

Chocolate mahseer, *Neolissochilus hexagonolepis* (McClelland, 1839)

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- Chocolate mahseer (*Neolissochilus hexagonolepis*) is a highly esteemed food and game fish, found only in North Eastern Himalayan region particularly in Meghalaya. Fish is considered as a threatened species and hence needs special attention to conserve for increasing its population in the natural water bodies. (IUCN 2016).
- Fish is a batch spawner; reported breeding season is in January-February, May-June and July-September.
- During the spawning season mature male are identified by oozing milt on slight pressure applying on the belly where as in females show a fully bulged and soft abdomen with a slightly swollen pinkish vent and anal fin.
- For captive breeding, the brood stock of 600-800 g can be raised at temperature range of 18-22⁰C in concrete tanks @ 2-3 nos/m² with provision of good water filtration system in crystal clear water, quality feed (30-40% protein), with regular health checks.
- With good management practice this species naturally spawn in aquarium condition multiple times without use of any synthetic hormone.
- Also, a single dose of the hormones viz. ovaprim or ovatide is administered intramuscularly to both male (0.2-0.3 ml/kg body weight) and female (0.6 ml/kg body weight) for ovulation where natural spawning does not occur.
- Stripping operations usually undertaken when the female showed signs of ovulation, generally at intervals of 10-16 hours following injection. The fecundity of the fish is very low (3500 eggs/ kg body weight).
- The ova are collected in a small dry tray with repeated stripping process several times till all the ovulated eggs were released followed by males stripped in the same manner and milt is mixed with ova by a feather for about 1-2minutes, gradually added with water for fertilization of eggs and washer with clean water for 3-4 times.
- The fertilized eggs are demersal, white in colour and have a diameter of 2.0- 2.5mm. The fertilized eggs are incubated in perforated hatching trays and placed in a long tub where oxygen rich water flow is maintained throughout the incubation period. Hatching took place within 50- 60 hours at 20-20⁰C, newly hatched larvae is 10 to 11.0mm in length and transparent golden yellow in colour. The length of free swimming larva is 1.4-1.6 cm. At this stage the larva started feeding.
- Once yolk sac absorption takes place, the spawn are reared in a closed re-circulatory tanks equipped with filtration system @2000-3000 spawn/m³for about 15 days, during which they are fed with yolk suspension for 2-4 days, there after fed on formulated wet feed until the fry stage.
- Further the fry are reared in outdoor fingerling rearing tanks or ponds.
- With good water quality management and efficient water filtration system a survival of 80-90% is achieved during nursery rearing.

- Chocolate mahseer is a batch spawner. With good brood stock management, hatching and rearing practices, mass scale seed production of chocolate mahseer is possible round the year which in turn will help in conservation and aquaculture practices in hilly region.

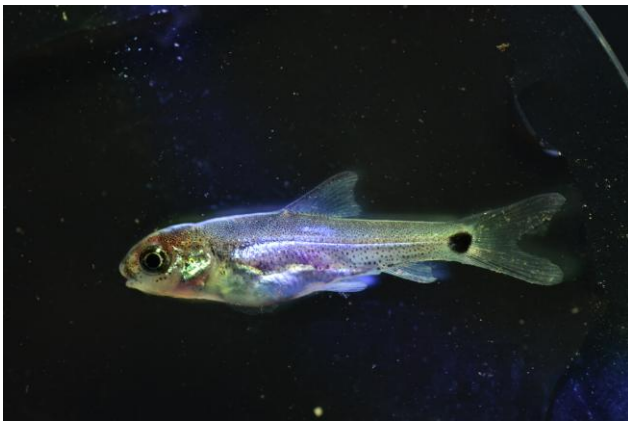
Photographs



Chocolate mahseer hatchlings



Chocolate mahseer brood stock



Chocolate fry



Chocolate mahseer fry in tank