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Diverse ethnic food practices of the *Galo* tribe in Arunachal Pradesh

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The present study has been undertaken to to study the diverse ethnic food practices of the *Galo* tribe of Arunachal Pradesh. The present study was conducted in 20 villages of Tirbin and Kangku circle of West Siang district during the year 2017. 200 households *i.e.* 10 households in each village was purposively selected for the study. The food practices of the *Galo* tribe ranges from the use of fermented bamboo shoot to edible wild plants and insects which are mostly collected by the woman folk of this community from the jungles. The prevailing knowledge systems of diverse ethnic food practices are passed on generations after generations by the elder members of this community. However the younger generations lack interests in learning those traditional food systems which is great threat to the existence of those traditional food system as well as to the eco-culture of the *Galo* tribe. Therefore, it is important on the part of the government to plan and implement certain policies to preserve those valuable traditional food practices of the *Galo* tribe thereby contributing to the overall health and well being of the people belonging to this tribe in particular and to the mankind as a whole.

Key Words : Diverse ethnic food, Practices, Galo tribe

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INTRODUCTION

Arunachal Pradesh, the Northeastern most state of India, nestled in the foothills of Eastern Himalayas is popularly called as "land of rising Sun"(Deori, 2015 and Ratan *et al.*, 2016). It is the largest state in the North-East India which is geographically located between 26°28′ to 29°30′ North Latitude and 90°30′ to 97°30′ East Longitude and spreads over an area of 83,473 sq km.

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Urmimala Baruah, Department of Food Science and Nutrition, College of Community Science, Assam Agricultural University, Jorhat, (Assam) India The state is the richest biotic province of Indian republic bordering Assam and Nagaland in the South, Tibet (China) in the North and North East, Bhutan in the West and Myanmar in the East. The area is exceptionally rich in ethnic culture and biological diversity (Mao et al., 2009). Parallel with this, nature has been exceedingly endowed the state with rich bio-resources. Arunachal Pradesh has second largest area under forest cover of 68,045 sq km (Anonymous, 2008). These forests are also home to sizeable tribal population who continue to live in close association with nature and utilizes a wide variety of forest resources for sustenance and livelihood. The varied climatic condition of the state ranges from tropical and temperate to alpine zone with 80 per cent relative humidity (Tag and Das, 2004). The average annual rainfall in the state is over 350 cm. It receives heavy rainfall from both North-East and South-West monsoon and favours

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luxuriant vegetation growth with high species diversity. It is fully a tribal state and comprises of 19 districts inhabited by 26 major tribes and 110 sub-tribes of diverse culture and lifestyle, with rich indigenous knowledge system (IKS), occupy in different geographical regions since time-immemorial (Tag *et al.*, 2005). Majority of the local tribal communities are originally belonging to Mongoloid racial stock but their long history of migration coupled with geographical isolation has brought to them certain distinctive characteristics in language, dress and customs and customary laws which is prevalent among the tribes including the *Galo* tribe. The rich oral tradition of the state forms an intricate web of indigenous knowledge system that act as unseen guiding force to tribal lives of this state (Tarak *et al.*, 2009).

The Galo is one of the most prominent tribe of Arunachal Pradesh among the 26 indigenous tribes of Abotani descendant (Abo-Tani means the great ancestor of human kind) which is primarily concentrated in Alo, Tirbin, Liromoba, Tai, Dumporijo, Likhabali and Basar area of West-Siang district and however, they are also sparsely distributed in East Siang and Upper Subansiri districts. As per the 2011 census, the Galo population was estimated at 112,272 members (Deori, 2015). The Galos are hailed as innovative and hardworking and they are considered to be very prosperous and culturally vibrant tribe of the Eastern Himalaya (Bora et al., 2012). The local people of the community still sustain their livelihood through forest bioresources although agriculture is the backbone of their economy (Deori, 2015). They practice both Jhum or swidden cultivation and wet or terrace cultivation for agriculture methods (Deori, 2015). The Mopin is the major community festival which is popularly celebrated among the Galo tribe. It is mainly agriculture based festival celebrated for 4-5 days in the month of April every year. The Donyi-Poloism is the main religion of the tribe in the district, although Christianity is on the rise in the recent decades which is a major cause of cultural concern for those who believe in the power and concept of traditional faith and belief system (Anonymous 2011). This tribe is well known for its rich traditional knowledge base relating to the diverse uses of foods such as plants and plant products, insects and wild animals in their day today life. The use of diverse ethnic foods by the Galo tribe not only reveal their rich food heritage but also their intuition for sustainence of life and the ecosystem as a whole. Therefore, an attempt has been

made to study the diverse ethnic food practices of the *Galo* tribe of Arunachal with the following objectives:

- To assess the food diversity of the *Galo* tribes

- To study the food preparation practices of the target population.

