# Ethnobotanical studies of magico-religious plants with reference to Khampti tribe

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Abstract: Ethnobotanical studies of magico-religious plants used by Khampti tribe were carried out in 6 villages of Lakhimpur district of Assam. The information was gathered through questionnaires and discussion. A total of 48 plant species belonging to 30 families and 44 genera were observed to use in different magico-religious practices. The documented plants were grouped into three use categories. Maximum of plant species (75%) were used in sacred and religious rites followed by taboos (33.33%) and magical belief (12.5%). On the basis of plant parts used, leaves were the most dominant part with 17 plant species. Among documented plants, Ziziphus jujube was the most culturally significant plant.

Keywords: Khampti, Assam, Magico-religious practices, Cultural important index.

## I. INTRODUCTION

Khampti tribe, one of the schedule tribe of Assam belongs to Tai race and are known as Shaghai. They are immigrants of Upper Burma and are concentrated in Lohit district of Arunachal Pradesh and North Lakhimpur district of Assam [1]. The total population of this tribe is 1,106 which constitutes 0.03% of the total ST population of Assam. About 75.41% of the tribe resides in the rural areas [2]. They follow *Hinayana* Buddhism religion and worship Lord Buddha as a God. They also worship earth as Goddess and spirits of ancestor [1]. The major festivals of Khampti tribe are *Sangken*, *Poi-Pee-Mau*, *Poileng*, etc.

An examination of literature reveals that few studies have been carried out on religious practices and conservation of plants around shrines and pagodas of Khampti tribe [3]. However, the detailed account of ethnobotanical study on plants related to magico-religious practices in this tribe is lacking in Assam. Therefore, the present study is taken up to document the plants used in different magico-religious practices and to determine the culturally significant plants in Khampti tribe

## II. MATERIALS AND METHODS

The present study was conducted from December 2014 to March 2018 in Lakhimpur district of Assam. The geographical co-ordinates of the district are 93°42' and 94°20' E longitude and 27°53' and 27°53' N latitude. Six villages namely Borkhamptigaon, Borpothar no.1, Deotula, Gosaibarikhamptigaon, Sribhuyangaon and Tipling were selected for the present study. Prior Informed Consent (PIC) was taken from the informants. The ethnobotanical informations were gathered through a questionnaire survey [4]. The collection of plants samples, preparation of herbarium and identification of plants were done by using standard methodology and literature [5,6]. A total of 51 informants (31 males and 20 females) were interviewed. The culturally significant plants were determined by using an ethnobotanical index i.e., Cultural important index [7].

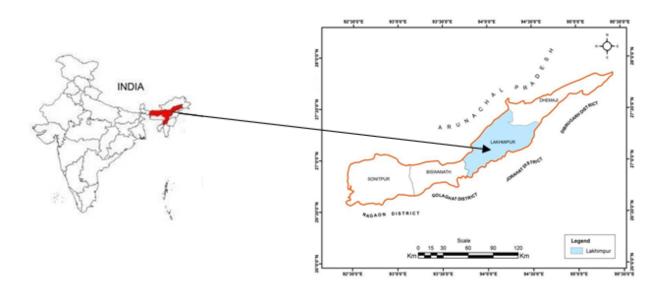


Fig 1: Map showing study sites

## III. RESULTS

A total of 48 plant species belonging to 30 families and 44 genera were collected and documented for the present study (Table 1, Fig.2). The most dominant family was Poaceae (10 species) followed by Arecaceae (4), Rutaceae (3), Apocynaceae (2), Leguminosae (2), etc. The tree with 22 species was dominant category and followed by herbs, grasses, shrubs and climbers (Fig. 3). The whole plant was dominant category among all plant parts in magico-religious practices followed by leaf, stem, fruit, wood etc. (Fig. 4).



Fig.2. Magico-religious practices of Khampti tribe (A-C) and plants used in magico-religious practices (D-F):
(A) Maaikom sumphai festival, (B) Buddha purnima, (C) Culm of Bambusa tulda used to support long branches of Ficus religiosa as a ritual, (D) Ficus religiosa (Sacred tree), (E) Arundo donax, (F) Phrynium pubinerve.

