

## Ethnomedical Botanical Survey in Annapurna Conservation Area (ACA), Nepal

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**Abstract:** A survey on ethno-medicine was conducted in Annapurna Conservation Area to document the indigenous knowledge on medical practice of plant resources. Local people having good knowledge on use of plants were consulted during field to explore medicinal plants. In present study, 24 species of medicinal plants were identified. The collected plants were used against 18 diseases; 9 species were used against fever; 7 species for cold and cough; 6 species for cuts and wounds and few plants were even used for some critical disease like paralysis.

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**Keywords:** ethno-medicine, indigenous knowledge, traditional medical practice and paralysis.

### Introduction

Annapurna Conservation Area is located between the latitude 28°11' to 28°45' and longitude 83°25' to 84°30'. The altitude of the ACA from ranged 1000 m to 8678 m and occupies the total area of 7629 sq. km. The major ethnic groups of this region are Gurung, Magar, Botia, Thakali, Manangis etc. ACA is famous not only for its unique physiographic and climatic condition but also for its ethnic and cultural diversity. Various ethnic groups existing in this region have their own tradition and culture as well as their own ethnic medicinal practice. Sub-tropical, temperate, sub-alpine and alpine climates are found in ACA region which have created different ecological habitats favoring more than 1226 species of plants, 102 species of mammals, 474 species of birds, 39 species of reptiles, 22 species of amphibians [1].

A few studies have been carried out to document and explore various medicinal plants and their role in primary health care in ACA regions. Ethnobotany deals with the study of the relationship between people and plants and most commonly refers to the study of how people of a particular culture and region make use of indigenous plants. The main aim of ethnobotany is to document the knowledge about plants that had come through generations and use of knowledge for the benefit of the society. Historically plants used in traditional medicine by the indigenous populations across the world have produced some of the most useful modern day pharmaceuticals. The use of medicinal plants at home is not only cheaper from economic point of view, but also responsible for fewer side effects than that of chemical antibiotics.

Today about 80% of the world's population rely pre dominantly on plants and plant extracts for healthcare [2] In addition, of the top 150 proprietary drugs used in the United States of America (USA), 57% contain at least one major active compound

currently or once derived from plants [3]. Today, ethnomedical practices and beliefs are part of a total belief system that transcends class, ethnicity and religious belief in such a manner that the terms "folk or traditional" can be used to describe practices that are truly universal [4]. In North America, Europe and the Caribbean, the return to the traditional (ethnomedicinal) aspect of healthcare is not restricted to the poor, but extends to all social classes [4].

Since the 1980, extensive works have been conducted on medicinal plants particularly on ethnobotany in different parts of Nepal. These studies focused on the plants used as medicine by different ethnic/cast group in different geographical areas along with their description, distribution, vernacular name, parts used, method of preparation dose etc. 72 plant species were reported from Helambu and adjoining area; among them 20 species were used for food, 13 for fodder, 4 for compost, 16 for medicine, 7 for timber, 5 for fire wood, 3 for fiber and 9 for miscellaneous purpose [5]. 52 plant species belonging to 50 genera and 17 families are used for the treatment of domestic cattle in the Narayani zone of Central Nepal [6].

### Methodology

#### *Plant collection and identification*

The collected plant specimens were pressed and dried. They were categorized according to their use. Identification was done by using relevant literatures and related Professor of Tribhuvan University of Central Department of Botany. In survey time, main destination areas were Birethanti, Ghandruk, Chhomrong, Sinuwa, Machhapuchhre base Camp and Annapurna Base Camp. The local people of these areas are mainly based on the Hotel Business Programme. But in the Southern part of ACA

(Birethanti, Ghandruk and Chhomrong) villagers are also based on the agriculture and livestock development.

#### **Rural appraisal:**

Rural appraisal technique was used to get information from the local people on different uses of plant species, location, growing condition and place of availability. The traditional healers, the key informants were interviewed with informal questionnaire about various aspects of the health issues and healing practices that applied in their community.

#### **Results**

Majority of plants in this region are being used as medicine by ethnic group. 24 medicinal plant species belonging to 22 families have been recorded in ACA region. Ethnic groups are collecting medicinal herbs from the forest, pastures and villages. These medicinal plants are used to cure different diseases. Among them, the most important species are *Dactylorhiza hatagirea*, *Rheum australe*, *Aconitum heterophyllum*, *Aconitum ferox* etc. on the basis of their consumption. The collected herbs are used against 18 diseases; 9 species are used against fever; 7 species for cold and cough; 6 species of cuts and wounds and few plants are used even for some critical disease like paralysis.

S.N.	Disease	Plant Used	No. of Species
1	Antihelmintic	<i>Rheum australe</i> , <i>Hippophae salicifolia</i>	2
2	Snake bite	<i>Dactylorhiza hatagirea</i>	1
3	Scorpin-sting	<i>Dactylorhiza hatagirea</i>	1
4	Appetizer (indigestion)	<i>Rheum australe</i> , <i>Swertia sp</i> , <i>Rhododendron anthopogon</i> , <i>Primula sp.</i>	4
5	Mouth, teeth and gum problem	<i>Rumex sp.</i>	1
6	Chest infection	<i>Rhododendron sp.</i>	1
7	Cold and cough	<i>Fragaria sp</i> , <i>Juniperus Squamata</i> , <i>Allium wallichii</i> , <i>Swertia sp</i> , <i>Zanthoxylum arantum</i> , <i>Picrorhiza dcrophulariiflora</i> , <i>Paris polyphylla</i>	7
8	Cuts and wounds	<i>Dactylorhiza hectagirea</i> , <i>Rumex sp</i> , <i>Viola sp</i> , <i>Pedicularis sp</i> , <i>Juniperus sp</i> , <i>Thalictrum sp</i>	6
9	Fever	<i>Thalictrum foliolosum</i> , <i>Geranium sp</i> , <i>Primula macrophylla</i> , <i>Swertia sp</i> , <i>Taraxacum sp</i> , <i>Zanthoxylum aromantum</i> , <i>Paris polyphylla</i> , <i>Bergenia ciliata</i> , <i>Picrorhiza scrophylariiflora</i>	9
10	Kidney problem	<i>Juniperus sp.</i>	1
11	Jaundice	<i>Swertia sp.</i>	1
12	Vomiting	<i>Rhododendron sp.</i>	1
13	Paralysis of disease	<i>Juniperus indica</i>	1
14	Ulcer	<i>Primula nepalensis</i>	1
15	Fracture	<i>Viscum album</i> , <i>Hypericum cordifolium</i> , <i>Pinus wallichiana</i>	3
16	Stomach disorder	<i>Urtica dioca</i>	1
17	Dysentery	<i>Asperagus filicinus</i>	1
18	Nasal bleeding	<i>Aperagus filicinus</i>	1

#### **Conclusions**

Most of the people in ACA depend on herbal treatment due to availability of medicinal plants near the villages. The most important species are *Dactylorhiza hatagirea*, *Rheum australe*, *Aconitum heterophyllum*, *Aconitum ferox* etc. The collected herbs were used against 18 diseases; 9 species were

used against fever. 7 species for cold and cough, 6 species for cuts and wounds and few herbs were even used for some critical disease like paralysis. Ethnomedical practice could be better way for rural health care.

**References**

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