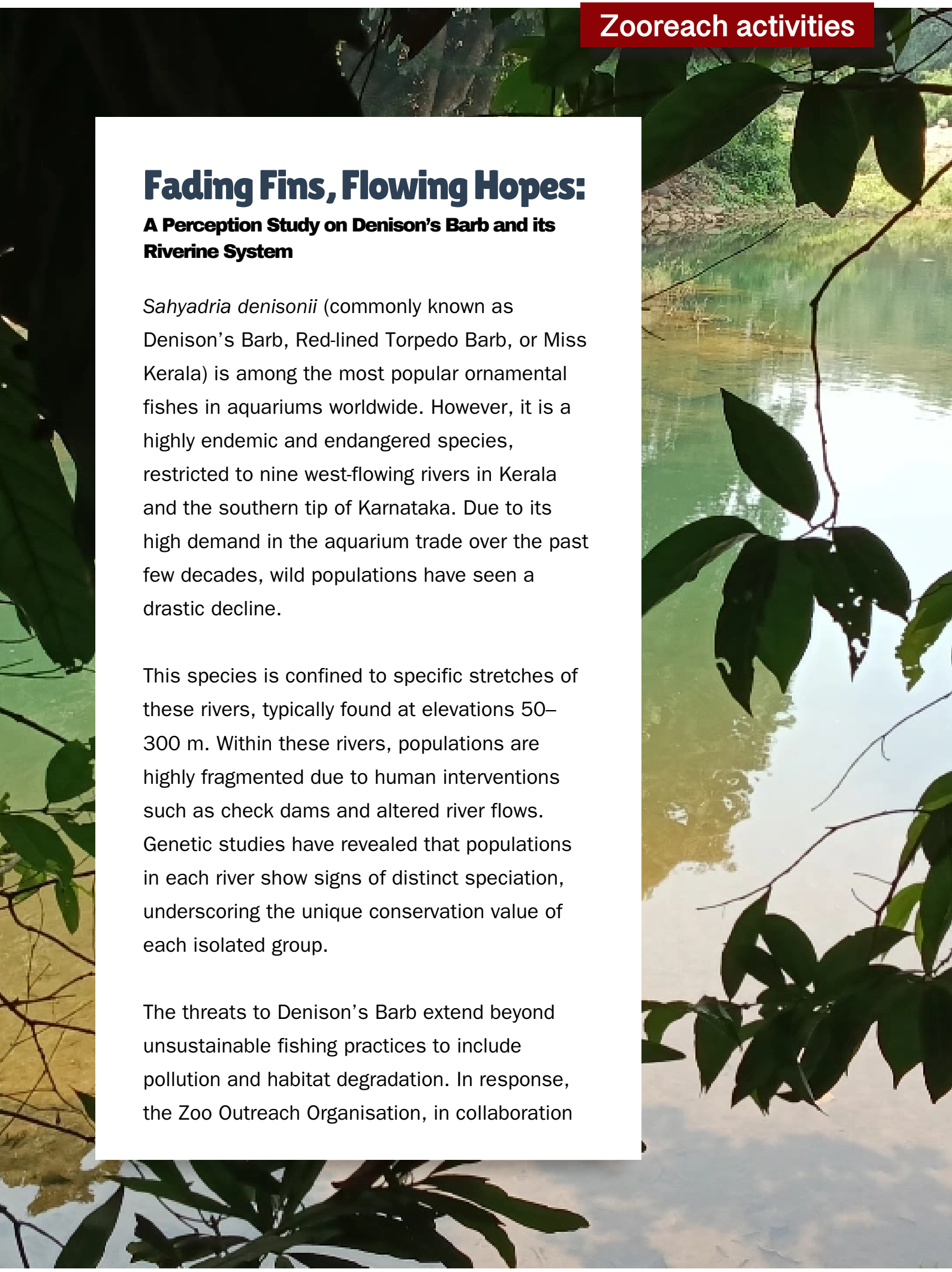

Fading Fins, Flowing Hopes:

A Perception Study on Denison's Barb and its Riverine System

Sahyadria denisonii (commonly known as Denison's Barb, Red-lined Torpedo Barb, or Miss Kerala) is among the most popular ornamental fishes in aquariums worldwide. However, it is a highly endemic and endangered species, restricted to nine west-flowing rivers in Kerala and the southern tip of Karnataka. Due to its high demand in the aquarium trade over the past few decades, wild populations have seen a drastic decline.

