

HABITAT WISE TRADITIONAL FISHING TECHNIQUE AND APPLIANCES USED BY *SANTHAL* OF DUMKA, JHARKHAND, INDIA.

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ABSTRACT

Dumka is the sub-capital of 28th newly formed state of Jharkhand, India. The district has 10 blocks mainly dominated by *Santhal* tribe other than Paharia, Oraon, Bedia etc. *Santhals* are mostly agriculturalist but due to many types of water bodies present in the district they catch fishes as hobby, for food, festival & livelihood. One of the main water resources is Mayurakshi river. Ancestral inherited knowledge of *Santhals* make them well acquainted with fishing techniques and appliances fit to habitat of fishes. This paper present new information about the correlation between habitat of freshwater native fishes and fishing appliances made of natural artefacts like grasses, bamboos etc. and places where appliances can be fit to fix for a good catch. Collecting pot made of bamboo had also be reported. Vernacular name (Santhali) of fish species is also been sought out along with English and Zoological name.

KEYWORDS– Dumka, *Santhal*, Fishing techniques.

1.INTRODUCTION

On 15th November 2000, Jharkhand became the 28th new state of Indian with Ranchi as its capital & Dumka as its sub-capital. Dumka district consists of 10 blocks namely Dumka, Masalia, Rameshwar, Shikari Para, Jama, Gopikandar, Kathikund, Jarmundi, Saraiyahat and Ramgarh. As per 2011 census, the total population of Dumka district is 13.21 lakh with more than 60% live in rural area. Scheduled Tribes population is 43% and Scheduled Caste population is about 6%. (Census 2011).

There are 32 tribal group found in Jharkhand state, *Santhal* tribes are mostly found in Dumka district. Dumka climate is humid subtropical. The average annual rainfall of Dumka is 1391.40mm.

1.1 Geographical Location:

The district Dumka lies between 23°45' to 24°38' North latitude and 86°20' to 87°75' East longitude (dumka.nic.in). It is surrounded by following districts of Jharkhand, Bihar & West Bengal.

- East : Pakur (Jharkhand) & Burdwan (West Bengal)
- West : Deoghar (Jharkhand)
- North : Sahibganj, Godda (Jharkhand) & Banka (Bihar)
- South : Jamtara (Jharkhand) & Burdwan (West Bengal)

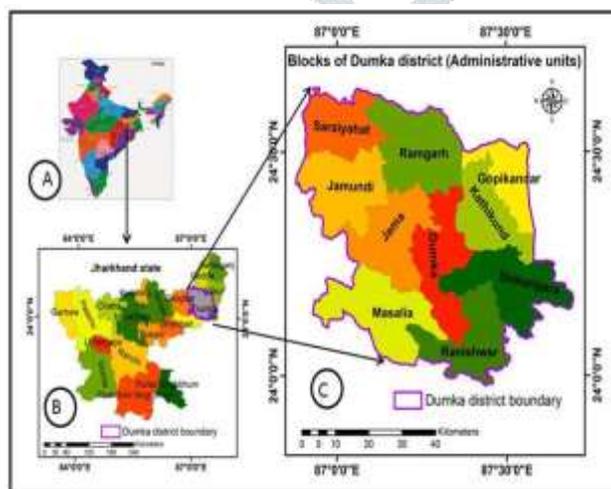


Figure 1: Study area: A-India, B- Jharkhand state and C- Dumka district

1.2 Water Resources:

Dumka district is drained by three rivers which are perennial named Mayurakshi, Brahmani and Bansloi and their tributaries.

1.2.1 Mayurakshi River – The main water resources is the Mayurakshi River also known as Moor river which originates from Trikut Hills, 16 K.M. from Deoghar make a confluence with the Bhagirathi river at Kalyanpur (West Bengal) and discharges in Hooghly river. The river is about 250 K.M. long (Wikipedia).

Famous Massanjor dam also named Canadian dam as it was made with collaboration of with Canada is built on this river.

The dam site has a catchment area of 1869 sq.km. The dam is a good source for big fishes but the dam is spread vastly in the nearby lands with mud, glasses, herbs etc. This marshy land is a very good habitat of smalls fishes, crabs, snail etc. One can see such spreads in Baskichak, Lakhikundi etc.

All these sites are about 10-15 Km. from Dumka town & provide good business of fresh native fishes in the local market & town also.

1.2.2 Brahmani River – Originates from Kathikund, Dumka district & meets Dwarka Rives in West Bengal. It has crystal clear water, when it passes through the forest, fishes can be seen in flowing water.

