The Intertidal Coast

The rocky intertidal is the portion of a rocky coastline that is periodically covered or exposed by daily tidal changes. This interface is a complex environment where species are well adapted to the changing habitat conditions. Conditions are more terrestrial higher in the intertidal and correspondingly more marine in the lower intertidal area, depending on the amount of exposure the area receives.

This range of environmental conditions influences the species that are able to adapt to changing habitat variables. These environmental conditions are, in part, responsible for the unique zones within the intertidal that are highly visible by the dominant species that occur in each area or “zone”.

The splash zone is the area above the high tide water line and mainly depends on sea spray and mist for water coverage. The characteristic

species of the splash zone are the little acorn barnacles (Cthamalus dalli),

sea lettuce (Ulva sp.) and the periwinkle snail (Littorina sp.). All species are adapted to withstand long periods of exposure.

The high zone is the area of intertidal that is covered by highest tides. This zone is characterized by the larger acorn barnacle (Balanus glandula), buta large number of limpets and chitons also call this “zone” home. Two species of rockweed, Selvetia compressa and

Hesperophycus harveyanus, are commonly observed in the high intertidal

zone.

The mid zone is characterized by the three highly recognizable intertidal species the seastar (Pisaster sp), the mussel (Mytilus californianus) and the gooseneck barnacle (Pollicipes polymerus). The mussel beds provide the characteristic texture and color for this zone.

The low zone is mixed with organisms that can be found in both the intertidal and subtidal habitats and is characterized by the large fleshy

brown algae that begin to appear in this zone. Several algae species are

common, but the characteristic brown algae of the low zone are the feather boa (Egregia menziesii) and the sea palm (Eisenia arborea). The low intertidal zone provides more food, shelter and protection from

desiccation than the other intertidal zone and is therefore inhabited by a greater number of species.

What is unique about the intertidal coastline?

A. Organisms in the intertidal zone can only survive out of water for 10 minute periods.

B. The intertidal zone is only found in the Americas.

C. The environment is constantly changing due to the daily tidal changes.

D. The environment changes daily due to the changing seasons.

Which statement is true about theintertidal coastline?

A. Tides change in the intertidal once a week.

B. The seasons play the greatest role on the changing intertidal coastline.

C. Conditions are more marine higher in the intertidal and more terrestrial lower in the zone.

D. Conditions are more terrestrial higher in the intertidal and more marine lower in the zone.

Organisms that live in the splash zone must be adapted for\_\_\_.

A. Long periods under water

B. Long periods of no water

C. Freshwater survival

D. Swimming at great depths

Which intertidal zone provides the best shelter and availability of food?

A. Splash Zone

B. High Zone

C. Mid Zone

D. Low Zone