

# PERIYAR BEATS



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# FIELD DIRECTOR'S MESSAGE

## A MONTH OF LEARNING AND CONSERVATION

The past month has been a whirlwind of activity here at PTCF. Our Eco Development Committees (EDCs) had their little members laugh, play, and learn during "Kilikootam" vacation camps, a program that has been running successfully since 2005. Apart from that, we were able to organize a composite aquatic faunal survey, the first of its kind in India, involving 75 academicians, students, and our Fishermen EDC members. This survey revealed that the Periyar Tiger Reserve (PTR) holds 30% of the fish species found across Kerala. The presence of nine micro-endemics, meaning species found only in Periyar, indicates that our efforts in controlling the population of invasive fish species such as African catfish have been successful.



On a different but equally important note, we are excited to have participated in the synchronized elephant estimation that took place across five southern states: Telangana, Andhra Pradesh, Karnataka, Tamil Nadu, and Kerala. This synchronized and collaborative effort is essential for the long-term monitoring and conservation of elephants across South India. PTCF's professionals played a vital role by training data collectors across the Periyar-Agasthyamalai landscape and conducting the surveys.

We are energized by the success of all our initiatives, helping us learn and grow. These initiatives exemplify our commitment towards education, research, and holistic conservation.

Towards Learning and Growing!

**Pramod PP. IFS**  
**CCF (WL) & Field Director, Kottayam**  
**and Executive Director, PTCF**

## PERIYAR TIGER CONSERVATION FOUNDATION

### Vision

To enhance participatory forest management through multi stakeholder participation in Periyar Tiger Reserve and adjoining landscape consistent with the state and national legislations

### Mission

- To safeguard the Western Ghats
- To facilitate Environmental, Social, Economic, Cultural, Educational and Aesthetic aspects of Periyar Tiger Reserve and adjoining landscapes
- To support Ecodevelopment, Nature Education, Research, Ecotourism and Protection both technically and financially

## WORDS FROM THE WILD

### NATURE'S WHISPERS: A CALL TO SELF-DISCOVERY THROUGH ENVIRONMENTAL EDUCATION

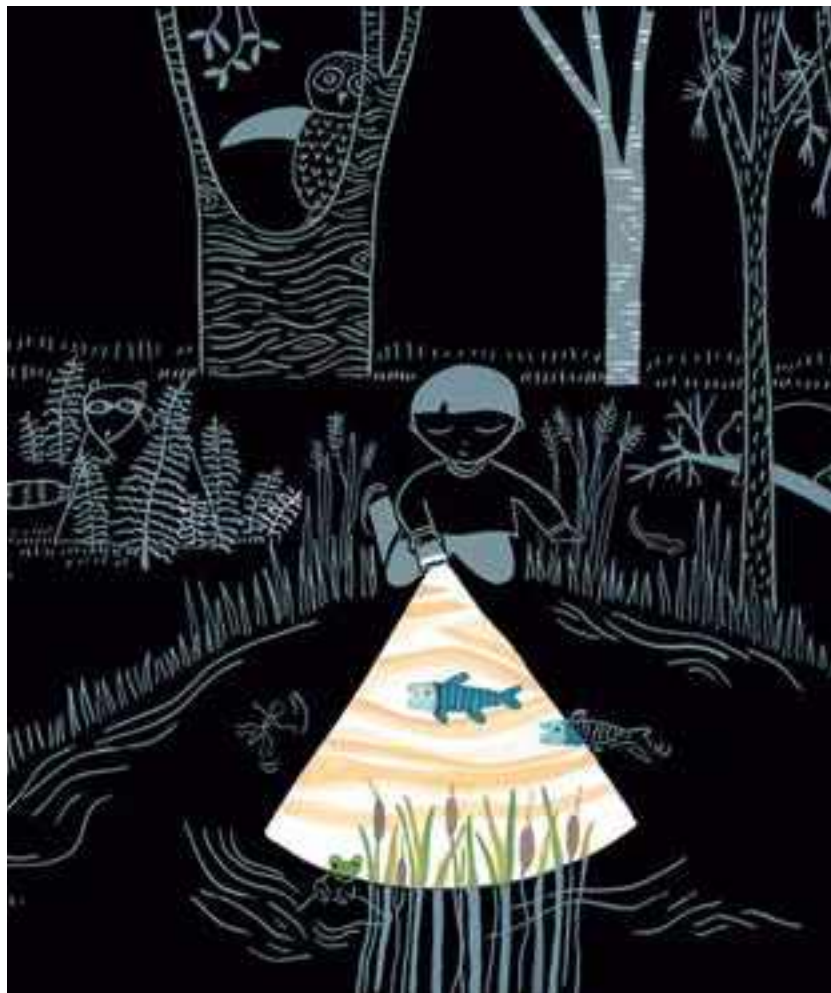
Sethu Parvathy, Nature Education Officer, PTCF

