

## **Upland**

**Read:** Welcome to our fifth and final habitat at the Refuge. This is the upland. It is very special because it is the only freshwater habitat at the Refuge. But do you see any water in this photo? No! So where do you think plants and animals get freshwater from? Plants and animals in this upland habitat are adapted to survive in the California climate of hot and dry summers, and cold and wet winters. During the rainy season, there is freshwater falling from sky, soaking into the ground, creating puddles, and droplets on leaves. During the summer, plants go dormmate to reduce the amount of water they need, and animals rely on morning dew and the water within their food. Have you ever walked outside early in the morning and noticed everything was wet, even though it didn't rain? This is morning dew!

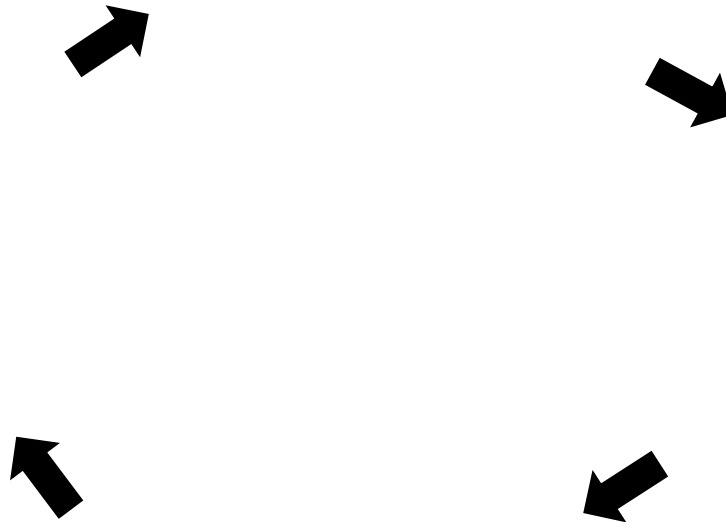
The upland is bursting with life! There is so much biodiversity of plants and animals. As you will learn, there are reptiles, mammals, birds, and insects of all kinds that rely on this habitat and each other. There are big, tall trees, and flowers of every color! Fresh water makes it easy for these species to survive.

Do you see the small plant cages in this photo? These cages are used to protect newly planted plants. The Upland is where a lot of Refuge volunteers do habitat restoration work. What does the word "restoration" mean? To restore something is to bring it back to its original state. Here at the Refuge, this means pulling invasive plants (weeds), and replacing them with native plants that these species depend on for food and shelter. You can also help by planting native plants at your home!

*Click your mouse or spacebar to continue learning about the species in the upland!*

1. The California Poppy is the \_\_\_\_\_ flower of \_\_\_\_\_. It is native to the west coast, but is also found in many other states across the United States.
2. When are the best times to plant Poppy seeds?
3. Click on the Nesting icon. How do Barn Swallows build their nests?
4. Western Fence Lizards can change their color. Why do they do so?
5. What is the Anna's Hummingbird source of food?
6. Do males or females have the bright pink feathers on their throat?
7. How fast can a Black-tailed Jackrabbit run?
  - a. 3 MPH
  - b. 13 MPH
  - c. 30 MPH
8. How many litters can a female Black-tailed Jackrabbit have per year?

9. Watch the video on the Gray Fox webpage. What special adaptation do Gray Foxes have?
10. Are Gray Foxes territorial?
11. How do Red-tailed Hawks usually fly?
  - a. Direct Flight (in a straight line)
  - b. Soaring (in circles)
  - c. V-formation (group of birds flying in a V shape)
12. When does a Red-tailed Hawk get its red tail?
13. What is the Monarch Butterfly's defense mechanism?
14. Fill in or draw the Monarch's life cycle:



Thank you for joining us on this Virtual Field Trip at Don Edwards San Francisco Bay National Wildlife Refuge! Be on the lookout for other interactive activities we are developing at <http://sfbws.com/>