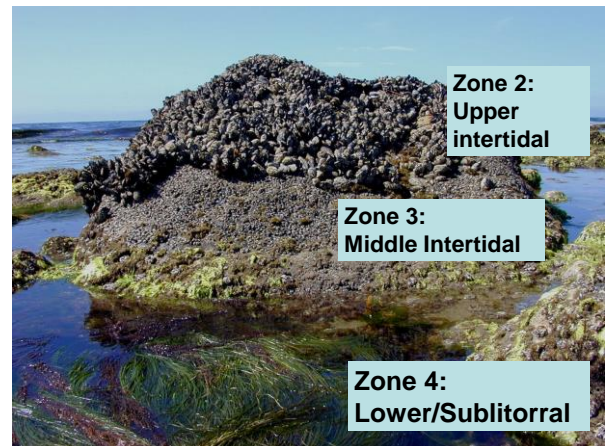
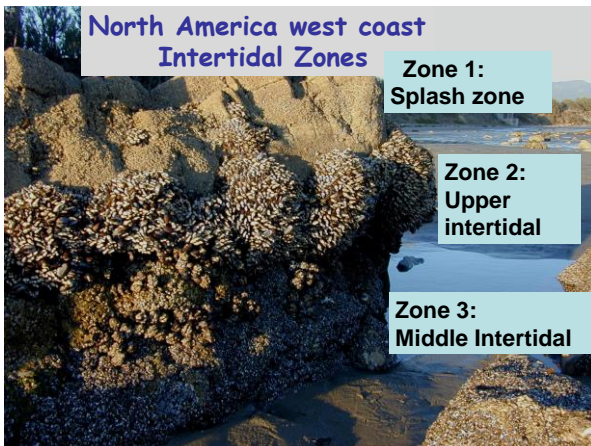
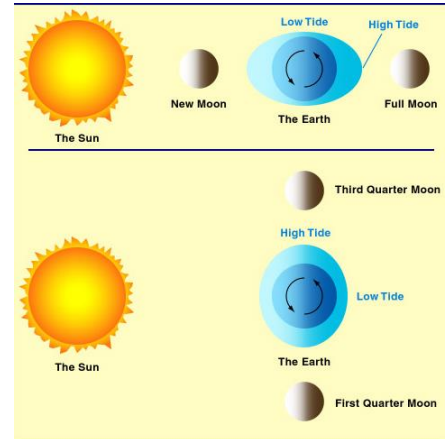
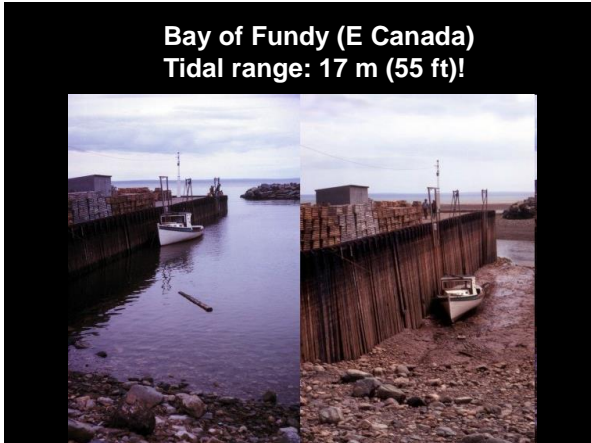
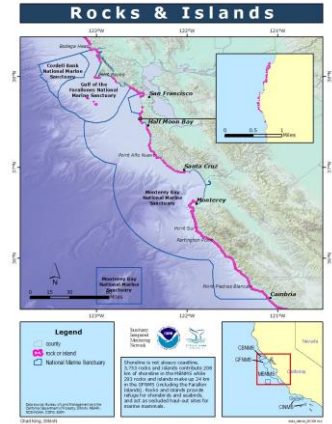


