



Activity 9

Threatened Habitat: Threatened Birds



Photo PRBO



Photo P. Knapp



Photo National Park Service




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Activity 9

Objective:

- To learn the importance of beach and dune habitat to birds.
- To learn about threatened and endangered species.
- To learn how to help protect beach-nesting birds.

Materials:

-  Life on the Ocean's Edge video by La Purisima Audubon Society (sign out from STRAW).
-  Poster paper
-  Colored pencils; markers; paint

Background

Beaches and dunes provide habitat for plants and wildlife, many of which are threatened and endangered. Snowy Plovers and California Least Terns are two fascinating birds that depend on beaches and dunes for nesting. You will find two background pages, which summarize the endangered or threatened status and nesting requirements of the California Least Tern and the Snowy Plover.

Vocabulary:

Clutch - a complete set of eggs laid by the female bird

Cryptic - camouflaged, difficult to see

Endangered - an animal or plant in danger of extinction within the near future throughout all or a significant portion of its range.

Endangered Species Act - a government law that protects species of plants and animals that could become extinct in the near future. The Act's goal is to help species recover so they no longer need special protection.

Extinct - when a species exists no longer.

Mobbing - when birds attack a predator or intruder in large numbers.

Threatened - an animal or plant likely to become endangered within the near future throughout all or a significant portion of its range.

Vulnerable - sensitive to being disturbed.

Note on Web Searches:

Type "California Least Tern" or "Western Snowy Plover" into your search engine to get results specific to the California population of the species.

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Procedure:

1. Brainstorm with class to get them thinking about beach and dune habitat. (You may need to review with class what habitat means)
2. Discuss with the class how beaches and dunes are an important habitat for many birds, especially the Snowy Plover and the Ca Least Tern who rely on beaches and dunes for survival.
3. Go over important vocabulary that they will be hearing in the video.
4. Watch video.
5. Discuss and summarize the ways that human activities can disturb nesting birds on the beaches: off road vehicles use, walking too close to nesting birds, dogs off leash, building on beaches and dunes.
6. Choose one or all of the following activities to do as a class.

Public Announcement Poster Making Activity

Have students imagine they are managers of a public beach that is home to nesting Snowy Plovers and/or Least Terns. How would they alert the public so that their beach? Have the students create signs to post at local beaches or nature centers (Point Reyes National Seashore for example).

1. Pass out poster paper and poster making supplies to students.
2. Have students create a poster that they would put up on a beach to alert the public about nesting birds using student artwork or photos downloaded from the web.
3. Important to include the ways that someone visiting the beach can help avoid disturbing the birds.
4. Poster should also include student artwork or photos from the web of plovers or beach habitat.

Beach-nesting Bird Drama

1. Students work in groups to develop and present a skit that teaches the audience about the threats facing nesting Snowy Plovers and/or California Least Terns. For example, a family visits a beach learns about plovers or terns from a biologist or a ranger; a news-cast reporting from the field about nesting birds on California beaches.

Nest Cycle Activity:

1. Compare and contrast the nest cycle of Western Snowy Plovers and California Least Terns by making a chart showing the differences and similarities in the following characteristics:
 - number of eggs in clutch
 - which parent incubates eggs
 - which parent takes care of chicks
 - whether chicks feed themselves or depend on parents
 - how many days until chicks can fly
 - how birds respond to approaching people and predators

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Background on Snowy Plovers:

The Snowy Plover (*Charadrius alexandrinus*) lives on dunes, beaches, sand spits, and salt flats across western U.S. and into Canada and Mexico. Snowy Plovers on the west coast, from Washington to Mexico, are *threatened*. Thus, they are protected under the *Endangered Species Act*. Plovers are threatened because their beach habitat has been lost from building and recreation.



Adult male Snowy Plover.

Nests of Snowy Plovers are shallow depressions on beach sand that are often lined with tiny pebbles and beach debris. Both parents incubate their three-egg *clutch* for four weeks. Upon hatching, tiny, downy plover chicks are able to run around and feed themselves on the beach, but are protected by the adult male. The female plover abandons the family and may nest with another male. Chicks cannot fly for about four weeks after hatching. Nests, eggs, and chicks are extremely well camouflaged so they remain hidden from predators. Unfortunately, it is this *cryptic* characteristic that makes nests and chicks *vulnerable* to human disturbance.

In general, plovers and their chicks respond to people as potential predators by changing their behavior from foraging or resting to crouching or alertness. Adult plovers may move away from a person who is walking towards them; but when chicks are present, their reaction to us increases.

Often the adult plover will lead his chicks away from approaching people, and sometimes chicks can become separated from their family. It is dangerous for chicks to move around because they:

1. lose of energy
2. are more visible to predators
3. spend less time being kept warm by their parent
4. spend less time resting or feeding.

These negative factors may make the chick vulnerable to predation, particularly when the chicks are very young and dependent on their parent.

Beach visitors can help plovers by:

1. keeping dogs leashed,
2. leaving driftwood flat on the beach (to reduce perches for predators of plovers such as a raven),
3. walking on the wet sand—away from plover nesting areas,
4. helping protect beach and dune habitat.



The male Snowy Plover Cares for the three flightless chicks. He must keep chicks warm when they are small, and keep them safe from predators for 4 weeks.

Photo by Dave Dixon.

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Background on California Least Terns:

Least Terns (*Sterna antillarum*) are seabirds that live on open beaches, gravel pits, dried mudflats, and open lands along the Pacific and Atlantic coasts. A unique group of these birds, called the California Least Tern, nest on the beaches of Southern California. In the fall and winter, they leave for tropical climates to the south. There are very few California Least Terns because their beach nesting homes have been lost to building and recreation. They are *endangered* and, thus, are protected under the *Endangered Species Act*.



Least Tern at its nest on a beach.
Sketch taken from the Web.

California Least Terns nest in large groups on beaches, making shallow nests in sand, shell or gravel that are often lined with tiny pebbles, shells and bits of wood or grass. Both males and females take turns incubating their two-egg *clutch* for about three weeks. Once hatched, the chicks can leave the nest after about two days; but, chicks cannot fly until they are about twenty days old. Chicks are often left alone on the beach while both their parents catch fish in the ocean for them. Nests, eggs, and chicks are extremely well camouflaged so that they remain hidden from predators. Unfortunately, it is this *cryptic* characteristic that makes nests and chicks *vulnerable* to human disturbance.

When disturbed by humans or potential predators, terns usually respond by leaving the nests and chicks, and dive-bombing or *mobbing* the intruder. Chicks that are still unable to fly may attempt to run away, separating them from their parents. It is dangerous for chicks to move around because they:

1. lose energy,
2. are more visible to predators,
3. spend less time being kept warm by their parent,
4. spend less time resting or feeding.

These negative factors make the chicks vulnerable to predators, especially when the chicks are very small.

Adult terns will sometimes abandon colonies if disturbed repeatedly, making them particularly vulnerable to recreational activities on beaches. They will easily relocate to suitable habitat. Unfortunately, with increased development, there are few undisturbed beaches for their use. People can help terns by:

1. keeping pets leashed,
2. leaving driftwood flat on the beach (to reduce perches for predators of terns such as raven),
3. walking on the wet sand—away from tern nesting areas,
4. helping protect beach habitat.