

The Rufford Foundation
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Preliminary Report

**TRADITIONAL ECOLOGICAL KNOWLEDGE IN THE MISHMI HILLS ARUNACHAL
PRADESH, NORTHEAST INDIA**



Ambika Aiyadurai
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Introduction

My study site is a village called Koronu adjacent to Mehao Wildlife Sanctuary in Lower Dibang Valley district of Arunachal Pradesh, Northeast India. The name Koronu comes from the Koronu River. The village has around 70 houses, mainly Idu Mishmi families in the village. According to the government records, there are around 100 houses. This includes the labour migrant population from outside the village for example, there are Nepalese families who work as agricultural labourers, men from Jharkhand who work as construction workers and few government staff such as school teachers, forest department staff and other government staff who are from different parts of India. Koronu is 20 km from Roing the district headquarters of the Lower Dibang Valley. The road to Koronu is under construction and GREF (General Reserve Engineering Force), a branch of Border Roads Organisation is responsible for road construction. There are two rivers that need to be crossed to reach Koronu. During monsoon, reaching the village is very difficult and at times not possible. There is no way one can reach Koronu when the river is flooded. Situation will get better when the bridge is completed.

My host in Koronu is a 53-year-old widow whom I met in December when I made a preliminary survey. Everyone calls her Nani, which means mother in Idu language. The first few weeks were spent observing the village activities. I met the Gaon Burrah, GB (village headman), public leaders, school teachers and village council members. I accompanied Nani to her farm, followed her to collect bamboo shoot, shrubs, maize, herbs, pig fodder. I documented the plants she gathered, purpose of collection, how it was prepared and preserved. I was advised to visit the forests in October and November onwards which I plan to. I communicated with villagers in Hindi and I have started to understand basic Mishmi. Villagers can speak Hindi very well and some could speak English.

Initial Observations

I documented around 60 plants, both cultivated and grown wild in and around Koronu village. Their local names, their uses, their socio-cultural significance, medicinal uses and trade value were recorded. I did not collect any plants, instead I took photographs of the plants, both for documentation and for identification purposes. A botanist in Itanagar (state capital) is helping me identify the plants based on scientific classification. In the field, I try to find out what people say about particular plants, if there are any folk stories, how they are collected, where and how it is prepared or preserved. Please see Appendix 1 for a preliminary list of plants. During winter season, people go to the forests more often unlike the summer season where venturing into the forests was difficult. I will be able to get more information on winter crops and wild plants collected during winter months (October onwards).

I spent time walking in the village and to nearby areas to observe what animals are reared and what animals are hunted. I interviewed men, women of different age groups. Men who frequently hunted were interviewed to understand the role of animals in their lives. I showed pictures of wildlife using mammal and bird identification guide books. I recorded what they have to say about wildlife. Taboos, uses, where the animals are found, hunting methods and folklores were documented. Any wildlife sighted was also recorded. Appendix 2 has a list of animal hunted in and around Koronu village.

Methods: I engaged with villagers through informal discussions and interacted with them in shops, during weaving sessions and in the farms. My stay with Nani helped me to interact with many villagers very easily. Nani sells locally made rice beer (Yu) and villagers visited her house from morning to evening to have rice beer. This gave me plenty of opportunity to get to know who is who, kinship patterns, their names, what they do and where they live. During interviews, I used a recorder with the respondents' permission. I participated in official meetings, social gathering, healing rituals and village functions.

WILD AND CULTIVATED PLANTS IN AND AROUND KORONU VILLAGE

1. **Bamboo:** People talk of two kinds of bamboo. Jungle bamboo is called Aruchu and cultivated bamboo is called Mangechu. Both wild and cultivated forms are found in the study site. Bamboo is used for house construction, making fences, mats, as fire wood, and articles for daily use like mugs, ropes and baskets are also prepared. Some species of bamboo are used for religious occasions. For constructing houses, bamboo is never harvested in the beginning of the month and it is important that harvesting is done only in the middle of the month around 15-16th day of the month. If harvested otherwise, the bamboo used to build the house will be infested with insects (pests). There is no restriction on harvesting for other purposes. Bamboo species are yet to be identified.

Bamboo leaves are used during funeral ceremony. Leaves and stem are used by priest (Igu) during chanting and later inserted on the walls of the house. Thin bamboo stem is planted in the middle of the burial ground. Later it is shifted inside the house and tucked on the walls. During chanting Igu holds this in his hands. I observed the entire funeral ceremony and will submit my notes in my final report.

Bamboo shoot is use for consumption and is a popular food among the local people. Bamboo shoot is also consumed in the dried form and is called Aposi which can be stored for a longer period of time. The cooked rice distributed in rituals is mixed with Aposi. Sometimes, dried ginger is also added and distributed in any important rituals.

