

## Paediatric Ethnobotany of The Boxa Tribe of Tarai and Bhabar Region of Uttarakhand, India



### Botany

**KEYWORDS :** Paediatric ethnobotany, Boxa tribe, Tarai- Bhabhar

**Neeta Pande**

Associate Professor, Department of Botany M. B. P. G College Haldwani, Uttarakhand, India

**Anju Joshi**

Research Scholar, Department of Botany P. N. G College Ramnagar, Uttarakhand, India

### ABSTRACT

*The peculiar geographical condition of Tarai of Udham Singh Nagar district (Uttarakhand) provide for the growth of a wide range of flora and fauna. A geographical distribution and spatial variation among plants and animals is quite evident.*

*Udham Singh Nagar is an old ethnic region peopled by various tribes. The traditional customs and belief are still maintained in this tribal community. The present article deals with paediatric ethnobotany of Boxa tribe. This tribal group use different local plants which are specially prescribed for treating various ailments of children. During the study 24 plants of 22 families were identified. The present work is based on personal interview and interaction with local people, medicine men and mother among Boxa tribe.*

### 1. Introduction

Indian subcontinent, rich in biodiversity, is one of the 12 mega biodiversity zones of the world. This diversity is spread across the plant, animal, culture and ethnic groups. Since time immemorial tribal existence in a particular area has depended upon its geographical condition and its flora and fauna. These tribal people belong to various cultural groups viz., Nagas, Khasis, Garos, Gaddis, Bhotiyas, Tharus, Rajis, Buxas, Jaunsarees living in various isolated pockets in harmony with nature [1].

Traditional medicinal plants have a significant role to play in the entire life of tribal people in almost every age group [2, 3 & 4]. Paediatric ethnobotany is a science which deals with the treatment of ailments of children through the use of traditional plants by tribal community. However, this is a recent branch of ethnobotany where lots of scope for research and documentation is available and it has a great potential in the field of Paediatrics [5, 6].

In remote areas traditional customs and beliefs are still maintained by these tribal people. However, due to change in life style and urbanization, youths are no more interested in their rituals and customs and therefore there is a great possibility of losing this precious knowledge in coming future. Consequently it becomes pertinent to document this indigenous knowledge of the Boxa Tribe of the Tarai Bhabar area of Uttarakhand in India.

### 2. Study Area

The selected villages present in the study area are located around Udham Singh Nagar of the Tarai and Bhabar regions of Uttarakhand (Fig 1). As far as the Tarai region is concerned, it is characterized by numerous springs and swamps whereas the Bhabar is composed of waterless areas having beds of boulders, silt and gravel brought by streams and rivers.



**Fig1. Study area**

### 3. Methodology

For obtaining valuable information related to paediatric problems and their treatment by using indigenous plants, an extensive survey was done during the year 2013 in the Tarai and Bhabar regions of Udham Singh Nagar (where the Boxa tribe resides). The first hand information was collected by conducting personal interviews, interacting with old and experienced men of the tribal community and, from the women who used the traditional plants for the treatment of various ailments in children. During the survey PRA technique was used as a tool. Information collected through them was verified through repeated questioning of local inhabitants from the area concerned. The flora was identified with the help of literature and experts, and herbarium is deposited in the Botany Department of M B P G College Haldwani, Uttarakhand.

### 4. Results and Discussion

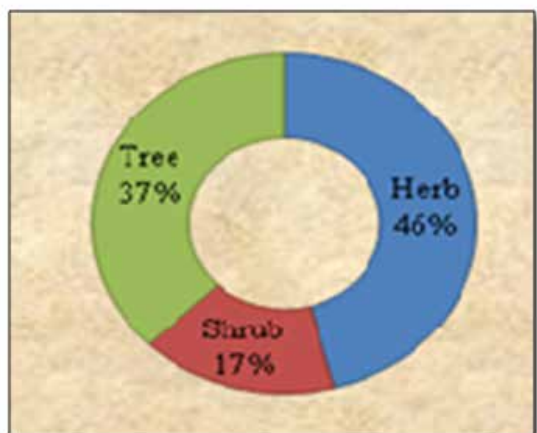
During the present study it was found that Boxa tribe of Kumaun division in district Udham Singh Nagar of Uttarakhand is still prefer the practices of their traditional medicine system for treating the various ailments of their children. The present study explored 24 plants of 22 families employed as medicine for treating various paediatric ailments by traditional healers, vaidyas, mother etc. among Boxa tribal group of Udham Singh Nagar.

The plants used in different form like decoction, infusion, juicy extract and paste etc. In the present study, highest representative are reported in Lamiaceae, and Rutaceae (2 species each) family followed by Amaranthaceae, Araceae, Allicaceae, Asteraceae, Asclepidaceae, Apiaceae, Caesalpiniaceae, Euphorbiaceae, Fabaceae, Malvaceae, Meliaceae, Moraceae, Nyctaginaceae, Poaceae, Punicaceae, Ranunculaceae, Solanaceae, Scrophulariaceae, Sapindaceae, Zingiberaceae (1 species each).

