

Macroalgae

Subjects: [Plant Sciences](#)

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What are algae? Algae are organisms that perform photosynthesis; that is, they absorb carbon dioxide and release oxygen (therefore they have chlorophyll, a group of green pigments used by photosynthetic organisms that convert sunlight into energy via photosynthesis) and live in water or in humid places. Algae have great variability and are divided into microalgae, small in size and only visible through a microscope, and macroalgae, which are larger in size, up to more than 50 m (the maximum recorded was 65 m), and have a greater diversity in the oceans. Thus, the term “algae” is commonly used to refer to “marine macroalgae or seaweeds”. It is estimated that 1800 different brown macroalgae, 6200 red macroalgae, and 1800 green macroalgae are found in the marine environment. Although the red algae are more diverse, the brown ones are the largest.

macroalgae

classification

pigments

morphological characteristics

reproduction

Algae are single or multicellular organisms that live in water or in humid places. These organisms have chlorophyll (an organic pigment capable of absorbing and channeling the energy of sunlight), which is why they are able to perform photosynthesis, that is, the transformation of luminous energy into chemical energy, capturing carbon dioxide (CO₂) to form complex organic compounds (along with water and mineral salts), and releasing gaseous oxygen (O₂), during the process of organic synthesis. Algae are considered the true “lungs” of planet Earth, stealing this epithet from large forest patches, such as the Amazon rainforest. Algae are distinguished from seagrass (angiosperms) because, unlike the latter, they do not have a vascular system (xylem and phloem). Algae on the seafloor have a holdfast and transport nutrients through the body by diffusion, while seagrasses are flowering vascular plants with roots and an internal transport system ^{[1][2]}.

References

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2. Gaspar, R.; Fonseca, R.; Pereira, L. Illustrated Guide to the Macroalgae of Buarcos Bay, Figueira da Foz, Portugal, 1st ed.; MARE UC, DCV, FCT: Coimbra, Portugal, 2020; p. 128.

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