Bamboo shoot is also preserved for a longer period of time. They are mashed using stones, washed with water and kept inside a nylon bag to drain out water. This bag is tied and kept under a heavy stone for 2-3 days to squeeze out water completely. After that it is transferred to a plastic bottle and lid is closed tightly. This can be preserved for a year or so.

2. **Kalita:** This is a species of wild turmeric (species yet to be identified). The root has religious significance and also medicinal value. Igu always starts any kind of ritual with Kalita. Igu chews a small piece of Kalita and spits the saliva in three directions. During healing ritual a piece of the root is given to the patient who wears it around the neck using a thread. A white thread (always white) is used as a string. Wearing Kalita is very common among the villagers. People visiting Igu for complaints of illness, bad omen and difficulties regarding finance and simply bad times get a piece of Kalita. For example, my host's son went through a bad phase of financial loss, accident and also health issues in the month of May. A priest was called for a day's ritual and he was given Kalita. Priest peels a piece of Kalita and makes a small hole using a bamboo stick. I was told that whenever one feels scared of anything or feel nervous, Kalita is bitten and the saliva is rubbed over the head and face. The root is aromatic. I observed three ceremonies (one funeral and two healing rituals) and have written about this in detail in my field notes.

3. **Aalaana:** Leaves are used as packaging material and as plates during small parties and ceremonies. Leaves are collected in large numbers from wild and kept aside for use for distributing food. The rear side / posterior side of the leaves are used for taking food. These leaves are also used in the hat as an inner layer and this keeps it cool during summer. These days it is replaced by plastic sheet.

4. **Aakko:** Hindi name for Aakko is Khair. It grows in the wild. It belongs to grass family and used to make roof. They collected in large quantities and once dried they are prepared for roofing.

5. **Barsa or Marsana:** It is an herb grown wild. Their leaves are used for consumption and cooked with other vegetables. It gives a tingling sensation on the tongue while eating. It also has medicinal value for lowering blood pressure.

6. **Chekapu** (Pumpkin): Leaves and fruits are consumed. In some places flowers are also cooked as evening snacks. White pumpkin is called Aoonpoo.

7. **Jarumona**: Grown wild and collected for pig fodder. Looks like a weed growing along the road side. Women collect them in large quantities in the basket while returning from farm work. After reaching home, Jarumona leaves and twigs are dropped in the pen for the pigs to feed on.

8. **Lasun** (garlic): They are grown in the garden and used as a spice.

9. **Adulu** (soyabean): They are cultivated for consumption and fermented to use for long period of time.

10. **Adokobra** (Long beans): Cultivated for consumption.

11. **Chimbro** (Flat beans): Cultivated for consumption

12. **Athana**: Seeds and flowers are dried and preserved as spice. They are added in meat for flavour. Leaves are also added as flavor and smells similar to coriander. Athana is also cooked with other vegetables.

13. **Ee/ Ye** (Turmeric): This is grown by Nepalese farmers and not by Idu. Roots are dried to make powder. They are used as a spice in cooking and used as a medicine because of its antiseptic properties.

14. **Gedu** (Tapioca): They are cultivated and tuber is used for consumption

15: **Red beans**: For consumption. Need to collect more information.

16. **Omtira** (Orange): Orange plantations are common and a successful cash crop in the village. Oranges are sold in the market and exported outside the state in large quantities.

17. **Sombun**: Leaves, tuber and stem are used as pig fodder. They are grown wild and also plenty of them are found near houses. The leaves are cut along with stem and fed to pig both in raw form and also cooked with other fodder. They are not sold in the market.

18. **Pineapple**: There is no Idu name for pineapple. People here use the Hindi name, Ananas. Villagers started to grow very recently about 7 years ago. The horticulture department in Roing introduced oranges by giving them saplings to grow. The plantation is not successful and people are not very keen to continue this.

19. **Sobasi**: Fruits of this tree are consumed. Yet to identify the English name. Mostly locally consumed and have not seen being sold in the market.

20. **Omrita** (Papaya): Fruits are consumed and cultivated.

21. **Tambul** (Betel nut): Betel nut plantations can be commonly seen. This is a beneficial cash crop and most houses have a betel grove with at least half a dozen trees. Some villagers have large farm for betel nut trees.

22. **Tupurna**: Leaves are used for consumption. Only in winters it is suitable for eating. During summer, the leaves give an itching sensation while eating and therefore it is avoided.

23. **Mudarasi** (Guava): Grown in home gardens for fruits.

