

Understanding Algal Blooms in Florida



VIDEO 1. What Are Algae?

What are algae?

Algae are a large and diverse group of organisms that use the sun's energy to grow through photosynthesis.



Where do algae grow?

- Algae can be found all over the world on land and in the water.
- Aquatic algae live in freshwater ecosystems and saltwater ecosystem.

The importance of algae

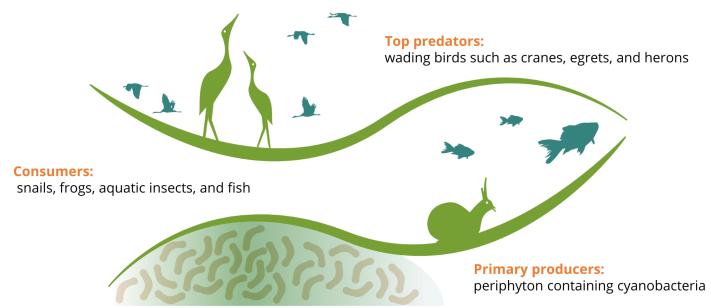
- Algae are an essential food source in many aquatic ecosystems.
- Algae make up less than 1% of the photosynthetic biomass on Earth but are estimated to produce 50% of the oxygen in Earth's atmosphere.

Algal blooms

- Algal blooms area a rapid overgrowth of algae that occur under certain environmental conditions.
- Harmful algal blooms (HABs) are especially detrimental to people, animals, and aquatic ecosystems.

Types of algae

Scientists estimate that there are hundreds of thousands of different algae species. Algae species differ in their appearance, where they grow, the production of toxins, and the formation of HABs.



Food web in the marl prairie ecosystem of Big Cypress National Preserve, FL

Photo credit: FAU/CES



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References

Algae basics

• Raven, J.A., & Giordano, M. (2014). <u>Algae</u>. *Current Biology*, 24(13), PR590-R595.

The importance of algae

- Periphyton. (2015, April 14). National Park Service.
- Chapman, R. L. (2010, September 1). <u>Algae: the world's most important "plants" an introduction</u>. *Mitigation and Adaptation Strategies for Global Change*, 18(1), 5-12.
- Falkowski, P. (2012, March 1), <u>The Power of Plankton</u>. *Nature*, 483(7387), S17-20.

Types of algae

 Guiry, M.D. (2012, July 28), <u>How many species of algae are there?</u> Journal of Phycology. 48(5), 1057-1063.

Green Algae

• Ancestors of land plants revealed. (2011, April 17). EurekaAlert!.

