

Conserving Subterranean fishes of Kerala

Background

Subterranean fishes are mysterious freshwater fishes that were discovered recently. They have extremely unique adaptations- some are blind, have translucent skin, barbels/feelers and/or chemoreceptors for finding and hunting their way in underground water channels.

These fantastic fishes are threatened by chlorination of wells, borewell digging, chemical pollution that go into ground water reserves and persecution cause of misunderstandings.

Activities conducted during the reporting period 1 April 2025 – 31 March 2026

- Survey for subterranean fishes in Kerala
- Community perception surveys to map attitudes and knowledge base of local communities towards these fishes
- Development of education materials for communities and educators to build foundation for behaviour change
- Engage with managers and policymakers to build new management strategies for conservation of these fishes



Presenting the local language education packet.
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Key achievements and outcomes

- Developed educational materials such as posters and education packets that breaks down since to simplify the information in both English and local vernacular language
- The key study sites were in 11 districts in Kerala – Thiruvananthapuram, Kollam, Pathamamthitta, Kottayam, Alappuzha, Thrissur, Ernakulam, Kozhikode, Malappuram, Kannur, Kasargod.
- Genetic studies conducted for the following species *Rakthamichthys sp.* (4

samples), *Horaglanis sp.* (8 samples), *Ophichthys fossorius* (2 samples), *Pangio bhujia* (4 samples). All this genetic study generated 10 CO1 sequences for these subterranean fishes.

- Conducted community surveys with 25 members including those who have subterranean fishes occurring in their home wells.
- Conducted interactions with Panchayat



Searching for subterranean fishes in water tank. © Zooreach Team



Checking for subterranean fish in house well. © Zooreach Team



Remya sharing the education packet with a school student
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Local wells that houses suterranean fishes. © Zooreach Team

member from seven different districts (Thiruvananthapuram, Kollam, Alappuzha, Kottayam, Kozhikode, Kannur, Thrissur).

Challenges faced

Lack of adequate funding.

Key partnerships and collaborations

- Kerala University of Fisheries and Ocean Studies
- Local panchayats and managers in study sites in Kerala

Measurable outcomes

- Designed and developed 1,000 education packets in English and local vernacular language for outreach to lay the foundation for behaviour change towards conservation of subterranean fishes.
- Conducted surveys in 12 districts in Kerala and genetic studies in four unique subterranean fish species that is crucial to better understand these lesser known species
- Conducted surveys of 25 community members and interacted with panchayat members from 7 districts in Kerala

Acknowledgments

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Future plans

- Conduct outreach programs with local community members in study sites in Kerala.



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