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## Research Article

### MEDICINAL VALUE OF INDIGENOUS FOODS CONSUMED BY THE BODO PEOPLE OF BAKSA DISTRICT OF ASSAM (INDIA)

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#### ABSTRACT

The present paper explores the indigenous food varieties consumed by Bodo people of Salbari area of Baksa District of Assam. Bodos are one of the major ethnic tribe of Assam. The dietary habits of Bodos mostly depend on the local sources of variety of vegetables and non vegetarian food items. The Bodos of Baksa district are well adapted with their natural surroundings and forest resources for their livelihood and they still practice indigenous knowledge of food preparation and food preservation. The Bodo people still prefer ethnic foods comprise of various wild edible plant, animal and insects which have medicinal value which cure various diseases and ailments like cholera, dysentery, cold and cough etc.

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#### INTRODUCTION

Food has been a basic part of our existence. In every society, people have diverse feeding habits that have been inherited from generation to generation. Several factors influence the choice of the food we eat. These include availability, economy, cultural and social habits, physiological and psychological attributes, marketing methods, and nutritional knowledge, among others. Through the centuries we have acquired a wealth of information about the use of food as a part of our community, social, cultural and religious life. It has been used as an expression of love, friendship, and social acceptance. It is also used as a symbol of happiness at certain events in life (Mudambi *et al.* 1991).

Millions of people in developing countries depend on wild resources, including wild medicinal and edible plants, for their healthcare and to meet dietary needs (Balick and Cox, 1996). According to Abbiw (1996), the tendency of populations in developing countries to favour traditional medicinal plants is mainly due to the inaccessibility of modern medical care, as well as to economic and cultural factors. People from ethnic tribal societies have close association with and have good knowledge about forest resources (Das *et al.*, 2014). Traditional medical practices based on plants are an important component of the primary healthcare system in the developing world (Sheldon *et al.*, 1997). In India various types of wild edible plants are traditionally used as a source of food which

provides adequate level of nutrition to the consumers. There are some leafy vegetables which have nutritional value as well as also toxic value. The use of plants for traditional medicine is established in all indigenous societies in the world (Basumatary *et al.*, 2014).

Each tribal community of northeast India has its own food habits based on the location specific diversities on crops and forest resources, culture, ecological edges and seasonal variability. The Bodos are one of major tribal communities living in northeast India. The Bodos used the wild plants as a food as well as for curing certain diseases which they have been practicing from past generations. These edible food plants have not only nutritional value but also precious for maintaining the good health. The Bodos are mostly dependent on forest resources for their livelihood and have developed their own skills, tools and techniques for harvesting forest resources. Their oral traditions help them to maintain the traditional knowledge of edible plants and animals and their medicinal values. Certain species of insects are consumed during festivals, some for therapeutic purposes and some as a component of folk medicine (Narzari and Sarmah, 2015). Insects have long been a significant dietary factor in the poorer regions of the world, and it is high time that scientist recognizes this fact and begins to build on it, rather than discouraging or ignoring the practice (Ramos, 1990).

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**Table 1** Mode of consumption and medicinal values of the plant food items of the Bodo People

