Ethnobotany of the Kman of Arunachal Pradesh

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TABLE OF CONTENTS

TABLES

FIGURES

Error! No table of figures entries found.

MAPS

Error! No table of figures entries found.

ABSTRACT

The Kman people of Arunachal Pradesh still inhabit a rich and biodiverse environment which has been preserved from the major threats to SE Asian forests. The forests are still little-known, and there are no field guides or local herbaria to aid identification. The paper presents a very preliminary account of Kman ethnobotany, discussing the classification of plants, their medical and practical uses and their role in Kman religious ideas.

Keywords; Kman; ethnobotany; Arunachal Pradesh

1. Introduction: ethnobotany

Ethnoscience may be briefly defined as the attempt to map indigenous understanding of the external world against 'science', broadly conceived, or at least some external interpretative system. In its simplest form, it has tended to consist of long lists of vernacular names tabulated against their scientific equivalents. It was realised quite early that such an exercise could be misleading; that without a corresponding understanding of the underlying classificatory system the archive of checklists would grow ever more voluminous but their usefulness would be at best doubtful.

In principle, classificatory studies can be applied to almost any cognitive area; outside the natural world, colour is perhaps the most widely studied. Nonetheless, the rich biology of many tropical environments has stimulated the majority of work in this area. Ethnoscience also has a practical and indeed commercial aspect; loggers searching for timber trees, foresters trying to estimate the value of woodland and medical botanists seeking clues to indigenous pharmacopoeias have made use of compilations of vernacular names. Somewhat later, anthropologists would come to see this raw material as an excellent jumping-off point for studies of cognitive systems.

The useful plants literature focuses on medicinal plants and to a lesser extent catalogues of other uses relevant to subsistence communities, such as firewood. The academic tradition redevelops in America under the stimulus of new ideas about classificatory concepts. Ethnoscience is reborn with an emphasis on notions of structure in terminology and hierarchy in categories of thought. This particularly associated with the work of Brent Berlin in the New World (e.g. Berlin, 1992; Berlin *et al.* 1973), Ralph Bulmer in New Guinea (e.g. Bulmer 1967) and later Cecil Brown in Amerindian and Polynesian languages (1984, 1985) and Taylor (1990) in Indonesia. Features of this body of work are a notable disinterest in cultivated plants and domestic animals and considerable attention to the structure of the conceptual world of other cultures. Typically, a series of implicit or explicit categories are arrayed in ranked form and the considerable datasets of identified plants and animals placed within these ordered hierarchies.

A rather different approach can be traced to the influence of social anthropology. In this view, categories are less than absolute, and should be understood as developing and used within social contexts. This is associated with the work of Roy Ellen (e.g. Ellen and Reason, 1979; Ellen 1993). There is a sense in which this is self-evident; individual informants do not generally produce entire crypto-scientific schemas to conveniently illuminate their understanding of the natural world. Categories are confused and disputed and different subgroups in a society may have good reasons for interpreting concepts in differing fashions.

2. Forests and biodiversity in SE Asia

Until recent times, the tropical forests of SE Asia were characterised by a highly biodiverse fauna. However, modern economic pressures have meant that forests are under attack almost everywhere. Industrial logging companies have accessed the forests of Cambodia and Laos by barely legal means, feeding the desire of the developed world for tropical hardwood.

A region which remains well-preserved is the tropical forests of Arunachal Pradesh. There are several reasons for this, the most important of which is the highly dissected terrain. The region is cut through with deep river valleys, and mountain slopes which descend rapidly from the Tibetan Plateau leaving very few areas of flat land for establishing homesteads and settlements. At the same time, the region is subject to earthquakes, landslides and other types of geomorphological instability, leading to periodic floods. This has acted as a major deterrent to the buildup of high population densities, despite the potentially rich fauna and flora. Indigenous populations remain small and highly scattered, responding to the potential risks. At the same time, entirely by chance, political friction between India and China and the fractious situation in Tibet has meant that the border has long been closed. A supposed Indo-China 'war' in 1960, in reality more like a border skirmish, has meant that normal commercial traffic between the two countries is not operating although many ethnic groups have cross-border distributions. Prior to this, local populations were intermediaries in a trade connecting Tibet and the valley of the Brahmaputra in Assam. Irritating as the closure of the border must be, especially to divided peoples, it has had one beneficial effect, the preservation of forest from the demands of Chinese traders.

