

Euglena

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Euglena Latest News

In India, Euglena and its relatives are now widespread indicators of deteriorating water quality.

About Euglena

- Euglena is a **unicellular, flagellated microorganism** belonging to the group **Euglenophyta**.
- These are commonly found in **stagnant or slow-moving freshwater ponds**, ditches, and urban lakes.
- **Characteristics:** These protists are **highly adaptable, capable of both photosynthesis** (like plants) and feeding on organic matter (like animals).
- This flexibility helps them **thrive in nutrient-rich, oxygen-poor environments**.
- Three of the most **common euglenoid genera** observed in Indian water bodies are: **Euglena, Phacus, Trachelomonas sp.** These species often dominate surface waters, especially during warmer months.
- The striking red or pink colour seen during blooms is due to a **pigment called astaxanthin**, produced by many euglenoids.
- **Astaxanthin is a fat-soluble xanthophyll** that gives these organisms their bright red colour.

Impact of Euglena on Biodiversity

- **Oxygen depletion:** Euglena photosynthesises, but at night it consumes oxygen, leading to diurnal oxygen fluctuations. This can result in hypoxia (low oxygen levels), which is dangerous for fish and other aquatic life.
- **Dense surface scums:** Euglenoid blooms form **thick mats on the water surface**, which block sunlight from reaching submerged plants. This reduces the lake's productivity and **alters its ecological balance**.
- **Fish mortality:** Euglenophyte blooms can stick to fish gills, making it hard for them to breathe. Some species also produce **toxins like euglenophycin**, which directly kill fish or indirectly affect them by disrupting the food chain and oxygen levels.

Source: DTE

Source: <https://vajiramandravi.com/current-affairs/euglena/>

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