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Plants As An Integral Part in the Life of the Bodos of Assam

Abstract

The relationship between man and plants is as old as humanity. There would have been no civilization without proper utilization of plants by man. Right from the Palaeolithic period to the present time man shared a very close relationship with plants. This paper attempts to study the various ways in which plants are related to the life of the Bodos of Bahupara, Assam, and the use of native plants in food, medicine, household items, in religious practices, etc. With the passage of time, it has been noticed that changes regarding conservation of forest resources and dwindling of forest areas have influenced the villagers and have changed their mode of lifestyle to a certain extent. However, with growing demand for organic products, the villagers need to be encouraged to harness the products of nature more effectively for a sustainable living and make this world a better place to live in.

Keywords: Plants, Man, Medicine, Magico-Religious Practices.

Introduction

Our ancestors not only depended upon the plants for food and shelter but also to treat most of their illness. The tribes of India as elsewhere in the world use plants for various purposes and a few were also noted for their hallucinogenic properties. They even attribute their properties to spiritual forces residing in the plants. As a result, a number of legends grew up around these beliefs. The instant transportation of the human mind to the spiritual world where communication with spirits and gods were supposedly possible was thought to be pure magic by these people. These forces of nature which brought them good or evil were held in awe by their ancestors and they regarded these mysterious forces as gods and objects of devout worship.

Man's dependence on plants is as old as humanity. Even though man lives in the 'Atomic Era' or the 'Space Age', it seems that he will be dependent on plants directly and indirectly for as far into the future as human imagination can be projected (Baker 1965). Civilization would have been impossible without proper utilization of plants through agriculture. The requirements of man for nourishment and shelter dictate that he exploits his environment for satisfaction of these needs on a daily basis. This relationship of man and his environment is the basis of ecology. Ecology can be defined as the study of entire assemblages of living organisms and their physical milieus, which together constitute integrated systems (Honigmann 1997). Hence, environment is an integral part of the total system.

Ecological Anthropology of the 1960s has many ancestors, like Daryll Forde, Alfred Kroeber, and Julian Steward. The ecological anthropology of Roy Rappaport and Andrew Vayda were influenced by Steward's cultural ecology. However, the analytic unit shifted from culture to the ecological population, which was seen as using culture as a means of adaptation to environments. The cultural materialism of Marvin Harris was influenced by Steward's culture change (evolution) and culture core as on his cultural ecology. Cultural materialism, shared with ecological anthropology an interest in the adaptive functions of cultural phenomena, including religion. Rappaport focused on ritual in the ecology of a New Guinea people and Harris (1966,1974) analysed the adaptive , conservatory role of the Hindu doctrine of ahimsa , with special reference to the cultural ecology of India's sacred cattle (Kottak 1999). The modern world displays a degree of political and economic interrelationships unparalleled in global history. This has led to a transformation and replacement of local ethnoecologies. Migration, media, and industry spread people, institutions, values and technologies.



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Issues addressed by the new ecological anthropology arise at the intersection of global, national, regional and local systems, in a world characterized not only by clashing cultural models but also by failed states, regional wars and increasing lawlessness. A new mediating, ethnoecological model, that is, sustainable development, has developed, has developed from recent encounters between local ethnoecologies and imported ethnoecologies, as a response to changing circumstances. Sustainable development aims at culturally appropriate, ecologically sensitive, self-regenerating change (Kottak 1999).

Scholars like Forde (1934), Herskovits (1955) and Evans-Pritchard (1940) laid importance on man's relation to his physical environment. Vidyarthi (1963) and Rai (1966) in India discussed the interaction of man and forest among the Malers and the inhabitants of Chotanagpur respectively. Anthropologists, who are interested in the study of plants, seek to find out the various ways in which plants are related to the life of a particular people and the use of native plants in food, medicine, fabrics, household items, etc. Tribal as well as rural people have their own hereditary traditional knowledge about several varieties of domesticated and wild plants which are used as food and medicine. Indigenous knowledge of plants is available in Ayurveda; Charaka and Susruta, the famous early Indian physicians, mentioned that medicinal herbs and plants should be recognized and identified with the help of cowherds, hermits, huntsmen, forest dwellers and those who collect fruits and edible roots of the forest (Jain 1987). India is extremely rich in floristic wealth and native plant genetic resources. Moreover, the tribal as well as rural communities of India are still the storehouse of much information and knowledge to unfold the multiple uses of plants.

Research Design

The present paper is based on data collected in the course of fieldwork undertaken among the Bodos of village Bahupara, about 3 km from the town of Rani in the Kamrup District of Assam. The data was collected in the year between 1996 to 1998 and between 2009 and 2010. Primary data on population pattern including educational status, occupational pattern and others were collected using a structured household schedule. Data on physical aspects of the village and their various knowledge and practices associated with plants was collected using focused interviews and non-participant observations.