The human spirit can only endure so much negativity. Complaining incessantly, day in and day out, without translating that frustration into action, can lead to a sense of despair and a desperate grasp at unrealistic solutions (Source: learned helplessness theory). This is precisely what drove me, one hopeful morning, to pursue the role of a nature education officer at PTCF. While the role of an educator resonated more deeply with me than simply being a teacher, my true goal was to ignite a spark in a society already drowning in information overload.

The education I envisioned wasn't about cramming in more facts, but rather fostering a connection with the natural world around us, and by extension, with ourselves. Information is readily available at our fingertips through countless resources and Google searches, yet without the ability to observe and learn from nature directly, we become handicapped. This ability to connect with the natural world isn't some extraordinary skill to be mastered; it's simply a gateway to self-discovery. It may sound unconventional, but the emotions evoked by the dawn chorus, for instance, can be a powerful indicator of our own emotional state (Source: connection to nature and mental health).

Nature's classroom is vast and accessible. Observe the animals, the trees – even a single leaf can hold a wealth of lessons. These silent teachers offer invaluable insights into decision-making, perseverance, the art of letting go, the power of camaraderie and collaboration, and our dependence on a delicate balance. Through this observation, we begin to recognize our own internal compass, learning to discern what truly resonates with us and what hinders our growth.

The beauty lies in the accessibility of this education. One doesn't need a sprawling wilderness; a backyard can be the starting point. A friend of mine embarked on a fascinating scientific study of the lizard population in his own backyard – a testament to the potential for discovery even in familiar spaces.



Lizi Boyd's Flashlight- on curiosity and wonder



For those without a backyard, a bustling balcony, a scenic bus ride, a stroll through a park, or even a simple observation of a squirrel feasting on mangoes can spark a connection. Another friend finds solace in daily conversations with a majestic sapota tree, seeking clarity for her thoughts. Similarly, I once found myself confiding in my neighbor's jackfruit tree, pouring out my work woes through my office window. Later, I gathered the fallen leaves to create compost, nurturing new life from the remnants of the old.

Growth is an inevitable part of life, as are the bonds of companionship and compassion that we cultivate along the way. Learning from nature, the ultimate teacher, is the key to unlocking these essential aspects of our being. By embracing the whispers of the natural world, we embark on a journey of self-discovery, one observation, one connection at a time.

#### References

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Stobbe, E., Sundermann, J., Ascone, L. et al. Birdsongs alleviate anxiety and paranoia in healthy participants. *Sci Rep* 12, 16414 (2022). <https://doi.org/10.1038/s41598-022-20841-0>

### TOURIST'S TALK

"The location was cool and quiet. It was an awesome experience to be here amongst bamboos and the accompaniment of birds and friendly animals. The nature inside bamboo grove was blending with peace and calmness that provided us too with inner peace."

Aby Zacharias



#PERIYAR

## PERIYAR'S BOUNTY

### PERIYAR STONE SUCKER

പെരിയാർ കല്ലൊട്ടി

***Garra periyarensis***

The Periyar River, snaking through the lush hills of Kerala, India, harbors a unique treasure – the Periyar Stone Sucker (*Garra periyarensis*). This fascinating little fish, belonging to the carp family (Cyprinidae), clings to life only in the upstream reaches of this majestic river. Discovered as recently as 2001, with its home base identified as Thannikudi, a section in PTR, the Periyar Stone Sucker already finds itself classified as "Vulnerable" on the IUCN Red List, highlighting its precarious existence.