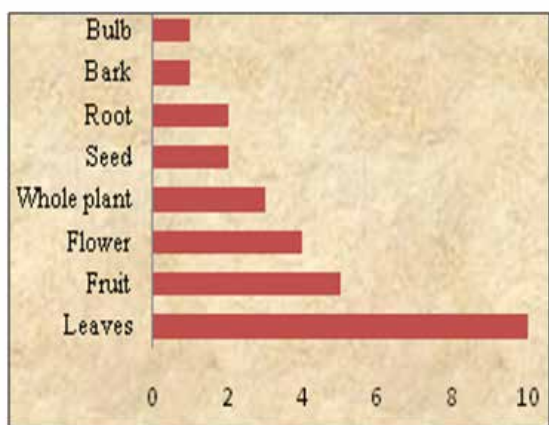
Based on present survey, it was found that Boxa indigenous group is dependent maximum on herbs (46%) followed by trees (37%) and least on shrubs (17%) as depicted in Fig 2. For the preparation of traditional medicine, this tribal community used different parts of the plant species. Maximum they used leaves (10) followed by fruit (5), flower (4), whole plants (3), seeds (2), root (2) and least used part is bark (1) and bulb (1) of plants (Fig 3).

The plants were found to be effective against dysentery, diarrhea, constipation, cough and cold, cuts and wounds, jaundice, inflammations, stomach related problem, worm, urinary trouble, liver problems, skin ailments, fever and abdominal pain etc. The present study highlighted the traditional medicinal system for

treating paediatric ailments with available local plants to collect, preserve and properly documents these traditional medicinal plants as well as save folk remedies at the primary health care.



**Fig 2. Medicine procured by Boxa tribe of different categories of plant species**



**Fig 3. preferential plant parts being used for treating various ailments of children**

#### **Ethnomedicinal plants used for treatment of paediatric problem by the Boxa tribe in Udham Singh Nagar of Kumaun (Uttarakhand)**

Species name are followed by vernacular/ local names, habitat of the plant and plant parts used as medicine.

##### **1. Alliaceae**

1.1 *Allium cepa* L. / Pyaz/ Herb/ Bulb

Uses-The juicy extract of bulb is used to prevent nose bleeding.

##### **2. Amaranthaceae**

2.1 *Achryanthus aspera* L. / Chirchita/ Herb/ Whole plant

Uses- The paste of leaves can be used as antiseptic in wound. The root is used to cure toothache.

##### **3. Anacardiaceae**

3.1 *Mangifera indica* L. / Aam/ Tree/ Seeds, fruit

Uses- The powder of seeds with salts is used to cure congestion. The unripe mango is roasted and its pulp juice with salt and sugar is used in dysentery.

##### **4. Annonaceae**

4.1 *Annona squamosa* L. / Sharifa/ Tree/ Root and bark

Uses- Decoction of root is used to prevent dysentery. Decoction of bark is used to cure diarrhea and dysentery.

##### **5. Apiaceae**

5.1 *Trachyspermum ammi* (L.) Sprague. / Ajjwain/ Herb/ Seeds

Uses- The infusion of seeds of ajjwain is used to cure congestion. Seeds are soaked in water overnight and used to cure fever.

##### **6. Asclepiadaceae**

6.1 *Calotropis procera* (Ait.) R.Br. / Akha/ Shrub/ Leaves & flower

Uses- The juicy extract of flower is used to cure stomach pain and fever.

##### **7. Asteraceae**

7.1 *Targetes erecta* L. / Genda/ Herb/ Flower

Uses- The freshly prepared juice of flower is used to cure ear trouble as well as in curing jaundice.

##### **8. Caesalpinaceae**

8.1 *Cassia occidentalis* L. / Banar/ Shrub/ Leaves

Uses- The fresh leaf paste is used as anti inflammatory in wound.

##### **9. Euphorbiaceae**

9.1 *Euphorbia hirta* L. / Dudhi/ Herb/ Leaves

Uses- fresh prepared juice of leaves of plant is used in dysentery.

##### **10. Fabaceae**

10.1 *Dalbergia sisso* Roxb./ Shisham/ Tree/ Leaves

Uses- The decoction of leaves is used to cure dysentery.

##### **11. Lamiaceae**

11.1 *Mentha sylvestris* L. / Pudina /Herb/ Leaves

Uses- The herb leaves are used for digestive disorders. The paste of leaves is applied on forehead to get relief from headache.

11.2 *Ocimum sanctum* L. / Ram tulsi / Herb/ Leaves

Uses- Plant has antibacterial property. Leaf paste applied on cuts and wounds. The juicy extract of leaves with powder of black Peeper is used to cure typhoid. Infusion of leaves is used in gastric disorder and in cough and cold.