Bahupara is a small, predominantly Bodo village. The village is situated about 30km from Guwahati. It is bounded on the north by the Block Development Office, Rani and on the south by the office of the Forest Department, Government of Assam. To the east of Bahupara stands the Kolong Pahar and to the west the village Batabari is situated. The population of Bahupara is 303, out of which 167 are males and 136 females and they are distributed through 48 households.

The People

The Bodo Kacharis of Assam is a branch of the Great Bodo Group of the Indo-Mongoloid family falling within the Assam-Burmese linguistic section. Their identity is not uniform as an ethnic group. In upper Assam, they are identified as Sonowal and Thengal Kachari, while in western Assam, they are more popularly known as Boro or Bodo Kachari. In the southern districts of North Cachar and Cachar, they are designated as Dimasa and Barmans respectively. The origin of the Kacharis is still very largely a matter of conjecture and inference. In feature and general appearance they approximate very closely to the Mongolian type (Endle 1997).

Plants As Food

The people of Bahupara are a farming community. The plain land of the region is suited for agriculture. The tropical or semi-evergreen forests of the area are sources of various wild edibles in the form of stems, roots, tubers, fruits, seeds and leafy vegetables. The people of this village depend largely on plants for their sustenance and livelihood. Agriculture, horticulture and collecting wild food plants are important preoccupations of the Bodo villagers. The area consists of sandy loam, clay loam and loamy soil which are suitable for Kharif crops, Rabi and Zaid crops (Table 1). There are about eleven traditional varieties of rice grown and three high yielding varieties grown in Bahupara. The traditional varieties of rice grown are Moinagiri, Tangapasi, Bora, Boka, Pasobhog, Aijori, Mala etc. The high yielding varieties of rice include Aijung, I.R.8 and Pusa. Other cultivated crops include maize, pulses like mati mah (black gram), mustard, different varieties of fruits, vegetables and greens (Table 2,3,4&5) They also cultivate a number of spices like turmeric, ginger, bay leaf, black pepper etc.

As regards fertilizers, the people generally use home-made manure made from cowdung and plant refuse. They also apply other fertilizers like ammonium sulphate, potash, urea and D.P. They plant *Bhotera (jatropha sp.)* and *Morapat (jute)* plants in the paddy fields to protect the crops from pests. Most of the farmers depend on rain water for cultivation.

The villagers also consume some other edible plants like mint *pudina*, and areca nut and leaves *tamul paan*. The roots of the banana tree, particularly the variety called *Bhim Kol* are eaten as curry, a relished food item called *pasala*. The bark of the tree is spilt and dried after which it is burnt into ashes. This is known as *khar* ---a traditional food ingredient. Bamboo shoots of *Bholuka bah*, *kata bah*, and *kakoa bah* are also consumed by the villagers.

Plants as Medicines

Plants have provided man with real or supposed means of healing, from the very earliest times. According to Carelton Coon (Baker 1965), the religious practitioner or shaman, was the first specialist ---his is the oldest profession. He performed a medical and religious function, because disease among the primitive people is usually equated with

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invasion of the body by evil spirits, and consequently, religious incantations and rituals were needed as an accompaniment to the administration of medicine. Plants are the natural and traditional source of medicine and the use of herbs has been the mainstay in therapeutics in spite of enormous changes in therapeutic practices. The Indian medicinal flora is one of the richest with high therapeutic potentialities. North East India in particular has also dense forested areas which facilitate the growth of different varieties of plants which are known to the people of this region to have healing properties. The villagers of Bahupara primarily depend on modern medicine and physician, but even today they depend on herbal medicine to cure diseases to some extent.

There are some unique methods of treating some ailments. For excessive bleeding during delivery as well as menstruation, five seeds of *ghonta joba* *Hibiscus rosasinensis* are given to eat for one or two days. Even complicated problems like fracture in bones are cured with the help of plants. They even used herbal medicines as abortifacients in earlier days.

It is thus evident that the villagers of Bahupara are aware of the medicinal values of a large variety of plants and herbs which are found to grow naturally in the village. Thus, these people have learnt the use of various plant and plant materials for remedial purposes. The knowledge of traditional medicines which these people have is inherited. Studies by various National Government and International Organizations (WHO) have shown that for 75-90% of the rural populations of the world, the local herbalist alone attends to their medical problems (Sarma and Medhi 2008). Though there are a number of primary health centres and their branches, villagers still depend upon their traditional healers and their knowledge of medicinal herbs.

Plants in Magico-Religious Beliefs

The Bodos of Bahupara use many flowers, fruits or whole plants as offering to deities, and some plants are themselves worshipped or considered sacred. Some plants are believed to possess magical properties.

