

Indigenous Knowledge and Tribal Worldview on Forest

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Abstract

This durable ethnographic study explores the Indigenous knowledge of the local landscape of the Juang one of the Particular Vulnerable Tribal Groups (PVTGs) of Odisha. Following an ethno-ecology method supported by the case study method, an attempt has been made to highlight the emic view of the tribal people based on their knowledge and worldview. All parts of their natural environment, like hills, streams, forests, vegetation soil type etc. are integral parts of their cultural ambience. Classifying the resources found within their lives and livelihood activities incorporates the bio-physical tenets that include the use, composition, position, and size of the objects and belief system as an inseparable part of their culture. Explanations attributed to naming the natural objects and material goods reveal that with the change in contents due to internal demands and/or external interventions, the context of livelihood changes however, even with the decline of biodiversity, the traditional knowledge remains unchanged.

Keywords: Bhuiyan-Juang Pirha; Indigenous Knowledge; Environmental Perception; Ethno-ecology; Folklore; Indigenous People; Mythic; Natural Resources; Nomenclature.

INTRODUCTION

Harold Conklin and Charles Frake, American Anthropologists first proposed ethnoecology as an approach to study human ecology in a series of articles published during the 1950s. They focused on ecological relationships held by people in their own cultural matrix. The study of the relationship between humans and the environment has been of

interest to anthropologists for a long time. Ethno-ecological classification is the study of systems of knowledge developed by a given culture to classify the objects, activities and events of its universe. Classification is an inherent quality of human beings, which is present in all forms of science.

The indigenous people living in the cradle of nature are intimately connected to their biophysical surroundings. Due to the close association with habitat, man has innovated the techniques of recognising and categorising different objects of nature. It seems that the tribal community from their centuries old life experiences has been capable of differentiating animate and inanimate objects of nature under broad categories through their cultural markers. Thus, the material bases of nature help community members for idea generation. A culturally acquired behaviour of the indigenous people often kept on replicating through ritual

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practices which may be referred to as folk knowledge. Thus, ethno-ecology can be defined as indigenous perceptions of “natural” divisions in the biological worlds and soil plant animal human relationships within each division (Frechion *et.al.* 1989).⁸ Ethno-ecologists have produced detailed and excellent data on how people in different societies categorize their environment (Conklin, 1954; Frake, 1962).^{3,7} Vadya and Rappoport (1968) also are in favour of an ethno-ecological approach to scientific study.¹⁹ Ethno-ecology is essentially a research strategy and a number of anthropologists who have used emic and systematic theoretical orientation have sought to introduce rigour into their field work by adopting an ethno-ecological approach (Knight, 1974) that pays holistic and cross cultural approach to find out the universality of man’s understanding about nature through his culture.¹⁵ The state of Odisha is a confluence of diverse forms of culture which mainly includes Aryan, Dravidian, and Adivasi culture. The cultural history of tribes in Odisha revolves around the forest collections and agricultural cycles. The manifestations of plants, animals and insects in forests and hills correspond to their sociocultural transactions. For example, Puspunei a ritual locally known as Chher-chhera, is celebrated among local communities of Chhattisgarh and some parts of western Odisha. The customary practices linked life and livelihoods such as procurement and consumption of food from forest and agricultural land go along with the classificatory names of natural objects. The Christian converted tribal communities observe Christmas while not ignoring the traditional customs such as ancestral worship in sacred spots invariably in forest/foot hills adjoining the streams, propitiating the deities to ward off the evil spirits etc. With this background, the study intends to document and interpret the indigenous knowledge on the classification of natural objects and material goods of the Juangs.

Objectives

To document the ethno-ecological classification based on Indigenous Knowledge (IK) of natural objects especially about forests, valleys, hills, streams, plants and soil in Juang cultural history. While mentioning the emic and world views about the taxonomy and nomenclature of natural objects, it is intended to document the explanations the natives offer their logic about this, that indicate their dependency on the biodiversity of natural

resources of their habitat.