1.2.3 Bansloi River-The river initiates from the district of Sahibganj in Jharkhand from the hills of Bans. It run down to Pakur district of Jharkhand and moves to West Bengal and flow into Bhagirathi.

Many natural water bodies like lakes ponds, underground water holes, temporary pools and puddles during rainy season are found with variety of fishes

1.3 Ethnic People – *Santhals*, the largest populated tribe of Jharkhand (census 2011) & third largest populated tribe in India after Bhils & Gonds (Acharya, 2016). *Santhals* are the dominant inhabitants of Dumka district along with other tribes namely Paharia, Bedia, Korias, Karmali etc.

1.3.1 Livelihood – *Santhals* are mainly agriculturalist and in off season migrate to neighbouring states to work as daily labours to earn money. Again, before Monsoon, they return for paddy cropping. Fishing is their hobby and they are not professional fisherman. They do catch fishes mainly as hobby, public event, to maintain social custom of annual fishing (Bodding 2011), for cooking, sun drying some variety for off season and also for livelihood when they need money.

Earlier some work had been done on *Santhal* and traditional fishing gear of Birbhum, West Bengal (Samaidar, 2014) but there are few works on *Santhal* tribe and their traditional knowledge, practices about fishing in this area is done. Present study will document detail features of traditional fishing techniques & appliances used Habitat wise by *Santhal* tribe.

2. MATERIALS AND METHODS

The study was conducted for 12 months from January 2018 to 2019, covering almost all seasons in the district. Participatory Appraisal Method (PRA) was followed for the study. Data and information were collected from reversal of learning i.e., getting information more from chosen groups villagers were selected from village near the water bodies. Various question was asked to selected villagers to collect information like (a) the fish species mainly caught (b) its habitat (c) material used for making appliances (d) season and time of fishing (e) livelihood etc. Friendly rapport was established with village Pradhan, expert fisherman, village elders etc. About 110 villagers were cross questioned for validity of answers. Visit to the water resource where appliances were fixed was also done.

3. RESULTS AND DISCUSSIONS

Traditional method of fishing with unique appliances.

Santhal have inherited the traditional fishing system from their forefathers. They are well acquainted with fishing sites & know which fish species they will get from there. They use different appliances made mostly of natural artefacts like glasses bamboo's etc. Below are given some of the variety of fishes dwelling in certain places and with specific gear to catch it.

3.1 Mucu (Fig.-2): This particular fishing gear is applied in habitats such as shallow pond, swamps, running water, marshy places & paddy field in rainy season. The *Mucu* is like basket made of bamboo wider at one end than the other, both ends are open. It is plunged with the wider end down into the water over the fish and the hand is put in through the smaller opening & the fish is caught. Fishes caught are 1-1.5Kg.

3.2. Hunda jail (Fig.-3): It is a *Santhali* word means a net use to knock down with a stick by pressing against fish. It is like a big bag made of two bamboo stick crosses at the end where a person holds it. It gives a triangular form. This gear has a wider mouth made of nylon net and narrow long end. The man using this net keep its hand on bamboo on narrow end and press the front broad

base under the water to a bushy area because some fish dwell in bushy area. When the fish are knock down by the net they fall or enter the net, then the net is careful withdraw. Small fishes, crab's snail is also caught.

3.3. Ciyara (Fig-4): This gear is fixed in the over flowing water especially during raining season in pond, streams, paddy field etc. *Ciyara* is made of bamboo stick which are arranged vertically supported by two or three horizontal bamboo stick. Fish variety caught is usually *Puntius Sp.* (Swamp barb, pool barb, Ticto barb) (*Puthi*) family -cyprinidae, *Anabas testidineus (Tale hako)* (climbing perch, walking perch) family – Anabantidae. This is an air breathing species which can climb or walk with jerking motion and live outside the water for few hours. *Notopterus* (Asian knife fish) (*Bandhor, Citol*) family – Notopteridae. One can catch or get 1-4 Kg. of fish from this gear also.

3.4. Torodung (Fig-5a, 5b, 6a & 6b): This gear is useful in places where there is passage for running water just like narrow ditch. It is fixed usually in the paddy fields during rainy season. This trap is like weir basket. It is made of wicker work either circular or oval, 70-80 cm long. The lower end is tightly closed. The mouth is broad and furnished with teeth like structure to prevent fishes from slipping out of the trap. The gear is made up of rib of palm leaves *Borassas flabelliform* L, Kans ghas (grass) *Sachharium spontaneum* L, Split bamboo etc. Fish variety caught are mainly *Puntius Sp.* shrimps etc.