##### **12. Malvaceae**

12.1 *Hibiscus rosa sinensis* L. /Gurhal/ Shrub/ Flower

Uses- The juicy extract of petals of flower is put on belly of child for urination.

##### **13. Meliaceae**

13.1 *Albizia lebbeck* (L.) Benth./ Siris/ Tree/ Leaves

Uses- The mixture of juicy extract of leaves of Siris and Neem (*Azadirachta indica*) is used in eye problem.

##### **14. Moraceae**

14.1 *Ficus religiosa* L. / Peepal /Tree/ Leaves

Uses- The paste of leaves with cow ghee is applied on burn area and wound.

**15. Myrtaceae**15.1 *Psidium guajava* L. / Bihi/ Tree/ Fruit

Uses- The roasted fruit is used to cure cough and cold.

**16. Nyctaginaceae**16.1 *Mirabilis jalapa* L. / Gulbans/ Herb/ Leaves

Uses- The freshly prepared juice of leaves is used as antiseptic on wound. The leaves is used as to cure mums.

**17. Poaceae**17.1 *Cynodon dactylon* L. / Doob/ Herb/ Whole plant

Uses- Entire aboveground parts are crushed and its juicy extract is used to stop bleeding in wound.

**18. Punicaceae**18.1 *Punica granatum* L. / Anar/ Shrub/ Fruit peel and flower

Uses- The powder of pollen grains of the flower with milk is used to cure dysentery and vomiting in infant. The powder of dried peel of fruit with honey is used in cough and cold.

**19. Ranunculaceae**19.1 *Prunus persica* (L.) Stokes. / Aaru / Tree/ Leaves

Uses- The juicy extract of leaves with honey is used as wormicides in infant.

**20. Rutaceae**20.1 *Aegle marmelos* (L.) Corr. / Bel/ Tree/ Fruit

Uses- Juicy extract of fruit pulp is used in indigestion.

20.2 *Citrus aurantium* L. / Nimbu/ Tree/ Root and fruit

Uses- The decoction of root is used for relieving acute fever. The juice of lemon with juicy extract of leaves of ocimum is used to remove out scar.

**21. Solanaceae**21.1 *Solanum nigrum* L. / Makoi/ Herb/ Whole plant

Uses- Decoction of leaves is used for liver and skin diseases. The leaves decoction is used as antipyrite during fever.

**22. Zingiberaceae**22.1 *Curcuma longa* L. /Haldi/ Herb/ Flower

Uses- The extract of its flower with ajjwain is used to cure cough and cold in children. Paste of flower is mixed with egg is rubbed externally on chest of infant to cure from Pneumonia.

**5. Conclusion**

During investigation it is noticed that plants are so closely linked with almost every sphere of Boxa life that they are reflected not only in their art, culture, folklores, food habits, but also in their medicinal system. In the ethnopaediatric medicine system Boxa give significant importance to local plants. The result of the present study also shows that medicinal plants continue to play an important role in the traditional Paediatric health care system of Boxas. Generally Boxa tribe in Udham Singh Nagar district of Uttarakhand still has a great believe in the effectiveness of natural medicines.

**REFERENCE**

1. Nautiyal, S., Rao, K.S., Maikhuri, R.K., Semwal, R.L. & Saxena, K.G. (2001). Traditional knowledge related to medicinal and aromatic plants in tribal societies in apart of Himalaya. *Journal of Medicinal and Aromatic Plant Sciences*, 22(4A) and 23(1A): 528-541. | | 2. Jain, S.K. & Rao, R.R. (1983). Ethnobotany in India- An Overview: pp.22. Botanical Survey of India, Howrah. | | 3. Ramakrishnan, P.S. (2000). Biodiversity, land use and traditional ecological knowledge: The context. In: P.S. Ramakrishnan., U.M. Chandra- shekara., C. Elouard., C.Z. Guilmo., R.K. Maikhuri., K.S. Rao., S. Sankar., K.G. Saxena (Eds.): *Mountain Biodiversity, Land Use Dynamics, and Traditional Ecological Know- ledge*. New Delhi: Oxford & IBH Publication, India (P) Ltd., pp. 3-13. | | 4. Samal, P.K., Dhyani, P.P. & Dollo, Mohin. (2010). Indigenous medicinal practices of Bhotia tribal community in Indian Central Himalaya: *Indian J. Traditional Knowledge*, Vol. 9 No.1, pp. 140-144. | | 5. Tiwari, Jay Krishan., Ballabha, Radha & Tiwari, Prabhawati. (2010). *Ethnopaediatrics in Garhwal Himalaya, Uttarakhand, India (Psychomedicine and Medicine)*. New York Science Journal; 3(4). | | 6. Pande, Vineeta & Pande, Neeta. (1998). Paediatric Ethnobotany. *Himalaya Environment: Issue and Challenges*. In: P.C. Pande (Eds.) pp 159-164.