

Snowy Plover Docent Manual

updated May 2020



COAL OIL POINT
R E S E R V E

Coal Oil Point Reserve
Bldg 7060 Slough Rd. Goleta, CA 93117

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Introduction

Thank you for participating in the Coal Oil Point Reserve Snowy Plover Docent Program at Sands Beach!

This program assists the protection of the Western Snowy Plover at COPR by increasing beach user awareness and promoting educational opportunities for the community.

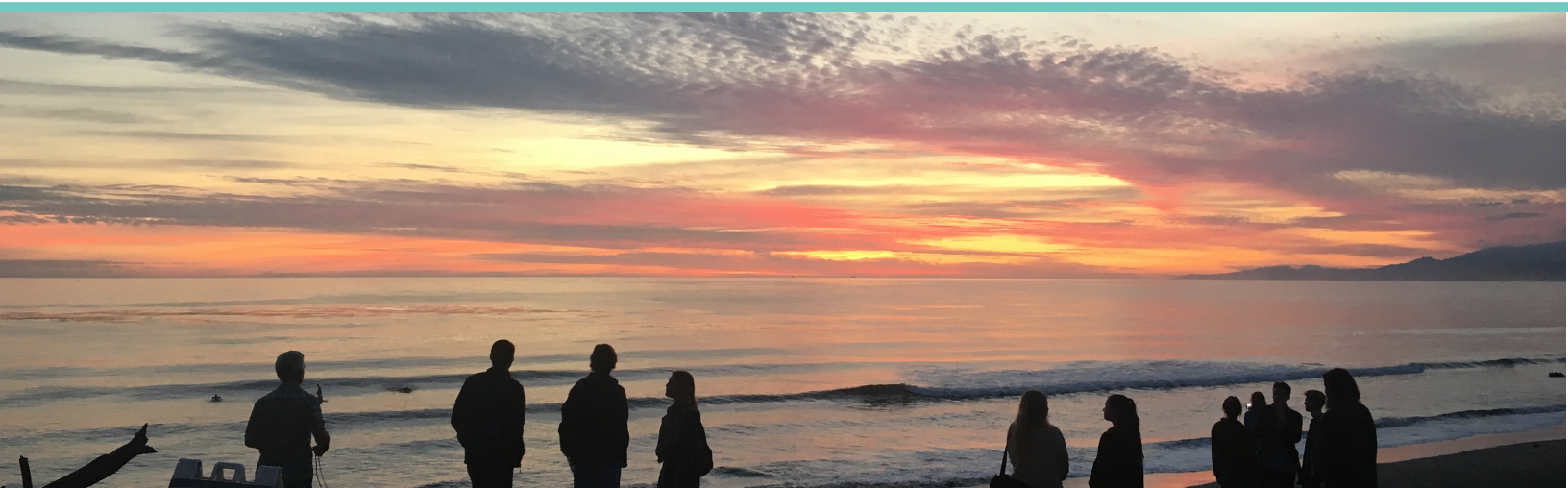
Overview

This manual includes all of the information you'll need to be an effective docent. A condensed "cheat sheet" outlining the most important docent priorities can be found on pg. 28. This manual also includes a docent quiz and several appendix documents to help prepare you for your new role in the protection of Snowy Plovers.

The Snowy Plover Docent Program (SPDP) was established in August 2001, and docent feedback continues to be vital in the success and effectiveness of the program. Please be vocal and active in your involvement and let us know if you have any ideas about how to improve the program!

Program Goals

- *Protect and preserve the habitat* of the Western Snowy Plover on Sands Beach at Coal Oil Point Reserve
- *Communicate information* about the natural history and conservation of the snowy plover, its habitat, and COPR
- *Educate visitors* about the importance of following beach regulations intended to protect plovers, their habitat, and COPR
- *Create a positive connection* between members of the public and the Coal Oil Point Reserve



Acknowledgements

Reserve Director at COPR, various SBAS board members, coordinators of other Plover Volunteer Programs in Central and Northern California, and a long list of numerous others have contributed to the inception and development of the SPDP.

