

## Ethnobotanical Studies of Ayubia National Park District Abbottabad, Pakistan

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**Abstract:** The ethnobotanical data of total 26 plant species belonging to 24 families was collected from the local people of the Ayubia National Park. A complete list of the plants is given with their name, family and ethnobotanical use which is very helpful for finding the status of the flora of the National Park with the interrelationship between the people and plants of the area.

**Key words:** Ethnobotany, medicinal plants, herbal medicines

### Introduction

The investigated area Ayubia National Park lies between 34-1 to 34-38 North latitude and 73-22.8 to 73-27.1 East longitude, over an area of 1684 hectare. The people and plants have a strong interrelationship as they depend upon plants for their various needs so this study was conducted to collect the valuable ethnobotanical data.

A lot of work is being done by many workers in this field, as Yang reported that in China there are as many as 2294 traditional Tibetan medicines all from plants (1106) Animals (448) and natural minerals (840), (Yang, 1988). Elisabetsky reported that annual world market value for medicine derived from medicinal plants by indigenous people is US \$ 43 billion, (Elisabetsky, 1990). Bukhari worked on Ethnobotany and vegetation analysis of Machyara National Park Muzaffaarabad AJK, he reported 10 plant communities in different regions of the national park he discussed the status of the species in the park he also reported the detail of the medicinal plants of the park, (Bukhari, 1994). Shingji suggested that Ethnobotany is a science of documenting the traditional knowledge on the use of plants by indigenous people and for further assessing human interactions with the natural environment, it has a great potential for contributing to biodiversity, conservation in the Himalayan region, (Shingji, 1994). Zandial worked on the ethnobotany of the National Park Machyara. He reported 104 important species of plants including tree shrubs and herbs with their local uses by the local people. (Zandial, 1994).

The precious Ethnobotanical knowledge is disappearing very fast. Ethnobotanical surveys can be very helpful in rescuing and preserving this precious indigenous knowledge. In Ayubia National Park the vegetation is extensively being impoverished due to heavy population pressure from the surrounding villages. The people mainly in the form of fuel wood and fodder and grazing of the animals exploit the resources of the park. Nowadays due to change in traditional cultures the precious Ethnobotanical knowledge is disappearing very fast. The valuable Ethnobotanical knowledge which was transmitted orally from generation to generation, was a source of strong linkage between people and plants. Such relationship intern helped in sustainable use of plant resources by the communities.

### Materials and Methods

Before starting the research work on Ethnobotanical studies of Ayubia National Park the general information about the area was collected. Maps were obtained from forest Department Abbottabad and Dungagalli. 10 villages

around the park were surveyed and ethnobotanical data was collected. More than 100 interviews were made of persons including local people Hakims (pansaries) and park authorities on random bases. Plant specimens were collected and preserved in the herbarium of Govt Post Graduate College Abbottabad. A questionnaire was adopted for the interviews of the people which included the information about the informant, the plant used by them, for what purpose the plant is used either medicinally, fuelwood, fodder, or as food. A separate Hakims (local Healer / Herbalist) survey was also conducted to collect the information about the plants used medicinally by them.

### Results

*Achillea millefolium* L.

Family: Asteraceae

Local Name: Sultani booti

Part used: W.P

Use: The plant is used as diaphoretic, stimulant and tonic. The plant is also used in fever and cold.

*Atropa acuminata* Royle

Family: Solanaceae

Local Name: Chella lubbar

Part used: R.L

Use: The plant is used as sedative stimulant antispasmodic, it is also used in cough. The leaves are narcotic diuretic and anodyne.

*Arisaema flavum* Forssk.

Family: Araceae

Local Name: Ad bis

Part used: Rh

Use: The plant is poisonous and used against snake's bites, the fruit is eaten without chewing in cough and cold.

*Althea rosea* L.

Family: Malvaceae

Local Name: Gule khaira

Part used: R

Use: The root of the plant is used in jaundice and also in stomach and urinary ulcers, it is also used in liver disorders.

*Aesculus indica* (Wall. ex Camb.)

Family: Hippocastanaceae

Local Name: Ban khor

Part used: Fr

Use: The oil of the seed is used externally to lessen the pains, the fruit is given to buffaloes and horses in cold and

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fever, it is also used in manufacture of furniture and also is a fuel wood.

*Abies pindrow* Royle

Family: Pinnaceae

Local Name: Fir

Part used: W

Use: The wood is used in manufacture of furniture and beams of houses, also used as fuelwood.

*Bergenia ciliata* (Haw.) Sternb.

Family: Saxifragaceae

Local Name: Bhat pai

Part used: Rh and L

Use: The rhizome is crushed and used in all kinds of ulcers mainly stomach and duodenal and also in internal infections. Used as tonic and in muscular disorders and as antianeasous drug. It is externally used on wounds as antiseptic.

*Berberis lycium* Royle

Family: Berberidaceae

Local Name: Sumbul

Part used: R, L

Use: Root is used in jaundice and diarrhea. The bark of root is used in diabetes. Its strengthen the bones and muscles of the body, and it is used for all the internal infections.

