

Fading Fins, Flowing Hopes: A Perception Study on Denison's Barb and its Riverine System - Part 3

As part of the project 'Saving Denise and Friends' of LivelyWaters! programme of Zooreach in partnership with Shoal, we explored another important river in Kerala, the Valapattanam River, which eventually led us to the Iritty/Bavali River. The Valapattanam River is the longest river in Kannur District, originating from the Brahmagiri Hills of the Western Ghats in Karnataka. Initially, it flows eastward through the hilly Malenadu region before turning sharply west, cutting through deep valleys and finally descending into the plains of Kannur. Along its course, it passes through Manikkadavu, Vattiyamthode, Vayathur, Nuchiyad, Chamathachal, Uchatthu Kayam (where the Payyavoor River joins), Madambam, Sreekandapuram, Chengalayi, Mungam, Koyyam (where the Bavali/Iritty River joins), and several other towns, before reaching the Arabian Sea at Azhikkal, where the Kuppam River joins the Valapattanam River.

We began our journey on 6 June 2025, reaching Kannur and choosing to stay in Sreekandapuram since the river passes near the town. On the first day, we visited Manikkadavu, where the river flows from the forested areas before entering human settlements. We carried out perception studies from Manikkadavu to Vattiyamthode. While most locals knew of 'Miss Kerala' *Sahyadria denisonii* through

media, only a few people had actually seen it, mainly during summers when water levels drop and fish get trapped inside water pools. One villager even suspected we were involved in exporting the species, but after explaining our conservation work, we gained his trust.

Fishing was minimal here, mostly by the tribal community. Earlier, dynamite was used, though now stopped; however, poison fishing with Thurishu (local name for copper sulphate) still occurs during summer. Locals highlighted other threats, such as excessive bridge construction, quarry effluents directly entering the river, and declining fish populations since quarrying began. We visited near this quarry and realised it was too close to the river and the forest of the Brahmagiri Wildlife Sanctuary. One individual recalled seeing the fish in forest stretches during summer while fishing. Others pointed to reduced rainfall, loss of natural springs, and seasonal fragmentation of the river as changes occurring over a course of years eventually affecting the riverine system.





on his advice, we travelled from Nuchiyad-Ullikkal to Koottupuzha New Bridge near the Kerala–Karnataka border. Though access was difficult due to steep terrain, we reached Charal, where the river split into fast and slow flowing channels. Here, we finally observed the Miss Kerala fish (1–2 inches long).

Excited, we continued

On the second day, we studied the stretch from Payyavoor to Nuchiyad. Most people recognized the fish from photographs, acknowledging its earlier presence but describing it as now very rare. Many suggested that the variety and number of fish that they used to see in their childhood in the river are no longer seen in the river.

They also noted a sharp decline in deep summer pools, river fragmentation, and reduced water-holding capacity. Despite panchayats releasing hatchlings annually, naturally occurring populations seemed to have disappeared. Locals also recalled past harmful fishing practices by outsiders, though these are now restricted. Even deforestation along river sides, changing rainfall, dams, and human alterations such as rerouting and channel restructuring were repeatedly cited as causes.

Even after two days, we found no fish in this stretch, though some suggested its presence in the Iritty/Bavali River. Our earlier pilot data, however, had not recorded it there. On the third day, a fisherman confirmed the species' presence in the Iritty River near the dam and shared knowledge of its aquarium trade. Acting

downstream, where locals confirmed both the fish's presence and its ongoing (though reduced) capture for the aquarium trade.

Observations by the locals also included increased river width due to clay and sand deposition, vanishing deep pools, quarry effluent release directly to the river, and fishing using hooks, Thandadi nets (Local name of a special net), and occasionally poison and electrofishing.





On the fourth day, we surveyed the Bavali River from Iritty to Kottiyoor. Locals near Iritty town knew the fish but had not seen it in the reservoir of Pazhassi Dam. Further upstream at Kottiyoor, however, we observed the species directly.

Fishing here was mostly done with nets targeting larger species, but older residents recalled people once catching Miss Kerala fish in packets. At Kottiyoor temple, preparations for the annual Vysakha Mahotsavam were underway, and the riverbanks were crowded with pilgrims. Sadly, we also saw plastics and pollutants trapped along the banks. Locals confirmed that a lot of waste is dumped in the river, and now no one uses the river as compared to earlier days, along with sand mining also a major threat.



Before concluding, we visited Kanjirapuzha, a narrow Bavali tributary, and made a surprising discovery: a large shoal of *S. denisonii* (40–50 individuals, 10–11 cm long). This was the first time we encountered such a thriving population. Interestingly, locals were unaware of its presence, suggesting it was relatively undisturbed. One villager mentioned noticing them only in the past six years, raising questions: could this reflect breeding migration? Habitat shifts following the 2018 floods and landslides? Or improved suitability of these stretches due to ecological changes? However, even here, the construction of bridges, side walls, and effluent discharge posed looming threats.

On the last day, we visited Iritty and moved downstream to the confluence of the Bavali and Valapattanam rivers at Munambu Kadavu, Koyyam. Near the Pazhassi Dam reservoir, we met a few fishermen who confirmed that the species is absent in the reservoir and can only be found upstream.

In our view, along the Valapattanam River, *S. denisonii* has become extremely rare, while in the Iritty, Bavali, and particularly Kanjirapuzha



tributary, viable populations still survive. Conservation requires urgent action-raising awareness, regulating harmful practices, and protecting habitats. In particular, the undisturbed Kanjirapuzha shoal may represent one of the few remaining wild populations, hidden from traders and therefore highly valuable for conservation. With collaborative efforts and sustainable river management, these populations can be safeguarded, eventually leading to a more ecologically sustainable riverine system. It's important to note that these insights are based on preliminary observations from various study areas in a location and have not yet been thematically analysed in depth.



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