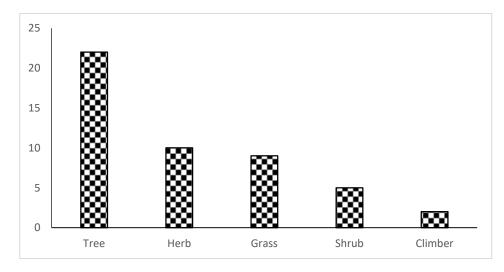


Fig 3: Habit of magico-religious plants

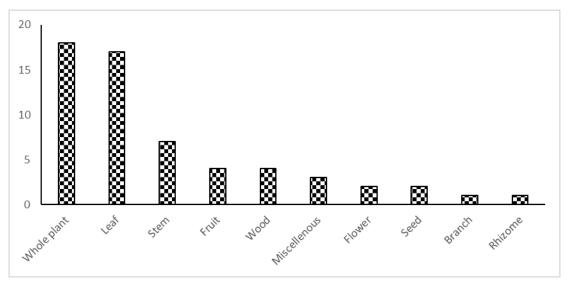


Fig 4: Different plant parts used in magico-religious practices.

Table 1: The plant used in the magico-religious practices of Khampti tribe

Sl.no.	Botanical name	Family	Common and vernacular	Habit	Part	Uses
			name		used	
1.	Acacia farnesiana (L.)	Leguminosae	Sweet acacia (E), Korom	Shrub	WP	The tree is raised in the front yard to prevent the entry of evil spirit.
	Willd.		neng (K)			
2.	Acorus calamus	Acoraceae	Sweet flag (E), Bach (A)	Herb	R	The rhizomes are used to prepare garland for curing common cold and also for
	Linnaeus					protection against evil spirit especially practised in children.
3.	Aegle marmelos (Linnae	Rutaceae	Bael (E), Mak lak (K)	Tree	L	The leaves are offered to Lord Buddha during a religious rite in Sanken festival.
	us) Correa					
4.	Allium sativum	Amaryllidacea	Garlic (E), Puro-ching (K)	Herb	BL	The bulbs are used to prepare garland for curing common cold and also for
	Linnaeus	e				protection against evil spirit especially practised in children.
5.	Alpinia nigra (Gaertn.)	Zingiberaceae	Bamboo-leaved Galangal	Herb	L	The leaves are used for wrapping cooked rice to offer in the monastery during
	Burtt	_	(E), Munhayu (K)			Sanken festival.
6.	Alstonia scholaris (L.)	Apocynaceae	Devil tree (E), Maitang	Tree	W	The wood is used to prepare coffin during the final rite.
	R. Br.		(K)			
7.	Areca catechu Linnaeus	Arecaceae	Betelnut palm/Arecanut	Tree	F	The fruits are offered during a ritual called Hak Som na, which is related to first
			(E), Magmuh(K)			transplantation of paddy.
8.	Artocarpus	Moraceae	Jackfruit (E), Tun-malang	Tree	WP,	The dye from the wood is used for colouring the clothes of Monk during a ritual
	heterophyllus Lam.		(K)		W	of Shiva Kathing dan.
						The tree is not planted in the front yard of the house and is consider as taboo.
9.	Arundo donax L.	Poaceae	Giant reed (E), Mai- oue	Grass	S	The stem is used for supporting the long horizontal branches of Ficus religiosa,
			(K)			a sacred tree, in a ritual called Kaam mai.
10	Bambusa balcooa	Poaceae	Plains bamboo (E),	Grass	S	The culm is used for the preparation of ceremonial shed (Chang fra) used during
	Roxb.		Maichang bhuluka (K)			Lufra ceremony in which idols of Lord Buddhas are offered to the monastery.

