

PLUGGED IN

FUN FOR KIDS

A COOPERATIVE PROJECT OF THE SANTA BARBARA NEWS-PRESS AND THE MUSEUM EDUCATORS' ROUNDTABLE TO PROMOTE LEARNING AMONG YOUNG READERS IN NATURAL SCIENCE, HISTORY, TECHNOLOGY AND ART

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This Month's Theme: "Life On The Edge"

Life is Tough for Wild Things on the Western Shore

By Sally Isaacson, Santa Barbara Botanic Garden

As you walk along a sandy beach, you might feel hot and thirsty, your hair will blow in the wind, and you may get sand or salt in your eyes. Now you

have a feeling for the tough conditions plants and animals of coastal habitats must handle.

Fresh water may be scarce and leaves dry out very quickly in the wind even though there is plenty of water in the ocean. Many coastal plants are adapted to conserve water. Their leaves may be juicy to help store a lot of water or they may be covered with tiny, silvery hairs that reflect sunlight, trap water, and prevent water loss. Some plants have special ways for getting rid of salt to produce salt crystals on their leaves.

Have you ever noticed the shape of sand dune plants? Many of them form

low mounds that spread across the sand. Close to the ocean, the sand is constantly moving. Plants that survive best have low, creeping stems that can make



Guadalupe Dunes with mounded Sea Rocket plants in foreground



Great Blue Heron



Seagulls at river mouth, Guadalupe Beach

new sprouts when they are buried under sand. Can you guess what kinds of roots are under the sand?

Summer is a great time to explore Santa Barbara County's coastline. So, pack up a picnic and take a family trip to visit one of the exciting places we suggest below to learn about some very interesting plants and animals.













Roots of the Dune Rush grow through shifting sand.



MATCH THESE BIRDS WITH THE TRACKS THEY LEAVE IN THE SAND.

By Amy Findlay, CEC's Watershed Resource Center

You can find the birds shown below in many water habitats. Although several different bird species can be found in the same habitat, their feet show us how they feed and move in very different ways. Can you match the bird with the tracks left by their feet? Answers are below.

	1		Kingfisher
	2		Grebe
	3		Coot
	4		Merganser
	5		Blue Heron

Answers: 1: Grebe, 2: Kingfisher, 3: Coot, 4: Merganser, 5: Blue Heron

Rare Birds on our Beaches

By Laura Francis and Julie Bursek, Channel Islands National Marine Sanctuary

Two interesting birds you might see on a beach walk are Least Terns and Snowy Plovers. They are ground nesting birds that can be hurt if their nests are disturbed. If you see these birds on a beach walk, please help protect them by staying out of closure areas put in place for their protection.

The Least Tern (*Sterna antillarum browni*) is North America's smallest tern and weighs just 9 ounces. Useful markings to identify Least Terns are white foreheads on otherwise black caps. They feed on small fish and shellfish in shallow, near-shore waters and coastal ponds, channels, and lakes. They catch their prey by either flying low over the water and snatching fish near the surface or hovering high above to plunge headlong into the water to catch their target.

Least Terns are an endangered species and are in danger of becoming extinct. They are decreasing in number because of dredging, filling, water pollution, and predation by wild animals.

Western Snowy Plovers (*Charadrius alexandrinus nivosus*) eat crabs, worms and beach hoppers. They usually stop, look, run, and then seize their prey from the surface of the beach or the tide flat. The pale sand color of their backs blends with their surroundings as they turn and face away from intruders.

The Western Snowy Plover is a threatened species. That means it will become endangered if not carefully protected. Snowy plovers breed on coastal beaches and in wetland areas. The Pacific Coast populations have declined due to loss of coastal habitats to construction of buildings, roads, and campgrounds, and nest failure caused by disturbances from human activities on beaches.



Signs warn that the beach is closed to humans.



Places to see Least Terns, Snowy Plovers and interesting beach plants:

Santa Maria area: Rancho Guadalupe Dunes County Park (Least Terns and Snowy Plovers: Spring and Fall). Be sure to visit the Dunes Center to learn about the ecology of sand dunes at their wonderful new visitor center.

Lompoc area: Ocean Beach County Park (Least Terns and Snowy Plovers: Spring and Fall):

Coal Oil Point Reserve at Sand Beach: (Snowy Plovers: Winter)

Santa Barbara Waterfront: Harbor, beaches, bird refuge, and zoo (Snowy Plover: Fall to Spring)

On a visit to the beach or to an estuary, you will see many different birds that are especially adapted to "life on the edge" of the ocean. Pay particular attention to their beaks and feet that give hints about their lifestyle and feeding habits. Did you know that Great Blue Herons eat both fish and gophers?

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All photos by Sally Isaacson.