

Ethnobotanical survey of barda sanctuary: I, Gujarat

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Abstract

The Barda Hills (sanctuary) from a compact block of about 192.31 sq. kms lying between parallels of latitude 21° 40' to 21° 55' North and meridian of longitude 69° 40' to 69° 50' East. The tribe inhabiting this region is mostly Rabaris. They live in small settlements and their economy is based mostly upon animal husbandry. In present study, 58 plant species used by the Maldharies of Barda Hills for their lives, for making shelter (16 species), for food (24 species), for ceremonial purposes (6 species), and for miscellaneous purposes (12 species).

Keywords: barda sanctuary, ethnobotany, plant used by tribal people

1. Introduction

Barda Sanctuary is spread in two districts Porbandar and Jamnagar, Gujarat State of India. The part of Barda Sanctuary, which falls under the Porbandar district, is known as “Rana Barda”, while the portion of Barda sanctuary, which falls under the Jamnagar district, is known as “Jam Barda”. The Barda Sanctuary from a compact block of about 192.31 sq. kms lying between parallels of latitude 21° 40' to 21° 55' North and meridians of longitude 69° 40' to 69° 50' East. The tribe inhabiting this region is mostly Rabari; they live in small settlements and their economy is based mostly upon animal husbandry (cattle about 5,000). The population of Maldharies in Barda Sanctuary is about 8,000. The Barda Sanctuary is hilly area. At places vary gentle slopes are noted but there are conspicuous absence of undulating ground. The climate is generally hot and dry. The average rainfall is 500-600mm. The average maximum temperature is 42.5°C in May, and the minimum temperature is 6.0°C in January. The climatic conditions

support dry deciduous nature of the forest in studied area. Dominant plants were *Acacia senegal*, *Lantana camara*, *Cassia auriculata* and *Manilkara hexandra*.

Ethnobotany is the study of how people of a particular culture and region make use of indigenous plants. Ethnobotanist explores how plants are used for food, shelter, medicine, clothing, hunting, and religious ceremonies.

In the early period of evolution, man was a food gatherer, totally dependent on forest for food and shelter. Gradually, he learnt to grow food, rear animals (cattle) and build houses. With this process of development, his dependence on forest gradually decreased but the pace of development has not been uniform for all human beings. Some human races went much ahead, while others living in comparative isolation in hilly, remote and densely-forested areas were left behind in the race of development and are still in varying stages of primitive-ness. These people are called tribal (in Barda Hills, they are known as Maldharies), aboriginal or indigenous people.

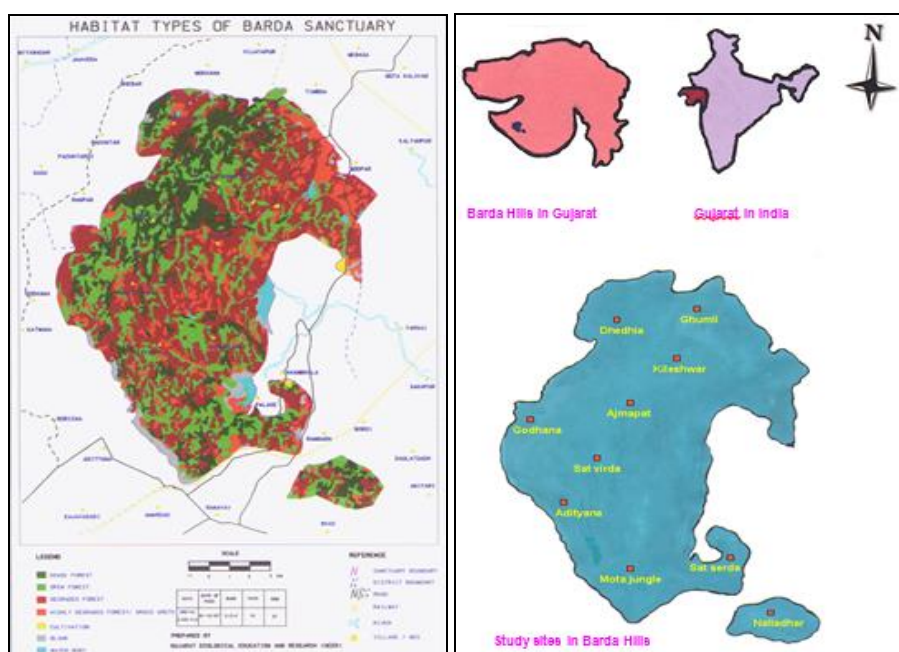


Fig 1: Study area and geographical location of Barda, Sanctuary in Gujarat, India

Materials and Methods

The tribe inhabiting this region is mostly Rabaris. They live in small settlements and their economy is based mostly upon animal husbandry. Like other tribes, the Rabaris have a rich oral tradition of extracting indigenous medicines from different plants. The information regarding traditional uses of plants was collected by means of personal interviews of tribal men and women. Besides this, Questionnaire was designed for Maldharies (tribal individual), and another for medicinemen (Jain, 1993, and Punjani, 1997).