METHODOLOGY

The present study was conducted in 20 villages of Tirbin and Kangku circle of West Siang district during the year 2017. The villages are namely Deke, Dedu-Doke, Degom, Essi-Yordo, Kardo, Kargi, Lama-Doke, Moba-Doke, Tirbin and Tai in Tirbin circle and Kamcham, Ngopi, Barajan, Mingmang, Holi, Kanku, Balisori, Siloni, Rite and Masi in Kangku circle.200 households i.e. 10 households in each village was purposively selected for the study. Data was collected by using a self structured interview schedule through personal interview with the respondents. The respondents were women in the age range of 25 to 70 years. Interviews were conducted in the local language by visiting each household of the village with assistance of a local language translator who served as a guide also. The data obtained were coded and tabulated.

OBSERVATIONS AND ASSESSMENT

The results obtained from the present investigation as well as relevant discussion have been summarized under following heads :

Meal pattern:

Meal could be defined as a certain amount of food eaten at a specific time. Although the meal is universal, meal patterns vary considerably among societies, cultural and social classes, age groups, and individuals (Patro and Szajewska, 2010). The meal pattern of the *Galo* tribe is presented in Table 1.

From the Table 1, it has been observed that the people of the *Galo* tribe had three meals a day such as breakfast, lunch and dinner. Rice is the predominant food

Table 1: Common meal pattern of the Galo tribe				
Meals	Food items			
Breakfast	Rice with boil potato and boil green leafy vegetables			
Lunch	Rice with boiled vegetables/ green leafy vegetables			
Dinner	Rice with boiled vegetables/ boiled fish with green			
	leafy vegetables			

item in all the three meals followed by green leafy vegetables. These green leafy vegetables include mostly the wild plants collected from the jungles. The most prefered method of cooking is boiling. They mostly use bamboo shoot in their boiled preparations. The most common traditional method of cooking of the Galo tribe is boiling of meat or fish with tender bamboo shoot. Bamboo shoot is gathered from the jungles and preserved in different ways. One way is- bamboo shoot is peeled, cut into pieces, grind and then kept in containers. When it turns sour it is used in different cooked preparations. Secondly, bamboo shoot is peeled and then wrapped in banana leaf and then buried under the soil and stones are kept over the banana leaf and kept for 1 month. After that it is taken out and stored in containers. This is called Heepe. Third is the dry bamboo shoot. It is prepared by peeling followed by grinding and then drying in the sun, This is called Hupe. A mixture of dry chilli (Yaluk) roasted sesame (Naamdu) and bamboo shoot and local dry fish



Fig. 1: Boiling of fish with tender bamboo shoot



Fig. 2: Roasting of meat



Fig. 3: Steaming fish by wrapping in banana leaves



Fig. 4: Cooking rice in bamboo tubes

is prepared and consumed as chutney with rice. The other methods of cooking used are steaming, roasting, smoking and fermenting. The most common food item prepared by steaming is the intestine of chicken. This is usually prepared by wrapping the pieces of meat with condiments in a leaf and then the leaf is buried under the ash in the fire place. The meat buried under the ash, gets cooked due to the heat of the fire. The Galo tribe preserve meat and fish for a longer period of time by smoking. The meat or fish to be smoked are kept in a shelf above the fire place for few days. The heat from the fire smoked the meat and fish thus enabling them to be stored for a longer period of time. This in turn ensure a huge stock of protein. Another traditional method of cooking food by the Galo tribe is cooking in bamboo tubes during feasts and festivals. Rice is cooked in bamboo tubes. Meat or fish along with wild edible plants are stuffed in raw bamboo tubes and the tube is covered and kept over the fire. The tube is then turned from time to time to prevent burning of the food.

Consumption of wild plants by the Galo tribe:

The wild plants consumed by the tribe has been presented in Table 2.

Table 2 gives the names of wild plants consumed by the Galo tribe. These include- Oin, Taka, Oyik, Tair, Raaer, Oyik, Oji. These plants are gathered from the jungles especially by the Galo women and are consumed as vegetables in the daily diet. Majority of these wild plants have great demand in the local market and hence, are of high economical value and serve as a source of income as well as supplementary nutrition for the lower section of the society. In a study conducted by Deori (2015) reported that gathering is an important method of food procurement among the Galo, especially for women. They are fully adept in identifying edible plants from the forest. On an average, they can easily identify more than 30 species of edible wild leaves, roots and mushrooms. Different kinds of wild potatoes, tubers, yams, mushrooms and leaves are collected usually on daily basis. In the villages, women regularly go to the forest to collect edible leaves and return back with a basket full of supplies to cook for the day. Ratan et al. (2016). Carried out a study among the Galo tribe of arunachal Pradesh and found