METHODOLOGY

The field area selected for the present work was the villages amidst forest ambience. Six villages under the Gonasika Gram panchayat were periodically visited to cover up the annual cycle of livelihood activities between January 2021 and January 2022 to document and cross-check of the collected data. However, the focus of the study was restricted to only three villages only such as Guptaganga, Tangarpada, and Raidhia. While Guptaganga has the better forest coverage in the study area, Raidhia virtually does not possess any forest under its habitat rights. Tangarpada village has good exposures with non-tribal communities and marketing facilities available with Kendujhar town, the District headquarters for Non-timber forest producers (NTFP). Data was collected through observation at the village level and discussion with tribal and non-tribal villagers at the subjects’ convenience and reasserted the validity of data from key informants. Checking, rechecking and cross-checking data was a regular feature to determine the validity, reliability and accuracy of information. People’s ideas and opinions were given due importance and interpreted taking into their views.

Ecology of the Area

The study area is mostly covered with thick and diversified vegetation that includes Tendu (*Diospyros melanoxylon*), Sal (*Shorea robusta*), Asan (*Terminalia alata*), Dharua (*Anogeessulattfolia*), Mahua (*madhuca indica*) etc. which are some of the dominant tree species. The suitable climatic condition of the area has encouraged many government and non-government agencies to go for horticulture plantations and to grow a variety of fruit bearing trees. The Juang were primarily a hunting and food gathering community in the past. Now the slash and burn cultivation on the hill slopes has become the primary source of their livelihood. The Juang villages are situated on a permanent basis close to the hills where shifting cultivation is practised. Each Juang village has a well demarcated boundary marked by physical objects like trees, stones or springs. The hills which are used for cultivation by rotation are situated within the village boundary. The Juang of a particular village exploits whatever resources are available within their village boundary from which the people of

other villages are entirely excluded. The exclusive right over the area within the village boundary is so rigidly observed that, if the wounded animal hunted by the people of a village runs into the territory of another village and dies there, the flesh of the chase is shared by both the villages. To trespass into the village boundary of a village other than one's own for the purpose of exploiting resources is an offence according to the Juang customary laws.

Study Area

The unit of the study has been individual sample households and the universe is the Juang community of Keonjhar district. The Keonjhar district has been considered because it housed the highest concentration of the Juang tribe. It comprises three subdivisions, thirteen Tahasils with eighty Revenue Circles, twenty five police stations, thirteen Community Development (CD) Blocks, 297 Gram Panchayats and 2137 villages. The Gonasika Gram panchayat comes under Banspal CD Block and Tahasil of Kanjipani police station.

Physical aspects of the District

Traditionally the Juangs have a territorial political organisation known as Pirha headed of a Sardar. The Juang Pirha is situated approximately at 21° 11'-22° 10'N. latitude and 85° 11'-86° 22'E longitude about 300 km. to the northeast of the state capital Bhubaneswar. The district is bounded in the north by the Singbhum district of Jharkhand, in the south by Jajpur district, in the west by Sundergarh and Angul districts, in the east by Mayurbhanj and Balasore districts of Odisha. The study also comes under the divisional forest office (DFO) Kendujhar and the forest range of Bayapandadhar (Anjar) is six km. away from Kendujhargarh. In the west of Kenduajhargarh at a distance of 13 kms and 29 kms remain two forest beats namely Suakati and Gonasika form the area under the study. The villages taken for the sample village under the study are from Gonasika Gram panchayat namely; Guptagana, Tangarpada and Raidhia. Topographically the district can be broadly classified into three categories namely.

- (1) plain region of Baitarani river belt
- (2) hilly region of Bhuinyapirh and Juangpirh and
- (3) sub-mountainous region of the western and northern part.

Anandpur sub-division comes under the plain region with an altitude of 45-60 meters above sea

level. The soil type is alluvial with loamy structure. The area is agriculturally very much suitable due to the fertility of soil and availability of water. The hilly region comprises the Bansapal, Harichandanpur and Telkoi areas of the Kendujhar subdivision. Two vulnerable tribes namely the hill Bhuinya (Population -306128*) and the Juang (Population -47095*) inhabit this area. The Bhuinyas are found in Bhuinyapirh, a territory in the northwestern part of the district around Bansapal, and the Juangs in great compactness in the Juangpirh, a territory of the southwestern part of the district. Both have customarily known territorial units locally known as Pirha. These two pirhas are separated from each other by the natural barriers which later indicated by National Highway No. 53 (NH-53), a part of which runs through this hill terrain from Kendujhar to Pallahara.*(Source Census of India, 2011).

