

New algal species with 'umbrella head' discovered

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In news- A group of botanists from Central University of Punjab, Bathinda (CUPB) have discovered an algal species from the **Andaman and Nicobar Islands**, after nearly four decades.

Key updates-

- The bright green algae measuring as small as 20 to 40 mm, resembling an umbrella or a mushroom, has grooves on its cap measuring 15 to 20 mm in diameter.
- It is **named after the imaginary sea mermaid, Acetabularia jalakanyaka** and is very primitive and is a **single-cell organism**.
- Though it was originally spotted in 2019 at the island, the CUPB team took about two years to identify and fully understand the morphology of this algae.
- Its **nucleus forms a rhizoid structure, which facilitates the algae to attach itself to shallow rocks**.
- Acetabularia is **highly regenerative** in nature such that even if one chops off the top portion, the algae can regrow.
- As it is primarily a **marine algae**, the projected sea level rise due to global warming is not as much of a direct threat to its existence.

About Algae-

- Algae are members of a group of predominantly aquatic photosynthetic organisms of the kingdom Protista.
- Algae have many types of life cycles, and they range in size from microscopic Micromonas species to giant kelps that reach 60 metres (200 feet) in length.
- The **study of algae is called phycology**.
- They are defined as **eukaryotic (nucleus-bearing)**

organisms that photosynthesize but lack the specialized multicellular reproductive structures of plants.

- Beginning in the 1830s, algae were classified into **major groups based on colour—e.g., red, brown, and green.**
- They are **oxygen producers, food base for almost all aquatic life,** economically important as a **source of crude oil and as sources of food** and a number of pharmaceutical and industrial products for humans.
- They are **used in ice creams to limit ice crystal formation** (producing a smooth texture), in syrups as **emulsifiers and thickeners,** and in candy bars and salad dressings as fillers.
- Agars, extracted primarily from species of red algae, are used in **instant pie fillings, canned meats or fish, bakery icings and for clarifying beer and wine.**
- Agar is also used extensively in laboratory research as a **substrate for growing bacteria, fungi, and algae in pure cultures and tissue culture.**
- When nutrients are abundant, as in some polluted waters, algal cell numbers can become great enough to produce obvious patches of algae called “blooms” or **“red tides,”** which can deplete the oxygen content in the water and poison aquatic animals.
- Several algae produce toxins lethal to fish.
- They can cause human diseases by directly attacking human tissues, although the frequency is rare.