We deeply appreciate **Nelle Lyons, Chief Ranger of the Bay Area District of the California State Parks**, for her wealth of helpful knowledge and for providing us with the March 2000 version of the *Volunteer Manual for Half Moon Bay State Beach*. We have also adapted our manual based on the June 2002 version of the *Guadalupe Nipomo Dunes Western Snowy Plover Docent Program Manual*.

We also thank the **United States Fish and Wildlife Service (USFWS)** for their support in acquiring monitoring permits and offering their guidance and expertise about Snowy Plover conservation.

Our partners at the **Santa Barbara Zoo** have been invaluable in assisting COPR with the captive rearing of plovers that require rescue and rehabilitation.

Sponsors

Coal Oil Point Reserve, UC Natural Reserve System (UC NRS)

The UC NRS mission is to contribute to the understanding and wise management of the Earth and its natural systems by supporting university-level teaching, research and public service at protected natural areas throughout California.

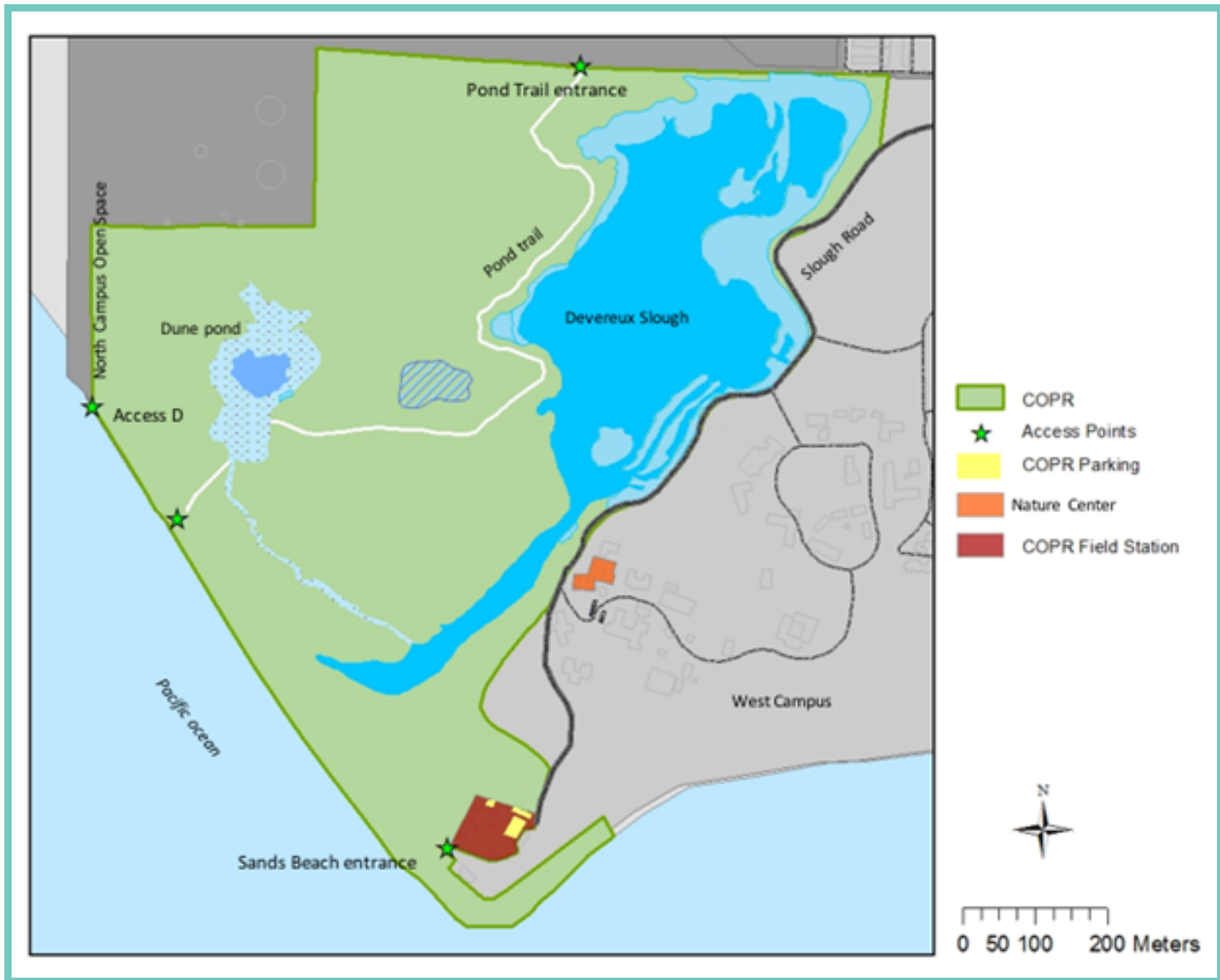
Santa Barbara Audubon Society (SBAS)

