

## Denise and Friends at the Kasargod Train-the-Trainers Workshop



For three lively days from 12–14 June 2026, the serene setting of Kadaleevanam in Cheruvathur, Kasargod, transformed into a vibrant learning space as teachers gathered for *Teaching with Denise and Friends*, an innovative train-the-trainers workshop conducted by the Zoo Outreach Organisation under its LivelyWaters! initiative.

Supported by SHOAL, ReWild, and Synchronicity Earth, and the Kerala University of Fisheries and Ocean Studies (KUFOS), the workshop focused on one of the Western Ghats' most iconic freshwater fishes—*Sahyadria denisonii*, nicknamed Miss Kerala. This striking freshwater fish is found only in 11 west-flowing rivers of the Western Ghats. Once heavily collected for the international aquarium trade, the species continues to face threats from habitat degradation, pollution, and illegal fishing.

A key feature of the workshop was the specially designed educational resource manual and a packet with activity labels, colouring books, educational cards, and stickers, provided to every participant.

Following in the footsteps of Zooreach's founder, Sally Walker, the workshop began with the customary tying of the friendship band and taking a pledge to save Denise by learning and disseminating information to others. After a quick mindmap exercise to assess the teachers' perception towards rivers and fish, the teachers were introduced to the topic and given the specially designed manual.



Registration of participants on the opening day of the workshop. © Payal Molur



Kadaleevanam served as the perfect backdrop for the three-day residential workshop. © Payal Molur



A collective pledge by participants and the Zoo Outreach team reaffirmed their commitment to the conservation of Denise and Friends.

© Payal Molur



Participants enthusiastically engage in the flashcard game during the first day of the workshop © Payal Molur



Payal facilitating the activity session by introducing the program and the educational material. © K. Gokul



An insightful expert talk on the fishes of the Western Ghats by Rahul G Kumar on Day 1 of the workshop.  
© Payal Molur



This was followed by one and a half hour engaging talk by renowned ichthyologist Rahul G. Kumar, a lifelong aquarist whose passion for fishes evolved into a distinguished career in fish conservation, research, and taxonomy. With over three decades of experience studying freshwater fishes, Rahul took participants on a fascinating journey through the rivers and streams of the Western Ghats, revealing the incredible diversity of fish life that inhabits this global biodiversity hotspot. He explained that stretching over 1,500 km from north to south along the western coast of India, the Western Ghats are home to a remarkable array of freshwater fish species.

The session introduced teachers to several unique fish groups found in the region. Among them were native Cichlids, including species that are restricted to specific river basins. Rahul also discussed the two species of *Horabagrus*, both endemic to the Chalakudy River, and the endemic fish *Labeo chekida*, another conservation priority from the same river system. He further explained how scientific understanding of fish diversity continues to grow. For instance, the genus *Dawkinsia* included only five recognized species in 2000, but through continued research and taxonomic studies, this number has increased to 14 species by 2025.

A special focus of the session was Denisonii (Denise), the fish that forms the heart of the educational programme. Teachers learned that Denise occurs in many west-flowing rivers, from the Chandragiri River in northern Kerala to the Bharathapuzha River further south. The participants watched stunning underwater videos showcasing the fish in its natural habitat.

Another memorable moment was the video of a Hillstream loach, a master of camouflage. The fish blended so perfectly with the streambed stones that it was difficult to spot at first glance. These visual demonstrations helped teachers understand how fishes interact with their habitats and provided practical insights into identifying species in the wild.

The presentation also introduced participants to several important river systems, including the Valapattanam River, the Chandragiri River, and their tributaries. Understanding these river networks helped teachers appreciate how freshwater ecosystems are interconnected and why conserving entire watersheds is essential for protecting aquatic biodiversity.



Participants engage in the map activity by designing and naming rivers within their group's landscape. © Payal Molur



Each group identified and placed stickers representing species found in and around freshwater habitats, along with the threats they face. © Payal Molur

The talk concluded with a discussion on the threats faced by Denise and its freshwater companions. Armed with knowledge on fish, the teachers then played the 'Who am I' card game that helped remember and recall the fish and other animals they had just heard about.

The chapters of the manual unfolded through Denise's Living River map, an interactive learning experience built around a giant map of a typical west-flowing river of the Western Ghats—the very landscape where Miss Kerala *Sahyadria denisonii* lives. More than just an activity, the map became the thread that connected the entire

workshop, allowing participants to experience the journey of a river from source to sea.

Working in groups, teachers joined and coloured a five-foot-long river map made up of 24 illustrated puzzle sheets created by P. Kritika. As they pieced together the river, they brought to life shola forests, streams, rapids, pools, riverbanks, floodplains, estuaries, and the ocean. They then populated their rivers with stickers depicting the rich biodiversity of freshwater ecosystems, including Miss Kerala, otters, kingfishers, crabs, dragonflies, and numerous other species. Each group named its river and shared stories about the habitats and wildlife it supported, transforming a collection of paper sheets into a living ecosystem with its own identity.

