

Field Trip to the Tijuana Estuary

Name _____
Section _____

Take 5 South to Coronado Avenue and turn to the right (headed West). Go to 3rd Avenue and turn left. Go to Caspian Way and take another left. You should now see the State Park sign. (619)-575-3614. The Tijuana Estuary Visitor Center is open to the general public 5 days per week, Wednesday through Sunday, from 10:00am to 5:00pm. For more information and schedule go to http://trnerr.org/visitors_center.html

Reserve hours for trail use: 1/2 hour before sunrise to 1/2 hour after sunset DAILY.

Visitor Center is closed on Thanksgiving, Christmas and New Year's Days, but trails remain open during daylight hours.

The Tijuana Estuary is a natural drainage for the Tijuana River. The river flows from the mountains of Northern Baja California and empties through a north flowing canyon into the border between the United States and Mexico. It is a unique area, one of the few marshlands that has not been turned into either recreational areas or industry. The Estuary is not without its problems.

During rain storms the Mexican sewage facilities can not keep up the increased flow. Raw sewage from Mexico overflows into the drainage system of the river and hence into the estuary.

The upper end of the marsh is composed of agricultural fields and grazing lands, the middle portion is owned by the Navy and is used for a helicopter landing field.

The lower portion of the marsh is the natural part of the Estuary and the State of California is responsible as a state park.



Figure 1 Lesser Yellowlegs

The Estuary:

Describe the eight types of habitats found within the estuary.



1. Salt Panne _____

2. Brackish Pond _____

3. Riparian _____

4. Uplands _____

5. Salt marsh and Transition _____

6. River bed and Agriculture _____

7. Dunes and Beach _____

8. Tidal Channels and Mud Flats _____

How do the basically freshwater loving plants survive in a salty marsh? _____

What thorny plant growing in this estuary usually will not grow down by the water? _____

What plant is considered the “hotel” for many of the creatures that live at the marsh? _____

What is “Salt Marsh's Bird Beak” and how does it grow? _____

Give an example of the types of plants within these five groups found around the estuary?

1. Salt Marsh Plants _____

2. Chaparral Plants _____

3. Cactus and succulents _____

4. Sand Dune plants _____

5. Riparian _____

What seaweeds are often found floating in the channels around the Estuary?

1. _____

2. _____

What is an Estuary? _____

How many estuary reserves exist in the United States? _____

What are the two major environmental problems the Estuary faces every day?

1. _____

2. _____

How does the position of the sand dunes protect the Estuary?

What happens to the Estuary during the Winter? _____

What are the three reasons the Estuary supports such a rich abundance of wildlife?

1. _____

2. _____

3. _____

What are the three factors which can cause an animal to become endangered?

1. _____

2. _____

3. _____

What Estuary insect is known as the “Olympic Sprinter” of the sand dunes? _____



Figure 3 Tiger Beetles - mating

The Ghost shrimp shares its home with what other animal? _____

How long does it take the Stripped Shore Crab to grow to its full size? _____

How does the Stripped Shore Crab grow with its encasing shell?

What coloration change occurs during the Stripped Shore Crabs growth?



Figure 4 Stripped Shore Crabs

Why does the Snowy Egret and the California Horn Snail adapt so well to the marsh lands? _____

Why are the marshes so important to the Skipper? _____



Endangered Species

Name four ways that species in the marsh become endangered:

1. _____

2. _____

3. _____

4. _____

What are the causes for the decline of the Savannah Sparrow?



Figure 6 Savannah Sparrow

Fabulous Wetlands with the Science Guy)

What kind of wetland is the Tijuana Estuary considered to be? _____

Name the food chain members of the marsh going from Phytoplankton to the Northern Harrier.

1. Phytoplankton
2. _____
3. _____
4. _____
5. Northern Harrier

Birds



Figure 7 Northern Harrier



Figure 8 Osprey



Figure 9 Great Egret



What are the species of birds you would expect to find year around in the Estuary?

1. _____

2. _____

What are the birds found at the marsh just in the Spring and Summer?

1. _____

2. _____

3. _____

4. _____

What are the birds found at the marsh just in the Fall and Winter?

1 _____

2 _____

3. _____

4 _____

5 _____

6 _____

7 _____

8 _____

Why is there a difference in the number of birds from Fall to Summer?

Name ten species of birds found at the Tijuana Estuary.

1. _____

2. _____

3 _____

4 _____

5 _____

6 _____

Name ten species of birds found at the Tijuana Estuary (continued)

7. _____

8. _____

9. _____

10. _____

How many different species of birds have found at the Tijuana Estuary?

How many of these birds are residents? _____

How many of these birds are migratory? _____

What do the short billed birds feed upon? _____

What do the medium length billed birds feed upon? _____

What do the long length billed birds feed upon? _____



Figure 18 Black-bellied Plover