The SBAS educates members of our community about birds and their habitats, advocates responsible legislation and public policies which help preserve our natural resources, and administers science-based projects using birds as indicators of environmental health. SBAS works to conserve and restore ecosystems, with a focus on birds and other wildlife, for the benefit of humanity and biological diversity. Help us create a culture of conservation to preserve the ecological integrity of our world.

Funding

- University of California, Santa Barbara
- University of California, Santa Barbara Coastal Fund
- Generous contributions from donors

Map of Coal Oil Point Reserve



Snowy Plovers at COPR

Historically, the coastal population of the Western Snowy Plover thrived at COPR year round. In the late 1960's, the plovers abandoned this site for nesting and only returned for winters. Researchers attribute this nesting site abandonment to the intolerably high levels of human disturbance as a result of increased beach recreation during this time.

In the year 2001, COPR began to actively manage the plover environment by installing educational signs, restoring the habitats on the dunes, creating a fence line to signify plover habitat, and creating the SPDP. These efforts to protect the birds were implemented in June of 2001, and within months Snowy Plovers returned to COPR for breeding.

According to the Endangered Species Act, the reserve is obligated to protect this species and has studied options to maximize protection of plovers and minimize the inconvenience to beach users. The Snowy Plover Management Plan, in conjunction with the Snowy Plover Docent Program, minimizes disturbance to plovers by increasing public awareness, reducing traffic in the roosting and nesting area, and informing visitors about the Santa Barbara County Ordinance Leash Law.

The reclamation of an abandoned breeding site is an unprecedented event for Snowy Plovers, but they have been slowly re-establishing their year round presence on the reserve since 2001. The reserve is a very important area for Snowy Plovers, and will continue to be managed so it remains a refuge for them throughout each year.

Remarkable breeding success in the local plover population inspires the potential for other plover populations to reclaim abandoned nesting sites with proper management. Areas previously used for nesting, usually current wintering sites, may be the key to recovering the threatened Pacific Coast Population of Western Snowy Plovers and eventually removing them from the Endangered Species List.



About the Reserve

Coal Oil Point Reserve consists of 170 acres along the South Coast of Santa Barbara County, encompassing the lower drainage area of the Devereux Creek Watershed, adjacent to the West Campus of the UCSB. COPR is one of 41 reserves in the UC Natural Reserve System, and the diversity of habitats and wildlife is striking. During a two-hour walking tour of the reserve you can observe more than 10 distinct habitat including sandy beaches, dunes, salt marshes, grasslands, vernal pools, freshwater ponds, and coastal scrub.

COPR is one of only a few reserves in the UC system with a portion of land openly accessible to the public. This presents the unique challenge of considering publicly accessible and recreational areas when developing and implementing habitat management plans.

The reserve harbors a variety of rare and endangered bird species such as the White-tailed Kite, California Least Tern, Snowy Plover, and the Belding's Savannah Sparrow.

Devereux Slough is considered one of the ten best birding spots in the Western United States and has earned the Audubon distinction as an Important Bird Area. Only 15% of the original Devereux Creek Watershed remains undeveloped, and COPR comprises the largest contiguous segment of that 15%.



Snowy Plover Docent Program

Program Supervisors

Jessica Nielsen
Conservation Specialist

Cris Sandoval
Reserve Director

See the *Contacts* section on pg. 29 for additional supervisor contact information.

Position Summary

Docents must be generally knowledgeable about Western Snowy Plovers and their habitat along Sands Beach. Docents interpret plover habitat and behaviors to beach users, and are also responsible for recording basic data and informing beach users of reserve regulations.