RESULT AND DISCUSSION

I. The Juanga Pirha

The Juanga Pirha, one of the lands of primitive tribes of Odisha now known as particularly vulnerable tribal group (PVTGs), are mostly distributed in 132 villages covered with hills and forests of south and west of Keonjhar district and plains of Pallahara in Dhenkanal district of Odisha. Juangs are mainly concentrated in Banspal, Harichandanpur and Telkoi blocks of Keonjar district and are autochthones of Junang Pirha of Banspal Block. The Juang Pirha is located in the northern part of the district, it lies within 21°1' North and 22°10' North latitudes and 85°11' East and 86°22' East longitudes. The climate of the area is sub-tropical monsoon type with a hot summer from March to May, biting cold wind lashing from December to February and rains falling from June to September. The hilly, forested rocky terrain and uneven topography are situated at an altitude of 847 ft above sea level.

The Juang dominated areas of Keonjhar are divided into six pirhas, viz. Jharkhand, Satkhand, Hunda, Charigada and Kethua, stretched from north to south and separated from Rebonapirha by river Samuko. The Jharkand Pirha is socio-culturally superior to other Pirhas and claims the originality and geographical affinity to Gonasika. On the basis of their inhabitation, the Juangs have been divided into two broad categories as 'thaniya' dwellers in the original homeland centring Gonasika, and the 'Chageedias' who have fled from Gonasika and reside in other pirhas. The Juangs have their own dialect as 'Dravidian' (Dalton:1872)



Fig. 1: Forest land of Gonasika village, the Study Area

which is closer to Mundari linguistic group (Das *et al.*: 1949).⁴ The primitiveness of the community could be easily noticed as they used leaves as their attire in the distant past, thatched their small huts with leaves, and used various forest based products for their livelihood. (Samuells: 1856; Dalton: 1872; Hunter: 1877; Riseley: 1891; Bose: 1929).² The term Juanga in tribal dialect means 'man' used to identify the community as 'pathua', i.e. the wearer of leaf dresses (Elwin: 1948, Rath and Giri: 1998).^{5,9}

The principal subsistence activity of these hilly forest dwellers is hunting and minor forest produce collection and Sweden cultivation, which is locally known as Kaman, Taila and Ekan. This fascinating tribe is generally inhospitable to strangers. They generated a lot of interest among Anthropologists and others for well over a century now. Many significant features of this tribe have been delineated and highlighted by previous works of anthropologists like Samuells (1856), Dalton (1872), Hunter (1872), Bose (1928), Elwin (1948), Mohanty (1992), Giri (2017).^{11-13,17,16}

II

The tribal people have their own perception in categorizing the natural environment on the basis of different dimensions. All parts of their natural environment, like hill, stream, forest, vegetation and soil type etc. are very well observed by the Juang. During the course of investigation distinct features in relation to naming environmental objects were found which are discussed here. Some natural objects are classified vividly as their more associated with life and livelihood and reflected their indigenous knowledge. Latop (soil) and Jal (Forest) have been categorised in higher numbers than other natural objects.

Talur (Hill)

According to the Juang Talur is broadly divided

into three different zones. The upper most part of the Talur called Andata. The Andata may be conical or it may be flat. The hill with conical top is called Tukulung and the one with flat top is called sama. The middle portion of the hill covering its major part is called Etata. The lower portion or the foothill is called Tulita. The settlement is usually situated in the Tulita of a hill.

The different parts of a hill starting from foothill to hilltop exhibit distinct patterns of vegetation succession. The Tulita is covered with small trees, bushes, or herbs. In this zone the population of trees is very thin. The Etata exhibits mixed sal (*Shorea robusta*) forest, with a wide range of species in composition. The suitable localities, small patches of semi evergreen forests are also observed. The climax of plant succession is observed in Andata of the hills, which comprises only one or two species.

Types of Hill

1. Based on Size

The hills are classified into three types on the basis of size. The hills covering large areas are called Mata Uli (Mata=Big, Uli=Hill). The hills, which cover a small area, are called Entei Uli (Entei=Small, Uli=Hill). The smaller isolated Hills or hillocks are known as KereiUli (Kerei=Small patch; Uli=Hill).

2. Based on Height

The tall hills with higher elevation are called Jaling Uli (Jaling=High; Uli=Hill). Most of the hills in Gonasika and adjoining area are of this category. The hills with lower elevations are called Entei Uli (Entei=Small; Uli=Hill).

