

Dr. Tali Mass & Jeana Drake – Corals: Changes with Climate Glossary

TERM	DEFINITION
Alkalinity	The concentration of negative charge in a solution that can be neutralized by a strong acid. In seawater, the total alkalinity is typically determined by measuring the concentration of bicarbonate (HCO ₃ ⁻) and carbonate (CO ₃ ²⁻) because they contribute to most of the negative charge.
Aragonite	One of the two common mineral forms of calcium carbonate. The shells and skeletons of some marine organisms, such as mussels, corals, pteropods, and some algae, contain this mineral.
Aragonite Saturation	When the seawater can no longer dissolve any additional aragonite at a given temperature and pressure.
Binocular Microscopy	A light microscope adapted for use with both eyes.
Boundary Layer	The slower moving layers of air or water that form over surfaces.
Calcification	The production of shells, plates, or skeletons from calcium carbonate.
Corallite	The skeleton produced by a single coral polyp.
Covariance	The degree to which two variables change together.
Diel Cycle	A 24-hour cycle (period).
Endosymbiosis	A type of symbiosis in which one organism lives inside the other.
Histology	The study of the microscopic anatomy of cells and tissues.
Irradiance	The amount of radiation (in this case from the sun) per unit area.
Light Penetration	The depth to which light can penetrate into the water. It is influenced by properties such as water clarity and turbulence (movement of the water).
Mesophotic Coral	Mesophotic corals are light dependent corals typically found at depths ranging from 30-40 m and extending to over 150 m in tropical and subtropical regions.
Morphology	The form and structure of organisms and their structural features.
Nematocysts	The stinging cells found in coral tentacles.
Photoacclimation	Adjustment of an organism's photosynthetic ability to alterations in the amount of light in an environment.
Photosynthetically Active Radiation (PAR)	The amount of light available for photosynthesis. This typically includes light waves from the sun between 400 and 700 nanometers.
Polyp	An individual coral. It may live alone or as part of a colony like a coral reef.
Radially Symmetric	The arrangement of body parts around a central axis such that if you split the organism in any direction through the center it would produce two equal halves.
Saturation	When a solution (i.e. seawater) is unable to dissolve any more of a substance.

Scanning Electron Microscopy (SEM)	A microscope that uses a focused beam of electrons to generate an image. It creates a 3-Dimensional image, which makes it particularly useful when looking at the surface structure of the object being studied.
Sessile	An organism that is fixed in one place. These organisms do not swim in the water.
Submersible Respirometer	A piece of scientific equipment used to measure oxygen production (via photosynthesis) and oxygen consumption (via respiration).
Symbiosis	A close ecological relationship between the individuals of two (or more) different species. This relationship may be positive, negative, or neutral depending on whether both species benefit, one species benefits at the other's expense, or neither species benefits.
Zooxanthellae	Microscopic, photosynthetic algae that live inside of most corals. These algae provide the coral with food and oxygen and help with waste removal in exchange for protection and the substances the algae need for photosynthesis.