

Fishing Weirs and Galo Mythologies from the foothills of the Eastern Himalayas

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ABSTRACT

Traditional hunting and gathering ways of life have existed as the main mode of subsistence for humans since long and continue to be with some indigenous communities despite the onslaught of urbanization. Arunachal Pradesh, the North-easternmost state of India that shares international borders with the Republic of China, Bhutan and Myanmar is home to a large number of indigenous communities who still continue to live in traditional ways of life despite the changes brought by modernization.

Traditional and community fishing is still practiced by them and the use of various types of weirs is still common. The weirs come in various shapes and sizes and are made by the community people themselves using bamboo splits and rattan. The making of the fishing weirs needs special skill as some take a longer period for the processing of the raw materials while some are made on the spot at the time of need, in both cases active participation to learn and develop the skill is necessary. What makes these fishing weirs special is the mythology behind it. The Galo indigenous community people hold these fishing weirs with utmost respect because of its importance in their mythology. The folk stories mention how the fishing weirs came to the human and the role played by the weirs in sustaining human life on this Earth. However, as the younger generation do not have much time to spent with their village/community elders, this tradition of making fishing weirs is not easily known to many and the myths behind it. Therefore, this paper aims to explore the different kinds of the fishing weirs and to bring out the importance of the related mythologies associated with them.

Key words: fishing weirs, myths, indigenous communities, Himalayas

INTRODUCTION

Arunachal Pradesh located in the foothills of the Eastern Himalayas is home to a number of indigenous people who still practice traditional mode of subsistence. As the land is gifted with numerous rivers and natural freshwater streams, the natives still do fishing on a regular basis using traditional fishing techniques. The data presented here are from a preliminary ethnographic study carried out between 2017-2019 on the subsistence mode of the Galos, one of the well-known ethnic communities mostly inhabiting the Leparada District of Arunachal Pradesh. The principal objective of the research was to provide a database documenting the traditional fishing weirs of the Galos and to explore the associated fishing myths or legends. The research also aims to understand the significance of these traditional weirs in the context of modern fishing equipment readily available in the market.

The importance of fish in a Galo society cannot be ignored. As most of the villages are located near a river or stream, fishing is a very important economic activity and fish is an important source of food for them. Fish is not only important as a source of protein but also an important food item in any feast or ritual to entertain the guests. Sharing of fish is important socially and communally. Fish are exchanged during marriage, also offered as gifts when visiting distant relatives. Certain species of fish are only exchanged during marriage, others such as *Amblyceps* sp. (Tammii), *Chaanna punctata* (Talo), *Pterokryptes afgana* (tayek), *botia* sp. (Ribo-Ringum) etc. are not consumed or offered during weddings for consumption nor for gifting. And during the taboo period also, certain species of fish are not consumed for a stipulated time period.

Galos still practice community fishing when all the community people gather on an appointment day to fish together. Fishing is not only a medium of food supply but it also brings the members of the clan together and through such exercise it binds the community further. For them fishing is not just an economic activity but also an important part of the learning process through which the young ones gain an understanding of the technique of using the fishing gears and learn about the fish behavior from the village elders. Through such on-spot training, the traditional knowledge is being passed on to the successive generations. Community fishing is a part of the cultural heritage of the Galos and it is still practiced by the community members. It is interesting to note that in many of the Galo folklores the mention of rivers, fish and the water world is invariably there. The tales of Jai Bonnw, Anyi-Kari-Karnya, Vmv lama Yo Vmv feature special mention of the water world and different techniques of fishing. It is in the folklore of Jai Bonnw that the first mention of herbal fishing occurs. Religious rites and other marks of respect are integral to the practice of fishing. Galos believe in the sacredness of nature and in the guardian spirits who are in charge of the mountains, hills, sky, streams, rivers, streams etc therefore before any large scale fishing mission or hunting, the shaman performed a ritual called *ambin hunam*.

However, in the present day, this tradition is not strictly followed. In community fishing, men, women, young and even children take part. On the appointed day many families come together with their assorted indigenous fishing gear and whole day fishing is done. Meal is cooked by the river bank with the freshly caught fish and all the community members have their meal together. At the end of the day, the catch is divided among the participants who then either steam the fish in a bamboo receptacle or dry it over fire for preservation and future consumption.

