

## **Fading Fins, Flowing Hopes: A Perception Study on Denison's Barb and its Riverine System - Part 2**

*After completing our initial perception studies along the Iruvazhanjippuzha River, we planned to explore another important river in Kerala- the Payaswini River, also known as the Chandragiri River. This river originates in the Talakaveri Wildlife Sanctuary in Karnataka's Western Ghats and flows through towns such as Adyadka, Sullia, Adoor, Muliya, Chengala, Kasaragod, and finally joins the Arabian Sea. It is the longest river in the Kasaragod District of Kerala.*

*We began our journey on 19 May 2025 and reached Kasaragod, choosing to stay in Adoor, which was centrally located for our fieldwork. Since the river flows through both Karnataka and Kerala, we planned to spend three days in each state. Language barriers were a challenge, but manageable – Koshik spoke Tulu and Kannada, useful in Sullia and nearby villages of Karnataka while Sidharthan, being a Malayali, handled communication in Kerala. This division helped us collect meaningful data from locals during our perception study.*

In the Sullia region, local communities confirmed the presence of *Sahyadria denisonii*—commonly known as “Miss Kerala”—and noted that the fish had historically been targeted for trade.

## Zooreach activities

Previously, this was a part-time occupation for many residents, and during the fishing ban in Kerala, teams from the state would visit Sullia to collect the fish for trade. Interestingly, many locals involved in earlier fishing activities were misled by middlemen who claimed the fish were exported for medicinal purposes to avoid disclosing trade specifics. While the trade has declined, fishing still occurs during the summer when water levels are low. Unfortunately, this seasonal reduction in water levels leads to water scarcity for domestic and agricultural use. Few claim unregulated water extraction using electric pumps run continuously due to free electricity schemes leads to water scarcity.

Locals also expressed concern about declining fish populations and attributed this to overfishing, water extraction, and

environmental disturbances like the 2018 Madikeri landslide, which they believe altered the river's ecology. The use of JCBs to clear riverbeds and create deep pools was also reported, alongside small-scale sand mining.

Most of the fishermen typically use nets and, occasionally, illegal methods like dynamite fishing. They suggest that the Denison Barb is found in both shallow and deep waters, with larger individuals preferring deep pools during the monsoon. Specific nets are used to minimise damage to the fish, as even minor injuries reduce their market value. People who used to transporting these fish said that transportation of these fish is risky, with slight changes in temperature



or water quality often resulting in mass deaths. The high mortality, combined with falling prices and the costs of hiring labourers (Rs. 200–300 per person daily plus meals), has made the trade increasingly unviable. Earlier the fish longer than 2 inches fetched Rs. 40–50, while smaller ones sold for Rs. 25. These prices have since plummeted, further discouraging traders.

On the third day of our visit, we happened to meet a local dealer involved in the trade of these fish. He shared valuable insights from a trader's perspective. According to him, the fish can be found from Koyanadu near Sampaje in Madikeri taluk to Aloor in Kasaragod taluk. He observed that during the monsoon, the fish are found in deep pools over 3 m deep, while in summer, they move closer to the riverbanks due to reduced water levels. These fish do not require a specific habitat and are found throughout the river. He mentioned that traders usually use a special type of net in slow-flowing or stagnant water to catch the fish alive.

However, in Kallugundi, harmful practices like using poison and dynamite are also used to catch them for consumption, which causes diseases among the fish.



## Zooreach activities

The species reportedly breeds twice a year—June and December—during which he avoids fishing. He also pointed out several major threats to the fish and the river ecosystem, backed by photos and videos. The most serious issues include: the release of untreated effluents from the Centrifuge Latex Factory and the Crepe Rubber Factory of the Karnataka Forest Development Corporation, which led to a mass fish death just three months ago; direct discharge of wastewater from engineering and medical institutions; harmful chemicals from plantations and farms; over-extraction of water using electric pumps that run continuously due to free electricity, leading to dry riverbeds in summer; and illegal sand mining in some areas. He emphasized that pollution is the biggest threat to the fish and river, and instead of enforcing a complete ban, sustainable fishing should be promoted by educating the local community.

On the 4<sup>th</sup> day, we began our perception studies from Aloor Village of Kerala, where the Payaswini and Kudumbur rivers converge near the Aloor Dam. Local fishermen confirmed that *Sahyadria denisonii* is absent here, likely due to increased salinity from seawater intrusion. Additionally, one local suggests that some fishermen have installed nets near the One elderly resident recalled that the

estuary, blocking upstream fish migration, which is a recent and troubling practice. Few locals also noted an increase in otter and cormorant populations, which they believe contribute to fish depletion.



river never dried up in summers in the past; its current seasonal desiccation has intensified overfishing. Others pointed to increased riverbank erosion after dam construction, widening the river and altering its flow. A few locals have also informed us about the conservation of Palappuvan/Bhimanama in the Payaswini River. Palappuvan/Bhimanama is the name given by the locals for the Asian Giant Softshell Turtle, which is the largest freshwater turtle in the world. This turtle is 'Critically Endangered' and listed under Schedule I of the Indian Wildlife Protection Act, 1972. We were happy to know that the conservation of this crucial species and their nesting habitat is ongoing with the involvement of the locals along the river stretch. This conservation effort indirectly helps many other species' conservation in the river.

In our view, the Sullia region poses a more serious threat to the Miss Kerala fish due to intense overfishing, pollution, and small-scale sand mining. While the river's stretch through forested areas remains relatively safe and protected, conservation challenges persist in more populated regions.



Encouragingly, many local communities show a positive attitude toward protecting the river, recognising their dependence on it for water. However, with proper awareness and collaborative efforts, a more ecologically sustainable riverine system can be achieved. It's important to note that these insights are based on preliminary observations from a single study area and have not yet been thematically analysed in depth. Although the hope of conservation being a success will depend on the combined efforts of local communities, government agencies, NGOs, and all stakeholders working together for the protection of the river and its unique biodiversity.



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