



# Ethnomedicinal plants to benefit the residents of Balasore District's Remuna Block, Odisha

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## Introduction

Plants are the best friends of mankind. Human life on this planet would not be completed without a look at the role of plant have been an integral part of human society since the start of civilization. Depending on plants for food, fodder, fuel, drug and shelter from the time of evolution mankind on this planet and whole human race understand its importance. Since time immemorial the human society has developed in close association, with the plant's life. The term of "**Ethnobotany**" refers to all studies that are related to the reciprocal relationship between plants and traditional people (Martin 1995, Cotton, 1996). Ethnobotany is the study of a region's plants & their practical uses through the traditional knowledge of a local culture and people. A majority of **Remuna** peoples still dependent on medicinal plant to fulfil their healthcare problems after so many

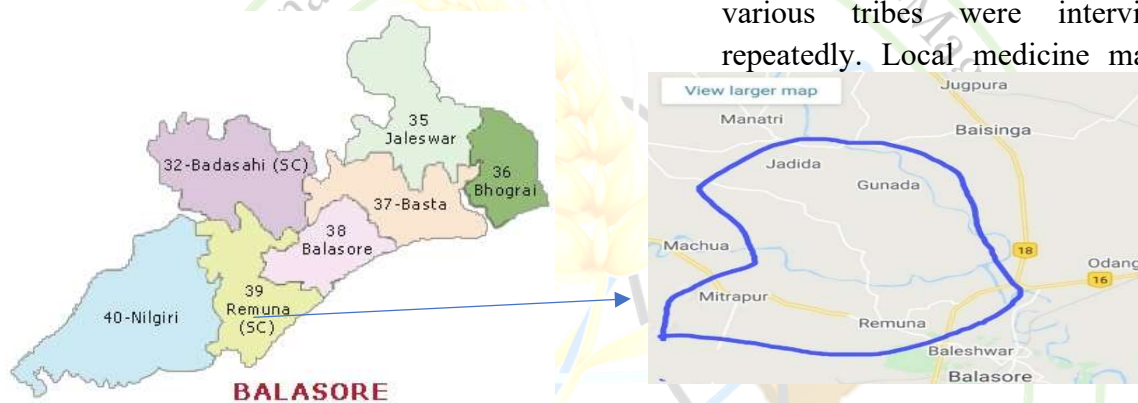
developments of medical sciences. The local peoples are the storehouses of traditional knowledge, which is rapidly disappearing. So, there is an urgent need to document this knowledge, or otherwise it will be lost forever. Beginning of civilization people have been used plant medicine and also plant continue to be major source of medicines, as they have been throughout human society. Plant species which are used for remedy of any ailment called medicinal plant. Traditional healers use plants in treatment of diseases like bleeding, boils bronchitis, cold, cough, malaria, Diahorea, Dysentery, Ear Complications, Headache, Leucoderma, Pneumonia, Renal complications, piles, scorpion bite, snake bite, and skin diseases plants are also used other condition not ably reproductive health conditions. Plant species which are used for remedy of any ailment called medicinal plant. According to WHO (2001) more than 80% of world population rely on traditional system of medicine for their primary health needs and over 2100 plant species are useful in preparation of medicine worldwide. Ethnobotanical study is properly carried out in this region of Remuna block, Balasore. Therefore, present work is undertaken with following objectives.

1. To present an inventory of the plants used by the various tribes of Remuna block of Balasore district.
2. To documents the ethnobotanical data from exiting literature and from actual field work.
3. To documents the plant parts used exclusively for the management of

various diseases used by traditional healers.

### Study Area:

Balasore consist of 12 blocks out of which Remuna block is one of the tribal dominated areas of Odisha. It's geographical co-ordinate latitude and longitude is 21.52'99" N and 86.88'35" E respectively. Remuna block covered the area is 130 km<sup>2</sup> including 99.54 km<sup>2</sup> rural areas and 30.47 km<sup>2</sup> urban areas. According to census 2011 information the



(Fig- Remuna Block Map)

population is 91,668 peoples. 21,597 houses, 129 villages in Remuna block. Some of the villages of this block are located in the remote area with no easy access to the hospitals for treatment of the patients. Therefore, peoples are traditionally used some plants for their treatment.

### How to collect Data?

#### Field Study:

Different villages of Remuna block of Balasore district undertaken during January 2020 to March, 2020 to collect information on the medicinal uses of different plant species. To collect first-hand information on new sources of drugs, foods and folk knowledge regarding conservation of

biodiversity, intensive ethnobotanical explorations were undertaken in different villages. Field tours to these areas were planned in such a way as to collect ethno botanically interesting species either in flowering or fruiting stage. For a proper understanding of local customs, beliefs, habits and uses of plants, different categories of people like family heads, healers, old experienced and knowledgeable informants and medicine man of various tribes were interviewed repeatedly. Local medicine man or

village headman accompanied the author during field trip to the study area. Photographs were taken in the field for better documentation of traditional knowledge. Voucher plant specimens were collected for further study and preservation.