3. Based on Vegetation

Based on vegetation a hill is categorised as follows:

JalUli (Jal= Forest; Uli= Hill) i, e. the hill with



Fig. 2: Forest hill of Guptaganga village, the study Area

vegetation and Tangara Uli (Tangara=barren, Uli=Hill), i.e. a hill without any vegetation. When a part of the hill is devoid of vegetation, that part is called Pada Uli (Pada=Open; Uli=Hill). Pada Uli usually represents the degraded portion of the forest. A hill with rocks and stones is called as Tunguru Uli. Sunduria Uli near Talabaruda (a hamlet of Guptaganga) is a rocky hill, covered with red coloured stones, is an example of TunguruUli. A large chunk of rock formation is called Chatur. Rusichaturi near Gupta ganga village is a huge rock with sporadic vegetation in the rock crevices is an example of Chaturi. A hill covered with soil is called LakaUli (Laka=Soil; Uli=Hill). TumukiaUli, a hill near Guptaganga village in the Gonasika area belongs to this category.

Valley

The valley, bottomland between two hills, exhibits three different forms. According to Juang these three different forms are Dadha, Chanda and Samlaka. When two hills are situated near each other keeping a small extended plain is called as Dadha. And when two hills meet each other at their base leaving little space at the meeting point, this type of valley is called Chanda. Normally, hills with steep slopes and in close proximity to each other forms such a narrow pass or gorge. At places the gorge has dense forests, which may some times become semi evergreen.

Samlaka may be called a valley in true sense. This is an extended plain land between distantly positioned hills (sam=Plain; Laka=Land).

Latap (SOIL)

Latap (Soil): The Latap is categorised by the Juang on the basis of its use. The soil suitable for the agriculture is called Chasa Latap whereas the soil used in the construction of house or decorating is called InjaLatap. The soil is also categorised on the basis of texture and colour of the soil, as follows.

Rigidi Latap: This is a red coloured soil consisting of small granules of stone. It is lateritic in nature. This soil is suitable for cultivation of Niger. It is also used for making walls of the huts. The land with this type of soil is called Rigidilaka. (Rigidi=red granular soil; Laka=Land).

Alan Latap: It is red and loamy soil. It is considered the best soil from the agricultural point of view as it is rich in organic nutrients and has good water holding capacity.

Putalata Latap: This soil is found in swamps, marshes

and near stream banks. This soil is clayey in nature and suitable for paddy cultivation.

Bali Latap: It is sandy soil. In the hill slopes this type of soil is rarely found. In Dharmaduar (a hill adjacent to Guptaganga village) this type of soil is observed. It is also suitable for cultivation.

Maisali Latap: This type of soil is found in the Bila land (cultivable land). It is sandy loamy in texture and suitable for paddy cultivation.

Sunduru Latap: This is a type of red soil with fine granules usually used for giving a colour wash on the mud walls.

Andra Latap: It is lime like white coloured soil, usually used for white washing the walls, especially the Majang (youth dormitory).

Kelia Latap: The dark coloured soil. It is also used for the colour wash on the wall surface.

Anugale Latap: It is brownish white soil, which is used as lime for white washing the wall. According to the condition of soil, the dry and the moisture soil is called Kasarlatap and Ada Latap respectively.

Forest:

The forest is the important aspect in the ethno-ecological study. The tribe is inextricably related to the forest and therefore has in mind distinct categorization of forests.

Forests are classified based on the composition of Tree species.

Bahut Jalayante: This term denotes a very dense forest. In this forest tree species are abundant and compact in distribution.

Akata Jal: It is also a dense forest. But the tree species are less abundant. On the basis of location of vegetation in the hill, the Akata is of three types such as.

- I. *Samajal Akata* - Dense forest found on the top of the hill.
- II. *Adrani Akata* - Dense forest on the slope of the hills.
- III. *Pachiri Akata* - Dense forest on the rock covered hills.

Qui Qui Jal: This is equivalent to open forest. In this type of forest tree species are sporadically or thinly present.

Kunchula: It is referred to scrub jungle. The tree species are lacking in this type of forest. The forest is represented by small shrubby elements.

Laka Udayate: It denotes degraded forest. The

forest is covered with thorny herbs or grasses.

Forest classified based on its position on the hill.

The forest at the top of the hill is called Same Jal. In this forest, the plant community shows climax succession with only one or two species.