Fishing is done mainly during the winter season when there is abundance of fish in the rivers. The Galos are good fishermen and they can travel to far off places on foot, for days together and stay near the river in the forest for fishing. The most common fish consumed by them are Ngoru (*Garra annandalei*), Riibo (*Schistura rupecula*), Riingum (*Nemacheilus devdevi*), Orse (*Semiplotus semiplotus*) Ngopi (*Labeo gonius*) etc. (Bagra 2010). Due to the importance of fish amongst them many indigenous techniques have been developed. Some popular traditional methods of fishing are hand-gathering, trapping, stationary enclosures, indigenous basket-shaped wicker traps, bamboo weirs and use of stupefying aids to catch fish. These indigenous techniques are locally called qou nunam (ubnam), *`lwwruu ubnam*, *tahum-kunam*, *ta`kom`gaanam*, *w`dwr`gaanam*, *`riigoo goonam*, *`higo`tonam*, *`hwl`monam*, *`lwwpum`pumnam*, *`paakam karnam*, *hi`bok pvnam*. Though many new methods and machineries are available in the market, the age-old traditional methods are still used as specific fishing methods are very effective to catch particular species of fish.

The indigenous gears used for fishing are made of perishable locally available material, bamboo, wood and cane. The indigenous traps are designed in such a way to make the entry easy and the exit difficult; once the fish enters inside it cannot escape. Traps are culturally almost universal. They make traps with various forms: conical, cylindrical and basket type.

Some of the traps are used exclusively by the women and some by the men only. Traps can be either fixed or mobile. However, a number of techniques with various kinds of traps and weirs which can be operated by a single person are also practiced.

A Glimpse into various Fishing methods

- Tahum /Tasum Kunam

In this fishing method a conical shaped basket with narrow end and broad mouth, '*raajuu*' is used to catch small fish in the rivers and streams. This gear is made of cane and bamboo. It is used by the womenfolk to fish. '*Raajuu*' is put down in the water and fixed in between two legs, and slowly with both hands the bottom of the stones are searched. Because of the disturbance caused, fish come out of their hideouts and enter the '*raajuu*'. The '*raajuu*' is then lifted up and the catch is put in a small bamboo basket called '*ginci*', which is tucked under the waist for carrying the catch. The mouth of the basket is covered with ferns and leaves to prevent the fish from coming out of the basket.

- '*Riigoo goonam*'

This method is also practiced by womenfolk. In this technique the (cylindrical gear with wide mouth and narrow end) are fixed in the river in a straight line in such a way that the whole width of the river from one bank to the other bank is covered and the corners are sufficiently covered with ferns and other shrubs, so that no space is left for the fish to escape. From a distance of about 10 metres ahead, standing facing the mouth of the '*raajuu*', women start moving the stones vigorously with the hands or with the help of a stick etc. so that the fish come out of its hideouts and make an escape towards the side where the '*raajuu*' are already fixed. Gradually the fish are herded towards the mouth of the '*raajuu*'. Once the fish enter the '*raajuu*', they are immediately lifted out of the water and the fish caught in the individual '*raajuu*' are taken. (Fig. 1)



Figure 1. '*Riigoo goonam*'

- '*Ta'kom 'gaanam*'

A traditional gear locally called *ta'kom* which is a hand-woven long funnel shaped wicker, is placed against the water current with some leaves inside it. A simple *ta'kom* can also be made of split bamboo. It can be kept overnight. As it is fixed against the water current, fish that enters a *ta'kom* could not turn around to get out.

- W`dwr`gaanam

It is a traditional basket weir fish trap about two meters long consisting of two wicker cones, one inside the other which is made in such a way that it is easy for the fish to get inside and hard to get out. It can be set as well as mobile. To catch fish, the trap is buried halfway in shallow water. Sometimes to lure the fish, baits are used. This is the most common gear used by men as it does not require guarding. It can be fixed in the evening or night and can be checked the next morning.



Figure 2. `Lwwpum

- `Lwwpum `pumnam

It is another traditional method of fishing where flat stones are piled underwater. This is done during the cold months when fish like to remain in holes. Choosing an appropriate site to pile the stones is the most important issue. A site with shallow water, medium current and sufficient sunlight is the most appropriate selection. Big flat stones are piled underwater in such a way that there is sufficient space inside for easy movement of fish. These piled stones are called `lwwpum (Fig.2). These piled stones are left undisturbed for 2-3 months, after which the fish gathered in the `lwwpum are harvested. A circular bamboo screen locally called *cwergoo* is used to cordon the `lwwpum. It is tightly fixed at the bottom so that fish cannot escape. From a small hole in the bamboo screen, w`dwr is fixed. Gradually, the piled stones are removed. It is practiced mainly from the month of October to February.