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ambusa pallida Munro ambusa tulda Roxb.  ombax ceiba Linnaeus rassica juncea cinnaeus) Czern.  alamus tenuis Roxb.  apsicum annuum innaeus arica papaya L. fitrus limon (L.) ssbeck itrus megaloxycarpa ush. olocas nucifera innaeus) Schott ynodon dactylon cinnaeus) Pers. illenia indica innaeus laeocarpus oribundus Blume. rythrina stricta Roxb.	Poaceae Poaceae Malvaceae Brassicaceae Arecaceae Solanaceae Caricaceae Rutaceae Araceae Araceae Dilleniaceae Elaeocarpaceae	Maichang bijuli (K) Bengal bamboo (E), Maichang-ching (K) Silk-cotton tree (E), Tunlue (K) Indian mustard (E), Horiyo (A), Bareilley cane (E), Wai(K) Cayenne (E), Jolikya (A) Papaya (E), Aomita (A) Indian wild orange (E), Tun-ma-lue (K) Sour pummel (E), Mak lung (K) Coconut (E), Mo-un (K) Taro (E), Moan (K) Bermuda grass/ Wire grass (E), Yeame-chai (K) Elephant apple (E), Tun	Grass Grass Tree Herb Climber Herb Tree Shrub Tree Herb Herb Herb	S W, WP SD WP F F WP UP L	The culm is used for the preparation of ceremonial shed (Chang fra) used during a ceremony called Lufra.  The clum is used for supporting the long horizontal branches of Ficus religiosa, a sacred tree, in a ritual called Kaam mai. It is used as a substitute of Arundo donax.  The wood is used to prepare coffin during the funeral rite. The tree is not planted in the front yard of the house.  The oil obtained from seeds is used for lightning lamp during major festivals like Buddha Jayanti and lamps are lighted, at the base of the tree, around monastery and roads of the village.  It is considered inauspicious and, is not grown in front yard of house.  The dried fruits are used as a remedy against the evil eye.  The fruits are used for lighting of the lamp during Kati Bihu.  It is not grown in the front yard of a house and is considered inauspicious.  It is not planted in the front yard of a house and is considered inauspicious.
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olocasia esculenta .innaeus) Schott ynodon dactylon .innaeus) Pers. pillenia indica maeus laeocarpus oribundus Blume.	Poaceae Dilleniaceae	Bermuda grass/Wire grass (E), Yeame-chai (K) Elephant apple (E), Tun		WP	1
imnaeus) Pers.  lillenia indica imnaeus  laeocarpus oribundus Blume.	Dilleniaceae	grass (E), Yeame-chai (K) Elephant apple (E), Tun	Herb		The whole plant is offered during a ritual called <i>Hak Som na</i> , generally practised during the first transplantation of paddy.
innaeus laeocarpus oribundus Blume.			т.	L	The leaves are offered to Lord Buddha during a religious rite in the Sanken festival.
oribundus Blume.	Lincocarpacene	machang (K) Indian olive (E), Jalpai	Tree Tree	F, WP WP	The fruits are used for lighting of the lamp during Kati Bihu.  It is not grown in the front yard of a house and is considered inauspicious.  It is not grown in the front yard of a house and is considered inauspicious.
	Leguminosae	(A) Indian coral tree (E), Tun-	Tree	WP	There is a prohibition of planting in the front yard of the house.
icus religiosa L.	Moraceae	mai-tong (K) Sacred fig (E), Ahot gash	Tree	WP	This tree is considered a sacred tree.
arcinia pedunculata	Clusiaceae	(A) Monkey fruit (E), Maa-	Tree	WP	It is not grown in the front yard of a house and is considered inauspicious.
oxb. Ex BuchHam	Mahmara	haoo (K)	Charl	EC	The days are used for liability of large in a state of the state of th
ossypum herbaceum innaeus			Shrub	FS	The flosses are used for lighting of lamp in a religious rites. The thread is used to weave cloth during Shiva Kathing dan. During the marriage ceremony, the thread is used to tie the leaves of Phragmites karka.
Leteropogon contortus L.) P.Beauv. ex Roem. Schult.	Poaceae	Black speargrass (E), Kha (K)	Grass	L	The leaves are used to prepare the ceremonial shed (Chang fra) during Lufra.
agerstroemia speciosa Linnaeus) Pers.	Lythraceae	Pride of India (E), Ajar (A)	Tree	WP	The tree is not planted in the front yard of a house.
ivistona jenkinsiana iriff.	Arecaceae	Himalayan fan palm (E), Tong ku (K)	Tree	L	The leaves are used for making the ceremonial shed (Chang fra) used during Lufra.
langifera indica	Anacardiaceae	Mango (E), Tun mong (K)	Tree	L,	The leaves are used for preparing holy water called Tameta and is sprinkled
innaeus				WP	around village boundary to protect against natural calamity. It is not planted at the front yard of a house and is not considered as auspicious.
Iesua ferrea L.		Tun-kamko (K)		L, WP	The leaves are offered to Lord Buddha during a religious rite in the Sanken festival. The tree is not planted in the front yard of the house and even the tree shadow should not fall on the house because as per their belief system.
