

# Milky Sea effect

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**In news**—New satellite technology Day/Night Band is being used by scientists to find glow-in-the-dark milky seas of marine lore.

## About Milky Sea effect

- The Milky Sea effect refers to **an unusual marine phenomenon in the ocean in which a large amount of sea water appears to glow brightly (eerie blue glow) at night.**
- **Also called mareel, the milky sea is caused by bioluminescent bacteria**, billions of trillions of them, that live throughout the water column from the surface to the sea floor.
- Some point out that Mareel is typically caused by *Noctiluca scintillans* (popularly known as “sea sparkle”), a dinoflagellate that glows when disturbed and is found in oceans throughout much of the world.
- **Bioluminescent bacteria are light-producing bacteria** that are predominantly present in sea water, marine sediments, the surface of decomposing fish and in the gut of marine animals.
- Stress, caused by the movement of the sea and waves, leads the plankton to emit light, or bioluminescence as a defence mechanism in a similar way to some fireflies.
- Such occurrences **glow brightly enough at night to be visible from satellites orbiting Earth.**
- In 2005, scientists announced that for the first time, they had obtained photographic evidence of this glow.
- Between 1915 and 1993, 235 sightings of milky seas were documented, most of which are concentrated in the northwestern Indian Ocean and near Indonesia.
- The luminescent glow is concentrated on the surface of the ocean and does not mix evenly throughout the water

column.