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A traditional fishing method of Assam for catfishes using duck meat as an attractant

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An indigenous fishing method of River Kalong- Kapili, an important South bank tributary of Brahmaputra river is described. In this practice, small catfishes (*Mystus* sp) are caught in marginal areas of the river using raw meat of domestic duck (*Anas platyrhynchos,* Linnaeus, 1758) as an attractant. School of small catfishes attracted by the smell of the meat enters into small pits, where they are hand picked. Strong flavour of duck meat is used as an attractant in this innovative fishing method.

Keywords: Traditional fishing method, *Mystus* sp, Fish attractant, Duck meat, Assam, Kolong
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Assam is very rich in its aquatic resources. The mighty river Brahmaputra with 42 important tributaries flows for 640 km in the state[1]. River Kolong-Kapili is an important South bank tributary draining the Central Brahmaputra (agroclimatic) sub-zone of Assam. A survey of fish fauna of Brahmaputra in Assam revealed presence of 126 fish species belonging to 26 families[2]. Reports of Central Inland Fisheries Research Institute, Barrackpore revealed that catfishes (23.26%) predominated the catches of the river Brahmaputra, followed by major carps (17.85 %), minor carps (14.26%), hilsa (12.75%) and prawns (4.93%). The methods of fishing in the river Brahmaputra are diverse and the crafts & gears used are mostly indigenous[3]. Although a large number of indigenous fishing in Assam and its neighbouring states have been described, the use of attractants to catch fish in river Brahmaputra and its tributaries is yet to be documented[4-8]. In the communication, a traditional fishing method practiced in river Kolong–Kapili to catch small catfishes (*Mystus* sp) using meat of domestic duck (*Anas platyrhynchos*) is described. Species belonging to the catfish genus *Mystus* Scopoli reported from river Brahmaputra are *Mystus vittatus* (Bloch), *M. cavasius* (Hamilton-Buchanan), *M. bleekeri* (Day), *M. menonda* (Hamilton-Buchanan), *M. montanus* (Jerdon) and *M. tengara* (Hamilton- Buchanan)[9].

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Methodology

The study was conducted in river Kolong-Kapili, in Nagaon district (Central Brahmaputra Valley sub-zone) of Assam during 2004. Field surveys were conducted in the river stretch passing through Raha revenue circle of the district for observing operation of the fishing method and its catch composition. Secondary data on this traditional fishing practice and the knowledge system associated with it were also collected from fishers through focused group discussions[10,11].

Results and discussion

Fishers used small plank built wooden boats (5.3-7.0 m OAL) to perform the operation in the marginal areas of the river. The fishing activity is started in early morning hrs (5-6 am) and may continue throughout the day till sunset. The fishing was mainly practiced during non-rainy seasons (October to April). The highest catch per unit effort (CPUE) is in the month of April (2-3 kg). The implements used for the fishing practice were household small iron spade, steel eating plate (26 cm diameter) and harvesting pots (bamboo baskets). Raw meat of duck (*Anas platyrhynchos)* is used to attract the fishes. During the start of the operation, the fishers select a shallow area with mild water current near the river bank (Fig.1). They take a small piece of duck meat and squeeze it with fingers at a depth of about one foot below water

Fig.1 Selection of a suitable spot

Fig.2 Duck meat squeezing

Fig.3 Digging small pits in marginal areas

Fig. 4 Trapping the fishes using a steel plate

Fig. 5 Handpicking of trapped catfishes

Fig. 6 Catch from one operation

surface for 10-15 minutes (Fig.2). Small catfishes in schools gradually assemble in the pool. The schools are easily detected by barbells appearing the water surface. The fishes apparently become excited with the smell of the meat and sometimes even pinch hand of the fisher dispensing the meat with their pectoral spines.

After ensuring that a good number of fishes have gathered in the area, the fishers scrap only a part of bottom soil from the river bank to dig a small semi-circular pit of about 30 cm diameter using a small spade (Fig.3). The fishers with the meat piece in hand then shift the location of squeezing the meat to inside the pit. The fishes attracted by the meat ultimately enter the pit, after which the fishers block the narrow entrance to the pit with the help of a steel eating plate (about 26 cm diameter) (Fig.4). Thereafter, the fishes trapped in the pit are handpicked and kept in harvesting pot made of bamboo (*Bambusa* sp) (Fig.5). By using this method, fishers obtain catches of 250-300 gm of small catfishes (*Mystus* sp) comprising of 10-15 fishes per operation (Fig.6).The maximum catch (2-3 kg per operation) was obtained during the month of April. Out of the six species of small catfishes under the genus *Mystus* occuring in Assam, two species, *M. vittatus* (Bloch) and *M. cvasius* (Hamilton-Buchanan) were recorded during the present investigation[9]. In this operation, the fishers operated only once in a particular location, after which they move up stream or down stream the river for catching in another site.

The knowledge of fish behaviour by practical observation and experience often results in the development of very specific fishing methods[12]. The carnivorous and often scavangerous feeding behaviour of small catfishes has been effectively used by the local fishers for catching them with simple implements and little drudgery. Such innovative fishing methods ensured good fish catch from the river, where fishing with conventional fishing nets is difficult and ineffective because of large volume of water, strong water current and uneven bottom topography. In the present fishing method, the strong flavour of duck meat appears to have acted as a fish attractant. Attraction and concentrating fish into a range of fishing gear using chemical bait for stimulating the senses of smell and taste is part of development of fishing methods by traditional fishers all over the world[12]. However, the use of duck meat as a fish attractant appears to be limited to the study region.

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