dimusops elengi L.	•	(K)			The leaves are offered to Lord Buddha during a religious rite in Santen festival.
fusa balbisiana Colla		athia (K)			The leaves are used as offering plate during a ritual called Hak khow or Hak Som 192. The stem is used for preparing ceremonial structure (Komuchai) in the four corners of village boundary during Poi sanken. This ritual is generally done for the protection of village against natural calamity.
Telumbo nucifera Faertn.	Nelumbonacea e	Lotus (E), Mo-uu/ Mok Mou (K)	Herb	FL, S	The flowers are offered to Lord Buddha during major festivals like <i>Buddha jayami</i> . The fibre obtained from the stem mixed with the thread is used for weaving clothes during ceremony like <i>Shiva Kathing dan</i> , which are offered to monks.
<i>ryza sativa</i> Linnaeus	Poaceae	Asian rice, Red rice (E), Khow-Nou (K)	Grass	SD, ST	The puffed rice are offered during religious rites in all festivals. A rope from straw is made and tied on tree base, granary, and cowshed unit especially to protect its property against natural calamities and to ensure better productivity, which is generally performed one day prior to the celebration of Sitang mapi.
<i>thragmites karka</i> Retz.) Trin.ex Steud.	Poaceae	Tall reed (E), Mai kan lao/ Loa (K)	Grass	L	The leaves are used during marriage ceremony and the leaves are placed on both side of the staircase traditional house (Chang ghar). It is considered as auspicious and also prevents entry of evil spirit.
hrynium pubinerve Bl me	Marantaceae	- Tong ching (K)	Herb	L	The leaves are used for wrapping cooked rice offered to monastery during the Sanken festival.
iper betle Linnaeus	Piperaceae	,,,	Climber	L	The leaves are offered to Goddess Lakshmi in a ritual called Hak khow or Hak Som na.
accharum officinarum		Sugarcane (E), Oie (K)	Grass	L, S	The leaves are used to prepare ceremonial altar during Buddha purnima. The molasses (Gur) obtained from the stem are used to prepare a round shaped sweet (laddo) with puffed rice (Akhol), which are offered and distributed to devotees.
accharum ravennae Linnaeus) L.	Poaceae	Ravenna grass (E), Ikora (A)	Grass	L	The plant is offered to Goddess Lakshmi during a ritual called <i>Hak khow</i> for better agricultural productivity.
antalum album L.	Santalaceae	Indian Sandalwood (E), Namcha (K)	Tree	W	The wood is used during final rites of Monk (Bhiku). The wood is also considered best for carving Buddha statue.
vzygium jambos (L.) Iston abernaemontana divar	•		Tree Shrub	L FL	The leaves are used for offering during religious rites of Sanken festivals.  The flowers are offered to Lord Buddha during puja daily.
ata (Linnaeus) R.Br. k Roem. & Schult.		Mok-ya-khow (K)			
		(K)			It is not grown in the front yard of a house and is considered inauspicious due to its sour fruit.
erminalia chebula etz.					It is not grown in the front yard of a house and is considered inauspicious due to its bitter taste.
z iphus jujuba Mill.	Khamnaceae	Jujube (E), Tun-mok-kho (K)	Tree	L, B, WP	The leaves are offered during religious rites of Sanken festivals. The tender branches of the plant are used to clean the body during Sitang mepi festival as a ritual. The branches of the plant are kept at the wall of house, granary and the main gate to provide protection against the evil spirit. It is not grown in the front yard of a house and is considered inauspicious.
in the state of th	teropogon contortus ) P.Beatv. ex Roem. Schult. gerstroemia speciosa unaeus) Pers. vistona jenkins iana iff. ungifera indica unaeus  usua ferrea L.  unusops elengi L. usa balbis iana Colla lumbo nucifera eertn.  yza sativa Linnaeus  ragmites karka etz.) Trin. ex Steud. rynium pubinerve Bl ue ver betle Linnaeus ccharum officinarum  ccharum ravennae unaeus) L. usua balbis iana Colla  vigum jambos (L.) tston bernaemontana divar ta (Linnaeus) R.Br. Roem. & Schult marindus indica L. ryminalia chebula	maeus  tteropogon contortus ) P. Beauv. ex Roem. Schult. gerstroemia speciosa maeus) Pers. sistona jenkins kana iff. mgifera indica maeus  sua ferrea L.  Calophyllaceae  sua balbis kana Colla  Musaceae  thunbo nucifera tertn.  Poaceae  tragmites karka ett.) Trin. ex Steud.  rynium pubinerve Bl te per betle Linnaeus scharum officinarum Poaceae  cocharum officinarum Poaceae  cocharum fambos (L.) ston bernaemontana divar tta (Linnaeus) R.Br. Roem. & Schult. maerindus indica L. Fabaceae  reminalia chebula tz.  ryniual pambas (L.) fabaceae  Combretaceae  Combretaceae  Combretaceae  Combretaceae	Interopogon contortus   Poaceae   Black speargrass (E), Kha (K)   P.Beauv. ex Roem. Schult.   Schult.   Serstroemia speciosa maeus) Pers.	Black speargrass (E), Kha (Grass (E))   P. Beauv. ex Roem. Schult.	Second content   Seco

