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New algal species

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New algal species

A group of botanists from Central University of Punjab, Bathinda (CUPB) have discovered an algal species from the Andaman and Nicobar Islands.

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[Ref: Independent]

About the new algal species:

- The green seaweed has a cap-like structure similar to an umbrella.
- It has been named **Acetabularia jalakanyakae**, after the word 'jalakanyaka' which **means** 'goddess of oceans' or 'mermaid' in the Sanskrit language.
- It is the first species of the genus Acetabularia discovered in India.
- The whole plant is **made up of just one gigantic cell** with just **one nucleus** with bright green algae.
- It measures as small as **20 to 40 mm**, and resembles an umbrella or a mushroom, grooves on its cap measuring 15 to 20 mm in diameter.

Concerns:

Acidification of ocean water:

• Since plants in the genus Acetabularia have rich calcium carbonate deposits that account for



almost half their dry weight, they are highly **prone to ocean acidification** caused by global greenhouse gas emissions.

- As atmospheric carbon dioxide levels go up and the CO2 gas **mixes with the surface ocean**, the **carbonic acid formed increases the acidity of oceans**.
- Ocean acidification can significantly **impact calcium rich species**, especially algal partners of coral reefs called **Symbiodinium**, leading to the collapse of such reefs into lifeless white deserts via coral bleaching.

<u>Algae:</u>

- Algae are a **diverse group of aquatic organisms** that have the ability to conduct photosynthesis.
- Certain algae are familiar; for instance, seaweeds (such as kelp or phytoplankton), pond scum or the algal blooms in lakes.
- They occur in a variety of forms and sizes.



[Ref: World Atlas]

Characteristics:

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- The basic feature is being aquatic and photoautotrophic eukaryotes.
- They can exist as **single**, **microscopic cells**; they can be macroscopic and multicellular.
- Algae are **capable of photosynthesis and produce their own nourishment** by using light energy from the sun and carbon dioxide in order to generate carbohydrates and oxygen.
- They **live in colonies**; or take on a leafy appearance as in the case of seaweeds such as giant kelp.
- Algae are found in a range of aquatic habitats, both freshwater and saltwater.
- Algae are also able to **survive on land**. Some unexpected places where they grow are tree trunks, animal fur, snow banks, hot springs and in soil, including desert crusts.
- Algae are capable of **reproducing through asexual** or vegetative methods and via sexual reproduction.