Although participants were initially given the option of completing only selected sections



The second day's expert talk featured Naufal, who spoke about his journey of exploring and understanding fish diversity. © Payal Molur



Participants engage with a tunnel book to visualise and understand an entire ecosystem. © Payal Molur

due to time constraints, one group became so immersed in the activity that they spent their free time finishing the entire map and proudly shared it on the participants' social media group. Inspired by their enthusiasm, the other groups continued working late into the evening and early the next morning. By the end of the workshop, all four groups had completed their rivers, carefully colouring and illustrating even the smallest details.

The next day, the participants began with a talk by Naufal Nazium on how he went from being a fish trader to protector. His personal story and turning point showed the teachers the importance of educating at an early age as well as how to encourage their children to take up careers in conservation of wildlife research.

Among all the activities, the DIY Tunnel Book emerged as a clear favourite for most participants, although for a few it shared first place with the river map-making exercise. This beautifully illustrated and designed activity had the teachers puzzled at first.



The "Spots and Stripes" activity encouraged participants to observe and appreciate patterns found in nature. © Payal Molur

Sticking pieces of paper and folding them in strange ways gave them no clue as to what the end result would be. What had appeared to be a collection of flat paper components transformed into a stunning three-dimensional diorama depicting the journey of water from the shola forests of the Western Ghats through rivers and estuaries to the Arabian Sea. The hall soon filled with exclamations of delight and wonder as participants peered through their completed tunnel books, discovering depth, movement, and interconnectedness within the landscape.

Role playing to understand how all disciplines play a role in saving the river and Denise, playing games like 'Lentic-Lotic Jump' and spots and stripes, observation games and citizen science activities helped the teachers appreciate how everyone can participate in knowledge building of species, landscape changes and create scientific rigour in schools.

As the workshop progressed the teachers began to see how serious issues like threats to the river and to Denise and her friends could be brought out through play. Through a lively game inspired by musical chairs, and another inspired by 'Oranges and Lemons', participants introduced threat stickers representing pollution, habitat destruction, sand mining, dams, invasive species, and overfishing. With each round, more threats accumulated, and the stickers of the dam, the invasive fish and others covering their river and its wildlife. By the end of the activity, teachers could clearly see how multiple human pressures can overwhelm an ecosystem. Nearly half the teachers later remarked that map-making visual, hands-on method of bringing the river system and its

problems to the fore, was a powerful way to help students begin to understand not only how a river works, but also why it is worth caring for and protecting.

Using all that they had learnt, the teachers then were given topics like aquarium trade, invasive species, sandmining and plastic waste to convert into skits and performed for each other. The workshop ended with Dr. Sanjay Molur from Zooreach and Shyamkumar discussing the need to create Community Conservation Areas. All of the participants pledged their support to saving Denise and her friends and their habitats in a community-led initiative that would be initiated in identified locations.

Each participant was given a certificate along with 25–40 packets for them to conduct the program with their students.

### Reflections

A group of teachers said that the workshop was a privilege which other teachers in their school did not get and they are going to make use of it as well as train others. They want to take this workshop to the school and apart from kids they would like to run the workshop for the Parents Teachers Association (PTA). One participant reflected that the games reminded him of his childhood and that he would love to teach his students in a similar way.

One of the oldest teachers opined that she was forced to attend the workshop by the NGC coordinator, but after the workshop she didn't regret attending it and it reminded her why she loved teaching. She also added that she feels like she is equipped with more information and activities and feels confident to take the



An exhibition showcasing the artworks created by participants during the workshop activities

students through the journey of a west flowing rivers of Western ghats.

Of course, there was criticism too. One of the teachers was concerned about the age group of the children to which they can take this to. She was a lower primary teacher (1st to 4th standard). She shared her concern on how well those younger participants would be able to grasp these things and do these activities. And she also added that taking up more time and having extra patience might work.

They also added that the education materials were heavy to carry, but they are not ready to compromise on the number of education materials they are taking, because they do not want their kids to miss the opportunity which they got. They wanted their children to go through the workshop as they did. One of the participants was from a University and she felt that this manual could easily be brought



Participants proudly view their activity-based artworks displayed as part of an exhibition



Participants and facilitators celebrate the successful completion of the workshop with a group photograph.  
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into higher education as well. As each different activity and chapter was revealed the teachers commented that the way the education materials are created it gave them the freedom to adjust their timings and with the learning pace of the children. Towards the end of the workshop, teachers did not want to leave the workshop and felt connected with one another and vowed to keep in touch and exchange ideas on how to take this forward.

The workshop was led by Payal Molur and Sidharthan, with creative support from Dupati Poojitha and Neenu Purushothaman, logistical assistance from S. Gokul, and overall guidance from Dr. Sanjay Molur. The programme was made possible through the efforts of local coordinator Shyamkumar Puravankara, who

managed the event seamlessly, and Sushmitha T.M., Green Corps coordinator, who facilitated teacher participation from the region.



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