



# CATHCHING PRAWN METHODS IN PRANITHA RIVER SIRONCHA, DISTRICT :GADCHIROLI (MS),INDIA

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## ABSTRACT

Fresh water prawn culture and catching methods of Pranitha river was investigated in the year 2022.Documentation of crafts and gears regarding prawn harvesting in river of India is scanty. This paper is an attempt to record the prawn fishery related indigenous technological knowledge in terms of prawn catching craft and gear used in a pranitha river in the sironcha district gadchiroli (MS). As many as 2 different types of crafts and 3 different gears were encountered during the summer survey of the river which is the ideal time for prawn harvesting. The craft were coracle and thermocol raft. The chief gear used in prawn catching was a box trap besides gill net and cast net.

**Keywords:** Pranitha river, Sironcha, Coracle, Gill net, Cast net, Box trap.

## 1. Introduction

Sironcha is tahsil place of the district gadchiroli.Pranitha river are the potential source for fisheries development in the district. In many of the rivers cultivable fishes are being stocked to enhance production. Culture trials of freshwater prawn have been carried out successfully in a pranitha river. The Pranitha river is the largest tributary of godavari river covering about 34% of its drainage basin conveying the combined waters of the penganga river, the wardha river, and the wainganga river. By virtue of its extensive network of tributaries, the river drains a large part of vidarbha region in maharashtra, as well as the southern slopes of the Satpura Range in southeast Madhya Pradesh. It flows along the border of in maharashtra and komaram bheem Asifabad district in Telangana. The Pranahita sub-basin is the seventh largest in India, measuring about 109,078 km<sup>2</sup>, making it larger than the individual basins of significant rivers such as the narmada river and kave. Every water body has its unique pattern of craft and gear. It also gives an indication about the economic condition of the fishermen community where they use locally available less costly materials to make substances of technological delight giving maximum return. In case of the river, details about gears used in fish catching were documented. Unfortunately, this indigenous technological knowledge on prawn catching was not well documented in rivers of India. Present study is an attempt to document the crafts and gears used in prawn catching in pranitha river of sironcha tahsil.

## 2. Materials and Methods

Freshwater prawn catching data along with information on prawn catching crafts and gears were collected from the pranitha river those involves in prawn catching in the pranitha river in 2022.Crafts and gears were measured and materials and descriptions were recorded from sampling station (Table: 1).

## 3. Discussion

The fishermen of these tahsil regularly to catch naturally available fish species in the reservoir particularly Carps (*Catla*, *Rohu*, *Mrigala*, *Labeo calbasu*, *Etrophus*, *Tilapia*, Catfishes (*Bagarius*, *Ompok*, *Mystus*, sps.), *Notopterus*, Murrells etc.



**Fig 1:** View of the Pranhita river

Freshwater prawn has become an important component of global aquaculture both in terms of quantity and value. The fishermen of pranhita river made an attempt and stocked fresh water prawn natural collection from pranhita river in tahsil sironcha during the year 2022. Catching of prawn from the pranhita river is difficult due to the vastness of the area and great depth. In the first fishermen used gill nets for prawn catching and faced many difficulties while catching of prawn due to full water level and great depth of the river. Later the fishermen learnt to use the rectangular framed box traps for prawn catching. They are using these indigenous made box traps to catch prawns in the rivers besides using of small mesh size gill nets and cast nets. Craft is coracle and thermocol raft. Brief discussion of individual crafts and gear used in pranhita river is given below.

#### 4. Crafts

**4.1 Coracle:** It is a saucer shaped country craft, was one of the major fishing craft used in the fisheries of peninsular India. Coracles were prepared by wrapping HDPP sheet over the split bamboo frame with the help of coal tar as an external covering. Internal diameter varied in a range of 2-3 m in inner depth of around 0.5 m. Apart from being simple and inexpensive, coracle was durable and had very good maneuverability in all types of waters. It was also a versatile craft used for laying and lifting of nets, besides navigation and transport of fish, prawn and other materials in inland water bodies.

