International Journal of Plant Sciences, (January to June, 2010) Vol. 5 Issue 1 : 360-362

Wild vegetables used by tai-shyam people of Sivasagar district and their present stats

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Accepted : December, 2009

Key words : Vegetables, Plant species, Ethnic people

Field surveys were conducted during two seasons of the year spring and autumn each year (2007-09) and information about wild vegetables were gathered through the interaction with old age Tai-Shyam man and women. Data were collected regarding their food habit and utility of wild vegetables in different seasons of the year. 38 plant species were identified. For each species botanical name, vernacular name, family and parts used were recorded. Some of which are threatened and endangered. ONGCL drilling operation and extension activities of small tea growers are major threat to the biodiversity of Sola and other reserve forests of the district.

Biodiversity which is defined as the variety and variability amongst the living organisms and the ecological complexes in which they occur. The role of biodiversity is the survival and continunence of human race on this planet which is now well understood and better appreciated but the realization of alarming situation has come rather too late as large number of species of animals and plants have already been wiped off mainly due to human civilization leading to the habitat and environmental degradation and serious imbalance in nature.

Sivasagar district comprised with three subdivision *viz*., Sivasagar, Nazira and Charaideo with total area of 2668 square km. It lies between $94^0$8' and $95^0$4' East longitude and $26^0$7' and 2702' North latitude. Seven reserve forests and more than 25 grazing land with elevated topography receives the highest rainfall of the area, which average rainfall 400 mm and altitude 105 m-130 m above sea level. Eco-friendly adaptation and geographical significance are unique feature of the district

Most of the tract of the area alluvial formation with a great depth of alluvium put down in comparatively recent geological times over what was originally a floor of gneiss. The Naga hills from of the Patkai Range which raised due to earth movement and have been covered subsequently with deposited strata. Configuration of the ground is average terrain of Sivasagar division in flat. it is gradually hilly towards the south of the division Sola reserve forest lies on the foot hills of the Naga hills tract. The terrain is flat on the northern ends and gradually rising south wards.

Number of ethnic people inhabits in the transitional zone of such forest area *viz*., Tai-Khamiyang, Tai-Shyam, Tai-Phaka, Borahi, Motok, Sonowal Kachari, Mishing Naga, Tea garden and ex tea garden including Indian Nepalies, where wild vegetable are available. These tribal people of the area used different type of plant species in different aspects of their day today life such as food, fodder, medicine, wild vegetables, fibre and domestic purposes

Most of the Tai-Khamiyang inhabited near Sola and Sapekhati reserved forests which are rich in phytodiversity. But major area of these forest covered by ONGCL and extension activity of the small tea garden. The aim of the present investigation is to study the wild vegetables used by Tai people of this area. The Tai Ahom communities' one of the oldest ethnic component of Assam which has a rich heritage of culture and written records.

Floristic studies of Assam have been carried out time to time by several workers as Kankjilal (1930-40), Sharma (1978), Gogoi and Islam (2008), Gogoi (2008), Jain (1991).

Survey work carried out from March 2007 – March 2009 among surrounding inhabitant of Sola and Sapekhati Reserve forest area of the district. Personal interaction with old age person who regularly used wild vegetables from the areas and their present status. Moreover, contact and interview with the Tai-woman those are regularly collect wild vegetables. Collected specimens were preserved in the form of herbarium and deposited in the Gargaon College botany department Laboratory.

38 plant specimens were collected identified and compared with original herbarium sheets and enumerated below with scientific name, local name, family and parts

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used (Table 1).

Pteris aquilinum L. *Amaranthus spinosa,* and *A. viridis* are used very frequently as vegetables in all the season of the year and these species were available in the forest villages. *Colocasia escalunta, Oxalis corniculata, Rumex vesicarius* L. *Lasia spinosa Musa paradisiaca*, *Dillenia indica,* and *Sarcochlamys pulcherrima* commonly used as mix vegetables with fish and meat and these were also available in the forest of Sivasagar district as *Bambusa tulda, Calamua flagellum, Ficus benjamina, Alpinia galanga Cucuma amada,* etc. seasionally used have gradually disappear from the forest areas. *Clerodendrum coleobrookianum, Leucas aspera, Hydrocotyl asiatica, Pogostemon benghalensis, Vangueria spinosa* and *Smilax macrophylla* are used as vegetable and medicinal

