

Indian Hill Trout *Barilius bendelisis* (Hamilton, 1807)

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- *Barilius bendelisis* (Hamilton, 1807), commonly known as Indian Hill Trout distributed throughout India, Pakistan, Nepal, Bhutan, Bangladesh, Sri Lanka, Myanmar and Thailand. It is also considered as one of the principal commercial hill stream fishes in most of the streams and rivers of eastern Himalaya, Ganga region and Arunachal Pradesh.
- This is a demanding food fish and has a very good potential in ornamental fish industry. Breeding season is March to May depending on environmental temperature.
- For captive breeding, the brood stock of 15-20 g can be raised at temperature range of 20-25⁰C in concrete tanks @ 30-50 nos/m² with provision of good water filtration system in crystal clear water, quality feed with regular health checks.
- Both sexes attain sexual maturity in controlled conditions. Breeding behaviour of this species is recorded in aquarium. Males shows territorial behaviour. Mostly dominating male participate in courtship with several females.
- Species shows well developed sexual dimorphism characters during breeding period. Males are brighter in colour, develops breeding tubercles on snout and lower jaw region. Operculum is more elongated and serrated in males. Female are dull in coloration and have smooth snout.
- Courtship takes place above the nest. Female releases the eggs in pits that is subsequently fertilized by the dominant male. Male buried the eggs deeply into the gravel pits by vibrating its tail and anal fin. Parental care is not shown by the fishes.
- Incubation of eggs take place in the nest pits and after 3-4 days free swimming hatchlings come out from the nest.
- With good management practice this species naturally spawn in captivity and multiple breeding is observed in the month of January to May and August to December.
- The fecundity of the fish is very low (500-800 nos.) per average size female of 20g.
- The fertilized eggs are demersal, pale yellow in colour and have a diameter of 2.1 to 2.5mm in size. The fertilized eggs are incubated in perforated hatching trays that placed in a glass aquarium equipped with water filtration system. Sand gravel act as a substrate for biological filter to eliminate the toxic ammonia generated from metabolic activities of fish, decomposition of fecal matter and excess food.
- Hatching took place within 50-60 hours at 20-22⁰C, newly hatched larvae is 9 to 12.0mm in length and transparent golden yellow in colour.
- After yolk sac is absorbed, the spawn are reared in closed re-circulatory tanks equipped with filtration system @2000-3000 spawn/m³ for about 15 days, in which they are fed with poultry egg yolk suspension for 2-4 days, there after fed on formulated wet feed until the fry stage.
- With good water quality management and efficient water filtration system a survival of 80-90% is achieved during the larval and fingerling rearing.

- *Barilius bendelisis* is a batch spawner. With good brood stock management, hatching and rearing practices, mass scale seed production of *Barilius bendelisis* is possible round the year which in turn will help in conservation of the fish in natural habitat.

Photographs



Brood stock in aquarium



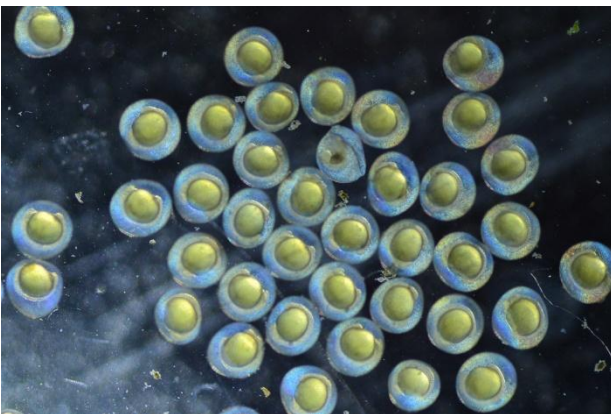
Courtship behaviour in aquarium



Male showing tubercle on snout



Female



Fertilized eggs



Hatchlings