*Cannabis sativa* L.

Family: Cannabinaceae

Local Name: Bhang

Part used: L

Use: The leaves are narcotic and is used as stimulant.

*Cedrus deodara* (Roxb. ex Lamb).

Family: Pinaceae

Local Name: Diar

Part used: W

Use: It is carminative used in pulmonary and urinary disorders. Extract from the bark is called the (lao), it is useful in all kinds of internal disorders.

*Cornus macrophylla* Wall.

Family: Cornaceae

Local Name: Kandar

Part used: W

Use: Wood is used in furniture and as fuel wood.

*Diospyrus lotus* L.

Family: Ebenaceae

Local Name: Amlok

Part used: Fr

Use: The fruit is eaten and is also used as sedative.

*Fragaria nubicola* Lindl. ex Lacaita

Family: Rosaceae

Local Name: Budhi maiwa

Part used: Fr and L

Use: Fruit is edible it is carminative, the leaves and fruit are mixed with the leaves of berberis lycium and used in cure of stomach ulcers it is also used as antiseptic on the wounds externally.

*Geranium wallichianum* D. Don

Family: Geraniaceae

Local Name: Rattan jot

Part used: R

Use: The root is dried and is crushed then it is mixed with milk and sugar then it is used in backache gout and is also used in strengthening of the body muscles and bones.

*Gentiana kurroo* Royle

Family: Gentianaceae

Local Name: Nil kanth

Part used: R

Use: The root is used in stomachache and is used in urinary infections it is also used as tonic and astringent.

*Galium aparine* L.

Family: Rubiaceae

Local Name: Cochna

Part used: W, P

Use: leaves are used in jaundice, externally used on wounds as antiseptic. it is also anti cancerous.

*Hedera nepalensis* K. Koch

Family: Araliaceae

Local Name: Albomar

Part used: L

Use: Leaves are used in diabetes.

*Impatiens bicolor* Royle

Family: Balsaminaceae

Local Name: Bantil

Part used: Fr, S

Use: It is diuretic, tonic and has cooling effect.

*Indigofera heterantha* Wall.

Family: Leguminosae

Local Name: Kainthi

Part used: L, W

Use: Leaves are crushed and the extract is used in internal body disorders, also used against warts in the mouth also used as fodder and fuelwood.

*Juglans regia* L.

Family: Juglandaceae

Local Name: Khor

Part used: W, Fr

Use: Seeds of the fruit are edible, used as miswak also used in toothache. It is used as dying agent and also used as very good furniture wood.

*Prunus padus* Hk. f.

Family: Rosaceae

Local Name: Kala kath

Part used: W, Fr

Use: The fruit has narcotic action, the wood is used in furniture making.

*Polygonum amplexicaule* D. Don

Family: Polygonaceae

Local Name: Masloon

Part used: R, L

Use: Root is used in making tea by the local people, also used in fever and diarrhea.

*Podophyllum emodi* Wall. ex Royle

Family: Berberidaceae

Local Name: Ban kakri

Part used: Fr

Use: Used in liver disorders, fruit is eaten by the local people, which is used as tonic

*Peonia emodi* Wall.

Family: Paeoniaceae

Local Name: Mamaikh

Part used: R

Use: The root is crushed and mixed with milk, sugar and roots of *Geranium wallichii* this locally called halwa and is used in backache and internal body pains.

*Skimmia lauroleola* DC.

Family: Rutaceae

Local Name: Ner

Part used: L

Use: The leaves are burned and the smoke is used in cleaning the nasal tract, also used in cough, cold and headache. The leaves are also used as insecticide.

*Taxus wallichiana* Zucc.

Family: Taxaceae

Local Name: Barmi

Part used: W

Use: The fruit is eaten and the bark of the wood is anti cancer and used in pneumonia. Wood is used for fuel and timber.

L: Leaf Fr: Fruit Fl: Flower W: Wood W.P: Whole plant  
Rh: Rhizome

#### Discussion

The present Ethnobotanical study provides information on the ethnobotanical uses of the 26 plant species belonging to 24 families. Most of the plant species are reported to be quite effective remedies for different diseases such as fever, diarrhea, diabetes, jaundice, backache, stomachache, ulcers, cold and even cancer. These plants are also used by the local herbal healers and hakims as traditional medicines.

In China as many as 2294 traditional Tibetan medicines all from plants (1106), animals (448) and natural minerals (840). (Yang, 1988). Many of the important medicinal

plants are sold at higher prices in the market, e.g. *Paeonia emodi* is sold in the market for 500 Rs per Kg. As Elisabethsky reported that annual World market value of the medicines derived from medicinal plants by indigenous people is US \$ 43 billions (Elisabethsky, 1990). Most of the plants used by the local people are not conserved but are over exploited. It is therefore necessary to find the ways of promoting the local people towards conservation as Shingji suggested that ethnobotany is the science of documenting the traditional knowledge on the use of plants by the indigenous people and for further assessing human interactions with the natural environment, (Shingji, 1994).

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