3.5. Barshi (Fig-7a & 7b): It is hook and line type of traditional fishing gear. It is made of nylon thread to one end of bamboo stick and a hook fixed to extreme free end of the thread. A little food material usually an earthworm with some wet wheat flour in hooked at one end. When the fish swallows the food and get tangled to the hook. The bobbling of water is the signal that prey is caught. Then the fisherman quickly pulls out the stick with a jerk & unfasten the fish to collecting pot. Variety of the fishes can be caught by this method but it depends solely on luck. One can catch big rohu (Rui) *Labeo rohita*, Catla, (*Catla catla*), *Heteropneustes* etc. Sometimes one has to be satisfied with small fishes only. Average yield may be (0.5 to 3 Kg.)

3.6 Chappa jail (Fig-8): Chappa jail is a *Santhali* word mean throwing net. It is used in pond, river, covering vast area in still or running water. The structure is like a cast net. Round shaped made of fine net only with weight of iron or stone at the bottom. It is thrown with full force water so that it can spread & cover a wide area. The weight sink to the bottom. All the fishes got covered under the net are trapped. The net is now pulled out with the help of rope. This net is used when a number of fishes are required especially applied by fisherman. All types of fishes big or small of the habitat can be caught by this technique.

4. Some practices and rituals among *Santhal* tribes regarding fishing.

4.1. Hakukatsum (Fig.9a): Fishing is a part of *Santhal* culture. Mostly on third day of Sorhi festival *Hakukatsum* is celebrated, *Haku* mean fish and *katsum* mean crabs. On this day this day male, female and children go outside to catch fish and crabs. On this day in every house fish are cooked.

4.2. Social event (Fig.9b & 9c): Fishing is also practise as social event in which the headman of village makes a public announcement that on such day fishing will done in this pond. All the people of that village or anyone interested to do fishing participate. Women generally do not enter into the deep water, but stand or move along the edges and try to catch fish or collect it by hand. All the people really enjoy it. After fishing is completed the collected fish mostly big size fishes are divided into three party, one part to headman of village, second to people involve in fishing and last part to villagers and third part to every household of that village.

Sorhi is one of the biggest of *Santhal* tribe, celebrated for three to five days. One day is dedicated for fishing know as *Hakukatsum*.

4.3. Ritual event (Fig.10) - On the last day of marriage a custom is practise known as *hako katsum* where the bride washes the feet of her family members. In return she gets lots of praise and gifts from family member.

There is scene created where fishing is occurring and there is lots of humour created in scene. Everyone tries to participate. It shows how fishing is related to social behaviour of *Santal* tribe

