Review of Key concepts in Intertidal Ecology (Marine Discovery)

Tides

Neap tides (moderate) vs. Spring tides (highest and lowest)

Substrates

Rocky Point has basalt boulders and pumice from volcanic activity
Station Beach has coquina: lithofied beach sand turned to rock under high pressure,125,000 years old
Pelican Point is made of granite rock, less hard and smooth than basalt.
Cracks and crevices: coquina (most) ------ granite ----basalt (least)
Habitat quality: coquina (best) ------- granite ----basalt (worst)

Physical factors in the intertidal

Temperature
Salinity (increases from evaporation, decreases from rain or runoff)
Wave action
Desiccation
Substrate movement

Biological factors in the intertidal

Competition (particularly for space: real estate is everything!)
Predation
Parasitism
Mutualism
Commensalism

"Connell's Rule"

Physical factors tend to determine the upper limit of where an animal can live; biological factors tend to determine the lower limit

Body Symmetry

Asymmetrical (sponges, algae)
Radial (anemones), pentaradial (seastars)
Bilateral (fish, crabs, polychaete worms)

Feeding strategies

Carnivore: eats animals
Herbivore: eats plants or algae
Omnivore: eats both
Planktivore: eats plankton and bacteria suspended n water
Detritivore: eats dead material in water or on substrate

Feeding modes

Filter feeders: catch food suspended in the water by creating a current (e.g., barnacles, sponges, porcelain crabs, tunicates, clams, mussels, oysters, scallops).
Suspension feeders: catch food and/or organic material from water using tentacles or spiny arms; do not generate a current; often predators (e.g., anemones, corals, hydroids, brittle stars)
Deposit feeders: remove organic material from the water or sediment by digesting sediment, use of mucous-covered tentacles or arms, or a mucous net, not predators (e.g., sea cucumbers, feather dusters)
Grazers: eat algae or encrusting colonial invertebrates (e.g., sea stars, sea slugs, octopus, fish, snails)
Scavengers: feed on dead or dying plants, algae or animals (e.g., crabs, snails, fish)

Modes of reproduction

Sexual versus asexual (budding, cloning)

Movement

Sessile (attached, encrusting, crustose) versus mobile (also called errant or motile)