Table 1 : Plant specimens used for vegetables

Sr. No.	Scientific name	Local name	family	Parts used
	Pteridophyta			
1.	*Acrostichum aureum* L.	Dhekialoti	Pteridaceae	
2.	*Pteris aquilinum* L.	Dhekia	Polypodiaceae	Young shoots
3.	*P. ensiformis* L.	Dhrkia	Pteridaceae	
4.	Gymnosperms			
	Gnetum gnemon L.	Telatia pat	Gnetaceae	Young shoots, inflorescences, fruits
5.	Angiosperms			
	Alpinia galanga L.	Tora goss	Zingiberaceae	Juvenile culms
6.	*Alocasia macororrhiza* Schott.	Oolkochu	Araceae	Tuber and tender leaves
7.	*Alternanthera sessilis* R. Br.	Mati-kanduri	Amaranthaceae	Young shoots
8.	*Amaranthus spinosa* L.	Kata khutora	Amaranthaceae	Young shoots
9.	*A. viridis* L.	Khutora	Amaranthaceae	Young shoots
10.	*Bambusa balcooa* Roxb.	Voluka banh	Poaceae	Young culms
11.	*Bambusa tulda* Roxb.	Jatibanh	Poaceae	Young culms
12.	*Calamus flagellum* Griff.	Raidung bat	Palmaceae	Tender stem
13.	*C. tenius* Roxb.	Jati bat	Palmaceae	Tender stem
14.	*Callicarpa macrophylla* Vahl.	Tongloti	Verbenaceae	Young leaves
15.	*Clerodendrum coleobrookianum* L.	Nephaphu	Verbenaceae	Young shoots
16.	*Centella asiatica* L.	Manimuni	Apiaceae	Whole plant
17.	*Curcuma amada* Roxb.	Zingiberaceae	Amada	Rhizome
18.	*Dendrocalamus hamiltonii* Ness.	kakobanh		
19.	*Dillenia indica* L.	Ooutanga	Dilleniaceae	Fruits and calyx
20.	*Eichhornia crassipes* Solms.	Meteka	Pontideriaceae	inflorescence
21.	*Ficus benjamina* L.	Jari-goss	Moraceae	Stipples
22.	*Hydrocotyle asiatica* L	Bor-manimuni	Apiaceae	Whole plant
23.	*Ipomea eriocarpa* R.Br.	Kalmow	Convolvulaceae	Young buds
24.	*Jassia repens* L.	Panikhutora	Onagaraceae	Young shoots
25.	*Leucas aspera* Spreng.	Drunbon	Lamiaceae	Young shoots
26.	*Lasia spinosa* Thw.	Changmora	Areaceae	Young leaves
27.	*Manihot esculanta* Crantz.	Himolualu	Euphorbiaceae	Underground tubers
28.	*Melastoma malabathricum* L.	Phutukola	Melastomataceae	Flower
29.	*Musa paradisiacal* L.	Kolgos	Musaceae	Fruits, inflorescence and tender stem
30.	*Musa balbisiana* L.	Bhimkol	Musaceae	Inflorescence, tender shoots
31.	*Oxalis corniculata* L.	Tengesi	Oxiladaceae	Whole plant
32.	*Pogostemon benghalensis* Kruntz.	Hukloti	lemiaceae	Young shoots
33.	*Polygonum microcephalum* D.Don.	Modhuhulang	Polygonum	Young shots
34.	*Polygonum posumbi* L.	Nol-tenga	Polygonaceae	Leaves
35.	*Rumex vesicarius* L.	Suka hak	Polygonaceae	Young shoots
36.	*Sarcochlamys pulcherrima*	Mesaki	Vegetable	Young leaves
37.	*Smilax macrophylla* Roxb.	Tikoni borial	Samilacaceae	Young shoots
38.	*Vangueria spinosa*	Kotkora	Vegetable	Young shoot

aspects.

Present status of the wild vegetables those are available at a time are *Alpinia galangal, Clerodendrum coleobrookianum, Smilex zeylanica, Alternanthera sessilis* which have come under IUCN red data book. *Gnetum gnemon* gradually decreased from Sola reserve forest area because all the ethnic people used different parts of the plant as vegetables *viz*., tender leaves, inflorescences, and fruits. *Calamus flagellum,C. tenius, Callicarpa macrophylla Polygonum posumbi, Melastoma malabathricum, Clerodendrum coleobrookianum* and *Gnetum gnemon*. All these species are kept under non conventional food plants but these plants are till not in the organized cultivation but rather occur in the wild form. At present botanists are emphasized non-conventional food plants for various prospects

The available information indicates that many of them are nutritionally and medicinally important with conventional crops as (Jain, 1981; Borthakur, 1997); Barua, *et al.*, 1999).

Not only the wild vegetables but also all the plants in this area are under threat due to anthropogenic activities. Most of the local inhabitants collect vegetables with root and damage the whole plant during collection. Major area of the forest is covered by well known ONGCL's oil field. More than 28 drill sites were successfully operated till date. Drilling operations of ONGC damage soil health causing threat to the biodiversity. The areas become barren at the drill site. Nothing can grow their due to split of crude oil.

Sola, Abhoypur and Gelakey reserve forests are one of the biological hot-spot of rain forest areas. So its conservation is necessary for the people lived around this forest mainly dependent on the wild vegetables and conservation. Public support must be generated in order to fulfill the real goal of eco-development. No commercial exploitation can be allowed in these areas and need protection from fuel-starved villages and fodder starved cattle.

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