a collector. A well-designed field notebook has numbered sheets with printed proforma for entering field notes such as scientific name, family, vernacular name, locality, altitude, date of collection and for recording any additional data collected in the field.

1) Fieldwork: collection and processing of specimens:

(i) Collection: A number of polythene bags can be carried for easy storage, as these can be readily made airtight using a rubber band and, as such, the plants retain their freshness for many hours. The specimen collected should be as complete as possible. Plants should be collected complete, in flowering condition, along with leaves and roots. All information concerning the plant should be recorded in the field notebook and a tag from the sheet attached to the concerned specimen.

(ii) Pressing: The specimens should be placed in the field press, which generally has one corrugated sheet alternating with one folded blotter containing few newspaper sheets, either directly after collection, or sometimes after a temporary storage in a polythene bag.

(iii) Drying: Drying of pressed plant specimens is a slow process. The plants, freshly collected, are placed in a press without corrugated sheets and the press is locked for 24 hours. Plants lose some moisture, become flaccid and can be easily rearranged. Drying can be enhanced using artificial heat (drying chambers).

Mounting of specimens: Specimens pressed and dried are next mounted on herbarium sheets, and properly labelled before these can be incorporated in a herbarium. Completely dried, specimens are mounted on good quality (preferably acid free) standard-sized herbarium sheet. The standard size of herbarium sheet is **29** by **41.5** cm (**11½** by **16½ inches**).
Different materials such as glue, paste, narrow strips of glued linen, thread, etc. are used for mounting.

Labelling of specimens: A Herbarium label (**4** by **6** inches) containing information on plant name, family, local name, date of collection, place of collection, collector's name, identity

status etc. (flowering/vegetative) should be pasted on the bottom right hand corner with information typed or filled with permanent ink. Paper pouch containing extra plant parts is pasted on the bottom left hand corner to serve as source of study material.

Filing of specimens: Mounted, labelled and treated (to kill insect pests) specimens are finally incorporated in a herbarium, where they are properly stored and looked after. Small herbaria arrange specimens alphabetically according to family, genus and species. Larger herbaria, however, follow a particular system of classification.

2. Taxonomic Identification of the plant specimen: Identification methods involve careful examination and comparison of the characters, such as the description of plant in the regional floras using family, genus and species keys, and cross matching with already available and identified specimens. Unidentified specimens can be sent to different institutions/ experts for proper identification.

3. Indexing and documentation: After mounting, labelling and identification, the specimens are given a unique number called Herbarium Accession Number. Specimens are arranged in a hierarchical system: species - genera - family - order and so on, following a standard system of classification such as that of Bentham and Hooker.