A-Assamese, E-English, K-Khampti, B-Branches, BL-Bulb, F-Fruits, FL-Flower, FS-Flosses, L-leaves, ST-Straw, R-Rhizomes, S-Stem, SD-Seeds, W-wood, WP-whole plant.

The result given in Table 2 showed that plants were divided into three categories based on their uses in magico-religious practices. Maximum numbers of plants were used in sacred and religious rites followed by taboos and Magical belief.

Table 2: Use categories and their percentages
ries Number of species % of species

Sl. no.	Use categories	Number of species	% of species
1	Sacred and religious rites (SAR)	36	75%
2	Magical belief (MAG)	6	12.5%
3	Taboos (TAB)	16	33.33%

The result presented in Table 3 shows that *Phrynium pubinerve* and *Ficus religiosa* have the highest CI (0.961 and 0.941) in sacred and religious rites and taboos category. *Ziziphus jujuba* has maximum total and mean CI followed by *Ficus religiosa*, *Mangifera indica*, *Artocarpus heterophyllus*, *Bombax ceiba* and other genera (Fig.5).

Table 3: Total and mean cultural important indices of 15 most important plants

S.No.	Name	SAR	MAG	TAB	Total CI	Mean CI
1.	Ziziphus jujuba	0.882	0.745	0.922	2.549	0.85
2.	Ficus religiosa	0.941	0	0.941	1.882	0.63
3.	Mangifera indica	0.863	0	0.824	1.687	0.56
4.	Artocarpus heterophyllus	0.863	0	0.745	1.608	0.54
5.	Bombax ceiba	0.863	0	0.569	1.432	0.48
6.	Mesua ferrea	0.941	0	0.431	1.372	0.46
7.	Dillenia indica	0.569	0	0.686	1.255	0.42
8.	Phrynium pubinerve	0.961	0	0	0.961	0.32
9.	Cynodon dactylon	0.941	0	0	0.941	0.31
10.	Saccharum officinarum	0.941	0	0	0.941	0.31
11.	Bambusa tulda	0.902	0	0	0.902	0.30
12.	Syzygium jambos	0.902	0	0	0.902	0.30
13.	Citrus indica	0	0	0.902	0.902	0.30
14.	Livistona jenkinsiana	0.882	0	0	0.882	0.29
15.	Nelumbo nucifera	0.882	0	0	0.882	0.29

SAR- Sacred and religious rites; MAG- Magical belief; TAB- Taboos; Total CI-Total cultural important index; Mean CI-Mean cultural important index;

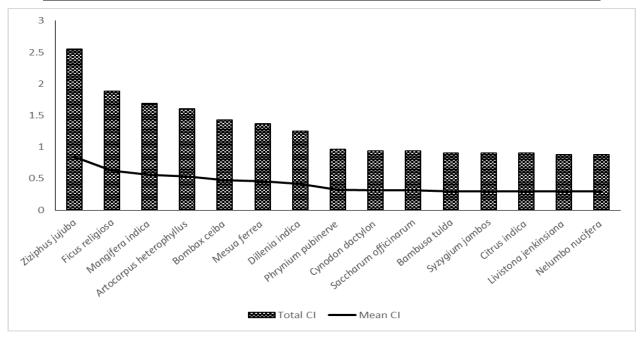


Fig 5:Total and mean cultural important indices of plants used in magico-religious practices.