Questionnaire for Maldharies (tribal individual)

Information regarding various uses of plants was collected with the help of the Questionnaire for tribal individual administered to the actual forest dwellers in the tribal region. The Questionnaire covered different uses, viz Shelter, huts, protection of walls, fencing, household articles, normal and special human diet, beverages, dyes, fodder, tooth-brush, medicines and miscellaneous uses.

Results and Discussion

The life style of the Maldharies of Barda Hills has evolved

Over centuries and direct use of natural resources such as plants and their products is inseparable part of their life and culture. The Maldharies cure their ailments using simple remedies. The ethnobotanical information was collected from the Maldharies (Tribal people) of Barda Hills with the help of questionnaire. Plants used by the Maldharies in their day-to-day life are listed below.

Shelter

1. Stems of *Bambusa arundiaceae* used for making walls and roof.
2. Stems of *Cassia auriculata*, *Grewia tiliaefolia*, *Phoenix sylvestris*, *Tectona grandis*, *Terminalia Arjuna* and *Terminalia crenulata* used for making walls.
3. Leaves of *Cyperus rotundas* used for making roof.
4. Stems of *Tectona grandis* used for making roof.
5. Stems and big branches of *Diospyros melanoxylon*, *Manilkara hexandra*, *Syzygium cumini* and *Tectona grandis* used for making doors and windows.
6. Entire plant (dried plant) of *Acacia senegal*, *Acacia chundra*, *Acacia nilotica*, *Bambusa arundiaceae* and *Lantana camara* used for making fences.

QUESTIONNAIRE FOR TRIBAL INDIVIDUAL ETHNOBOTANICAL SURVEY

Name: - _____
 Age: - _____ Male/Female: - _____
 Ness: - _____ Cast: - _____

PLANTS AND THEIR USES

| For the purpose of shelter | | For the purpose of food | |
|-----------------------------------|------------------------|---|------------------------|
| Purpose | Name of the plant used | Purpose | Name of the plant used |
| Walls | | Food grains | |
| Roof | | Pulses | |
| Doors and windows | | Vegetables | |
| Fencing | | Unripe fruits | |
| <u>Paniyaru</u> | | Ripe fruits | |
| Protection of wall | | Flower | |
| Support | | Spice | |
| Rope | | <u>Flavour</u> | |
| Extra | | For the purpose of preparing and serving food | |
| For the purpose of animal shelter | | Name of utensil | Name of plant |
| Purpose | Name of the plant used | Spoon | |
| Shed | | Plate | |
| Nails | | Mortar | |
| Ropes | | Pestle | |
| Fencing | | Dish – bowl | |

| | | | | | |
|--|------------------------|--------------------|---|------------------------|--------------------|
| PLANTS AND THEIR USES | | | | | |
| For colour and decoration purpose | | | For miscellaneous purpose | | |
| Purpose | Name of the plant used | Part of plant used | Purpose | Name of the plant used | Part of plant used |
| Wall | | | Hand flour mill | | |
| House | | | Wooden pestle | | |
| Body | | | Winnowing basket | | |
| Clothes | | | For writing | | |
| Extra | | | Bed | | |
| Plants used as a fiber | | | Hanger | | |
| Plant | Part giving fiber | Use | Storage and preservation of food grains | | |
| | Seed | | Broom | | |
| | Leaves | | Protection of clothes | | |
| | Stem | | Cage for Bird | | |
| | Root | | To Clean water | | |
| Plants used for bathing and washing | | | Tanning Leather | | |
| Plant used | Part of plant used | | Other household articles | | |
| Bathing | | | For cleaning water Pot | | |
| Washing clothes | | | | | |
| Washing hair | | | | | |

| | | | | | |
|--|-------------------|-----------------|----------------------------------|--------------------------------------|-----------------|
| PLANTS AND THEIR USES | | | | | |
| For Miscellaneous purpose | | | For Miscellaneous purpose | | |
| Purpose | Name of the plant | Plant part used | Purpose | Name of the plant used | Plant part used |
| For making smoking pipe | | | For fire | | |
| Leaves to prepare <u>bidi</u> | | | For giving to animals | | |
| Material for filing the <u>bidi</u> leaves | | | As a tooth brush | | |
| Forecasting weather | | | Plant giving gum | | |
| Preparation of Liquor | | | For filling cushion and pillow | | |
| For measuring weight | | | Plants used as a medicine | | |
| For making furniture | | | Disease | Plant | Part used |
| For the production of coal for fuel | | | | | |
| For covering mouth of animals | | | | | |
| For making toys | | | Name form Plant name | | |
| Extra | | | People | | |
| | | | Ness | | |
| | | | Place | | |
| | | | | Plants in idiom and folksongs | |