**Informants:** The information collected was considered notable when the researcher himself observed its actual application or three informants in the same or different villages reported a similar use. The herbal practitioners in the study area

ailments. The accumulation of knowledge of plant use is passed on from generation to generation. The first step of ethnobotany is collecting detailed knowledge about the local and indigenous people of the 100 persons interviewed in this study,



Fig-2: Author collecting Field data and Ethnobotanical data collected and interview by Village Peoples.

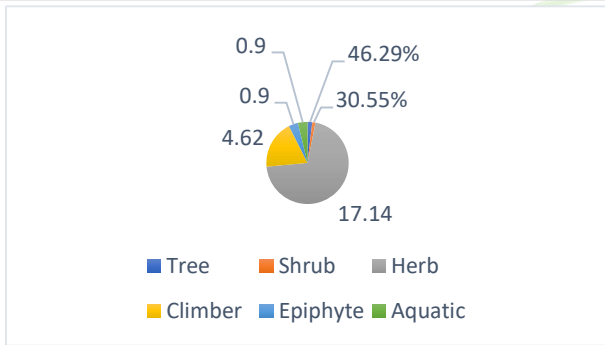
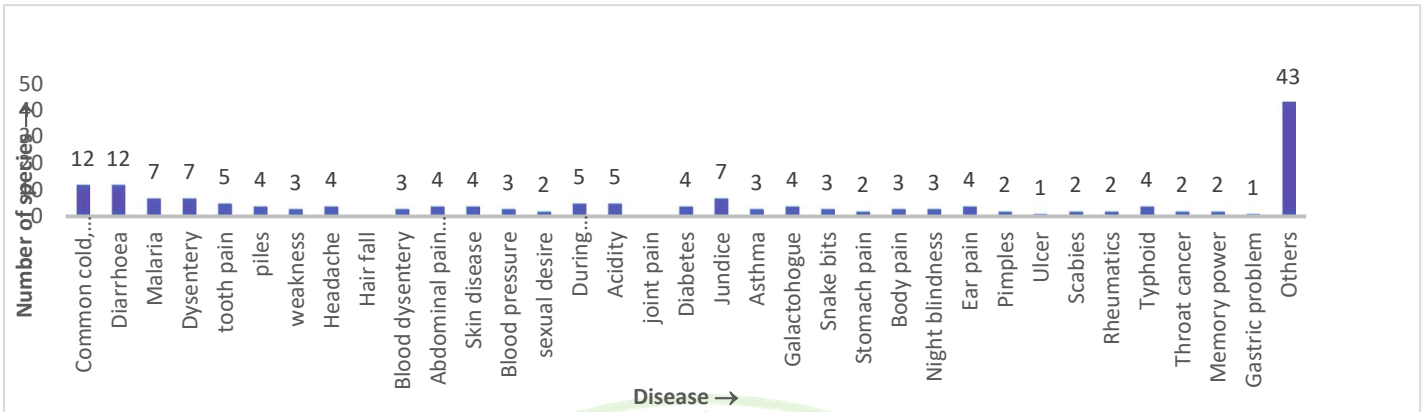
were interviewed, and information on medicinal plants, their families, local names, plant part used, method of preparation, and medicinal uses are presented elaborately.

**Results and Discussion:** The data on medicinal plants, which was collected from inhabitants in and around REMUNA BLOCK, Balasore district were analysed. The investigation revealed the medicinal plants of **108 species under 98 genera belonging to 56 families**, which are commonly used for various ailments by various types of diseases.

Out of 108 most 10specis are mostly used in different diseases inTable-1

Plants have been used for medicinal purposes since the evolution of man. Many of these tropical plants are used to treat and help cure a wide variety of diseases and all kinds of

women (65) were predominantly represented in the sampling than men (35). Fabaceae was the leading family with eight species (11.4%) followed by Verbenaceae, Moraceae, Acanthaceae, Rutaceae, Asteraceae, Rubiaceae, Apocyanaceae, Zingiberaceae, Euphorbiaceae, Solanaceae, Cucurbitaceae, Caselpinaceae, Rhmanaceae etc. Various studies conducted in Ethiopia reported that most of medicinal plants are being harvested from non-cultivated areas. For instance, the study conducted here indicated that 37 the highest number (90.43%) of medicinal plants was collected from wild in some villages of Remuna block. The local people have not yet started cultivating most of the plants species because they are using as remedies.



### Plant Parts Used to Treat Human Diseases: Method of Preparation, Dosage, and Administration:

In the collection of data concerning the preparation of medicine, participants reported various skills associated with herbal preparation.