3. Plants

3.1 Plant classes and parts

Kman has no over-arching term for 'plant' which covers all life-forms. Instead it has a diverse array of categories, which seem to have no common lexical element. These are shown in Table 1.

Table 1. Kman categories of plant

English	Kman	Comment
algae	gwî	
bamboo	wâ	
bush, shrub	chāmphūm	
cane	māy krī	
creeper	shūkrùw	
fern	məklìt	
fungus	sɔ́làỳ	
moss	māwàn	
mushroom	chīnūng	
tree	sə̀ng	

Kman names for parts of plants largely correspond to those in English (Table 2);

Table 2. Kman names of plant parts

English	Kman	Comment
bark	ù̀ng	
branch	chūng khāy	
flower	phân	
fruit	sʰî̀t	
grass	təphù̀n	
leaf	lâp	
leaf	láphûw	big leaves used for plates
leaf	ɔ́lâ	big leaves used for plates
root	krâ	
seed	lū̃y brə̀t	
seedling	lù̀y kətī	
stump	tù̀l	
thatching grass	məplòng	
thorn	kəthāw	
tree crown	chù̀k	

Kman landscape divisions are largely oriented around the distinction between the mountains and plains. Table 3 show the main categories of landscape recognised by the Kman.

Table 3. Kman landscape categories

English	Kman	Comment
jungle	kənān	
mələ̀ŋ	thick or virgin forest	

3.2 Domestic plants

Table 1 shows the names of Kman domestic plants

Table 4. Kman domestic plant names

English	Kman	Latin	Comment
Grains			
maize	bò	*Zea mays*	
rice, processed	hākùw	*Oryza sativa*	
paddy	māng	*Oryza sativa*	
millet, foxtail	mūng	*Setaria italica*	
millet, finger	dārò	*Eleusine coracana*	
wheat	kātsāwng	*Triticum spp.*	
mystery grain	pūrūng		now said to be extinct
mystery grain	chīkā		
sorghum	chāmphān	*Sorghum bicolor*	
Beans			
bean	chhông		
bean, soya	blày	*Glycine max*	
bean, yard-long	chhông nàpdūng	*Vigna sesquipedalis*	
bean, flat green	dūb bēē		
lentil	chhî	*Lens culinaris*	
bean, black and grey	grûw		Mishmi dal
pea sp.	māmblē	*Pisum sativum*	
pea	māmblè	*Pisum sativum*	
Fruits			
banana, plantain	hāmbyūng	*Musa sapientium*	
jackfruit	mā'lāng	*Artocarpus heterophyllus*	
strawberry	hūtyùm		
lemon	tākì		
mango	ãm	*Mangifera indica*	< Hindi
melon	gīl tū'		
orange, tangerine	tèngā	*Citrus reticulata*	< Assamese
papaya	pūmtò	*Carica papaya*	
pear	gāyūng		A. naspati
pineapple	dārāl	*Ananas comosus*	
plum I	āmàn		
plum II	tapui	*???*	

English	Kman	Latin	Comment
Tubers			
cassava, tapioca	məkhlāw gə̀n	*Manihot esculenta*	gan = deep-rooted
potato	ə̄lù	*Solanum tuberosum*	
sweet potato	làhȭ	*Ipomoea batatas*	
sweet potato	shūkūn	*Ipomoea batatas*	
taro	gə̀l	*Colocasia esculenta*	
yam	gə̀n	*Dioscorea spp.*	
Vegetables			
? leaf	bûw shə̀w		
wild green leaf	chə̄phāy		
green leaf	chàngkhròng		
green leaf	chāngkhrōng shāw		H. lahi
gourd	chə̄kāng		
?	chhông chātà		
bean (flat green)	chhông dūbbē		
?	chhông nàptùng		
?	chhông chāpēng		
mustard	ə̄tù		tùrī = plant
cucumber	gī̀l	*Cucumis sp.*	
cauliflower	gōbì		
bamboo shoot	gò’		
bitter gourd	kèrēlā		< Kerala
water gourd	kə̄’ǔm		
wild green leaf	khràm shāw		
garlic	lòsūn	*Allium sativum*	< Hindi
green leaf (used as spice)	māykī		
sesame, white	nyām blə̄ng		
sesame var.	nyām grān		
sesame var.	nyām phūm		
sesame, black	nyə̀m		note tone
spring onion	pə̄lūw	*Allium ascalonicum*	
eggplant, brinjal	phyūdù	*Solanum melongena*	
pumpkin	pō̰prà	*Cucurbita pepo*	
onion	pyə̃̀s	*Allium cepa*	< Hindi
tomato	shāw sə̄l	*Lycopersicon esculentum*	
?	shī shàw		
?skwas	shūkə̀wā		
Spices			
spice, general	shāwsū̃ng		
strawleaf	ānthūng shāwsū̃ng		
chili	bìchī	*Capsicum annuum*	
? spice (that gives sensation)	chīmārȭ		