| PLANTS AND THEIR USES | | | | |
|------------------------|---------------|------------|-----------------------|--------------|
| On special occasion | | | Property based plant | |
| Occasion | Purpose | Plant name | Property | Plant name |
| Marriage | | | Poisonous | |
| Burth | | | Itching | |
| Death | | | Dye | |
| Festival | | | Insecticide | |
| Religious | | | Weedicide | |
| On belief based plants | | | Narcotics | |
| Belief | Name of plant | | Plants used as fodder | |
| Sacred | | | Fresh fodder | Dried fodder |
| Omen | | | | |
| Ill-omen | | | | |

7. Stems of *Adina cordifolia*, *Diospyros melanoxylon*, *Tectona grandis*, *Terminalia Arjuna*, and *Terminalia crenulata* Sused for making cot.
 8. Stems of *Bambusa arundiaceae* used as a nail for cattle.
- **Food**
 - 1 Tender leaves and flowers of *Tamarindus indica* used as a vegetable.
 - 2 Ripe fruits of *Coccinia grandis* used as a vegetable.
 - 3 Ripe fruits of *Aegle marmelos*, *Annona squamosa*, *Azadirachta indica*, *Cassia fistula*, *Diospyros melanoxylon*, *Ficus benghalensis*, *Ficus racemosa*, *Ficus religiosa*, *Grewia tenax*, *Grewia tiliaefolia*, *Mangifera indica*, *Manilkara hexandra*, *Syzygium cumini*, *Terminalia catappa*, *Zizyphus nummularia*, *Momordica dioica* and *Luffa cylindrica* used as food.
 - 4 Unripe fruits of *Diospyros melanoxylon*, *Ficus benghalensis*, *Ficus religiosa*, *Luffa acutangula*, *Tamarindus indica*, *Mangifera indica*, *Carissa congesta*, *Cicca acida* and *Emblica officinalis* used as food.
 - 5 Leaves of *Murraya koenigii* used in curry and chutney.
 - **Rites and Rituals**
 1. Leaves of *Mangifera indica* used in ceremonies related to birth, marriage etc.
 2. Dried fruit of *Xeromphis spinosa* used in marriage rituals.
 3. Leaves of *Aegle marmelos* used in “Shravan mass” for God Mahadeva.
 4. Flowers of *Calotropis procera* used for garland in holy festivals.
 5. Flowers of *Nymphaea nouchali* and *Nymphaea stellata* used in holy festivals.
 - **Miscellaneous**
 1. Seeds of *Sapindus laurifolius* used as hair washing.
 2. Stems of *Bambusa arundiaceae* used as “Gedi” [walking stick for old man].
3. Soft stems of *Acacia nilotica*, *Azadirachta indica*, *Pongamia pinnata*, *Derris indica* and *Butea monosperma* used as a toothbrush.
 4. Leaves of *Helicteres isora* used for cleaning of earthen pots.
 5. “Khera Ness” is a name derived from the plant named ‘Kher’ (*Acacia chundra*).
 6. “Dhraman Ness is a name derived from the plant named ‘Dhraman’ (*Grewia tiliaefolia*).
 7. “Thoria Ness” is a name derived from the plant named ‘Thor’ (*Euphorbia neritifolia*).
 8. “Amri” (a baby’s name) from the plant name ‘Amri’ (*Cicca acida*).
 9. Plants like *Ocimum sanctum* and *Aegle marmelos* known as holy plants.
 10. Stems of *Bambusa arundinacea* used as hanger for cloth.
 11. Fresh leaves of *Butea monosperma* used for preparing dish (plate) and cup locally called “Patrala and Padia” to serve food.
 12. Generally all dried plants used as a fuel for making food and country wine.
- Late Shri Jaikrishna Inderji Thakker (1910) who wrote a matchless voluminous treatise on the medicine plants of ‘Barda Hills’ in vernacular language (Gujarati) under the titled “Barda Dungarni Jadibuti” (1910), in which he mentioned 611 angiospermic plants divided into 95 different families. It was the first book of its kind written exclusively on the plants of Barda Hills. Though basically it was a floristic composition of the plants of Barda Hills, yet there is concise and experienced explanation about ethnobotanical use of each and every plant, including ethnomedicinal uses of plants found at Barda Hills and they’re surrounding areas. In present study, 26 plant species used by the Maldharies of Barda Hills for their lives, for making shelter (16 species), for food (24 species), for ceremonial purposes (6 species), and for miscellaneous purposes (12 species). Most of these plants were wild and some of them were cultivated.

Analysis of ethno botanical data indicates that Leguminoceae (including its sub family) occupied first rank followed by Sapotaceae, Poaceae, Cucurbitaceae.

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