What is Thismia malayana?

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About Thismia malayana:

- It is a **new species of plant** discovered in the **tropical rainforests of Peninsular Malaysia**.
- It belongs to a group of plants known as **mycoheterotrophs**.
    - Unlike most plants, **mycoheterotrophs do not perform photosynthesis**.
    - Instead, they **act as parasites**, stealing carbon resources from the fungi on their roots.
    - This adaptation **takes advantage of the mycorrhizal symbiosis**, which is usually a mutually beneficial relationship between colonizing fungi and a plant's root system.
- **What happens in mycorrhizal symbiosis**?
    - The **fungi help the tree absorb water and nutrients** from the soil, while the **tree provides the fungi with sugars** produced through photosynthesis.
    - This symbiotic partnership is **vital for the health and growth of both** organisms.
- But **Thismia malayana**, **instead of contributing** to the exchange, **acts as a parasite,siphoning off carbon resources** from the fungi **without offering anything in return**.
- By stealing nutrients from fungi, this newly discovered species **thrives in the low-light conditionsof dense forestunderstories,** where its highly specialised flowers are pollinated by fungus gnats and other

small insects.

- The unusual plant is around 2 cm long and is typically **found hidden in leaf litter** and growing **near tree roots or old rotten logs**.

Despite its small size, Thismia malayana is very **sensitive to environmental changes** and has been **classified as Vulnerable** according to the **IUCN Red List**.

Q1: What are Fungi?

Fungi, along with Animalia (animals), Plantae (plants), Protista, Archaea/Archaebacteria, and Bacteria or Eubacteria form the six ‘kingdoms’ of biology. They are eukaryotic organisms; i.e., their cells contain membrane-bound organelles and clearly defined nuclei. Fungi usually reproduce both sexually and asexually. They help in breaking down dead organic material, they continue the cycle of nutrients through ecosystems. Fungi, as food, play a role in human nutrition in the form of mushrooms. They also act as agents of fermentation in the production of bread, cheeses, alcoholic beverages, and numerous other food preparations.

Source: Remarkable new plant species steals nutrients from underground fungi

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