English	Kman	Latin	Comment
ginger	dɔ̄'ìng		
? spice	dɔ̄mā'		= tɔ̄mā'
? spice	dūm gɔ̀rɔ̃̄		
? spice	ìlāychī		
cinnamon	jīshà		
? spice (garlic spc)	mā'kāw		= pūlūw
? spice	mūngsūŋ		
? spice	pākhù		
? spice	pùdīnā		A. pudina
? spice (garlic spc)	pūlūw		= māʔkāw
? spice	shāwsūŋ bālā		A. Naga dhaniya
? spice	tānā gɔ̀rɛ̃̄		

Other useful

gourd	cɔ̄kāŋ	*Lagenaria siceraria*
cotton	kāmbāt	*Gossypium spp.*
sugar-cane	grùt	*Saccharum officinarum*
tobacco, local	tāmbyà	*Nicotiana tabacum*
tobacco, commercial		
opium	kānī	

3.3 Wild plants

3.3.1 Trees

Table 5. Kman tree names

English	Kman	Assamese	Latin	Additional
tree sp. I	ɔ̃̄m		*Litsaea citrata*	
tree sp. I	ānthūŋ shāwsüng	*chitranala*		leaves used for flavouring food
tree sp. I	braysung	*shishu*		grows along rivers
tree sp. I	chāktūy	*oriam*		
tree sp. I	chambwi			used to make furniture
tree sp. I	chamdong	*jati puma*		
tree sp. I	chāmphɔ̄t		*Leucosceptrum canum*	
tree sp. I	chɔ̄khrōng	*dhuna*		
kainjal	chɔ̄ktūy	N. *kainjal*	*Bischofia javanica*	
tree sp. I	chɔ̄làỳ		*Callicarpa arborea*	
tree sp. I	chɔ̄phràng	*N. satpatay*	*Aesculus punduana*	
tree sp. I	chɔ̄phràng		*Trevesia palmata*	
tree sp. I	chɔ̀prɔ̀ùng	N. *setosiris*	*Albizzia procera*	
tree sp. I	chɔ̄thɔ̀m			fruit like an orange, eaten
tree sp. I	chütho	*lali puma*		
tree sp. I	chüthu	*pok jima*		used for firewood
tree sp. I	chō'chāy			hardwood
tree sp. I	jīshà làp		*Cinnamomum cecidodaphne*	