In the present study a sum total of **24 broad based diseases** are recorded and all the recorded diseases are categorized under the following headings and the number of plants used to

Fig-3: Different types of habit plant species used by Remuna block peoples

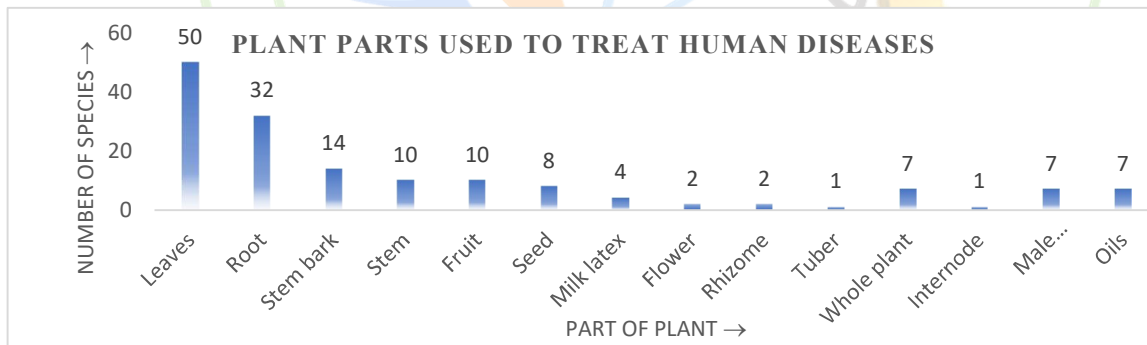


Fig-4: different parts of the plant used in human diseases

cure

different types of Diseases are categorized under the following headings and the number of plants used to cure different types of diseases are presented Balasore peoples.

During survey it has been observed that a no. of plants species is used to cure a single type of ailments. It is also found that the maximum no of plants collected and use to treatment



of different types of diseases. Total 108 species of plants are used for 156 types of diseases. Malaria, Diarrhoea, Dysentery, common cold, cough, jaundice, Diabetes etc are highest no of species are used in Remuna block, Balasore. Malaria is used 7 species like *Cuscuta reflexa* L., *Cyperus rotundus* L., *Elicpta alba*, *Nyctanthes*, etc. Common cold are used *Ocimum tenuiflorum* L. *Adhatoda viscosa* L. Etc. Diarrhoea are used *Punica granatum*, *Pisidium guajava*, *Aegle marmelos*, *Tamarindus indica* etc.

**Conclusion:**

Due to lack of interest of young generation towards traditional knowledge as well as urbanization and unscientific exploitation of natural forests, the valuable knowledge and plant species are getting depleted leading to their extinction. Hence it is necessary to collect and document such precious knowledge from the tribal and remote areas before their complete depletion and also increase awareness among the tribal communities for conservation and sustainable use of plant wealth. Further the plants with medicinal value should be chemically analysed so that active constituents from them can be identified and used for the development of new drug.

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**Table 1**

| Sl.No. | Botanical Name                       | Local Name | Family        | Habit | Diseases                                                     | Part Used                                 | Mode Of Administration                                                                                                                   |
|--------|--------------------------------------|------------|---------------|-------|--------------------------------------------------------------|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| 1      | <i>Adhatoda viscica (L.) Nees</i>    | Basanga    | Acanthaceae   | Tree  | Diarrhoea                                                    | Leaves                                    | Leaves are grind and taken orally.<br><br>Leaves juice mixed v taken orally 4-5 days                                                     |
| 2      | <i>Azadirachta indica A. Juss</i>    | Neem       | Meliaceae     | Tree  | Cough<br>Fever<br>Malaria&chi<br>cken pox<br>Jundice         | Leaf<br>Bark                              | Leaves is sleeping in period.<br><br>Bark is boiled with water is drink.                                                                 |
| 3      | <i>Aegle marmelos L.</i>             | Bela       | Rutaceae      | Tree  | Diabetes<br>Diarrhoea<br>Acidity                             | Leaf<br>Leaves<br>Leaves                  | Aqueous extract of le is taken once a day continuously one mo<br><br>3-4 leaves taken orall<br>5-7 leaves juice is tal in daily morning. |
| 4      | <i>Achyranthus aspera L.</i>         | Apamaranga | Amaranthaceae | Shrub | Dysentery                                                    | Root                                      | 25 g of root juice w sugar in water taken                                                                                                |
| 5      | <i>Calotropis gigantea (L.) Alt.</i> | Arakha     | Asclepidaceae | Shrub | Indigestion<br>Tooth ache<br>Eye affected<br><br>Snake bites | Root<br>Stem<br>Latex of milk<br><br>Root | Latex is dropped in e<br><br>Latex is applied on are 3days                                                                               |
| 6      | <i>Occium teneuflorum L.</i>         | Tulasi     | Lamiaceae     | Shrub | Common cold<br><br>Cough                                     | Leaf juice                                | Leaves juice mixed v honey early morning<br><br>Leaves juice with piper equal amount v is mixed and tak 1 times per day.                 |