The forest on the slope of the hill is called AdraniJal. It is usually a mixed deciduous type of forest. The forest in the gorge of hills is called Ghagijal. This type of forest is very dense and the plants in it exhibit very luxuriant growth. At places, the vegetation comes under the semi-evergreen category. Chaturi Akta forest is found on rocky hillocks.

Classification of forest based on its size:

On the basis of size, the forest is categorised by the Juang into three category (i) KubaJal or Mata Bana: It is a large stretch of forest cover. (Kuba=covering large area; Jal=Forest), (ii) NekteikJal is a moderate size forest cover. (iii) KereiJal: Very small patch of forest. A small forest area, around the place demarcated as sacred grove is called Patal.

The patch of forest demarcated as sacred grove is called GainsariJal. Actually, it is the core area of Patal and the line of demarcation between these two is obscure.

Naming of forest based on religious belief:

Kailang Kut: This type of forest cover serves abode of Gods, Goddesses, spirits, ghosts etc. It is usually found in Ghagijal (forest in the gorge).

Tani Pirha: The forest patch is demarcated as the abode of a particular deity, i.e. Baitaranipirh or abode of Baitarani Tani.

Rankunidaba: (Rankuni means evil spirit). This is the dwelling place of Rankuni, which forms a pocket in the Ghagijal.

Misani Ala: The forest pocket being the imaginary abode of Misani (evil spirit generally believed to be living in the burial ground) is called Misani Ala.

Diabana: It is the forest patch devoid of any spirits, ghosts etc.; one can pass through the Jungle fearlessly.

III

Worldview Hills, Forests, Streams, and Plants of the area:

Abala-Tunguru (Mythic): There are two views in vogue regarding Abala-Tunguru forest. A wolf once took a goat away. The villagers of Guptaganga asked an approaching old man as to where the wolf had taken the goat. The old man replied to

the Abala-Tunguru' (Abala = to that direction; Tunguru=Hill). This hill lies in the northwest direction of village Guptaganga.

The second view is that once a woman named Abala, stole some Pitalu (*Dioscorea wallichii*) from the stream where it was kept by the villagers and ran away to hide her in a Tunguru (hill) and since then the place is called as Abala Tunguru.

Akilung (Physical Feature of the Place): It is a place both sides of which are flanked by huge rocks and no voice is audible beyond these rocks. There is also a stream whose water gets stagnated in the place. This is a place where one would get confused as how to find out the way and hence it is known as Akilung (Place of confusion).

Anadain (Historic Event): This place is part of Tumkia hill, where a group of people of the pano (Scheduled caste, Ana in Juang language) used to beat drum to mark the festive occasion of goddess Durga, in the Brahmeswar temple.

Atigolaka (After Animal): In olden days, elephants were observed frequently at this place, hence it is known as place of elephant, ati (elephants) golaka (place).

Badalata (Folklore): This forest is situated in the southeast direction of village Upara Raidiha. In the remote past a tiger had killed an elderly woman of the village whose name was lata. After her name this portion of the forest is called as Badalatapahad as she was killed by a large tiger (Badaluther).

Baitarani Munda (After God and Goddess): This is the origin point of river Baitarani. The local people have given the name Baitarani Munda to this hill, and the part of the jungle in and around it is called as Baitarani pirh i.e. abode of Baitarani.

Batualatanga (After Plant sp) Many Bombaxceiba plants (Batuala) meaning cotton once existed here in this hill, and hence named such.

Betajharana (After Vegetation): It is place on the bank of a jharana (stream). Here a lot of cane shrubs (*calamus rotang*) were once growing and hence named as such.

Chhelia Dumbak (Mythic): The herdsman (Chhelia) used to make a pit (dumbak) here and used to drink water from the pit.

Dabang Adakala (Mythic): It's meaning is twin mango tree. The story goes that a nephew and his uncle had together gone to this place and had disappeared. In their place, two mango trees came up. The Juangs therefore call the place as Dabang Adakala.

Darughara (Historic Event): (Daru-wood; ghara = place) During the feudal period the soldiers used to periodically visit Juang villages and trouble them by taking whatever they liked free of cost. To save themselves from this harassment the Juangs of Guptaganga village used to hide in a place where they even concealed fire so the army would come to know about the existence of the settlement. Hence it is named as such.

