

UNIT 2: ETHNOBOTANICAL FIELDWORK

Detailed English Notes | Topics: 2.1 Herbaria as an Aid • 2.2 Ethnobotanical Study with the Help of Literature • 2.3 Tribes of North Maharashtra: Pawara, Bhil and Kokani

2.1 HERBARIA AS AN AID TO ETHNOBOTANICAL STUDY

Introduction to Herbarium

- A herbarium is a systematically arranged collection of preserved, dried and labelled plant specimens used for scientific study and reference.
- A herbarium specimen usually consists of a pressed, dried and mounted plant sample accompanied by a label containing collection information.
- Herbaria are especially valuable in ethnobotany because correct botanical identification is essential when documenting traditional plant uses.

Basic Steps in Herbarium Preparation

- Collection – collect a representative specimen, preferably including leaves, flowers and/or fruits whenever possible.
- Pressing – place the specimen between sheets of paper and press it to flatten and preserve its form.
- Drying – dry the specimen thoroughly by changing blotting/pressing papers as necessary.
- Mounting – attach the dried specimen to a herbarium sheet using suitable adhesive, strips or other standard methods.
- Labelling – record scientific name, family, local/vernacular name, locality, habitat, date, collector and collection number.
- Identification – identify the specimen using floras, taxonomic keys, comparison with authenticated herbarium specimens and expert assistance.
- Storage – store specimens systematically in herbarium cabinets under suitable conditions.

Information Recorded on an Ethnobotanical Herbarium Label

- Scientific name and author citation, when available.
- Family.
- Local/vernacular name and language/community using it.
- Collection locality and habitat.
- Date of collection.
- Collector's name and collection number.
- Plant habit and brief field notes.
- Plant part used.
- Traditional use and, where appropriate, preparation or application details.
- Informant/community information should be recorded ethically and according to consent and applicable rules.

How Herbarium Helps Ethnobotanical Study

- Provides permanent voucher specimens for plants mentioned in field studies.
- Prevents confusion caused by different local names for the same species or the same local name for different species.
- Allows researchers to verify plant identity after fieldwork.
- Helps compare specimens collected from different regions and communities.
- Provides material for taxonomic revision and future research.
- Supports publication of reliable ethnobotanical records.
- Creates a permanent reference for future students and researchers.
- Can document seasonal, geographical and morphological variation.
- Links traditional knowledge with scientifically authenticated plant names.

Limitations

- Some plants are difficult to preserve as herbarium specimens, especially large, succulent, aquatic or very delicate plants.
- Traditional use information cannot be obtained from the specimen alone; interviews and field observations are required.
- Improper identification or labelling can make a voucher unreliable.
- Collection must follow conservation, legal and ethical requirements.

Best Practice

- Collect voucher specimens whenever ethically, legally and ecologically appropriate.
- Use correct botanical identification and expert verification.
- Keep the voucher number connected to the corresponding field interview or ethnobotanical record.
- Do not overcollect rare or threatened species.
- Respect local communities and obtain appropriate prior informed consent where required.

2.2 ETHNOBOTANICAL STUDY WITH THE HELP OF LITERATURE

Meaning

- Literature-based ethnobotanical study involves collecting, organizing and critically evaluating information already published or recorded in books, floras, research papers, theses, reports, ethnographies, pharmacopoeias and other reliable sources.
- Literature review is an important component of fieldwork because it provides background knowledge and helps researchers identify gaps that need field verification.

Major Sources of Literature

- Floristic and taxonomic books and regional floras.
- Ethnobotanical books and monographs.

- Research articles in scientific journals.
- Dissertations, theses and project reports.
- Pharmacopoeias and traditional medicine literature.
- Ethnographic and anthropological reports.
- Government publications and biodiversity documents.
- Herbarium catalogues and institutional databases.
- Historical texts and classical literature, interpreted carefully and verified where possible.

Procedure for Literature-Based Study

- Define the study area, community, plant group or ethnobotanical theme.
- Search for relevant keywords including scientific names, local names, uses and geographical terms.
- Collect information from reliable primary and secondary sources.
- Record citation details systematically.
- Extract plant name, family, local name, plant part used, use category and other relevant information.
- Standardize scientific names and synonyms using reliable taxonomic references.
- Compare reports from different sources and identify similarities or contradictions.
- Separate documented information from assumptions or unverified claims.
- Identify knowledge gaps and species that require field verification.
- Prepare a literature-based database or annotated list.

