

## Occurrence of *Kryptoglanis shajii*, an enigmatic subterranean-spring catfish (Siluriformes, *Incertae sedis*) in the channels of paddy fields

*Kryptoglanis shajii* is a recently discovered catfish from the extreme western side of the Western Ghats, Chalakudy in Thrissur District, Kerala, India<sup>1</sup>. This fish is called 'enigmatic catfish' due to its habitat, the subterranean streams<sup>1</sup>. The only available description of this species is based on specimens collected from a newly dug artificial well (depth 6 m), where these fishes were found to enter with groundwater flowing from crevices in the laterite<sup>1</sup>. The salient features of *K. shajii* are the absence of dorsal fin, subcutaneous eyes, upward-directed mouth with distinctly projecting lower jaw, four pairs of barbells and fan-shaped pectoral fins without any spines. In this species, anal fin is completely confluent with caudal fin and the resultant long fin has 70–74 fin rays<sup>1</sup>.

This subterranean fish was observed inhabiting an open water body during a survey conducted in September 2011, over the paddy fields and water sources feeding paddy fields, at Perambra (10.34°N, 76.30°E), Thrissur District. These mildly flowing waterways, with an average width of 60 cm and water depth ranging from 40 to 70 cm, converged into a nearby pond located in the paddy fields. *K. shajii* was found mainly hiding between the submerged vegetation present on the sides of the water body. The aquatic and semi-aquatic plants, roots of trees and decaying litter provided refuge to this fish, as well as reduced the stress of water flow. This fish was dark red-

dish-brown in colour to perfectly camouflage with the habitat. This fish was abundant in this site as it was available in almost all scoops of the hand net. Only five fishes were collected live and two were fixed in formalin and preserved in 75% ethyl alcohol for further analysis. Other individuals caught in the net while collecting other species were released safely back to their natural habitat. Individuals ranging in size from 290 to 580 mm were available in this site.

This fish was extremely photophobic and spent most of the time under the shades provided inside the aquarium and came out of the shelter for exploration and feeding when it was kept in darkness. *K. shajii* was found feeding on minced earthworm and mosquito larvae, which shows that in natural water body this fish may be preying on small aquatic animals<sup>1</sup>. Another food item it preferred was crumbles of boiled egg. This fish was available in another collection conducted on the same site during October 2011, though the water level was very low (15–20 cm).

Presence of this subterranean fish in an open water body shows that either this fish represented by epigeal and hypogeal forms, or it may be migrating from the subterranean channels to the surface water through the temporary springs formed during monsoon. The basis behind the second hypothesis is that the distance between the site of the present collection and the well from which it has

been collected earlier is not more than 300 m, and channels of this area receive temporary monsoon springs originating from the nearby highland.

The western periphery of the Western Ghats in Kerala has many subterranean conduits due to the lateritic nature of the subsurface material<sup>1</sup>, and such subterranean streams and channels may be providing shelter for many unknown subterranean vertebrates and invertebrates. The presence of another triglomorph fish, *Horaglanis alikunhii* in a well of Parappukkara, an area nearly 13 km away from the present site of collection<sup>2</sup>, and collection of *K. shajii* from another well<sup>1</sup> located within a distance of 2 km substantiate this argument. The less-explored habitat from which this fish was collected requires immediate attention because paddy fields in this area are under constant threat of extermination due to anthropogenic activities.

1. Vincent, M. and Thomas, K. J., *Ichthyol. Res.*, 2011, **58**, 161–165.
2. Babu, K. K. S. and Nayar, C. K. G., *J. Bombay Nat. Hist. Soc.*, 2004, **101**, 296–298.

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*Kryptoglanis shajii*

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