HABITATS

The living and non-living surroundings around an organism which make up its ecosystem. Included are food, shelter, & life necessities.

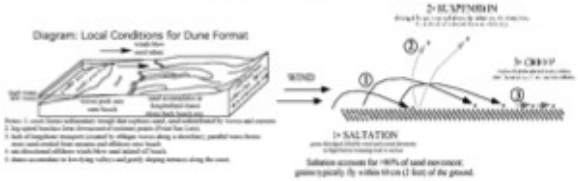
FIVE MAIN MARINE HABITATS:

- Sand Dune
- Beach
- Intertidal
- Protected
  - Estuaries, lagoons, bays
  - Salt marshes
  - Wharves & piers
- Mangrove Swamp

SAND DUNES

- Predominantly sand
- Wind is a large factor in maintaining the habitat
- Grasses and ice plants (succulents) as well as birds (plovers around here) and reptiles, insects, and rodents

Saltation



- The wind driven process which sorts sand and builds and destroys dunes.
- Causes a migration of the entire dune.

GUADALUPE

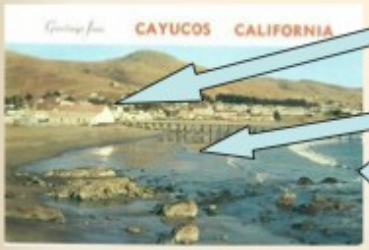
BEACH HABITAT

- Wave action is the major factor creating a beach of sand, mud, cobble, shell, or any mix of these.
- Strong waves = steep beach, smooth waves = shallow beach

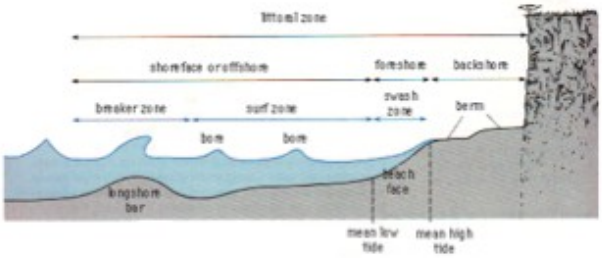
Beaches of sand, black sand, cobble, & shells



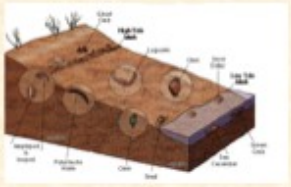

3 zones



- Backshore (water rarely hits)
- Foreshore (just above the surf zone)
- Nearshore (mostly submerged)



Beach Critters




- Animal life are mostly filter feeders, substrate ingesters, scavengers, & predators

PROTECTED AREAS

- Estuaries, lagoons, bays
- Salt marshes
- Wharves & Piers

Estuaries, lagoons, bays


Morro Bay


Surf Beach, Lompoc

- Estuaries are formed where a river meets the ocean.
- There is no active wave action, but a source of salt water from the ocean can cause "tides."

Salt Marshes

- Salt water once connected to the sea, due to land changes are cut off from a replenishing source.
- Salt marshes are more stagnant and have lots of birds and small animals.

Salt marsh in Carpentaria

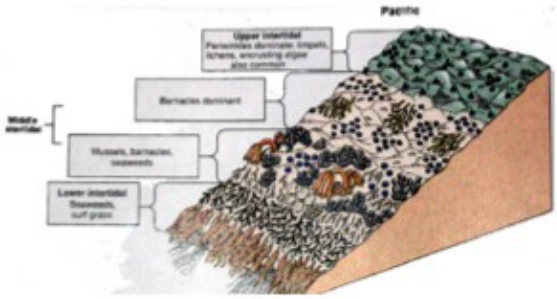
Piers or Wharves

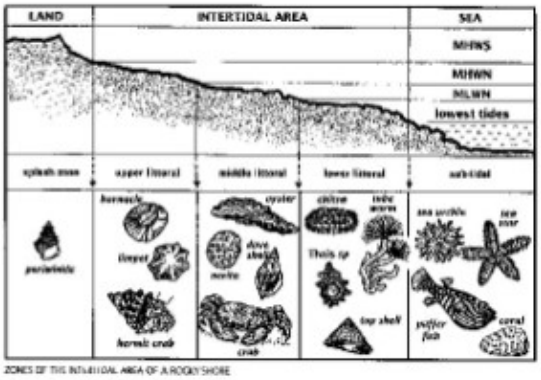
- Mostly man made where animals can be out of the direct wave action, but have access.
- Examples include San Francisco's Fisherman's Wharf & in Monterey.

PROTECTED ANIMALS

- Tend to be the animals that live in the lower tidal zones & mud dwellers.
- Many birds frequent protected areas for easy fishing!

INTERTIDAL HABITAT





ZONES OF THE INTERTIDAL AREA OF A ROCKY SHORE

Zones are shown with color changes on the rocks

Intertidal Habitat

- Divided into vertical zones: species are concentrated in bands along the rocks due to competition for food and living space.
- Upper
- Middle
- Lower

Upper Intertidal Zone:

- Seldom submerged, so critters are adapted to withstand dry air.
- Above the high tide mark, so only moisture is spray or slash-- "splash zone"
- Lichens, cyanobacteria, periwinkles, crabs, raccoons, birds, people

Middle Intertidal Zone:

- Covered/Uncovered with water via tides
- Sometimes broken into more zones
- Barnacles - acorn & gooseneck, Mussels, Rockweed, brown seaweed, some anemones, crabs, chiton

Lower Intertidal Zone

- Submerged most all of the time.
- Dominated by seaweeds - red, green, & brown algae
- Purple sea urchins, keyhole limpets, anemones, octopi, sunflower stars, sea cucumbers…

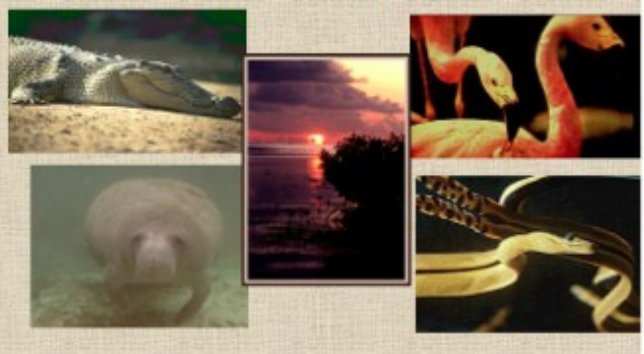
Critters from the zones

Mangrove Swamp

Mangrove Swamp

- Gulf coast & Florida
- Dense vegetation with exposed roots.
- Salt water floods the grove.
- Many animals in forest and mud
- Manatees in Florida

Animals of the Mangrove



ZONATION IN THE OCEAN