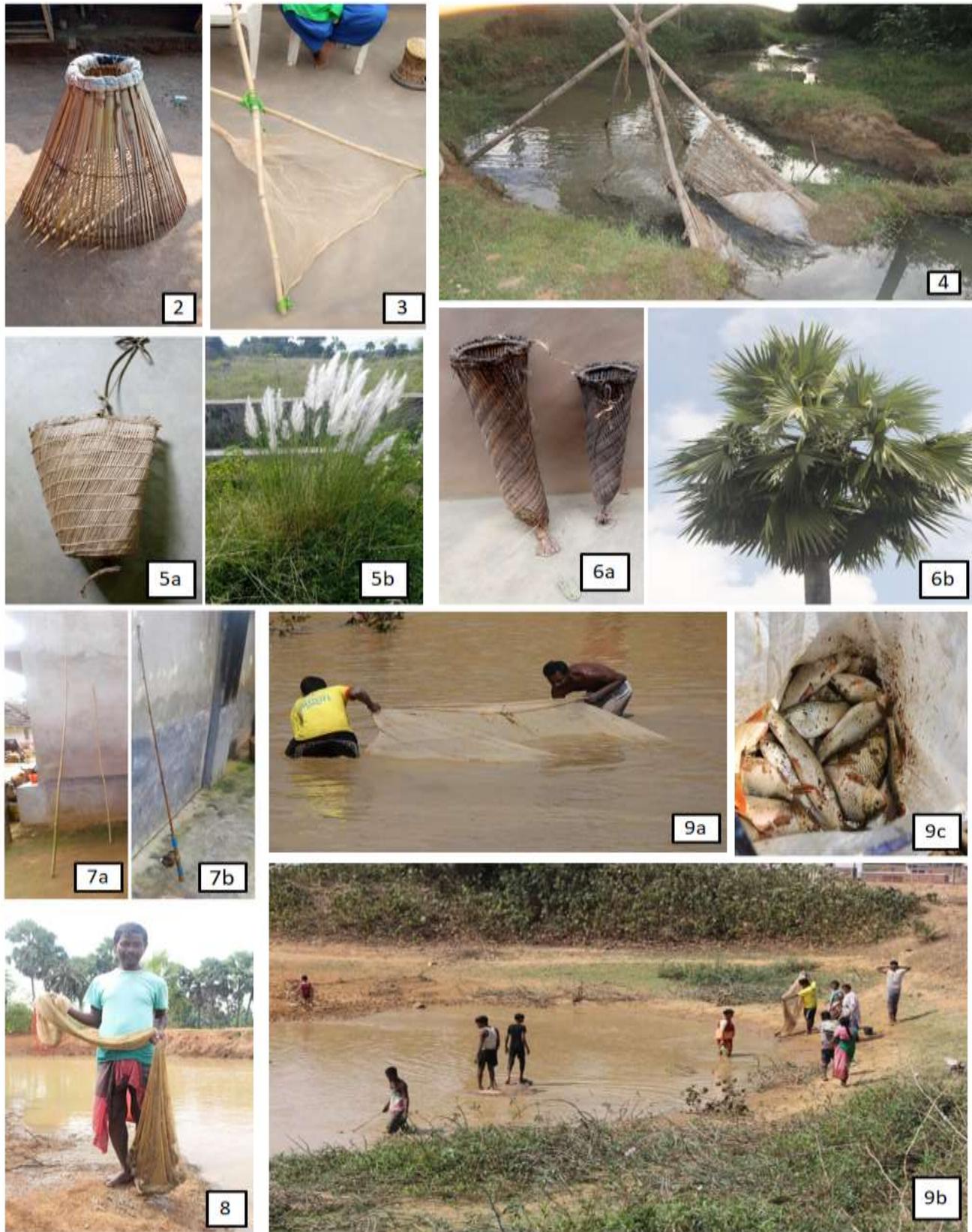


Fig.2 – Mucu; Fig.3 – Hunda jhali; Fig.4 – Ciyara; Fig.5a & 6a – Torodung; Fig.5b – Kans grass; Fig.6b – Leaves of palm
 Fig.7a & 7b – Barshi; Fig.8 – Chaapa jhali; Fig.9a,9b & 9c - Fishing practice as social event & fishes caught during fishing;



Fig.10 – *Katkum* ritual; Fig.11 – *Polygonum galbra* used for poisoning fishes; Fig.12a,12b & 12c – Bamboo basket & plastic bucket are used for collection of fishes.

4.4. By Poisoning (Fig.-11): Some fishes & crabs sought shelter under rocks cervices, creaks and grooves etc. in the water and it is impossible to catch it by the above-mentioned gears. Santhals know many herbs by crushing & putting it in water stupefies the fish & it come out & float on water & it is now easy to catch. Some leave of *Polygonum glabra* *Casearia tomentosa* etc. In running water, it is used vary rarely and in very low concentration. Mostly fished which are caught are collected in different basket made of bamboo, nowadays plastic bucket, basket, bag is also used. (Fig.-12a, 12b & 12c).

Some small size fish are dried in the sun and store it for future use. The dried fish are soaked in hot water before cooking it. Some fish mostly of *channa* Sp. (*Corgoc*, *Garai*) are kept in clay pot with water with some cooked rice for few days. The water of pot is changed every day. It helps them to store these fish live for few days. The big size fish are consumed or sold in the local market or gifted to their relatives.

5.CONCLUSION AND RECOMENDATION

Jharkhand is very rich in tribal communities and sufficient studies had not been conducted to document their traditional knowledge. Our survey indicates that *Santhal* tribe practice fishing as source of food, earning and fun.

Santhal tribe worship the nature, live very simple life, close to nature. They know the importance of biodiversity in their livelihood. Fishing is part of their life and culture. Fishing is only done to full fill there need they never exploit it. These fishing gears are mostly made of bamboo, grasses and net. Making and use of this net is passed on from one generation to other largely through oral tradition. Children learn from their parents. In every house at least any one type of fishing gear is found which shows how fishing is important part of their life and culture. Fishes trapped are *Channa sps.*, *Puntiussps*.

In rapid changing world, the use of these gears is decreasing in these tribal communities. These traditional fishing gears are being modified with nylon net for commercial fishing. Use of mosquito net are used, although this change is requirement of time but it may threat the existing knowledge in the society. The knowledge of Habitat of fish and corresponding use of fishing gears

These traditional indigenous fishing gear exhibit the *Santhals* tribe skill, innovation and their culture. It helps us to understand its cultural heritage. Therefore, detail of such gears needed to be documented and also preserved in the museum for future generation and studies.

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