The religious philosophy of the Bodo Kachari tribe centres round the super power of Bathou Barai which is analogous to Shiva of the Hindu Trinity. The Siju plant *Euphorbia nerifolia* is regarded as representing the Bathou, the supreme deity of adoration. Therefore, every traditional Bodo Kachari household is seen planting a Siju tree in their courtyard along with a sapling of tulasi. Dubori, tulasi and doron are required for the performance of Siju puja while tulasi, dubari, raw bananas, betel leaves and areca nuts are required for the performance of Buliya Puja (worshipped as the goddess of wealth) and Kherai puja (Bathou is propitiated).

While celebrating the three Bihus, the Bodos of Bahupara make use of a number of plants like *dighalati* (*Litsea salicifolia*) and *makhiyati* (*Flemingia strobilifera*). Offerings are made to the tulsi plant at the time of Kati Bihu. The makeshift cottage (*Bhelaghar*)

and a high temple-like structure (*meji*) of Magh Bihu are made out of different varieties of jati bah, bholuka bah, kakoa bah and sal tree etc. They even use Bel leaves, tulsi, dubari, rice grain, sandalwood, etc, in a marriage ceremony. It is customary for the members attending a funeral procession to breathe the smoke of dhan kher (straw) and chew a little *sokota* (*Corchorus capsularis*) on their return, to free oneself from pollution.

The Bodos also believe that some trees like bod, teteli, bagari and certain bamboo trees are abode of bad spirits and therefore must be planted far away from the living huts. They even believe that evil spirit (Kuber) resides in a Chaitan gos (*Alstonia Scholaris*) and dellinia and evil spirit (Pihasini) resides in bogori and bamboo trees. They consider the Bokul to be the abode of good spirit (Krishna) and are thus encouraged to be planted at the entrance of the house. Wood apple tree is believed to be the abode of Mahadeva. It is a common belief among them not to plant a tamarind tree in front of the house nor a wood apple tree at the back as it will bring distress.

Miscellaneous Uses of Plants

Other than the aforementioned uses of plants, the Bodos of Bahupara also cultivate a number of flowers (ornamental plants) all the year round in their gardens. Some important fibre plants cultivated in Bahupara are jute from which they generally make ropes and also the bark of odal gos (botanical name not known). The women particularly the girls use the leaves of jetuka (*Lawsonia inermis*) to decorate the palms and nails. The women folk prepare kohl (Kajal) with the help of mango leaves. The villagers also use various plants (areca nuts and leaves) for chewing and smoking (tobacco and hemp) purposes. Certain plants are used as pesticides (bhotera and morapat) which are planted in between the crops to protect the crops from pests.

Thus, it is seen that the villagers of Bahupara use plants for various purposes, starting from the use of plants for ornamental purpose to that of pesticides. There are certain timber-yielding and fibre-yielding plants also which are used by the villagers of Bahupara.

Conclusion

The people of Bahupara are found to have a very intimate relationship with plants surrounding them. They depend on plants for their food and use the plants for a number of purposes ranging from building houses, making household implements to using plants to cure health problems. The existence of the Kolong hill near the village have helped in establishing deep bond that man has with trees. Agriculture is practiced as a full time occupation by almost all the villagers and all the households in the village has a kitchen garden and flower plants.

However, in recent years, there have been noticeable changes in the village. A revisit to the village in 2010 made it clear that due to fragmentation of land holdings the production of the farmers is not sufficient for their own consumption. Joint families are being replaced by nuclear ones and have resulted in

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smaller agricultural plots. Earlier cultivation was the primary occupation of the villagers but now business, service, wage labour is the dominant means of earning. Farmers now want to cultivate high-yielding varieties along with the traditional varieties. To boost up production the farmers are using fertilizers along with biofertilizers and pesticides also. Traditional agricultural implements like the plough, yoke, sickle etc, are being replaced by efficient implements.

Another aspect that man must learn to appreciate before the future can be looked at with confidence is that of conservation of natural vegetational resources. In Bahupara, some timber yielding trees like Segun, Gamari and Sal have been brought under the protection of the local forest of Rani and one cannot cut these trees without official permission. As a result the villagers who used to depend on firewood and other plant resources from these areas had to face certain problems. Now they are availing LPG cylinders and kerosene for fuel. This would safeguard against inadvertent destruction of forests or natural flora and help in conservation of such native habitats and biodiversity.