The Galos also use different types of weirs for fishing. The large fishing weir structure is constructed from wooden posts, wattle fences and with stones at times. The wooden stakes are woven together to create a barrier or temporary dam that traps fish while letting water pass through. All the openings are blocked with traps, baskets or net traps. These are buried halfway in shallow water. In stone weirs, stones are arranged into rectangular walls on the

edge of rivers. At regular intervals the wall is opened. Then the fisherman would wade into the walled trap and seize their catch. Today the government prohibits such massive trapping techniques during the fish breeding season.

Herbal poisoning

The use of fish stupefying plants is an old practice in the history of humankind all over the globe. Indigenous people using various fish poisons to catch fish are common among many tribes of North-East India. Fish poisons are extracted from several plant species and these are mixed with water which makes the fish numb.

Even Galo ethnic community tribes of Arunachal Pradesh, due to their close contact with nature for a long period of time have acquired the knowledge of usefulness of certain plants to be used as fish poisons. The use of fish stupefying plants has historically been used by many hunter-gatherer societies to stun fish, so that the fish become easy to collect by hand. These stupefied fish can be eaten by humans without any adverse reaction. Mostly the plant species used as fish poison by the tribal are harvested exclusively in the wild.

Use of herbs as fish stupefying agent (*Hi`bok Pynam*)

In this technique of fishing, all community members participate. It is performed in a festive mood. This technique requires group involvement where the male group constructs a barrier or a temporary blockage across a river using reeds, tree branches and stones which results in a drop in the water level downstream. For stupefying fish through usage of fish poisons, the selection of a suitable water body is very important. Poisoning or intoxication is generally done in shallow water bodies, slow flowing or stagnant water so that the concentrated poison can be more effective. When the flow of the water reduces, the leaves, roots, seeds or the bark of the plant which is to be used as poison is crushed into a pulpy mass and scattered in and around the base of rocks and into holes where fish might hide. A small opening is made in the blockade to let the water mix with the crushed material or it is simply thrown in the water so that it can thoroughly mix with the poison which starts affecting the fish right after 10 minutes and soon thereafter the fish starts floating belly upwards. The Galos use varieties of stupefying agents. *Tamo* is the common term for all the poisoned herbs. The use of these poisonous plants does not remain the same throughout the season as their effectiveness also changes. Oxor, `Diik-tamo are mostly used in winter whereas *Rwpwk*, `Talík, *Taataa`puraa*, *Tanwr*, `Rugdwk are used throughout the year. In the case of *Diik-tamo* bundles of this bush are laid on stones thereafter pounded and crushed and the juice is mixed well with the water which is done only by men. Women and tabooed people (like people bitten by snakes or who carried a dead body and have not completed a stipulated time period etc.) are strictly restricted from touching such items. It is believed that if such people touch the herbal poison, the poisoning capacity gets reduced. Two to three people beat the plant upstream and the rest of them who are not engaged in beating and mixing the plants gather downstream with `raajuu or even with bare hands to catch the floating fish that succumb to the poison. Thus, the fish poison makes the fish float in a dazed state and come to the surface of water from where they can be captured easily.

As the juice of the plant mingles with water the bio-active components present in the plant act on the fish and their activity slowly gets paralyzed. The fish become stupefied and they rise to the bank or the surface of the river, where they are caught with bare hands and thrown on to the bank or put inside a container which is tagged along the waist. The effect of the poison does not last for more than 20 or so minutes. Therefore, the stunned fish are collected immediately and any fish that were washed out of the pools or overlooked in the gathering

would recover and swim away, since the toxins merely stupefied the fish rather than killing them outright. The poison does not adversely change the taste and quality of fish. These stupefied fish can be eaten by humans without any adverse reaction (**Fig.3. and Fig.4.**).



Figure 3. Herbal Poisoning



Figure 4. Hi`bok Pynam

The government prohibits such massive trapping techniques during the fish breeding season. Indigenous techniques are eco-friendly and non-destructive at all other aquatic life forms. These traditional methods of fishing do not deplete the stock of fish in the river. The modern

indiscriminate poisoning of creeks and ponds, however, has caused a decline in fish stocks. Presently, modern equipment and techniques like chemical poisoning, blasting and electro fishing for catching fish are also used. Fish are killed by blasting dynamites in the river and then skimmed from the surface and from the bottom. These are responsible not only for fast depletion of the freshwater fish but also causes water pollution, therefore, the state government has very strict regulations regarding fishing.

Recording and study of the traditional fishing techniques lead to conclude that all the materials used in fishing are highly perishable. In most of the cases the ecological factors are manipulated or molded to the advantage of the fishermen. In both cases, there is hardly any chance of leaving any trace of any kind. Therefore, the study of the ethnographic data can help us to get an insight into the archaeological gap of the traditional fishing practices of the indigenous community.

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