

La Jolla sandy beach habitat

credits: Canought

Quite unlike the beach in Mission Bay

Wave action

- 1. High energy habitat - crashing waves
- 2. Gentle grade
 - Not steep compared to the rocky intertidals
 - because sand can be moved by the waves
- 3. Sandy bottom
 - 2 - 0.06 mm grain size
 - high energy wave action prevents mud from settling
- 4. Grains of sand can scour organisms

Lack of a firm substrate

- 1. No place for algae or grasses to secure themselves, so they are missing
- 2. Sand moves tidally, seasonally, & with long shore current
- 3. Human developments

Water availability

- 1. Tidal variation in water level
 - desiccation
- 2. Lack of fresh water
 - From food
- ***Temperature - hot! Light colored sands reflects some sunlight, but also captures some, little to no shade***

Community structure

- 1. Infauna - many organisms live beneath the surface, not a visible community
 - - **avoid extreme temps, desiccation, predation**
 - - **minimize wave action/scouring by sand**
- 2. Trophic structure:
 - **a. primary producers - mostly interstitial in sand, some phytoplankton from offshore**
 - **b. primary consumers include deposit feeders and suspension feeders**
 - **c. secondary consumers, fishes, snails & birds**

Zonation and communities of sandy beach habitat

- ***A. Upper beach – supratidal – high tide to dunes***
- 1. Conditions – hot sands, dry, little access to fresh water, no protection from wind and spray, no place to hide from predators
- ***B. Strand line – delineates point of highest tide***
- Lots of organic material piled here
- ***C. Intertidal – between high and low tides***
- ***D. Lower beach – subtidal – below the low tide***