

Name(s): _____ Period: _____ Date: _____

Rocky Intertidal Habitat Data Sheet




What can observations of marine life over time tell us? Let's start with photo quadrats for practice!

- 1. Individuals:** Count them if **any portion** of the animal is in the photo quadrat.
Look closely – they can be hard to spot!

| Organism | Photo #: _____ | Photo #: _____ | Photo #: _____ |
|--|----------------|----------------|----------------|
| Giant green anemone – <i>Anthopleura xanthogrammica</i> | | | |
| Whelks – <i>Acanthinucella</i> spp. / <i>Nucella</i> spp. | | | |
| Turban snails – <i>Tegula brunnea</i> / <i>funnebralis</i> | | | |

- 2. Count and record** the number of squares (out of 6) with any part of:

| Organism | Photo #: _____ | Photo #: _____ | Photo #: _____ |
|--|----------------|----------------|----------------|
| Aggregating anemone (less than 5 cm—hard to see!) <i>Anthopleura elegantissima</i>  Photo: K. Soave | | | |
| Common acorn barnacles – <i>Balanus</i> / <i>Chthamalus</i> spp. | | | |
| Encrusting coralline algae (on rocks) – many species | | | |
| Flattened rockweeds <i>Fucus gardneri</i> / <i>Hesperophycus californicus</i> | | | |
| Green pin-cushion alga - <i>Cladophora columbiana</i> | | | |
| Iridescent algae – <i>Mazzaella flaccida</i> / <i>splendens</i> | | | |
| Limpets – <i>Lottia</i> spp./ <i>Macclintockia</i> spp. (0.5 – 2.5 cm) | | | |
| Red Algal Turf – <i>Endocladia muricata</i> / <i>Gelidium coulteri</i> | | | |
| Bare rock | | | |

- 3.** What living and nonliving things might affect the presence of different species in rocky intertidal habitats (tide pools)? Record your ideas below or in science notebooks with words and pictures.

4. Water temperature is one factor that affects the presence of different species in rocky intertidal habitats. Colder water usually contains more dissolved oxygen. Marine animals need it to live.

Get the approximate surface water temperature at Duxbury Reef / Duxbury Point, Greater Farallones National Marine Sanctuary using NOAA View Global Data Explorer:

<https://www.nnvl.noaa.gov/view/globaldata.html>.

- Click: **+ Add Data > Ocean > Temperature > At the Surface**
- Click the small “Data Values” box in the lower-right of the Time legend:



Temperatures in degrees Celsius are then displayed when you point to the map.

- Open a new browser tab. Find the map of the sanctuary on NOAA’s National Marine Sanctuary System website: <https://sanctuaries.noaa.gov/about/maps.html>.
- Approximate temperature at the shoreline at Duxbury Reef / Duxbury Point: _____ °C (_____ °F)
- Approximate temperature at 100 meters below the surface offshore of Duxbury Reef: _____ °C (_____ °F)
(Click **+ Add Data > Ocean > Temperature > At Depths**)

5. What threats do rocky intertidal habitats face and what can be done about these? Record your ideas below or in science notebooks with words and pictures.

6. Why are national marine sanctuaries important? Record your ideas below or in science notebooks in words and pictures.