



Sailfin Armoured Catfish

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Why in News?

Recently, scientists from [CSIR-Centre for Cellular and Molecular Biology \(CCMB\)](#) have discovered that the **invasive armoured sailfin catfish** has proliferated to 60% of the water bodies in the [Eastern Ghats](#), causing harm to **fishing nets** and disrupting the ecosystem.



What are the Key Facts About Sailfin Catfish?

▪ About:

- The **sailfin armoured catfish**, a collection of several morphologically similar species belonging to the genus ***Pterygoplichthys*** of the **Loricariidae** from South America, has been widely introduced to **tropical and subtropical freshwater** environments worldwide and has caused **serious ecological impacts**.
- It is one of the **most serious invasive species**.
 - In India, the fish species was originally introduced for its distinct appearance and its **capacity to remove algal growth** in tanks and aquariums, but its population has since **increased dramatically**.

▪ Features:

- Sailfin catfish have **worm-like dark markings** on the head over a dark-golden background, stout pectoral fins with rough surfaces, and a disc-like, **protrusible mouth** used like a suction cup to attach and feed on algae.
- **Female fish are generally smaller, while those larger than 18 inches are likely to be male.**

▪ Habitat

- Sailfin catfish live in various slow-moving water bodies and are most commonly found near the shore and in shallow waters.
- They are known to create **spawning burrows** along shorelines, sometimes undermining canal banks and lake shorelines.
- **Age and Growth:**
 - Grow to more than 20 inches and weigh 3.0 pounds.

eDNA-Based Quantitative PCR Assay

- It is a unique technique developed by the **CSIR-Centre for Cellular and Molecular Biology (CCMB)** to map the presence and spread of invasive species.
 - **Invasive species** when introduced in a new ecosystem can grow rapidly and often lack predators which threatens the new ecosystem and livelihoods depending on it.
- eDNA is **environmental DNA** collected from water samples.
- This technique aids in **the early detection of invasive species**, which greatly contributes to ongoing efforts to manage invasive species and directly benefits the survival of native and economically important fish.
 - Early detection of invasive fish is **essential for preserving ecosystems**, minimising loss of fish catch, and supporting ecological balance.
- The eDNA approach is **reliable, accurate, cost-effective**, and suitable for large landscapes like **Eastern Ghats** water bodies. It can test about 20 waterbodies for invasive species presence in a single lab test.

UPSC Civil Services Examination Previous Year Question (PYQ)

Q. Recently, our scientists have discovered a new and distinct species of banana plant which attains a height of about 11 meters and has orange-coloured fruit pulp. In which part of India has it been discovered? (2016)

- (a) Andaman Islands
- (b) Anaimalai Forests
- (c) Maikala Hills
- (d) Tropical rain forests of northeast

Ans: (a)

Q. Consider the following kinds of organisms: (2021)

1. Copepods
2. Cyanobacteria
3. Diatoms
4. Foraminifera

Which of the above are primary producers in the food chains of oceans?

- (a) 1 and 2
- (b) 2 and 3
- (c) 3 and 4

(d) 1 and 4

Ans: (b)

Q. With reference to the evolution of living organisms, which one of the following sequences is correct? (2009)

(a) Octopus – Dolphin – Shark

(b) Pangolin – Tortoise – Hawk

(c) Salamander – Python – Kangaroo

(d) Frog – Crab – Prawn

Ans: (c)

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