Dharamdwara: (Historic Event) During the feudal rule, the king used to loot Juang property and the Juangs simply watched their property being looted from a place where, they feel, Dharam Deota (the all powerful God of truth and virtue), would be watching all this. That place where the Juangs used to watch, is named as Dharamdwara.

Duaria (Historic Event): Since a Sevaka (functionary of Duari) of the local Brahmeswar temple cleared and cultivated a plot of land at this place, it was accordingly named by the older Juang generation and the name continues.

Gandhena Tanga (After Vegetation): Many Gandhena trees (*Premna Latifolia*) once existed in this hill. Hence, it is known so.

Ghodalanji (Mythic): On the day of Nuakhai Parba the Juangs made dance wearing mask in the disguise of Horse, Elephant, etc. Once on this day a dancer in the shape of horse ran away to the forest. From a distance, the villagers could not visualise the Lanji (tail) of the horse and not the body. The place from where the person disappeared is named as the Ghodalanji.

Jenakbhandai (After Vegetation): A homogenous patch of *Thysanolaena maxima* (Jenak means broom) the inflorescence of the plant is used for making brooms. So, on the basis of this plant this place is called Jenak bhandai.

Jhinkpani Pahada (Physical feature of the Place): This pahada (hill) has a stream, water from which flows very gently (Jhir..Jhir....Or Jhink...) and hence the name Jhinkpanipahada.

Kachua (Physical feature of the Place): This place remains always swampy (kachua) because of stagnant water, which also helps the fallen leaves to decompose.

Kalia Tunguru (Physical feature of the Place): This hill is situated between Tangarapada and Gonasika village and is covered with black stones. So, the same is called as (Kalia=Black; Tunguru=stone) Kaliatunguru.

Kanasdiha (Historical Event): A community settled at this place and started making bell metal for their

living. Since then, the place is known as Kanasadiha (Place of bell-metal).

Kapurpirh (After God and Goddess): In the south of the village Upara Raidiha, this hill is situated. It is named after the "kapur" who is believed to reside in this hill.

Karnadiha (After Vegetation): Karana or Kia plants (*Pandanus sp.*) are plenty at this place (Diha). Also the Juang of Guptaganga had their former settlement here.

Katangadiha (After Vegetation): The Guptaganga people were formerly staying at a place where there were many thorny bamboo groves and hence the place has got its name as Katangadiha.

Kelakundui (After Plant sp): The place consisted of many Kundui trees (*Ficus semicordata*) and hence, it is named such.

Kudilundae (After plant sp): An old mango tree present in a forest bears mango that smells like banana. Banana is called kudil. According to the name of this mango tree, the patch of the area is called Kudilundae.

Kumulidiha (Mythic): From the ancient time the elderly Juangs used to sleep at this place by putting their face downwards (kumuli) and therefore, the place is known as Kumulidiha.

Kuthighar (Historic Event): Literally it means a granary where paddy is stored. During the feudal days looting of paddy was taking place in a big way. In order to protect their grains, the Juangs of Guptaganga village dug out pits inside which straws used to be spread and over it grains used to be poured in. An upper layer of straw then used to be spread over the grains and then the pit used to be sealed with earth. As a result, nobody knew that grains were stored there and accordingly it was named such.

Maa-Sumuli (After God and Goddess): Maa Sumulia, a powerful goddess is believed to reside in that hill and therefore, it has such name.

Madulighera (After Animal): At this place, there were many bats (maduli) in the olden days; even today there are a number of bats seen here and hence, it's Madulighera.

Mainsi Banai (Mythic): The herdsman along with his herd of Buffalo (mainsi) had vanished (Banai) into the earth at this place and hence, the name was called such.

Phatatangara (Physical Feature): The rock of this hill (tangara) has cracked (phata) into two halves resulting in a big fissure.

Phuladih (Past settlements/Historical): It is a former Juang settlement, where the people of three villages namely Jantari, Upara Raidiha and Guptaganga inhabited together as a single group. After they started living in separate settlements as separate brother groups the original settlement was deserted, but its name remained as Phuladiha.

Pirh (Historic): The Juangs of Guptaganga call this place as pirh and they refer this particular hill as such, meaning belonging to them.

Pudadiha/Tintunidiha (Past settlement/Historical): This is another former settlement of Guptaganga village. That place (diha) was full of tamarind trees (Tintuni) and was named as such. But later, the place was destroyed (Pudi) by fire and hence was called Pudadiha.