Botanical name	English name	Assamese name	Bodo (Local) name	Mode of consumption	Medicinal value
<i>Centella asiatica</i> (Linn.)	Asian penny word	<i>Bor manimuni</i>	Manimuni/gader	Whole plant, Stem and leaves, curry with small fish and potato, fresh juice mix with little salt	Used in dysentery, liver trouble, nerve disorder, and stomach problems. It stimulates appetite, taken with milk to improve memory, good for skin disease and a blood purifier, given to women after childbirth
<i>Colocasia esculenta</i> (Linn.) Schott.	Coco yam	<i>Kola Kachu</i>	Gusum Taso	Leaf, petiole, roots are use as vegetable. stream are preparation of Napham, the fermented fish	Leaves used for blood coagulation in small injuries, roots used in pharyngitis, stream use inner ear problem, iron deficiency.
<i>Diplazium esculentum</i>	Fen	<i>Dhekia</i>	Dingkia	Leaves, boil with dried fish and fried	Used in urinal complaints and to enhance sexual power
<i>Enhydra fluctuans</i> Lour	Water cress	<i>Helosi sak</i>	helsai	Leaves, make juice with honey and fried with potato also	Leaves are useful for cough, skin diseases, nervous disease, gonorrhoea
<i>Hibiscus subdariffa</i> Linn	roselle	<i>Mesta tenga</i>	mesenga	Leaves/fruits/ Seeds, make delicious curry by leaves with pork and fish also	It is used for dysentery, fever, dyspepsia, general debility, etc.
<i>Momordica charantia</i> Linn	Bitter gaurd	<i>Tita kerela</i>		Leaves/seeds	Useful remedy for diabetes, night blindness, small pox
<i>Hibiscus rosa – sinensis</i> L	Hibiscus	<i>Joba ful</i>	Joba bibar	Flower	Bark and Crushed bark is used for the treatment of flower bud Cholera. Flower buds consumed for relieving stomach pain
<i>Clerodendrum infortunatum</i> Gaertn	Hill glory bower	<i>Dhopat tita</i>	Mwkwana	Roots	Young leaves are used in the preparation of 'Amao' the starter cake for 'Jau' a kind of country made rice beer. Leaves boiled in water and used to take bath in jaundice
<i>Amaranthus viridis</i> Linn	Green amaranth	<i>Khudna sak</i>	Kuduna pisa	Stream and leaves	Stem is used as antidote against snakebite
<i>Justicia adatoda</i> L	Malabar nut	<i>Bakhor tita</i>	bersikea	Flower, make juice with honey, fried with onion	Used cough and cold
<i>Oxalis corniculata</i>	Yellow wood sorrel	Singri tenga	Singri gakhwi	Curry with fish(sour test)	Used dysentery
<i>Paederia foetide</i>	stink vine	<i>Vedai lota</i>	kipibendung	Curry with fish and prepare <i>onla</i>	Used in stomach ache , gestic problem
<i>Andrographis paniculata</i>	King of bitter	<i>Durumphuk tita</i>	Kaningsa	Leaves are bitter test it fried with potato	Reduce fever, juice is take diabetes, liver problem, kidney stone.
<i>Carchorus capsularies</i>	Jute	<i>Mora pat</i>	Narzi	Leaves used for preparing traditional dises <i>onla</i> , boil with rice flour	Used in iurin infection, dried leaves used in skin disease.
<i>Bacapa mommieri</i>	Brahmi	<i>Brahmi sag</i>	Thiphu maigongo	Tender used as lefty vegetable	Eaten as brain tonic
<i>Dryymaria cordata</i>	Tropical chick weed	<i>laizabri</i>	jabshri	Leaves and tender shoots use as vegetable with other herbs	Leaves used for treat insects bite
<i>Lasia spinosa</i>	Lasia herb	<i>changmora</i>	Sibru	As lefty vegetable	Leaves are use in maternity related problem in the time of child birth
<i>Nymphaea nouchali</i>	Water lily	<i>Vet ful</i>	Pada bihar	Seeds eaten as raw, steam cooked with fish	Seeds are used in skin disease, roots eaten in dysentery
<i>Musa acuminata</i>	Banana tree	<i>Kol gos</i>		Inner part of stem used curry , roots are used for prepare alkali	Juice of small banana tree for dysentery , for gastric problem and cold and cough

Present paper is mainly focussed to understand the medicinal values of the tradition foods consumed by the Bodos of Baksa district, Assam (India). In this study primary data have been collected from the nine villages under Salbari Sub Division, of Baksa District of lower Assam in India. In the Bodoland Territorial Council area majority of the people are Bodo. According to Census 2011, the total Bodo population in BTC area people are 3,151,047 and in Baksa District the total Bodo population are 9,53,773. The Bodo tribes are conservative and reluctant to share their traditional knowledge. Traditionally this group of community is endowed with rich cultural heritage, diverse food habits, mythological faiths and folk tradition. A study on the food habits and its medical value was carried out during November 2016 to March 2017. Information is collected from 9 villages of Jalah development block. For collecting the data interview method are used. The information about different types of wild edible foods was mainly gathered from the village headman, adult members of the society (both men and women). The interviews about the indigenous medical knowledge of foods have been interviewed random basis.

Information regarding the plants and animal with various edible insects name, parts used for consumption, mode of preparation was collected and analysed accordingly.

## DISCUSSION AND RESULTS

The different types of wild plants and animals with insects species used by the Bodo people as their food habits and it has a great medical value of the study area, along with the species used is presented in the tabular form below and also mention of the its species local name, scientific name, parts used for making dishes, methods of preparation, medicine value etc.

The findings of the present study revealed that the Bodos of Baksa district are well adapted with the nature and forest resources as a food item as well as for cure of various disease problems like cholera, dysentery, cold and cough etc. In the present study about 19 species of plants 6 insect species and 6 animal species of different families have been used traditionally which are transmitted from generation to generation orally by the local people.

Many plants are used for different ethno medical purposes, including tuberculosis, asthma, paralysis, jaundice, earache, constipation, weakness, snake poisoning etc (Mahawar and Jaroli, 2016). These are also a good source of income for many poor communities in rural areas. Leaves, young shoot, stem, fruits, flowers, roots and seeds of the documented plant species are used as vegetables and medicines. On the other hand wild micro fungi have been consumed and it is used extensively in traditional system for health and also delicious food supplement. The freshly available wild food plants probably provide the nutritional requirement for the better health of the local tribes of the area. The plants are consumed either cooked or raw. They used various wild plants as their daily food habits and it has a great medicine vale. The rural people used this edible plant to different kinds of treatment as the rural local healers usually practice the treatment of diseases in their locality. They collect and preserve locally available and wild plant species from forest regions. Medicinal plants obtained from the forest regions have the efficiency to heal many diseases (Baro 2016). The Bodos of field area consumes flowers and inflorescence of different wild plants wholly or partly as raw, cooked or cooked with other accessories to meet their daily nutritional needs.

