



## Wild Tubers Consumed by the Indigenous Communities of Parambikulam and Vazhachal Regions of Kerala

Indigenous ethnic communities live close in the vicinity of forests and have conserved the biodiversity of their forest localities from long time. Forest is their home and they depended on the wild for their food and medicine. Immemorial association of these forest dwelling ethnic communities with the forest equipped them with the tremendous knowledge on wild food sources.. This knowledge has even helped in the development of many traditional medical treatments. The knowledge on the wild edibles play an important role in maintaining the ecological balance of the forest and ensure food security for the ethnic communities. These wild edibles are valuable sources of nutrients and easy source of proteins and vitamins. This paper is an attempt to record the traditional wild tubers used by the ethnic communities of Parambikulam and Vazhachal forest regions.

The study area includes Parambikulam tiger reserve and Vazhachal reserve forest. Parambikulam Tiger reserve is situated in Palghat district of Kerala and lies within 76° 35' and 76°50'E longitude and between 10°20' and 10°26'N latitude, covers an area of 888 sq km. Vazhachal reserve forest occupies an area of approximately 400 km<sup>2</sup>, and is located in the Thrissur and Ernakulam districts of Kerala. The region is famous for the country's most beautiful landscapes with waterfalls and rich green forests, which are home to elephants, tigers, bears, hornbills and many other animal species. The area is rich in fauna and flora and is famous for high rate of endemism. Vazhachal division is one of the most important divisions in Kerala in terms of biodiversity potential and has been assigned a very high conservation value. The study area falls within the larger Anamalai landscape.

The indigenous communities of the study region are Kadar, Malayar and Malamalasar among which Kadars occupy the majority. All these communities depend on the wild for their food and medicines and have immense knowledge about the forest and its herbal wealth. Kadars are

traditionally hunter gatherer community and once they were depended on the forest for their food.. They are the best representative of the integrated food gatherers. Their population is less in numbers and belonged to the endangered food gatherer community of India. Malayars and Malamalasar are agrarian tribal communities, they also collect herbs and tubers from the forest. These tribal communities were settled into settlements/colonies in the last five decades. Manmade disturbances in the form of dam construction, tourism, plantations and exploitation by outsiders has become a serious threat to the tribals livelihood security. The tribals of Vazhachal division achieved Community Forest Resources Rights under the FRA 2014. These rights empowered them to plan and implement conservation strategies and activities in the forest in which they live and this in turn helped them to sustain their livelihoods and preserve the indigenous knowledge.

Tribal communities of Earthdam Colony Parambikulam, Anjam colony Parambikulam, Vazhachal colony, Wachumaram colony, Sholayar Anakayam colony were included in the study. Data were gathered through group discussions and interviews with elder persons of the community and field documentation.

Wild tubers are the favorite among the wild food for the tribal communities of the region. Among the tubers *Dioscorea species* (kattukizhaangu) are the most preferred one for them. The appropriate time to collect tubers is after the rain, and when the winter starts. According to the tribals the season is from Vrishchikam (Nov-Dec) to Makaram (Jan-Feb). Most of the tubers are eaten either by boiling or cooking them directly on fire. Certain tubers having sour taste (Chavaalikizhangu) are peeled and boiled in water with turmeric and salt and are consumed after draining off the water. The Kadars have a special tool fixed to a stick to collect the tubers from the forest. They know the exact location and at what altitude these tubers

are available in the forest. Maturity of the tuber is calculated from the thickness of the climbers. After digging out the tuber, the lower parts are taken for consumption and the upper part along with the climber is kept carefully in the same pit for regeneration. This reveals their attitude towards forest conservation and importance in preserving the wild tubers.

The following table shows the list of tubers they consume

Sl. No.	Name of the tuber	
	Tribal name	Scientific name
1	Noorankizhangu	<i>Dioscorea pentaphylla</i>
2	Kanjirakizhangu	<i>Dioscorea oppositifolia</i>
3	Chandanakizhangu	<i>Dioscorea belophylla</i>
4	Chavalikizhangu	<i>Dioscorea hispida</i>
5	Naarakizhangu	<i>Dioscorea wallichii</i>
6	Noolankizhangu	<i>Dioscorea tomentosa</i>
7	Kachilkizhangu	<i>Dioscorea bulbifera</i>
8	Kachil	<i>Dioscorea alata</i>
9	Shatavari	<i>Asparagus racemosus</i>
10	Kattuchembu	<i>Colocasia esculenta</i>
11	Kattuchena	<i>Amorphophallus commutatus</i>
12	Manjakoova	<i>Curcuma neilgherrensis</i>

Wild yams and colocasia tubers are also their favorites. They extract powder from Manjakoova (*Curcuma neilgherrensis*) and consume it either by making 'kurukku' or by making dosha or orotti, ada etc. Traditionally this flour was the main food for the children below the age of 5. This flour is of high medicinal value and rich in nutrients, and earlier this was a compulsory food for ladies during and after pregnancy.

Traditionally the indigenous communities especially the Kadars of the region used to consume more than 80 species of food plants which included more than 10 varieties of wild tubers. These plant varieties along with honey and small animals they hunt were once the main food source of these communities. As years changed, along with many

developments in the region the attitude of tribal population towards these wild traditional foods especially that of younger generation got changed. Now the dependence of these communities on the wild food sources like tubers has reduced. A small population still collects them from the wild and use them as delicious food during the seasons. Knowledge about these tubers and the areas where these tubers grow in the wild are now known to a few people. They admit that the numbers of tuber plants in the forest area are also diminishing. Various developmental activities and climatic variations are disturbing the diversity of the forest and such very specific wild food plants are getting affected.

According to the tribals only 30% of the tribal populations are depending on the wild tubers. It is noticed that the health of the tribal communities are also declining as they move away from their traditional food sources, the wild edibles. The morbidity rate as well as the mortality rate is on the rise among the tribal community.

Anthropogenic activities and changing weather patterns are affecting the forest wealth. Research on wild, uncultivated food plants that are becoming extinct or decreasing due to these factors is virtually absent. Considering the indigenous communities knowledge on ethnobotany about wild edibles, medicinal plants, about their medicinal properties and the status of these species in the wild conservation strategies for the wild herbs and tubers need to be framed out involving the traditional knowledge of indigenous communities. Strategies should also bring in insitu conservation of these plants in the wild along with cultivating these species in their villages. The tribals of Vazhachal division achieved Community Forest Resources Rights under the FRA on 2014. The rights enable them to plan out conservation strategies and implement conservation activities of forest while sustaining their livelihoods.

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