**4.2 Thermocol raft:** Two to three rectangular slices of thermocol were tied with rope to splinted bamboo sticks to make a length of 6.5-7.5 feet with a width of 1.5 feet. This was covered by empty synthetic fertilizer bags and stitched on which single fisherman used to sit and go for prawn catching /fishing in the river.

**Table 1:** Prawn catching crafts and gear recorded in pranhita river sironcha.

| Name of the station     | Craft   |                | Gear     |                    |
|-------------------------|---------|----------------|----------|--------------------|
|                         | Major   | Minor          | Major    | Minor              |
| Pranhita river sironcha | Coracle | Thermocol raft | Box trap | Gill net, Cast net |

#### 5. Gears

**5.1 Gill net:** Different mesh size was observed in the gill net used in pranhita river . Though it was mostly meant for fishes, large sized prawns (*Macrobrachium malcolmsonii*) were also observed to be caught frequently.

**5.2 Cast net:** It was the most commonly observed gear being operated in this reservoir. The obvious reason was that it can be operated single handed. Different mesh and pocket size targeted to particular species were also encountered. The only medium size prawn was observed to make the total catch of some of the cast net operations.

**5.3 Box trap:** Among different fishing traps, box trap was one of the major gears used in the prawn fishery. Box trap was a cube shaped trap made of bamboo sticks knitted with some durable creepers. A bicuspid non-returning uni-directional vertical valve along the height of the trap was made to be used as an entrance for prawns. The sticks used to make this valve were thinner and knitted with nylon rope. The trap was kept in a vertical position under the water. A float made of thermocol piece was tied to the trap with cotton wire to help in locating the position of the trap.



**Fig 2:** Fishermen operating both gill net & cast net in river by coracle.



**Fig 3:** Fisherman on thermocol raft lifting the prawn trapper from the river.





**Fig 4:** Prawn trapped in box trap.

#### 6. Benefits of Box traps

The dimension of box traps is 1.75 length x 1.5 height x 1.5 width feet size and consist of only one-way entrance slits from both opposite sides and there is no way from inner to outside. These entrance slits allow the organism to enter inside and closes sticks automatically. These traps are cheap and made locally available materials. Each trap costs about Rs.150/- and durability is about 3-4 months of regular use in the water. About 80% of prawn catching is with the help of box traps only and remaining 20% catching with cast nets and gill nets in the river.



**Fig 5:** Front view of box trap.



**Fig 6:** Fisherman collecting the Prawn from the trapper.

## 7. Indigenous Technology

Fishermen are involved in a prawn catching activity regularly in the reiver with box traps. And also each fisherman uses 5-6 traps every day to catch prawns in the river. These traps are set in the reservoir with floaters for identification round the clock to prawn catch. Generally, the fisherman hangs to dry coconut pieces' to metal wire inside the trap was used as bait to lure the prawns. The prawn enters into these traps from both sides of one-way entrance slits and there is no way to escape from the trap after entering. In general one prawn was caught in unit effort, but 3-4 prawns were also observed in the catch of a trap. The fishermen collect the trapped prawn from these traps daily in the early morning and evening. On an average, each fisherman can catch about 1-3 kg per day. Though mostly prawns were being caught by it, sometimes other fishes like *Notopterus*, *Tilapia*, *Etroplus* etc. were also seen to be trapped.

The fishermen catch the grown prawn continuously for 3-5 months i.e. from February to June every year along with fish catches. The peak prawn catches are from March to May and minimum in February and June months. But the fish catch continues round the year by fishermen. The prawns caught from the river fetch a premium price and are in great demand. Presently, more than 100 fishermen, families are depending on the river for their livelihood from these Sironcha tahsil.





**Fig 7:** Size of Prawn from pranhita river



**Fig 8:** Fisherman lifted the trap from the water for prawn collection.

## 8. Conclusions

Considering the high export potential, the giant fresh water prawn, enjoys the immense potential for culture in pranhita river. Among the other medium sized rivers in the tahsil sironcha, this is the better prawn production yields in pranhita river.. Moreover, the uses of indigenously made rectangular traps are more economical and cost effective in prawn harvesting in pranhita river,economical importance.

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