**Medicinal values of the insect and animal food items consumed by the Bodo People**

Methods to prepare the edible insects for human consumption include roasting, boiling, or frying. Silkworm, ants and termites however, consumed both raw and roasted. Insects besides being used as food have also been used in treatment of certain diseases. The use of insect species for treatment of disease is regarded as a secret and passed from family members generation to generation among this tribe.

Apart from the positive role of insects and other arthropods with regard to the extraction of compounds useful in the treatment of certain diseases, spider and insect phobias, allergies to insects and their compounds and food taboos related to insects need to be studied (Meyer-Rochow, 2009).

Bodo people consume certain species of insects which constitute a significance component of diet among them (Das and Hazarika, 2012). Some edible insects consumed by Bodo people in Salbari sub division of Baksa district of Assam in India are cricket, grasshoppers, water giant bug, termites, red ants, beetle larvae, pupa of insects, etc. Edible insects, among the Bodos, are not used as emergency during food shortages, but are included as a planned part of the diet throughout the year or when seasonally available. Certain insects like male cricket and weaver ant are eaten in spring festival like *Baisaghu*. But when they uses as medicine purpose they collect it on the time of scarcity also.

Bodo people have been using certain animals and their product as their diet and as medicine (Narzary and Bordoloi, 2014). They used various animals, their parts and their products have constituted parts of indigenous medicine for disease and treatment.

It is observed that most of the edible food plants and animals are very simple methods of preparation. However single plant species are used for cure more than one disease.

The Bodos used as roasted insects as food item in their daily life and these species also have medicinal values which are used to cure certain diseases.

**Table 2** Mode of consumption and medicinal values of the insect food items by the Bodo People

Scientific name	English name	Assamese name	Bodo name	Mode of consumption	Medical value
<i>Tarbinskiellus portentosus</i>	Cricket	Uuichingra	khusanggra	Male insects as roasting of fire, especially in the time of Spring festival	Used as therapeutic food for healing certain diseases for whole year.
<i>Ocephayllas nephila</i>	Weaver ant	Amroli poruwa	khwjema	fired	Its egg is very beneficial for low presser peasant
<i>Anaphe infracta</i>	Giant wood spider	Katha poka	BemaRaja	Wings are discarded and fried with oil	Used ashes of giant wood spider for curing the snake bite
<i>Zonocerus variegatas</i>	Silk warm	Pat polu	emfow	Fried with oil and onion,	Consumed as nutritive food, after childbirth and time of pragency
<i>M.bellicosus</i>	Grasshopper	Phoring poka	Guma	Wings are discarded. Fried or smoke	It has always a staple item provide protein and cholesterol, ashes of grasshopper used in dog bit peasant in biting part
	termites	Uii-poka	gunjet	Adult termites fried with oil and also smoked	Used to brain related problems

**Table 3** Mode of consumption and medicinal values of the animal food items by the Bodo People

Scientific name	English name	Assamese name	Bodo (Local) name	Mode of consumption	Medical value
<i>Hoplobatrachus tigerinus</i>	Goliath frog	Vekuli	Ambu bongla	Fried in oil in flash of thigh parts and also vegetables	Stomach trouble and high blood pressure
<i>Duttaphrynus melanostictus</i>	Asian common toad	Suk vekuli	Ambu sibro	Flesh used as curry	Ashes of frog Skin used for curing skin disease and finger infection
<i>Sus scroba</i>	Pig	Gahori	Oma bedor	Pork liver and fat use as curry	Time of big pox disease village healer suggested consumed pork liver curry, fates are used as oil for muscular pain
<i>Capra aegagrus</i>	goat	sagoli	bwrma	Urine used for making 'Jokhor'	Used for treatment fever
<i>Columba livia chiroptera</i>	Pigeon bat	Paaro sorai baduli	phareo badamali	Meat curry with potato Meat curry	For low blood presser person Asthma problem person

## CONCLUSION

Traditional folk medicines, mainly based on plants, occupy a significant position today. Therefore, the need of the hour is to harness this natural resource sustainably for the socio-economic development of the indigenous communities. Many traditional medicine is use for better cultural acceptably, lesser side effects and its better effectiveness. This traditional knowledge also helps to curing the various diseases in rural area where people are not well introduced in the modern medical facilities. Through the acceptable of the modern system of medicine for some simple disease is available of some study are, but many people of the studied area still continued to depend on medical plants for treatment of diseases. This traditional knowledge of indigenous medicine played an undisputed role in the modern days world in health care system, but it should be important that the knowledge should cultivated by the upcoming generation. The utmost need of the present situation is that to uplift this traditional knowledge of ethnic medicine and preserved this knowledge for the betterment of future generation of their society.

### Notes:

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