

# Mangrove Glossary

**Aerial roots-** Roots that are formed in and exposed to air. In mangrove species (e.g., *Rhizophora spp.*), aerial roots develop into stilt roots (prop roots and drop roots) that anchor into the sediment, offering mechanical support and nutrient absorption.

**Anaerobic –** Occurring with little or no oxygen.

**Anchialine ponds –** A rare Hawaiian ecosystem, consisting of pools with no surface connection to the ocean, but affected by tides. These pools have a characteristic water quality and support an assemblage of animals and plants, many of which are endangered.

**Anoxic -** Without free oxygen. Aerobic metabolism (e.g., bacterial respiration) can consume dissolved free oxygen in water and soils, resulting in anoxic conditions that are detrimental to oxygen-breathing organisms.

**Bioaccumulate –** Uptake of dissolved chemicals from water and uptake from ingested food and sediment residues.

**Biogenic -** In mangroves, the trees themselves create the habitat. Biogenic also means “resulting from the actions of living organisms.”

**Canopy –** topmost layer of leaves, twigs, and branches of forest trees or other woody plants.

**Chlorosis –** abnormal condition characterized by the absence of green pigments in plants, causing yellowing of normally green leaves.

**Defoliation -** The removal of the foliar tissues of a plant, resulting from mechanical (e.g., hurricanes), biological (herbivore), or chemical agents (e.g., plant hormones).

**Deposition -** The accumulation of material on a substrate. In mangrove systems this term is typically used in relation to accumulation of surface sediment.

**Detritus –** Non-living organic matter that is so decomposed that it is impossible to identify the original parent material.

**Drop roots-** Roots that develop on a branch and begin as aerial roots but eventually grow into a substrate; these roots can provide mechanical support (e.g., *Rhizophora spp.*).

**Endpoint-** A measured response of a natural resource to exposure to a contaminant, such as oil, in the field or laboratory.

**Eustatic sea level rise -** The worldwide rise in sea level elevation due mostly to the thermal expansion of seawater and the melting of glaciers.

**Evapotranspiration -** The transfer of water from the soil, through a plant, and to the atmosphere through the combined processes of evaporation and transpiration. Evaporation is a function of surface area, temperature, and wind. Transpiration is a process of water loss through leaf stomatal openings, and is related to gas exchange and water transport within a plant. When the stomates open, a large pressure differential in water vapor across the leaf surfaces causes the loss of water from the leaves.

**Genotype -** Genetic makeup of an individual organism.

**Hermaphroditic -** Both sexes present in an individual organism.

**Infrared photography** – Photography using films sensitive to both visible light and infrared radiation. Live vegetation is particularly highlighted with infrared films and so is a useful tool for aerial surveys of live and dead plants.

**Lenticel** – A small, elliptical pore in the periderm that is a means of gaseous exchange.

**Mangal** - a mangrove forest and its associated microbes, fungi, plants, and animals.

**Mangrove** - a tree or shrub that has evolved the adaptations for growing in the intertidal zone (specifically, adaptations to salinity and flooded conditions).

**Microtidal** – A tidal range of less than one meter.

**PAH** - polynuclear aromatic hydrocarbon; also called polycyclic aromatic hydrocarbon, a component of oil. PAHs are associated with demonstrated toxic effects.

**Pneumatophore** - A vertical extension of an underground root, with lenticels and aerenchyma to allow for gas exchange. Pneumatophores are characteristic of trees adapted to flooded conditions (such as *Avicennia spp.*)

**Prop roots** - Roots that develop on a trunk and begin as aerial roots but eventually grow into a substrate; these roots can provide mechanical support (e.g. *Rhizophora spp.*), sometimes called “stilt roots.”

**Propagule** - Seedling growing out of a fruit; this process begins while the fruit is still attached to the tree. For some species of mangroves, propagules represent the normal, tidally dispersed means of reproduction.

**RSLR** – relative sea level rise - The net effect of eustatic sea level rise and local geomorphological changes in elevation. Local subsidence can make apparent RSLR much greater than eustatic rise.

**Sublethal effect**- An effect that does not directly cause death but does affect behavior, biochemical or physiological functions, or tissue integrity.

**Vivipary** – The condition in which the embryo (the young plant within the seed) germinates while still attached to the parent plant (synonymous with viviparity)

**Weathering** - Changes in the physical and chemical properties of oil due to natural processes, including evaporation, emulsification, dissolution, photo-oxidation, and biodegradation.

**Wrack** – Organic material, usually from dead seagrass or algae that wash up on shorelines.