24. **Incipoo** (Chilly): There are two species of chilly. I need to get them identified. They are either used in the raw form or dried form for cooking. It is a common

practice to preserve using oil and salt. They are stored in glass jars and people prefer while having the rice beer (Yu).

WILD ANIMALS IN AND AROUND KORONU VILLAGE

1. **Amepon** (Hoolock Gibbon): Idu also call this as Ameer pan or Ame-pa. Mishmi do not hunt Hoolock Gibbons. One can hear Gibbon's call every morning around the villages. Gibbons also visit close to the village periphery but not inside the villages. People believe that they are their fore-fathers and it is a taboo to hunt them. To see one is a very bad omen. One of the hunters told me that they do not even take their name at night, this bring bad dreams. A researcher working on Gibbons told me that villagers refuse to accompany him during his visits to the forests for the fear of seeing one. It is a taboo to hunt one (more on taboos in the final report).

2. **Ame**: This is a common term for all monkeys. One of the villagers had kept an Assamese macaque as a pet. The mother was hunted and the villager captured the infant. Ame is hunted for meat.

3. **Ala** (Musk deer): This is mainly hunted in the upper regions of Upper Dibang Valley. People say this animal carries 'gold' because of the high market price of the musk pod. Males are hunted for musk pod for sale in international market. The price is around INR 20000-30000 per tola (10 gms). Hunting season is during August and September and Ala are hunted using guns. Meat is consumed. I will be visiting Anini in the Upper Dibang Valley to study more on musk deer hunting.

4. **Macho** (Sambar): People say there are plenty on the plains in the Deopani region. During my fieldwork, I observed Sambar meat being prepared for cooking and will send you the transcript when ready).

Adults are called Macho Akuma (large blackish)

Juvenile are small and red colour, called Macho chen.

5. **Aapoee** (Civets): Villagers spoke of three types

Aapoee Akolo – large

Apoee Akumma – mid-size

Aapoee Kren – small

Hunters say that they eat gutti (seeds) and have lots of fat in its body. Hunted using guns and air guns. It is easy to spot them in winter season. My field assistant shot on last year and showed me the tail of a civet.

6. **Akonkoo** (Palm Civet): People say it stinks very badly. This is a lodrey (unlucky). If one goes hunting, seeing this animal brings bad luck.

7. **Amra-pungoo** (Leopard): Also called Amra kichi: Hunters said they lift goats. Two years ago a leopard used to roam around the village and even killed one dog. A villager later killed the leopard. Dogs often drive them out. Firing guns in the air also helps. Wild animals entering village premises is not a good sign for villagers. They should not hunt animals that enter the village premises. Hunters believe that wildlife should be hunted in the forests and the animals that wander within the village should be driven out but not hunted.

8. **Manjo** (Barking Deer): Two kinds of barking deer are reported here.

Manjo Akuma: big blackish

Manjo Yettochu: Brown reddish (very beautiful animal, said one hunter)

This is common in the region. Idu houses have skulls of barking deer decorated on the walls along with other wild animal skulls. Villagers also prefer the meat of barking deer because they say it is very soft and tasty.

9. **Akko** (Takin): Calf is called Akko che and Adult is Akko jo. Mishmi hills are known for this animal, also called as Mishmi Takin. The labourers working in the

cane cutting camp spoke of salt licks where takins visit regularly. Skulls can be commonly seen in Idu houses.

10. **Yiungu** (Mongoose): According to the villagers, Yiunga come to the village to steal chicken and catches rats. Yiunga is also known to store its catch in a corner.

11. **Adango / Adah** (Squirrel): Not yet identified the species. There are many species known from this region. They are often hunted by catapults (gittee). During winter season, I will get more information on squirrels.

12. **Aprupu** (Wild dog): Villagers spoke of wild dogs as animals that live in groups. They live on mountains and come down during winters by September and October. Aprupu are sometimes in a pack of 10-20 animals and even small groups of 2-3 also occur that chase a harem. There is a belief that their urine is poisonous.

13. **Aata** (Elephant): Elephants are seen as dangerous animals. People say they come to eat crops. This is their route and they come every year. It is very difficult for villagers when they come. The house where I lived was damaged by elephants few years ago. Earlier elephants used to come close to the village when the size of the village was small and there were more forests but now they only come to the farmlands on the periphery of the village adjoining the forest area. People in the village have shot elephants and see elephants as a nuisance. People spend more effort and energy to prevent elephants from raiding their crops.

14. **Pangolin**: One hunter said that it has paisa-paisa (coins) all over its body. When it sees people, it becomes round and becomes a ball. Pangolin is also hunted for meat.

