

PRELIMINARY OBSERVATIONS ON THE AVAILABILITY OF TOR TOR  
(HAMILTON) FRY IN THE RIVER NARMADA NEAR HOSHANGABAD,  
MADHYA PRADESH

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ABSTRACT

Collection of mahseer (*Tor tor*) fry during December to January from three centres of river Narmada near Hoshangabad, viz. Joshipur ghat, Dungenwada ghat and Kherra ghat, using a special type of fry collection net is described. The physical features and physico-chemical conditions of the collection sites are also dealt with.

The mahseer (*Tor tor*), commonly known as tor mahseer is widely distributed along the foot hills of the Himalayas and is also known to occur in rivers of Assam and Madhya Pradesh (Hora, 1940; Macdonald, 1948). This species forms an outstanding fishery of commercial importance, contributing 46.5% of carp fishery and 28% of the total landings (1958-66) in the 48 kms stretch in river Narmada near Hoshangabad (Karamchandani *et al.*, 1967). This excellent sport fish and food fish is on the decline due to intense fishing and destruction of its breeding grounds. In order to conserve this fish, a viable culture practice need to be developed. Although the biology of this fish has been studied (Deesai, 1970), no work has been done on the location of its seed resources. One of the essential requirement of fish culture is quality seed. To assess the fry potential in Narmada river in the vicinity of Hoshangabad a preliminary survey to locate the fry collection centres was undertaken in December, 1984 and January, 1985.

Three potential fry collection centres were located at Joshipur ghat, Dungenwada ghat and Kherra ghat (Fig.1), is given in Table I. On an average the number of mahseer fry in the catch was 40 to 60% and the rest were unwanted fish (Table I). Out of three centres located, Dungenwada ghat was the best collection centre where 70% of the total mahseer fry were collected.

The mahseer fry were collected by means of a fry drag net (1/16" mesh), 30 meters long. The rope line of 50 meters length was fitted with dry date palm leaflets at 15 cm intervals. The rope was provided with small stones as sinkers at

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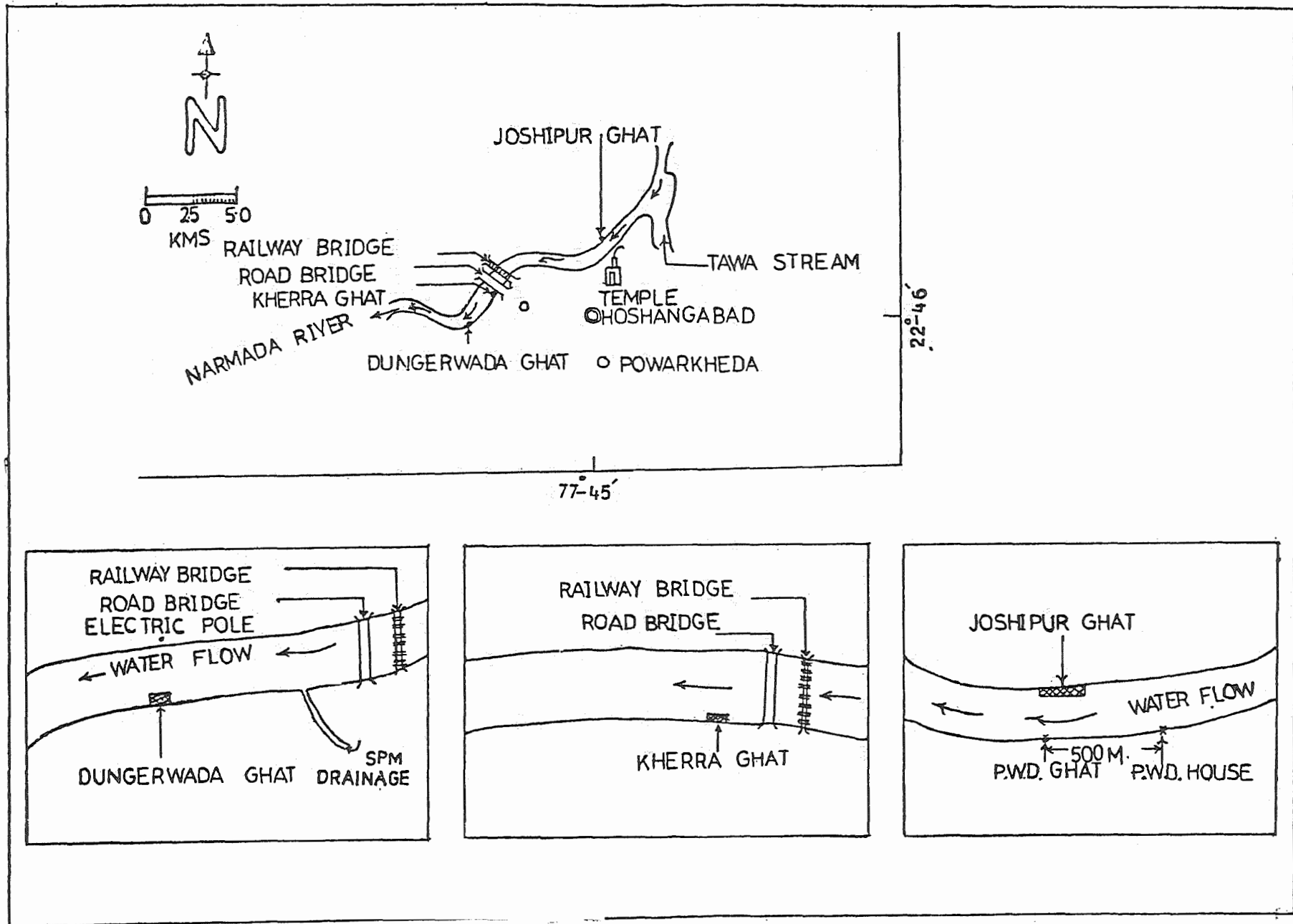


Fig. 1 : Fry collection centres of *Tor tor* in river Narmada.