The traditional (or what the reductionist world view has labeled 'unscientific') system of food production has managed pest control by a series of measures which include building up plant resistance, practising rotational and mixed cropping and providing habitats for pest-predators in farms, trees and hedgerows. These practices created a stable local ecology and economy (Shiva 1998). Women of Bahupara village possess a wide knowledge about traditional methods and relationships between plants. Their knowledge needs to be harnessed and utilized for the future. Moreover, the recent movement of the people from the villages to the city or cities in search of better avenues should be discouraged. The growing demand for organic farming is itself very encouraging. The land is seen as a priceless asset which it is man's task and happiness 'to dress and to keep' (Schumacher 1973). The world needs to be restructured ecologically at the level of world-views and life-styles. Otherwise peace and justice will fail to exist and the very existence of humanity will be threatened.

Table 1
Different Crops Grown in three Agricultural Seasons Among the Bodos of Bahupara

Kharif Season (Bohag-Bhado)	Rabi Season (Ahin-Aaghon)	Zaid Period (Phagun-Sot)
Paddy	Mustard	Ginger
Sugarcane	Potato	Turmeric
Jute	Winter vegetables, pulses	

Table 2.
Fruits Grown by the Bodos of Bahupara, 2009

English name	Assamese/local name	Botanical term
Mango	Aam	Mangifera indica
Pineapple	Mati kothal	Ananus comosus
Ramleh	Leteku	Baccaurea sapida
Shaddock	Rabab	Citrus grandis
Jujuba	Bogori	Zizyphus murutina
Banana	Kol(bhimkol, puriya kol, chenichampa, malbhog)	Musarparadisiacaola
Carambola	Kardoi	Averrhoa carambola
Dillenia	Ou	Dillenia indica
Coconut	Narikol	Cocos nucifera
Hogplum	Amara	Citrus aurantifolia
Not known	Paramlakhi (Halfoli)	Phyllanthus acidus
Papaya	Amita	Carica papaya
Guava	Madhuriam	Psidium guajava
Blackberry	Kolajamu	Syzygium cuminii
Jack fruit	Kothal	Artocarpus heterophyllus
Wood apple	Bel	Aegle marmelos
Pomegranate	Dalim	Punica granatum
Sour lime	Nemutenga	Citrus arrantifolia
Olive	Jalpai	Eleocarpus floribundus
Sugarcane	Kuhiyaar	Saccharum officinarum
Litchi	Lechu	Litchi chinensis
Lemon	Nemu	Citrus limon Burm f.

Table 3.
Vegetables Grown in Bahupara, 2009

English name	Assamese/local name	Botanical term
Lady's Finger	Bhendi	Abelmoschus esculentus
Chilli	Jalokia	Capsicum annumm
Cucumber	Tianh	Cucumis sativas
Sweet gourd	Rangalao	Cucurbita moschata
Country bean	Urahi	Dolichos lablab
Sweet potato	Mitha alu	Ipomoea batatas
Ribbed gourd	Jika	Luffa acutangula
Sponge gourd	Bhol	Luffa cylindrical
Tomato	Bilahi	Lycopersicum esculentum
Bitter gourd	Tita kerela	Momordica charantia
Ginger	Ada	Zinzibar officianla
Turmeric	Halodhi	Curcuma longa
Coriander	Dhania	Coriandrum sativum
Brinjal	Bengena	Solanum melongena
Onion	Pianj	Allium cepa
Radish	Mula	Raphanus sativus
Garlic	Naharu	Allium sativum

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Ash gourd	Komora	Benincasa hispida
Drum stick	Sajina	Mornga cleifera
Cowbean	Nechera mah	Vigna sinensis
Bottle gourd	Panilao	Legenaria siceraria
Cabbage	Bandha kobi	Brassica oleracea variety; capitata
Cauliflower	Phulkobi	Brassica oleracea variety; botrytis
Knol	Ol kobi	Brassica oleracea variety; caulorapa
Snake gourd	Dhunduli	Trichosanthes anguina
Pea	Motor mah	Pisum sativum
Taro	Kosu	Colocasia esculenta

Table 4.
Green Leafy Vegetables of Bahupara, 2009

English Name	Assamese/ Local Name	Botanical Term
Not known	Jilmil sak	Chenopodium album
Sorrel	Chuka sak	Rumex vesicarius
Not known	Lai	Brassica spinach
Spinach	Palleng	Spinacea oleracea
Not known	Maricha	Amaranthus blitum
Radish	Mula saak	Raphanus sativas
Mustard leaves	Sariyah	Brassica campestris

Table 5
Wild Greens found in the village Bahupara, 2009

Assamese/ Local Name	Botanical Term
Khutura	Amaranthus sps. (Spinousus, viridis)
Jilmil	Chenopodium album
Dhekia	Polyposium sps. & Pteridium aquilinum
Mo sundori	Not known
Narasingha	Murraya koenigii
Manimuni	Centella asiatica
Helechi	Enhydra fluctuans
Bhedailota	Paederia foetida
Chuka	Rumex vesicarius
Matikaduri	Cyperus tegetum
Kolmou	Ipomoea aquatic

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