15. **Amme**y (Wild boar): People here have no tolerance to wild boar. They visit mukkai-kheti (maize farm) and says it is khatarnak (dangerous). The meat is

preferred. Wild boar's lower jaws and skulls are decorated in large numbers in Idu houses.

16. **Aahoon** (Bear): Bears are hunted for bile and sold in the market. It fetches a very high price. Meat is consumed and their skin is used to make bags. Bear bags are commonly seen carried by men.

17. **Aapahun / Akrapra** (Frog): I don't know which species. Plenty of them found on the road-side puddles during summer season. People say the meat tastes like chicken. People in the mountain prefer these frogs more than in the plains and only men eat them.

18. **Kachingo** (Rat): Farm rats are captured using special traps. After finishing the farm work villagers check the traps. Women can eat rats and no other wild animals. Idu women are prohibited from consuming wild meat but can eat birds (I will write about the role of gender in wild meat and hunting in the final report).

Notes on the local names of plants and animals

The names I have collected need to be confirmed and finalized with the help of villagers. This is just a preliminary list and the information in this report may have minor errors in plant and animal identification which will be rectified in the final report.

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Appendix 1: List of cultivated and wild plants in and around Koronu village

S.No	Common Name	Idu name	Hindi	Parts used
1.	Bamboo sp.	Aruchu, Mangechu		stem, leaves, shoot
2.	Wild turmeric	Kalita		Root
3.	Cane sp. 1	Lakathon		Stem
4.	Cane sp 2	Lajayi		
5.	Cane sp. 3	Hill Hooka		
6.	Cane sp. 4	Pani Hooka		
7.	Maize	Ambo	Makkai	Seeds, stem
8.	Mustard	Tusi	Sarso	Seeds
9.	Buckwheat?	Ekka	Paphdi	seeds, leaves
10.	Ginger	Anjita	Adrak	Roots
11.	Timber sp.	Machumbo		Tree timber
12.	Jackfruit	Injipoo		Fruit
13.	Banana	Aajibro		Fruits, leaves
14.	Leaves	Aamanna		Leaves
15.	Leaves	Dosanna		Leaves
16.	Palm	Evona		Leaves
17.	Shrub	Avokaana		Leaves
18.	Shrub	Aalaana		Leaves
19.	Shrub	Aakko	Khair	Leaves
20.	Shrub	Aahona		
21.	Herb	Barsa		Leaves
22.	Shrub	Jarumona		
23.	Pumpkin	Chekapu		leaves, fruits
24.	Long Beans/french beans	Adokobra	circular	
25.	Flat beans	Chimbro		
26.	Soyabean	Adulu		
27.	Garlic		Lasun	
28.	Tapioca	Gedu		Root
29.	Turmeric	Aen/Ye	Haldi	Root
30.	Shrush	Aathana		leaves, seeds
31.	Ahomaasi			Leaves
32.	Herb	Thuna	Lai patta	Leaves
33.	Millet sp.	Kanju		Seeds
34.	Fox-tail Millet	Ya		Seeds
35.	Red beans	Anthen		Seeds
36.	Orange	Omtira		Fruits
37.	Yam	Sombun	Kachchu	Roots
38.	Pineapple	no name		Fruit
39.	Tree	Sobasi		fruit

40.	Tree	Mango	Aam	Fruits
41.	Papaya	Omrita	Papita	Fruits
42.	Betel nut		Tambul	Seeds
43.	Hedge Plant			Leaves
44.	Lady's finger		Bhindi	Fruits
45.	Brinjal		Baingan	Fruits
46.	Onion	Elopra/elompra	Pyaz	Root
47.	Potato	Ghisi	Aaloo	Tuber
48.	Shrub	Ahomaasi		
49.	White pumpkin	Aoonpoo		Fruits
50.	Cucumber	Anjipu	Kakdi	Fruits
51.	Chilly	Incipoo	Mirchi	Fruits
52.	Tea	Phala	Chai	Leaves
53.	Tomato	Tumpili	Tamatar	Fruits
54.	Mushroom	Akupoo		
55.	Mushroom	Akupi		
56.	Mushroom	Akunoo		
57.	Mushroom	Akudu		
58.	Mushroom	Akulipitu		
59.	Mushroom	Akumbroo		
60.	Mushroom	Golombo		
61.	Sweet potato	Geja		
62.	Flat beans	Chimbro		
63.	Herb	Mishmi teeta		

IMAGES FROM THE FIELD



Figure 1: Cane collected from the nearby forests. Used for making baskets, mats and small stools as shown in the image.



Figure 2: Infant Assamese Macaque kept as a pet



Figure 3: Fishes and crabs caught in Koronu river



Figure4: Wild animal skulls on display in Idu Mishmi house