#### IV. DISCUSSION

The present study documented a total of 48 plant species belonging to 44 genera and 30 families. The number of species in the study is found higher than other studies reported from Tehri Garwal [8], Banswara district of Rajasthan [9], Surguja division of Chhattisgarh [10], Terai region of Gorakhpur [11], West Bengal [12], Indo-gangetic plain [13], Andhra Pradesh [14], Bishnupur district of Manipur [15] Hill-Tiwas tribe of Assam [16], Fatehpur district of Uttar Pradesh [17], Central India [18], Gujarat [19], Hajong tribe of Assam [20], *Dobur uie* of Mising tribe from Assam [21], Darjeeling Himalaya [22] and however it is found lower than other studies reported from Nalbari and Sonitpur district of Assam [23], Bodo tribe from Assam [24], Tripura [25].

Poaceae was dominant family with 10 species, followed by Arecaceae (4), Rutaceae (3), Apocynaceae (2), Leguminosae (2), etc. which is similar to the finding reported from other tribes [23, 25, 26]. The present study reveals that most of members of family Poaceae are used for making ceremonial altar. The tree was the dominant category with 22 species and is similar to the finding reported from Nalbari and Sonitpur district of Assam [23] and Tripura [25].

The people of this tribe light lamps by using fruits of *Carica papaya* and *Dillenia indica* during festivals reflect that they still follow customs and traditions of their ancestors. They perform all religious rites for better production of crops and protection of their community from evil spirits and may be the reason for maximum percentage of plants used in sacred and religious category. Like other tribes of NE India, the growing of big trees with spines, thorns, sour fruit are not preferred in front yard of house. They are of belief that such trees are inauspicious and may bring bad luck to them. The use of these plants namely *Acacia farnesiana* and *Ziziphus jujube* due to presence of thorns, spines or prickles in them and *Allium sativum*, *Acorus calamus* and *Brassica juncea* to drag away evil spirit due to presence of peculiar odour are considered as taboo according to their belief. Similar observations are made in Tripuri tribe also [25] which shows that tribes of NE India share some common knowledge among them.

Ziziphus jujuba has highest CI value (2.549), followed by Ficus religiosa (1.882), Mangifera indica (1.687), Artocarpus heterophyllus (1.608), Bombax ceiba (1.432), etc. The maximum cultural important index of Z. jujuba is due to its utilisation in all three use categories whereas other plants are used in one or two used categories. The present investigation reveals that Z. jujube is the most culturally important plant in Khampti tribe.

## V. CONCLUSIONS

The Khampti tribes use 48 plant species belonging to 30 families in magico-religious practices. Trees are the most dominant with 22 plant species. The documented plants are categorized in three use categories namely sacred and religious rites, magical belief and taboos. *Ziziphus jujuba* is the most culturally important tree with highest CI value. The present investigations show that Khampti tribe has a good knowledge of plants used in magico-religious practices.

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### **REFERENCES**

- [1] Gogoi U (2013) The Khamtis of Assam and their religion with special reference to the Khamtis of Lakhimpur district, Assam, India. *Social Science Researcher*. 2(1): 1-12.
- [2] Census of India (2011) http://www.censusindia.gov.in/2011census/PCA/ST.html. accessed on 26/11/2017.
- [3] Gogoi P, Borthakur SK (1991) Plants in religion-cultural believe of the Tai Khamtis of Assam (India). Khamtis of Assam (India). *Ethnobotany* 3: 89-95.
- [4] Jain SK, Mudgal V (1999) A hand book of Ethnobotany. Bishen Singh Mahendra Pal Singh, Dehradun, India.
- [5] Jain SK, Rao R R (1977) A handbook of field and herbarium methods. Today and Tomorrows Printers and Publishers, New Delhi.
- [6] Kanjilal UN, Das A, Kanjilal PC, De, RN (1934-40) Flora of Assam. Vol. I-IV. Govt. of Assam. Shillong.
- [7] Tardio J, Pardeo-de-Santayana M (2008) Cultural Importance Indices. A comparative analysis based on the useful wild plants of Southern Cantabria (Northern Spain). *Economic Botany*. 62 (1): 24-39.