Importance

- Saves time by providing existing information before field visits.
- Prevents unnecessary duplication of previous studies.
- Helps select important species and communities for field investigation.
- Provides historical information that may no longer be available through direct observation.
- Allows comparison of plant uses between regions and communities.
- Helps identify changes in plant use over time.
- Supports correct interpretation of field findings.
- Provides references for scientific writing and research reports.

Critical Evaluation of Literature

- Check whether the plant identification is scientifically reliable.
- Check whether the source clearly identifies the community and geographical area.
- Determine whether the use was directly reported or merely repeated from another source.
- Compare information with taxonomic and pharmacological evidence where relevant.
- Be cautious about outdated scientific names and synonyms.
- Do not treat every traditional claim as scientifically proven; distinguish traditional use from experimentally validated activity.

2.3 TRIBES OF NORTH MAHARASHTRA: PAWARA, BHIL AND KOKANI

Introduction

- North Maharashtra includes culturally diverse tribal communities with rich traditional ecological and plant knowledge. Among the communities included in this syllabus are Pawara, Bhil and Kokani.
- Ethnobotanical study of these communities commonly examines medicinal plants, wild foods, fuelwood, fodder, timber, fibres, household materials, rituals and local resource-management practices.
- Exact practices and plant uses may vary between villages, families and subgroups; therefore field verification and correct documentation are essential.

A. Pawara (Pawari/Pawara Community)

- Pawara communities are associated particularly with the hilly and forested areas of the northern Maharashtra–western Madhya Pradesh/Gujarat region.
- Traditional livelihoods may include agriculture, collection of forest produce, livestock-related activities and seasonal wage work.
- Plant knowledge can include medicinal herbs, wild edible plants, fuelwood, fodder, timber, fibres and plants used in household and cultural practices.
- Ethnobotanical studies should document local names, plant parts used, preparation methods, seasonality, habitat and frequency of use.
- Traditional knowledge is often transmitted orally between generations.

B. Bhil Community

- The Bhil are one of the major tribal communities of western and central India and are present in parts of North Maharashtra.
- Forest and agricultural environments contribute substantially to traditional plant knowledge.
- Common ethnobotanical categories studied among Bhil communities include medicinal plants, wild foods, fruits, leafy vegetables, roots and tubers, fuelwood, fodder and construction materials.
- Traditional healers and knowledgeable elders may possess specialized knowledge of medicinal plants and their preparation.
- Documentation should distinguish household remedies, healer-based practices and food uses.

C. Kokani Community

- Kokani/Kokna communities occur in parts of western and northern Maharashtra and adjoining regions.
- Knowledge of forest plants, cultivated crops, wild foods, medicinal plants and other useful resources forms an important part of local ecological knowledge.
- Plant use may be influenced by local forests, agricultural systems, seasonal availability and cultural traditions.
- Ethnobotanical surveys among Kokani communities should record vernacular terminology carefully because local names can vary between villages.

Suggested Ethnobotanical Data to Record for North Maharashtra Tribes

- Community and village name.
- Local/vernacular plant name.
- Scientific name and family.
- Plant habit and habitat.
- Plant part used.
- Purpose/use category: medicine, food, fodder, fuel, timber, fibre, ritual, dye, household use, etc.
- Method of preparation and mode of use, when appropriate.
- Season of availability or collection.
- Source of knowledge, such as household members or traditional practitioners, recorded ethically.
- Abundance and conservation status where known.
- Whether the use is still practiced or is declining.
- Voucher specimen/collection number for botanical authentication.

Ethical and Conservation Considerations

- Respect community knowledge, customary practices and intellectual contributions.
- Obtain appropriate consent before recording sensitive traditional knowledge.
- Avoid disclosing culturally restricted knowledge without permission.
- Do not overharvest medicinal or rare plants during specimen collection.
- Give appropriate acknowledgement and follow institutional, legal and biodiversity-related requirements.
- Ethnobotanical research should aim not only to collect information but also to support conservation and respectful knowledge documentation.