English	Kman	Assamese	Latin	Additional
tree sp. I	zàwpà	*owtenga*		
maple	əchā, ləchā		*Acer thomsoni*	leaves used to serve food. malayta (Nepali)
tree sp. I	əsì		*Rhus semialata*	
tree sp. I	əyāy	*hingori*		Also Kman *tāsā*
tree sp. I	gəri	*jutuli*		used in construction
tree sp. I	grâwk		*Alangium begoniaefolium*	
Indian rose chestnut	grây	*nahor*	*Mesua ferrua*	hard wood
Himalayan birch	hā'yòng	N. *saur*	*Betula cylindrostachys*	
tree sp. I	həla'		*Terminalia myriocarpa*	holok
tree sp. I	həmbòng		*Erythrina arborescens*	
screwpine	həngjìp		*Pandanus furcatus*	
tree sp. I	jīshà		*Cinnamomum cecidodaphne*	
tree sp. I	jūk kàhò'		*Ficus roxburghii*	
tree sp. I	kāhāl	*pitula*	*Altingia excelsa*	
tree sp. I	kāhō'		*Trema politoria*	fruiting tree, produces stripes in trunk
tree sp. I	kānggōng làp			used for thatching
tree sp. I	kāyò'		*Talauma hodgsoni*	
kabra	kəchèng	*khokan*	*Ficus benjamina* var. *comosa*	
banyan	kəshōng	*khokan*	*Ficus benjamina*	
tree sp. I	khīsəntìkà		*?*	
tree sp. I	khrō	*bhola*	*Morus laevigata*	
tree sp. I	lāngkhrō'		*Trevesia palmata*	
tree sp. I	ləmbyòng làp			used for thatching
gunelo	ləpūm làp	N. *gunelo*	*Callicarpa arborea*	
tree sp. I	lô'		*Symingtonia populnea*	
Himalayan silver fir	màchì		*Abies webbiana*	
rubber tree	mànəng sèng		*Ficus elastica*	
Himalayan hemlock	məkhrùng sèng		*Tsuga brunoniana*	
kabra	məràỳ	*khokan*	*Ficus benjamina* var. *comosa*	
tree sp. I	mətù' sīt		*Spondias axillaris*	
tree sp. I	mūnzàng		*Rhus succedanea*	used as spice. it gives sensation
tree sp. I	mūngglō'	N. *uttis*	*Alnus nepalensis*	
tree sp. I	mungshi	*gunsorai*		
tree sp. I	nāpkhràwng		*Saurauia napaulensis*	
tree sp. I	rəhà kèmày	*siris*	*Alnus sp.*	
tree sp. I	rəngglòng	*borpat*	*Ailanthes grandis*	used for plywood
long-leaved pine	rûng	*tel khori*	*Pinus longifolia*	
tree, generic	sèŋ			
tarsing	shűngrồ,	*dhuna*	*Beilschmeidia*	

English	Kman	Assamese	Latin	Additional
	hŭ̃ngrɔ̃̀		*roxburghiana*	
tree sp. I	tābrālyà	*ritha*		fruit used as a whistle
tree sp. I	tàksù̃		*Schima wallichii*	
tree sp. I	tāpùy		*Castanopsis tribuloides*	
tree sp. I	tāsā	*hingori*		Also Kman *ə̄yāy*
tree sp. I	təkì phúkrú	*rubub tenga*		wild lemon
tree sp. I	tāksŭ̃y		*Caryota urens*	
tree sp. I	thŭ̃wō’		*Engelhardtia spicata*	
toku patta palm	tānggū’ lāp			used for thatching
tree sp. I	tŭ̃mà sàng		*Gynocardai odorata*	
tree sp. I	ùmrā		*Elaeocarpus lanceaefolius*	
Japanese maple	yāw		*Cryptomeria japonica*	
Himalayan silver fir	yâwk		*Abies webbiana*	
Japanese maple	yəmbì		*Cryptomeria japonica*	

3.3.2 Bamboos and rattans

Table 6. Kman bamboo names

English	Kman	Assamese	Latin	Additional
bamboo	wáà			general term
bamboo I	chānggrìng	A. *jati*		
bamboo II	chəkthān			
bamboo III	ə̄klō’			
bamboo IV	hāmà			generally found in hill areas
bamboo V	həwāl			
bamboo VI	lŭ̂			
bamboo VII	māybrət			
bamboo VIII	māylī			
bamboo IX	māysə̀̃ng			
bamboo X	mətàng			
bamboo XI	tāwī			thorny sp. found in jungle
bamboo XII	wá	A. *kako*		
bamboo XIII	wâ brùk			
bamboo XIV	wā tàl			
cactus	chānggrong			
cane I	māy krī			hill hooka
cane II	māy tūl			A. *pani hooka* used for cane furniture
cane IV	kánggòng			rāy dūng
cane III	kānchī			A. *lezai* stinging plant

