

## KEYWORDS AND PHRASES WITH DEFINITIONS FOR LESSON 13 AND 14

**Abiotic stresses** - the negative impact of non-living factors (high wind, extreme temperatures, drought, flood, or natural disaster) on organisms in a specific living environment

**Bathymetry**- the measurement of the depth of the ocean floor from the water's surface

**Biogenic habitats** – habitats created by the growth of certain plants and animals. In the Gulf of Maine there are salt marshes, sea grass beds, kelp beds, shellfish beds, and cold-water corals.

**Biomass** – the mass of living organisms in a given area (ecosystem) in a given time

**Biotic stress** – is a stress that occurs due to the damage caused to a living organism by another living organism such as a bacteria, fungi, virus, parasites, beneficial and harmful insects, weeds, and cultivated or native plants

**Cold water corals** –suspension feeding invertebrates with feathery tentacles that capture food particles from the water column; they can form a unique habitat that hosts a great diversity of species

**Currents** – the direction and flow within a liquid or gas (water current or air)

**Desiccation** – the drying out of a living organism

**Diurnal tides** – one high and one low tide each day or one tidal cycle per day

**Dunes** – a hill of sand built by the forces of the wind and water that in a coastal area usually runs parallel to the water

**Ecosystems** – an environment that includes all the living organisms that can survive in a particular area as well as the abiotic components (non-living) of air, soil, water, and sunlight

**Eelgrass/sea grass bed**- a highly diverse and productive ecosystem that in the Gulf of Maine are dominated by eelgrass, but in other climates may include other sea grass species

**Fouling communities** – habitats of species that may become established on piers, docks, wharves, shipwrecks, artificial reefs, bridge abutments or other human-made structures. In the Gulf of Maine, blue mussels, barnacles, tunicates, and sponges are some of the more common species found in this type of habitat. Many non-native species are found here as well.

**Gravitational force** – a natural phenomenon in which physical bodies attract with a force proportional to their mass; it is known familiarly as the force which gives weight to objects with mass and causes them to fall when released

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**Gulf of Maine, the** – see **The Gulf of Maine**

**Habitat** - the environment in which an animal or plant normally lives and grows

**Habitat formed by human activity** – biogenic or physical habitats that owe their existence to human activity. Biogenic habitats may be formed by invasive species and physical habitats may be formed on dock pilings, boat hulls, and other structures in the water

**Holdfast** – a root-like structure that anchors an organism such as seaweed to the substrate

**Intertidal** – above water at low tide and under water at high tide; also called littoral.

**Invasive species** - a non-native plant or animal

**Invasive-plant habitats** – habitats formed when a human activities such as shipping, aquaculture or the release of aquarium pets results in the establishment of a species that would not exist naturally in an area. These habitats can replace other habitats and cause profound ecological changes. They are usually contained/eliminated

**Kelp bed** – a productive ecosystem made up of anchored kelp

**Lower intertidal zone** - the area of the shoreline where the tidal water reaches its lowest level

**Middle intertidal zone** – an area of the landscape halfway between the upper intertidal zone and the lower intertidal zone; an area that is exposed to the air halfway between the tide cycles

**Muddy bottom** – a physical habitat whose main substrate (bottom) is mud

**Neap tides** – When the sun and moon are at a 90<sup>0</sup> angle from each other when viewed from the earth, the gravitational forces of the sun and the moon tend to cancel each other out, and the tidal range does not fluctuate as much. Neap tides occur at the first quarter moon and third quarter moon

**Physical habitats** – habitats that are defined by substrate and water depth; the

**Quadrat** – a metal, wood or plastic square which is placed on the area being sampled; used to isolate a small area for the purpose of counting organisms in the sample area

**Rainfall** – the condensation of water vapor into drops heavy enough to fall

**Recruitment** – in biology, when the juvenile organisms have survived long enough to be added to the population

**Rockweed bed** – an ecosystem made up of anchored *Ascophyllum nodosum* (bladder wrack)

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**Rocky bottom** – a physical habitat whose main substrate is cobble and pebble, boulder, or solid rock

**Rocky Shore** – a habitat that consists of horizontal zones between the high and low tide marks. The highest zone is the splash zone, followed by the high intertidal, middle intertidal, low intertidal and subtidal zones with invertebrates and algae of different species exist due to their abilities to tolerate the environment, predation, and competitive pressures of each unique zone.

**Rotation of the earth** – the eastward movement of the Earth around its own Axis

**Salinity** - the amount of salt in a solution

**Salt marsh/pond** – a biogenic habitat that occurs in the upper coastal intertidal zone and is dominated by herbs, grasses, and low shrubs

**Sandy bottom** – a physical habitat whose main substrate is sand

**Sediment** - organic/inorganic material that is deposited from water, ice, or wind

**Sea grass/eelgrass beds-see eelgrass/sea grass beds**

**Semidiurnal tides** - two high tides and two low tides each day or two tidal cycles per day

**Shellfish bed** – a biogenic habitat usually formed by a collection of bivalve mollusks. In the Gulf of Maine the three types noted are mussel beds, oyster beds, and scallop beds

**Slope of the habitat (shore or rock)** – the degree or angle of the land/substrate of a habitat; for example, a coastal habitat could be a vertical rock face or a sloping sand beach

**Spray/splash zone** – the highest zone in the Rocky shore where lichens can live

**Spring tides** – When the sun, moon, and earth form a line, the tidal range is at its maximum or the tidal highs are higher, tidal lows are lower, slack water times, the time when there is little movement one way or the other, are shorter, and tidal currents are faster. Spring tides occur at the new moon and full moon

**Stability of the substrate** – whether or not the substrate can easily shift and move affects what species will grow and thrive in a particular habitat

**Substrate** – the basic surface on which an organism lives, such as mud, sand or rock

**Subtidal** – a zone that is permanently covered with water

**Sunlight** – light from the sun

## KEYWORDS AND PHRASES WITH DEFINITIONS FOR LESSON 13 AND 14

**Temperature** - the physical property of matter that is commonly described as hot or cold

**The Gulf of Maine** - a large gulf in the northeast Atlantic Ocean delineated by Cape Cod, Massachusetts in the south to Cape Sable, Nova Scotia in the northeast.

**Tidal height** - a measurement that the tidal water reaches at a given time

**Tidal inundation** - a phrase used to describe the inflow of the tide

**Tidal pool** - a pool that forms in the depressions of intertidal rock outcrop which provide homes for some animals and algae that might not survive exposure to air while the tide is out; often an area of high salinity water concentrations

**Tide** - the rise and fall of sea levels due to the combined effects of the gravitational forces of the earth, sun and moon and the rotation of the earth

**Transect** - a fixed path along which one records data and occurrences of a phenomena; for example, how many of a species is observed in this fixed path could lead to an estimate of the biological abundance of a species in a particular area

**Upper tidal zone** - the area of the shoreline where the tidal water reaches its highest level

**Upper intertidal zone** - the area of the shoreline between mean high water and mean low water

**Wave action** - the result of wind blowing over a fluid surface

**Wind** - the movement of a large amount of air