Being a cyprinoid fish places the Periyar Stone Sucker amongst a diverse group known for their barbs and pharyngeal teeth. However, what truly sets this fish apart is its specialized feeding habit. Unlike its carp cousins, the Periyar Stone Sucker lacks crushing pharyngeal teeth. Instead, its mouth is equipped with a sucker-like structure, perfectly adapted for clinging to rocks in the fast-flowing waters of the Periyar. This unique adaptation allows it to graze on algae and other microorganisms that form a biofilm on the submerged surfaces.

The significance of the Periyar Stone Sucker extends far beyond its interesting feeding habits. Its presence serves as a vital indicator of the health of the Periyar ecosystem. Clean, well-oxygenated waters are essential for the growth of the biofilm that sustains this fish. Therefore, a decline in the Periyar Stone Sucker population can be a warning sign of deteriorating water quality or disruptions in the food chain.

The story of the Periyar Stone Sucker is a stark reminder of the delicate balance of freshwater ecosystems. This recently discovered fish, with its specialized adaptations, serves as a vital indicator of the health of the Periyar River. By understanding its role and the threats it faces, we can take necessary steps to ensure its continued existence. The future of this captivating little fish is intricately linked to the health of the river itself, and by protecting the Periyar Stone Sucker, we safeguard not just a species, but the entire ecosystem it calls home.



## NEWS GALLERY

### AQUATIC FAUNAL SURVEY IN PERIYAR TIGER RESERVE: NEW SPECIES AND THRIVING ECOSYSTEMS

The Periyar Tiger Reserve (PTR) has unveiled a hidden wealth of aquatic life in its first-ever composite aquatic faunal survey. This exciting expedition, conducted from May 16th to 19th, 2024, brought together 75 experts from across South India, including fishermen with a deep understanding of the local ecosystem.

The team meticulously examined aquatic habitats across the reserve, encompassing streams, rivers, and the majestic Periyar Lake. Their efforts yielded a record-breaking catch – 56 species of fish! This surpasses any previous study conducted in the PTR since the 1940s. Even more impressive, this diverse collection represents nearly 30% of all fish species known to exist in Kerala.



*Lepidopygopsis typus* by Beta Mahatvaraj

But the magic of PTR goes beyond sheer numbers. The reserve boasts nine species of fish found nowhere else on Earth – true aquatic gems restricted to the reserve's boundaries. The survey successfully documented eight of these precious micro-endemics, highlighting the success of PTR's conservation efforts. Sadly, one micro-endemic species remained elusive, but the search continues.

The survey wasn't just about fish. Odonates, the dazzling damselflies and dragonflies that grace freshwater habitats, also took center stage. The team documented a staggering 120 odonate species, the highest number ever recorded in a Kerala protected area. This impressive tally represents a whopping 63% of all odonate diversity in Kerala and a significant 55% of the Western Ghats' odonate riches. Even more remarkably, the survey added four brand new odonate species to the PTR's official checklist!, making the number of species 120.



*Euphaea cardinalis* by Abraham Samuel



*Anaciaeschna martini* by Manoj Sethumadavan





*Mesonoemacheilus menoni* by Dencin Rons Thampy

The presence of thriving micro-endemic fish populations is a strong indicator of a healthy aquatic ecosystem. This success story underscores the effectiveness of PTR's management strategies in controlling invasive species and fostering a haven for native wildlife.

This groundbreaking survey serves as a springboard for further exploration. Scientists are already planning detailed studies to formally describe the newly discovered fish species. Additionally, a follow-up survey encompassing both terrestrial and aquatic life is on the horizon, slated for the inter-monsoon period.



*Mesonoemacheilus periyarensis* by Dencin Rons Thampy

This collaborative effort, conducted under the guidance of the PTR's Field Director, Mr. Pramod PP IFS, represents a significant step forward for the conservation of this magnificent reserve. The dedication of experts, fishermen, PTR and PTCF staff has shed light on the hidden wonders within its waters, paving the way for a brighter future for this unique ecosystem.