- [8] Singhal P, Shivanee, Dobhal P (2017) Ethnobotanical studies on the religious plants of Sounla village of district Tehri Garhwal. *International Journal of Advanced Research.* 5(5): 833-839.
- [9] Rana, S, Sharma, DK, Paliwal, PP (2016) Ritual plants used by indigenous and ethnic societies of district Banswara (South Rajasthan), India. *American Journal of Ethnomedicine*. 3(1): 26 34.
- [10] Mahant, MM (2016) Nature conservation in tribals mythological belief s and taboos in Surguja (Ambikapur) division of Chhattisgarh, India. *Remarking*. 2(12): 57-58.
- [11] Mishra, T (2016) Ethnobotanical and therapeutic importance of sacred plants of terai region of Gorakhpur Division. *European Journal of Pharmaceutical and Medical Research*. 3(5): 534-540.
- [12] Roy, S (2016) Ethnobotanical appraisal of Rajbanshi community of Jalpaiguri and Coochbehar districts of West Bengal, India. *Journal of Chemical and Pharmaceutical Research*. 8(4):762-766.
- [13] Pandey D, Pandey, VC (2016) Sacred plants from ancient to modern era: Traditional worshipping towards plants conservation. *Tropical Plant Research*. 3(1): 136-141.
- [14] Swapna B (2015) An ethnobotanical survey of plants used by Yanadi tribe of Kavali, Nellore district, Andhra Pradesh, India. *Journal of Scientific and Innovative Research*. 4(1): 22-26.
- [15] Singh SK, Singh, RK, Sharma HM (2015) Ethnobotanical studies in relation to certain traditional culture of Chothe tribe in Bishnupur district of Manipur, India. *Pleione*. 9(1): 144-159.
- [16] Teron R, Borthakur SK (2014) Ethnobotanical appraisal of the hill-Tiwas of Assam, India. Pleione. 8(1): 109-119.
- [17] Agarwal P (2014) Study of sacred plants used by people in Fathepur district of Uttar Pradesh (India). *Life Sciences Leaflets*. 54 (2014):91-98.
- [18] Sahu PK, Kumari A, Sao S, Singh M, Pandey P (2013) Sacred plants and their ethno-botanical importance in central India: A mini review. *International Journal of Pharmacy & Life Sciences*. 4(8): 2910-2914.
- [19] Shah R, Patel R (2012) Study of traditional worshipping plant of Borsad Taluka (Gujarat) India. *Journal of Research in Science and Technology*. 1(11): 69-73.
- [20] Sharma UK, Pegu S, Hazarika D, Das A (2012) Medico-religious plants used by the Hajong community of Assam, India. *Journal of Ethnopharmacology*. 143(2012): 787-800.
- [21] Sharma UK, Pegu S (2011) Ethnobotany of religious and supernatural believe of Mishing tribes of Assam with special reference to the 'Dobur Uie'. *Journal of Ethnobotany and Ethnomedicine*. 7(16).
- [22] Rai SK, Bhujel RB, Das AP (2007) Ethnobotanical studies in Darjeeling Himalaya in relation to birth, marriage and death. In Das, A.P. and Pandey, A.K. (eds.). Advances in ethnobotany, Bishen Singh Mahendra Pal Singh, Dehradun. PP: 51-59.
- [23] Sarma J, Devi A (2015) Study on traditional worshiping plnts in Hindu religion from Nalbari and Sonitpur districts of Assam. *International Journal of Scientific and Research Publications*. 5(5).
- [24] Brahma S, Narzary H, Brahma J (2014) Socio-cultural and Religious plants used by BODO tribes of BTC, Assam, India. *International Journal of Scientific and Research Publication*. 4(1): 1-11.
- [25] Sharma M, Sharma CL, Debbarma J (2014) Ethnobotanical studies of some plants used by Tripuri tribe of Tripura, NE India with special reference to magico-religious believes. *International Journal of plant, animal and environmental sciences*. 4(3): 518-528.
- [26] Ahirwar RK (2015) Indigenous knowledge of Traditional Magico-religious believes plants of district Anuppur, Madhya Pradesh, India. *American Journal of Ethnomedicine*. 2(2): 103-109.