Western Ghats: two new freshwater loach species from Keralam

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News

Two freshwater loaches new to science have been described from the Periyar–Cardamom Hills region of the Western Ghats in Keralam. They belong to the genus Mesonoemacheilus (family Nemacheilidae); the paper 'Two new loaches of the genus Mesonoemacheilus from the Western Ghats (Teleostei: Nemacheilidae)' has appeared in the Journal of Fish Biology (Wiley). Mesonoemacheilus mannanorum was found in streams deep inside the Periyar Tiger Reserve and is named after the Mannan tribal community of the area. Mesonoemacheilus sabariensis was found in streams near Angamoozhi in the Pamba river system and is named after the Sabari Hills. The find underlines the need to protect hotspots like the Western Ghats and how much about India's wildlife is still unknown.

Key facts for the exam

Point	Details
Species 1	Mesonoemacheilus mannanorum – streams of Periyar Tiger Reserve
Named after	The Mannan tribal community
Species 2	Mesonoemacheilus sabariensis – Pamba system, near Angamoozhi
Named after	The Sabari Hills
Family	Nemacheilidae (stone loaches)

Point	Details
Journal	Journal of Fish Biology (Wiley), 2026
Region	Periyar–Cardamom Hills, Western Ghats

Background

- Loaches are small, elongated fish living on river beds among stones and pebbles, with sensory barbels around the mouth. As they need clean, fast-flowing, oxygen-rich water, they are treated as indicators of stream health. Tamil Nadu's popular 'ayirai' fish is also a loach, though of another family (Cobitidae).
- The Western Ghats (Sahyadri) run about 1,600 km from the Gujarat–Maharashtra border to Kanniyakumari and, with Sri Lanka, form one of the world's biodiversity hotspots. A large share of their freshwater fish are endemic species found nowhere else. Dams, sand mining, pollution and alien fish are the main threats.
- The Periyar Tiger Reserve (Thekkady) was declared a tiger reserve in 1978; the Periyar, Keralam's longest river, and tributaries of the Pamba rise here. The Pamba, Keralam's third-longest river, is called 'Dakshina Bhagirathi' for its link with the Sabarimala Ayyappa temple; it drains into Vembanad Lake.
- The Mannan are a tribal community of Keralam's Idukki district who traditionally maintain a 'Raja Mannan' (king) of their own. Naming a species after them recognises the role of forest-dwelling tribes in conserving these landscapes.

Tamil Nadu link: The Periyar Tiger Reserve adjoins Tamil Nadu's Theni district (Megamalai, Cumbum valley). The Mullaperiyar dam inside the reserve (1895, Col. John Pennycuick) diverts Periyar water through a tunnel to the Vaigai basin, serving irrigation and drinking water in Theni, Dindigul, Madurai, Sivaganga and Ramanathapuram districts.

Frequently asked questions

What is this news about?

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What are the key facts to remember for the exam?

Species 1: Mesonoemacheilus mannanorum – streams of Periyar Tiger Reserve; Named after: The Mannan tribal community; Species 2: Mesonoemacheilus sabariensis – Pamba system, near Angamoozhi; Named after: The Sabari Hills.

What is the background to this news?

Loaches are small, elongated fish living on river beds among stones and pebbles, with sensory barbels around the mouth. As they need clean, fast-flowing, oxygen-rich water, they are treated as indicators of stream health.

Practice questions (with answers)

1. The Periyar Tiger Reserve, home of one new loach, adjoins which Tamil Nadu district?

A) Theni

B) The Nilgiris

C) Kanniyakumari

D) Krishnagiri

Answer: A – Explanation: Theni – along Megamalai and the Cumbum valley. Thekkady became a tiger reserve in 1978.

2. The Mannan tribe, which keeps a traditional 'Raja' of its own, lives mainly in which district of Keralam?

A) Wayanad

B) Idukki

C) Palakkad

D) Kasaragod

Answer: B – Explanation: Idukki – a traditional system headed by the 'Raja Mannan'. The new species mannanorum is named after them.

3. The other new loach was found in a Keralam river called 'Dakshina Bhagirathi'. Which river?

A) Periyar

B) Bharathapuzha

C) Pamba

D) Chaliyar

Answer: C – Explanation: Pamba – so called for its Sabarimala link; Keralam's third-longest river, draining into Vembanad Lake. The Periyar is the longest.

4. A species that occurs naturally only in one particular region and nowhere else in the world is called:

A) Exotic species

B) Keystone species

C) Endemic species

D) Cosmopolitan species

Answer: C – Explanation: Endemic – both loaches are confined to small stream stretches. An exotic species is one brought in from outside.

5. Which engineer built the Mullaperiyar dam, inside the Periyar Tiger Reserve, that supplies water to southern Tamil Nadu?

A) Arthur Cotton

B) Mark Cubbon

C) Thomas Munro

D) John Pennycuick

Answer: D – Explanation: Col. John Pennycuick – completed 1895; water flows by tunnel to the Vaigai basin. Arthur Cotton restored the Grand Anicut and built the Coleroon anicut.

Sources: Journal of Fish Biology (Wiley) – doi.org/10.1111/jfb.70741 (paper title, lead author); PubMed 43058077 – pubmed.ncbi.nlm.nih.gov/43058077; Keralam Water Resources Department / Central Water Commission (Pamba basin); Keralam Forest Department / NTCA (Periyar Tiger Reserve). © Shanmugam IAS Academy.