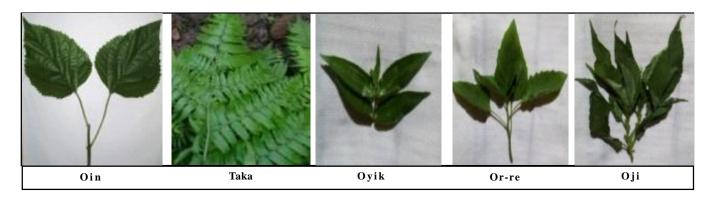
that majority of these wild-edible plant species have high economical value inlocal markets and these are found to serve as supplementary income source in addition to supplementary nutritional property for the less advantageous section of grass root community.

Consumption of insects by the Galo tribe:

The *Galo* tribe of Arunachal Pradesh has been found to consume different insects which is presented in Table 3.

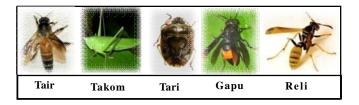
From the Table 3, it has been seen that the insects consumed by the *Galo* tirbe are-Tair, Takom, Tari and Tachai, Gapu, Tak Tapum, Mirbo, Tanyi and Reli. These insects are mostly consumed in raw, cooked and roasted form. These insects may be of high nutritional value and thereby contribute to conserving health and wellness of the *Galo* tribe. However, further scientific investigation regarding the nutritional value will provide reliable source of its potential health benefits. The use of insects as human food (entomophagy) especially by indigenous people in third world is well documented (Bodenheimer, 1951 and DeFoliart, 1990). Yhoung-aree *et al.* (1997) in a study conducted in Thailand, reported that over 50 species of insects are edible and consumed throughout the year in Thailand. The most popular are silkworm

Table 2 : Wild plants commonly consumed by the Galo tribe			
Plants (Galo name)	Botanical name	Mode of consumption	
Oin	Clerodendrum glandulosum Lindl. [Verbenaceace]	Boiling	
Taka	Diplazium esculenium (Retzius) Swartz [Athyriaceae]	Boiling	
Oji	Elatostema sublaxum (Elmer) H. Schroet. [Utricaceae];	Boiling	
Oyik	Ganostegia hirta (Blume ex Hassk) Mique [Urticaceae];	Boiling	
Tair	Litsea cubeba (Loureiro) Persoon [Lauraceae];	Boiling	
Rar	Piper pedicellatum C.DC. [Piperaceae];	Boiling	
Or-re	Solanum americanum P. Miller [Solanaceae];	Boiling	



pupae, bamboo worms, locusts, beetles and other insects. Another study conducted by Kato and Gopi (2009) among the *Galo* tribe of Arunachal Pradesh found that the community consumed a total of 12 species of insects. Consumption of insects showed that 61.11 per cent are consumed at larval stage followed by (16.67%) mature and 11.11 per cent of adult and hive, respectively.

Table 3: Insects commonly consumed by the Galo tribe			
Insects (Galo name)	Scientific name	Mode of consumption	
Tair	Apis dorsata	Raw	
Takom	Katydids sp.	Cooked	
Tari	Pentatomid sp.	Raw/cooked	
Tangik	Apis indica	Raw	
Gapu	Vespa bicolor	Roasting	
Tak Tapum	Cyrtotrechelus buqueti	Roasting	
Mirbo	Locusta sp.	Cooked	
Tanyi	Unidentified	Cooked	
Reli	Polistes sp.	Roasting	



Conclusion:

The study revealed the traditional knowledge and diverse use of ethnic foods in the day-to-day life of the Galo community, which greatly contribute to the food and nutritional security of this hilly tribe and their ecosystems. The food practices of the Galo tribe ranges from the use of fermented bamboo shoot to edible wild plants and insects which are mostly collected by the woman folk of this community from the jungles. A good amount of indigenous edible wild plants were also collected from the kitchen garden of almost all the households. This community has their own food habit based on their locally available diverse crops, forests resources, seasonal availability, culture and ecological systems. The knowledge of using fermented food products, wild edible plants and insects were found to be unique and scientific in nature which may contribute to the overall health and well being of the people of the

Galo tribe. The prevailing knowledge systems of diverse ethnic food practices are passed on generations after generations by the elder members of this community. However, the younger generations lack interests in learning those traditional food systems which is great threat to the existence of those traditional food system as well as to the eco-culture of the *Galo* tribe. Therefore, it is important on the part of the government to plan and implement certain policies to preserve those valuable traditional food practices of the *Galo* tribe thereby contributing to the overall health and well being of the people belonging to this tribe in particular and to the mankind as a whole.

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