Rushi Chaturu; Rushi=Saint; Chaturi=large block of stone (Mythic). In olden days, the hermits (Rushi) used to stay at this chaturi (hillock), while going round the Gonasikaregion they used to take Ganjei (tobacco) there. The evidence of grinding Ganjei on a piece of stone is found there even today in the form of smooth and polished surface.

Sebadak-Tanga (Mythic and Folklore): The literal translation of this term is ditch or hideout. The story goes like this: The king of Bonai had a deer, which his servant, a Juang, had stolen and run away. The king sent his soldiers to nab him. The Juang ran towards a field where the Juangs of Baruda (now Guptaganga) were busy in ploughing a piece of land. He requested them to save him from the king's army. The Baruda people dug a pit in the field and hid him there. The army came to that place, but could not trace out what they were looking for. After the army was gone, the man was brought out from the pit and was allowed to settle in their village. Since the man belonged to Tembrem bok (clan) and the Baruda Juangs belonged to Barum bok (clan), the latter thought of giving a daughter of Baruda to the Tembrem bok Juang, in marriage. After the marriage, the daughter asked her father for a plot of land to start their life. Her father gave the land where the man was kept hidden and since that day the hill is known as Sabadak-Tanga, (the hide out). This hill is situated half a k.m. away on the way to Gonasika.

SabadakJal (Feature): A small perennial water hole is present under a mango tree. The water in the hole is very filthy due to accumulation and decomposition of leaves and plant parts. This rotten water of the hole is called Sabadak. The jungle where this water hole is present is called SabadakJal.

Senabhandai (Historical Event): In a particular year, a bumper crop of Sennai (Cajanuscajan) was harvested from the plot, which prompted the Juangs to name it Senabhandai (granary of Arhar).

Saebatage (Symbol/Historical Events): Foreigners (Seaba) have visited this place and have kept piled up stones as a symbol of their visit.

SinduriaUli (Physical feature of the Place): This hill is also situated towards the east of Guptaganga and near Talabrauda, a hamlet of the former. The stone in this mountain is red mostly due to presence of iron, and the name is derived from it.

TamakiaUli (Mythic): Tamak is a type of musical instrument used by Gods and Goddesses. On the top of a hill (situated in the east of the village Guptaganga) they dance to the tune of this musical instrument so, the name is given accordingly.

Another view goes like this. Once, some villagers had gone into the jungle. On the way to the village they lost the path as it became dark. The particular hill became tall and came into their sight, which helped them to reach the village. This (Tumukia) is then called as Tumukiapahad.

Utkulily and (Mythic): There were many Utkuli (Nyctanthesartbortristis) plants at this place. If any one touches the Utkuli fruit, it vanishes and therefore, the place name is Utkulily and (magical place).

Naming of Streams

Dhal Kata (Mythic): Recent a robust Micheliachampaca plant was collected from the bank of the stream. The trunk of the plant was used for making a dhal (a type of drum). It is now kept in the community hall of Guptaganga village. Thus, the stream is given the name Dhal Kata (Dhal=drum, kata=fell down).

Barinitada (On the Feature): A spring started flowing in all directions (Bareni) and water got filled up in ditches (Tada). Hence, the name Barinitada is given to the ditches.

Kamdarnala (Mythic): Once a Juang was carrying honey (Kamdar), while passing through this place. The honey got spilled over the ground and flew like a stream (nala) and hence it was named as Kamdarnala.

Nomenclature of plants

The study on nomenclature of plants among the tribe reflects their intimacy with the environment. The local name represents the people's concept of

the living things. It reveals the salient morphological and ecological adaptations of plants. The system of naming is natural and based upon close observation of plants. According to the Juang the plant is called as sumusing. On the basis of the habit the plants are classified in 5 categories.

1. Matt Sumusing = large trees
2. Kabul sumusing = Kabul = Moderate size; sumusing = plant
3. Ana sumusing = Ana = Small, sumusing = Plant i.e. shrubs and large herbs.
4. Ghas = Prostrate herbs and grasses.
5. Lama = Creeper, climber and twitter

The tribe gives names to different types of plants after the animal and animal parts, morphological features based on folklore, indicating habitat, names after an other plants, property of plants, host plants, social significance and according to curative properties. There is a kilakluthursum using (*Miliusavelutina*); the leaf of the plant has resemblance with the ear of tiger. (Kilak-tiger, luthur-ear).