*Protosticta graveli* by Dr Kalesh S

## MANNAKUDY, PALLIYAKUDY, AND VANJIVAYAL EDC MEMBERS GAIN VALUABLE SKILLS IN TURMERIC CULTIVATION

Thekkady Range Forest Officer, K E Siby, inaugurated a valuable training program on Turmeric Cultivation at Bamboo Grove on 18th May. This program aimed to empower members of the Mannakudy, Palliyakudy, and Vanjivayal Eco Development Committees (EDCs) with the knowledge and skills needed to thrive in turmeric farming.

A total of 35 EDC members participated in the program, eager to learn the intricacies of cultivating this golden spice. Subject matter specialists Smt Aashiba A and Preethu K Paul led the session, providing participants with comprehensive training on various aspects of turmeric cultivation.

The training covered essential topics such as soil preparation, seed selection, planting techniques, proper irrigation methods, weed and pest management, and harvesting practices.



By equipping EDC members with this practical knowledge, the program empowers them to achieve greater self-sufficiency and potentially contribute to the economic development of the region.

## OVER 350 CHILDREN FROM FRINGE COMMUNITIES ATTEND VACATION CAMP “KILIKOOTTAM” AT PERIYAR TIGER RESERVE





Over 350 children from fringe communities surrounding the Periyar Tiger Reserve (PTR) participated in a 10-day vacation camp organized by the Eco Development Range of PTR and the nature education division of the PTCF. The camp, named "Kilikootam," aimed to provide children from both the West and East divisions of the reserve with an enriching and educational experience.

The camp was inaugurated by Sri. Mukesh, the Pampa Range Officer, for the West division and Mr. Anandapadmanabhan, the Eco-development Range Officer, for the East division. Over the 10 days, the children participated in various workshops designed to nurture their creativity and connection with nature. These workshops included pencil drawing, water color art, clay modelling, storytelling and poetry, theatre, and career guidance sessions for older children. The camp culminated in a cultural program showcasing the talents of the participating children, with the highlight being a performance of the best drama created during the theatre workshop.

The diverse range of workshops offered at the camp provided a platform for the children to explore their creativity, develop new skills all through play.

## **PERIYAR AGASTHYAMALA LANDSCAPE UNDERTAKES SYNCHRONIZED ELEPHANT ESTIMATION**

Periyar Tiger Conservation Foundation (PTCF) participated in a synchronized elephant population estimation exercise across five south Indian states. This initiative aims to gather precise data on elephant numbers and their sex ratio.

The program involved training frontline staff from 17 forest divisions in the Periyar-Agasthyamala landscape. Over 900 personnel received training in field data collection methods, including block counts (direct sightings), dung counts (indirect evidence), and waterhole counts. The actual data collection spanned three intensive days, from May 23rd to 25th, across the entire state.

This synchronized estimation offers a significant advantage over past methods. By conducting the exercise simultaneously across multiple states, park managers can account for the wide-ranging movements of elephants, leading to more accurate population estimates. This is particularly important for the Periyar-Agasthyamala landscape, which encompasses 280 out of the 610 blocks in Kerala, spread across 17 forest divisions.







The data collected will be first used to estimate the overall elephant population size using block count and dung count methods. Second, for analyzing data from block counts and waterhole counts will reveal the population structure, including the ratio of adults, juveniles, and males to females. This information is crucial for understanding herd dynamics and potential human-elephant conflict issues. Finally, the results will provide specific insights into the elephant population and age-sex ratio within the Periyar-Agasthyamala landscape.

The data gathered will not only provide a population snapshot but also inform recommendations for improved elephant conservation strategies within the state.

## PHOTO GALLERY



Photo by Deva Vyasan, Beat Forest Officer, Periyar Range





Banded Swallowtail by Bismi wills V B, Beat Forest Officer, Vallakadavu Range



Malabar memecylon (കായാമ്പു) by Navaraj T, Protection Watcher





*Enjoy the birds songs with our  
Bird Song trail*

CBET PROGRAM BY PALIYAKUDY EDC