This species is confined to specific stretches of these rivers, typically found at elevations 50–300 m. Within these rivers, populations are highly fragmented due to human interventions such as check dams and altered river flows. Genetic studies have revealed that populations in each river show signs of distinct speciation, underscoring the unique conservation value of each isolated group.

The threats to Denison's Barb extend beyond unsustainable fishing practices to include pollution and habitat degradation. In response, the Zoo Outreach Organisation, in collaboration

with Shoal has secured a grant to map the distribution of this species in its known range across Karnataka and Kerala. The project ‘Conserving Denise and Friends’ also aims to assess site-specific threats to other native fish species in these rivers and foster community engagement to improve data collection and raise awareness—steps that could ultimately lead to establishing community-based conservation reserves.

The initial phase of the project, led by Kasinath Anil in 2024, involved surveying river stretches to identify the presence or absence of the species and cataloguing threats along the nine rivers and their tributaries. The second phase focused on understanding local perceptions, particularly those of communities living along these rivers. It sought to explore their knowledge, utilisation, and attitudes towards the species, with the goal of informing conservation action plans. This phase also documented the community’s relationship with their riverscapes, noting ecological changes based on local observations.

As part of this second phase, we a long with Jithin Vijayan (independent researcher) travelled to Thiruvambady on 27 March 2025. This area, through which the Iruvazhanjippuzha River (a major tributary of the Chaliyar) flows, was identified as a site where Denison’s Barb had been previously recorded.

Kasinath had pinpointed seven such locations, forming the core of our study area. Our team decided to begin by interviewing individuals involved in fishing, as they are likely to have intimate knowledge about the species' local presence and historical trade. Tea shops served as our first points of contact, acting as informal hubs where local people exchanged information.

Through these conversations, we successfully identified and connected with key stakeholders, including fishermen, whom we interviewed using semi-structured questionnaires. We also spoke with other local residents to gather diverse perspectives.

Fishermen acknowledged the presence of the species and described fishing methods including nets, crackers, and even electrocution- claiming, somewhat questionably, that electrocution affects only large fish and not smaller ones. They also mentioned that the targeted trade in Denison's Barb had ceased following a ban by the Kerala government, stating that the species doesn't survive long after capture. However, local residents reported ongoing live capture and trade, suggesting that not all fishing has stopped.

Zooreach activities

Some fishermen noted that the fish had previously been exported to cities for Rs. 80–100 per pair, but claimed that declining market prices (down to Rs. 6) had deterred further exploitation. Yet, discrepancies in responses and hesitance to share full details indicated that some information may have been withheld.

Further threats to the species, as identified during our interviews, included habitat loss due to landslides, floods, river widening projects, and removal of river rocks- all of which impact the shallow habitats preferred by the species. Locals also reported pollution from tourists, as well as water overextraction by upstream resorts. While some areas now restrict tourist access to protect the river, enforcement remains a challenge.

Interestingly, many community members expressed a preference for conserving the entire river system rather than focusing on a single species. Some advocated for stricter regulations on pollution and fishing, and suggested forming local action committees to safeguard specific stretches of the river. There is a belief that with strong local involvement, other organisations, including political and social groups, may also join in to support river conservation.

In summary, our perception studies revealed a spectrum of attitudes toward conservation-from strong support to neutrality, but also highlighted significant potential for community-led initiatives.

To be noted that these observations are preliminary in nature, and from a single study area, and these observations are not thoroughly analysed thematically. Although by building awareness and involving local people in stewardship, we can foster a more ecologically sustainable riverine system.

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