Table I. Details of the fry collection at different centres in river Narmada

Date	Place	% of mahseer in the catch	No. of mahseer per sq. meter	No. of fry collected
24.12.84	Joshipur ghat	10-15	0.4	350
25.12.84	Joshipur ghat	10-15	0.5	200
26.12.84	Kherra ghat	80-90	4.1	1450
28.12.84	Kherra ghat	80-90	4.1	600
18.1.85	Dungerwada ghat	60-70	1.2	600
21.1.85	Dungerwada ghat	45-60	2.0	700
24.1.85	Dungerwada ghat	40-50	3.2	1800

an interval of 1 meter each. By this method the rope remained stretched along the bottom. The net was fixed along the water current in marginal waters. The rope line was fixed at the end of the net while the other end spread to encircle the area of about 500 sq. meters, thus covering the seed. Then the rope line was slowly pulled till it reached the foot rope of the collection net (Fig.2).

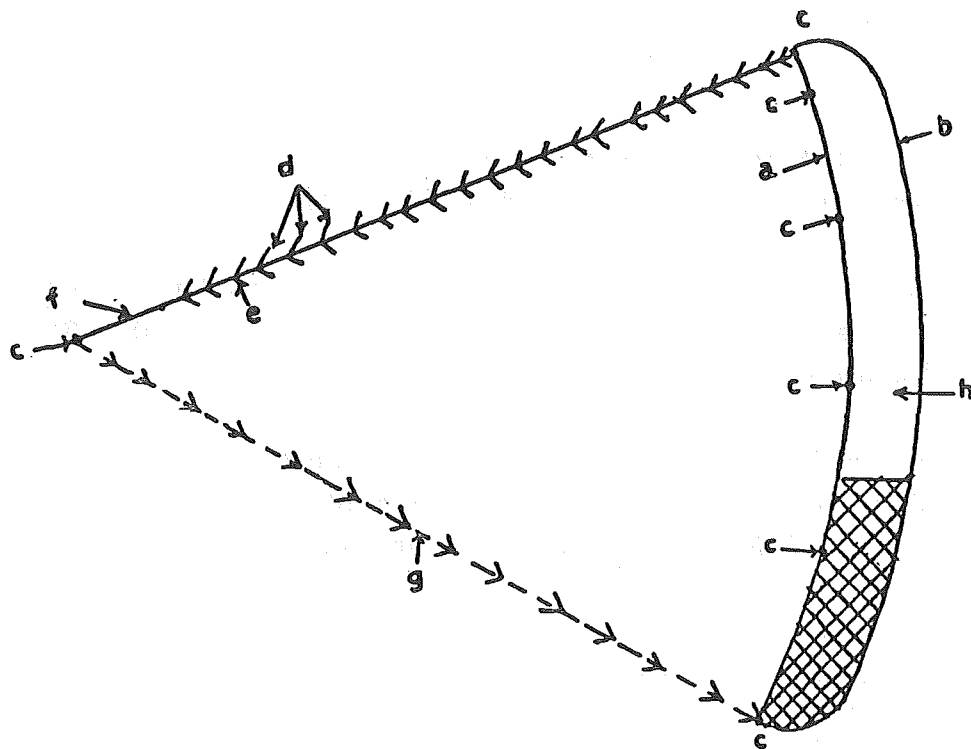


Fig. 2: Fry drag net used for collection of *Tor tor* in the river Narmada. a) foot rope, b) head rope, c) person, d) dry date palm leaflets, e) small stones, f) rope, g) direction of rope dragging and h) fry drag net.

The fry remained at the bottom of the river in marginal waters where the water was shallow and sandy. The depth range of water was 0.5 to 1.2 meters with moderate current and without weeds or algae. The fry was observed to avoid weeds and algae as also observed by Desai (1970). The Juveniles feed more on molluscs, insects and miscellaneous items (92.5%) than on macrovegetation and filamentous algae (7.5%).

Water temperature ranged from 15.6 to 22.8°C; dissolved oxygen 9.02 to 9.44 ppm; free carbon dioxide nil; total alkalinity 183.2 to 202.4 ppm; and, pH 8.2 to 8.4. It was observed that when the water temperature was about 25°C, the fry were not found in shallow waters. They might have migrated to deep waters where it was difficult to collect.

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#### REFERENCES

- Desai, V.R. 1970. Studies on the fishery and biology of *Tor tor* (Hamilton) from river Narmada. I. Food and feeding habits, *J.Ind.Fish.Soc.India*. 2 : 101-112.
- Hora S.L. 1940. The game fishes of India (ix). The Mahseer or large scaled barbels of India (2). The Tor mahseer, *Barbus (Tor) tor* (Hamilton). *J. Bomb. Nat. Hist. Soc.* 41(3). 518-25.
- Karamchandani, S.J., Desai V.R., Pisolkar M.D. and Bhatnagar G.K. 1967. Biological investigations on the fish and fisheries of Narmada river (1958-1966). *Bull.Cen.Intl.Fish.Res.Inst.* Barrackpore, 10 : 1-39.
- Macdonald, A. st. J. 1948. Circumventing the Mahseer and other sporting fish in India and Burma. *J.Bomb.Nat.Hist.Soc.*, Bombay : 306 pp.