3.3.3 Grasses and herbs

English	Kman	Latin	Additional
grass, general	tə̄phǔn		
grass sp.			
grass sp.	ānthūng		long leaves like sugar cane
grass sp.	chānggwū̃n sə̀ng		et. cricket
herb sp.	chēphāy	*Piper longum*	
grass sp.	chūk məsày		
grass sp.	əmīn sə̀ng		
grass sp.	ərùw		
grass sp.	əshì		large grass sp.
herb sp.	gārɔ̃̀	*A. chirata*	
herb sp.	gùl tə̄phàng		
grass sp.	hāmbrìy		wild cardamom
grass sp.	hərāw		large grass sp.
grass sp.	kānjī		stings
grass sp.	krē brə̀ng		
herb sp.	lāwīt	*Rubia cordifolia*	
herb sp.	làwng chənyāng		fruit is used as pellet in toy guns
herb sp.	māwɛ̃̄’	*Paris polyphylla*	
herb sp.	məkə̀l		stinging plant
grass sp.	məklìt		fern
herb sp.	mənzàŋ	*Zanthoxylum*	spices
herb sp.	məntshùw chhàyɛ̄̃		
grass sp.	məplòng		used for thatching
herb sp.	mūnglù		
herb sp.	mū̃ntshən		
herb sp.	mūyrū̃ng		
herb sp.	pāwā	*Coptis tita*	
grass sp.	pā’ lòŋ		used in dead rituals (*təlu)*, similar to cardamom plant
grass sp.	plōngdāwng		used for thatching
grass sp.	rō’ dək		
grass sp.	rō’ krǔk		
grass sp.	rô’ nyàm		
herb sp.	tālūp	*A. machenya*	creeper. leaf is used as anticeptic
herb sp.	tāntshō’ sə̀ng		
grass sp.	tā’ pən		herb with sticky burs

English	Kman	Latin	Additional
wild banana sp.	əmū		wild banana with white powdery leaf. used to smoothen loom
wild banana	ətyū̃m		wild banana

sp.				
wild sp.	banana	kə̄mān hàmbyūng		fruit is used as a vegetable
wild sp.	banana	lāmbyòng		wild banana found in hilly place
wild sp.	banana	lāng gr̄ìt		
wild sp.	banana	māwk hàmbyùng	kə̀tòw	large sp. also *jahaji kol* (< Assamese). 'train banana'
wild sp.	banana	mənǔl hàmbyùng		fruit is eaten as a fruit also *chini kol* (< Assamese)

3.3.4 Lianas and vines

Table 7. Kman creeper names

chānglùm	n.	creeper sp.	
dùmkā krǔw	n.	creeper sp.	= tālūp
əsūw	n.	creeper sp.	
gə̀n	n.	creeper sp.	
hə̄kyə̀t	n.	creeper sp.	
hə̄mbrə̄̂	n.	creeper sp.	
hə̄rō	n.	creeper sp.	
kānchhī̀	n.	creeper sp.	
kānggōng	n.	creeper sp.	
kānggrāt	n.	creeper sp.	
kə̄tə̀l	n.	creeper sp.	
lāwkrùw	n.	creeper sp.	
māykrī	n.	creeper sp.	
māytūl	n.	creeper sp.	
mə̄̀nggə̀l	n.	creeper sp.	
pūlā	n.	creeper sp.	
shūkrā'	n.	creeper sp.	
tə̄phī̀t krǔw	n.	creeper sp.	
tyō' mə̀ndī	n.	creeper sp.	
brò	n.	edible creeper sp.	
chə̄kāng	n.	edible creeper sp.	
chhî	n.	edible creeper sp.	
də̄̀bē	n.	edible creeper sp.	
kə̄'ə̀m	n.	edible creeper sp.	
məntshə̀n	n.	edible creeper sp.	
shūkə̀wā	n.	edible creeper sp.	
pōprā	n.	pumpkin	
kèrēlə̀	n.	bitter gourd	
lāhə̄̂	n.	sweet potato	= shūkūn
shūkūn	n.	sweet potato	= lāhə̄̂

3.3.5 Mushrooms

Table 8 shows Kman edible mushrooms

Table 8. Kman mushroom names

mushroom I	chīknūng	
mushroom II	chəng grāt	
mushroom III	sāwlū̃	
mushroom IV	pāsī	
mushroom V	māypət	
mushroom VI	mūng phlī’	grows on cowpats
mushroom VII	mū̃ndē	
mushroom VIII	lū̃y nyùl	
mushroom IX	kūm tū̃wà	
mushroom X	mā’plū̃m	

I-V grow on trees so are included in the fungus category, VI is regarded as separate.

fungus sə̃lày