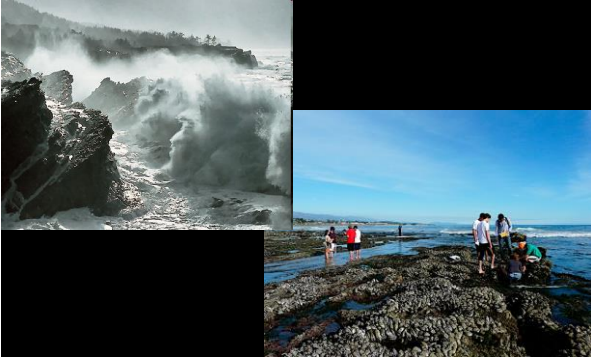
Bio125 Lecture #4 (1/26/17)

- I. Time Management: worksheet due Tues 1/31 at START of lecture
- II. Benthic Zone: Rocky Substrate
- III. Tides
 - A. Causes
 - B. Tidal patterns
 - 1. Daily
 - a. Diurnal
 - b. Semi-diurnal
 - c. Mixed semi-diurnal
 - 2. Monthly
 - a. Spring tides (new & full moons)
 - b. Neap tides (quarter moons)
 - C. Rocky Intertidal Zonation
 - CA Vertical Zones & indicator species (in lab field trip)
- IV. Rocky shore intertidal Challenges & Adaptations
 - A. Challenges & Adaptations
 - 1. Space competition
 - 2. Wave Shock
 - 3. Water loss (desiccation)
 - 4. UV

Hard substrate is limited in the ocean



Challenges & Adaptations of life in the rocky intertidal



Rocky intertidal adaptations 1. limited space (hard substrate)



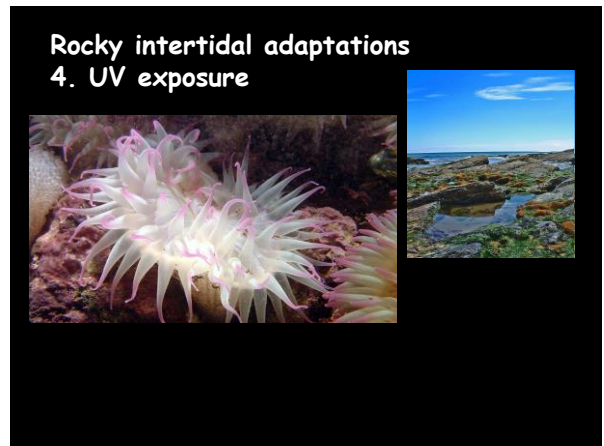
Rocky intertidal adaptatic 2. Wave shock



Rocky intertidal adaptations 3. Dessication



Rocky intertidal adaptations 4. UV exposure



Lecture #4 (1/26/17): Study Questions

1. Define benthic. What type of benthic habitat is most common in the oceans & shorelines?
2. Describe the two different processes that cause most places on Earth experience 2 high tides and 2 low tides within each 24 hour period.
3. Why does the peak tide occur about 50 minutes later each day?
4. Define the 3 types of tidal cycles: diurnal, semi-diurnal, mixed semi-diurnal; state which is most common and where each occurs.
5. Define spring & neap tides, state when each occurs, and explain why they cause the differences in tidal range on a monthly basis.

Lecture #4 (1/26/17): Study Questions

6. Why do we have 4 rocky intertidal zones here?
7. Define indicator species.
8. List the name of the zone and the indicator species for each here in CA (material presented in lab this week).
9. Why is space competition so intense in the rocky intertidal?
10. List 5 adaptations to space competition in the rocky intertidal. Provide an example organism for each.
11. List 5 different adaptations of intertidal organisms to wave shock. Provide an example organism for each.

Lecture #4 (1/26/17): Study Questions

12. What 2 biological risks can being out of the water cause for an intertidal organism?
13. List 3 different adaptations to dessication (drying out). Provide an example organism for each.
14. List 2 different adaptations to help reduce harm from UV rays by 2 different types of intertidal animals.