Dukursag (Centellaasiatica): Dukur means frog and sag means leafy vegetable. The leaf of the plant is of the shape of an open mouth of a frog.

Bhalumundi (a Variety of Oryza Sativa): The local Odia term for the bear is Bhalu. The shape of the paddy grain is compared with the head of a bear.

Manda Rasing (Melastoma Malabathricum): Manda means round and large, Rasing means flower. This plant is round and its size is moderate. Hence it is given the name Mandarasing.

Tin pakhiajodak (Acanthospermum hispidum): Tin - Three; pakhi - side, jodok -thron. The fruit of the plant bears three spire type.

Kesen (Anogeissus latifolia): Kesan - White: The trunk of the tree looks white after blazing the flakes of bark. This salient feature of the plant can be observed from a distance.

Kandaebadi (Amorphopalus sp.): Kanda - Old woman, badi = stick. The stem of the plant is compared with the walking stick of an old women.

Baningbak Jodak (Lantana Camara): Baningbak, the clan of Bali village, Jodak means thorn. During the investigation, it is revealed that the plants are not indigenous flora. These are naturalised about 30 years back in the locality. Incidentally, these are the plants, which indicate degraded forests. So, the spreading of these species are at the advent of degradation of forest. The Juang of Guptaganga, Gonasika, and other villagers said Baningbak

Jodak has been brought to the area by villagers of Bali, which is far away from truth. Hence, the plant (*lantana camara*) is given the name Baningbak jodak.

Tartari (Justiciagendarusa): The plants occur in streambed with the water current. It trembles continuously. Hence, it is given the name Tartari meaning trembling.

Madang (Dendrophthoesp): Madang means plant growing with other plants. The orchids are also called madang.

Kalathjak (Atyiosiascarabioides): The fruit of the plant resembles the fruit of the kalath plant (*Macrotyloma uniflorum*) and so also the habit of the plant, i.e. climber.

Banakallhi (Tephrosiapurpurea): Bana means wild occurring in the jungle. Kalthi means kalathi (*macrotyloma uniflorum*). The legumes of the plant have similarity with the fruit of *macrotyloma* SP.

Bisajadak (Durantaplumieri): Bisa means poison, jodak means thorn. When the thorn of the plant is pierced into the body of human being, it causes much pain. Hence, the plant is given the name after this feature.

Rasing (Wendlandialeyni): Kandaria is a person who acts as a mediator in marriage proposals. When he starts his search of a bride he pats the flower on his ear. The flower is considered to be auspicious for such purposes.

Galtang (Leonotisnepetaefolia Br.): According to Juangs in Galtang disease there is swelling and pain in the cheek of children. This disease is equivalent to mumps as detected by the doctor. The inflorescence of the plant is auxiliary, large and round, which is compared to swelling of cheek. Thus, the name Galling is given to the plant.

CONCLUSION

From the above discussion, it is clear that the people classify and name of the forest, hill, stream, valley, vegetation and soil on the basis of their use value and community shared terms as per the indigenous ethno-scientific knowledge. While categorizing the natural resources which are intimately connected to the Juangs' livelihood activities, the Juangs have attached meaning to the effective management of their environment. Not ignoring the the physical features and the use, composition, position, and size of the objects and belief system of their culture, the Juangs took care in naming the objects of nature. It is ascertained

that ritual dies hard and any element of a natural object that expresses vulnerability of their presence in their cultural assume ritual importance even around the intangible heritage. Thus, the change in the contents did not have any impact on the classification and nomenclature of the natural objects in their habitat. The analysis of ethno-classification of natural objects and the naming of them in Juang thought and culture has been rooted in traditions and customary practices. However, a few have got link to the faintly remembered cultural history and legends. The native classification and naming the objects are culturally shared across generations. Thus, the classification of natural objects by the state administration has over shadowed the ethno-taxonomy for reasons of 'conservation' and commercial use. This has been evidenced from the villages that are having market links and composed of mixed ethnic groups. This also implies that the villages closer to nature having rich biodiversity and by and large monoethnic in their composition and least influenced by greater society retain the ethno-classification less diluted. The cultural reconstruction with regard to the classification and naming of the natural objects of the community would be more reliable if villages with less external cultural contamination were considered in the study.

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