Docents are essential in communicating these rules to the public in a way that encourages visitors to voluntarily comply while better understanding the necessity of the rules in COPR's protection of plovers. Good communication with the public is vital in the successful management of the recovery of endangered species.

Qualifications

- Maintain an enthusiastic attitude when engaging people in conversation
- Communicate well with others and be sensitive to their needs and views
- Work independently and resourcefully in accordance with COPR's guidelines
- Use good written, verbal, and observational skills during shifts

Opportunities and Benefits

- Expand your awareness, understanding, sensitivity, and appreciation for our local natural areas and wildlife
- Help educate others about an issue that is important to you.
- Access free parking at the reserve before or after your docent shift
- Attend occasional social events with other docents to discuss your experiences out on the beach
- Eligibility for reduced rates and field trip travel accommodations to reserves within the UC System, such as Santa Cruz Island
- Collaborate with other plover volunteer programs throughout California, Oregon, and Washington
- Become more involved in local conservation issues

Commitment

Weekly 2 hour shift for a minimum period of 12 weeks

Requirements

- Read and understand this training manual
- Attend the six hour docent training sequence:
 - COPR tour (2 hrs)
 - Docent training (2 hrs)
 - On-site training (2 hrs)
- Commit to a regular weekly schedule.
- Understand the importance of the snowy plover species and its habitat.
 - Use the appendix documents in this manual for additional information.
- Wear the docent vest.
- Record basic data during each shift. These data are crucial for our annual reports.

Helping COPR Beyond the Beach

Volunteer efforts are always appreciated. Feel free to take on any projects that may benefit COPR and are of personal interest to you.

- Write articles or letters to local papers about the reserve.
- Help build or repair symbolic fence along Sands Beach.
- Create pamphlets or educational materials to increase public awareness .
- Participate in the reserve's habitat restoration workdays.
- Volunteer to help COPR at outreach events, such as the Santa Barbara Earth Day Festival.
- Further educate yourself about the local environment and wildlife with the resources listed in Appendix G of this manual.



COPR booth at Santa Barbara's annual Earth Day Festival

Docent: Educator & Protector

A Closer Look at Public Education through the SPDP at COPR

Docents help people understand how to share the beach with the plovers. Public education minimizes damage to the plover population and habitat while still allowing people to enjoy recreational activities on the publicly accessible reserve land.

Given the history of unregulated access to Sands Beach, this can be challenging. A wide variety of people use the beach for several acceptable and unacceptable recreational activities, so it is important to remind the public that Sands Beach is a part of a larger ecological reserve owned by the University of California Natural Reserve System.

Face to face interactions allow you to share knowledge and instill your appreciation for plovers and their habitat in others. People who know more about the Western Snowy Plovers care about their well being, and will change behaviors to benefit the species.

Educator

- Make yourself available and approachable.
- Provide beach users with accurate information on the natural history and biology of Snowy Plovers
- Help beach users identify Snowy Plovers and other shorebirds through the spotting scope
- Interpret reserve rules for beach users and provide explanations for their purpose
- Offer the brochures and public handouts found on the docent clipboard
- Encourage questions and learning at every level



Protector

- Interpret reserve rules and regulations to protect plovers in their habitat

It is not your job to enforce COPR's rules and regulations, only to interpret them for beach users. Most of the reserve's regulations are enforceable by law because they fall under county ordinances and UCSB penal codes. Some of COPR's rules are in place to protect wildlife and their habitats. We ask visitors to comply with and respect them though they may not be legally enforceable.

PERMITTED

- Surfing
- Sunbathing
 - Except in corridor (*see pg. 12 for additional information*)
- Walking or jogging along shore
- Wildlife viewing
- Leashed dogs
 - Except on Pond Trail
- Hiking on designated trails
- Photography

NOT PERMITTED

- Dogs off-leash
- Horses
- Trespassing
- Ball/frisbee games
- Alcohol consumption
- Bonfires
- Barbecues
- Camping
- Littering
- Fireworks
- Bike riding
- Motorized vehicles
- Firearms
- Drones

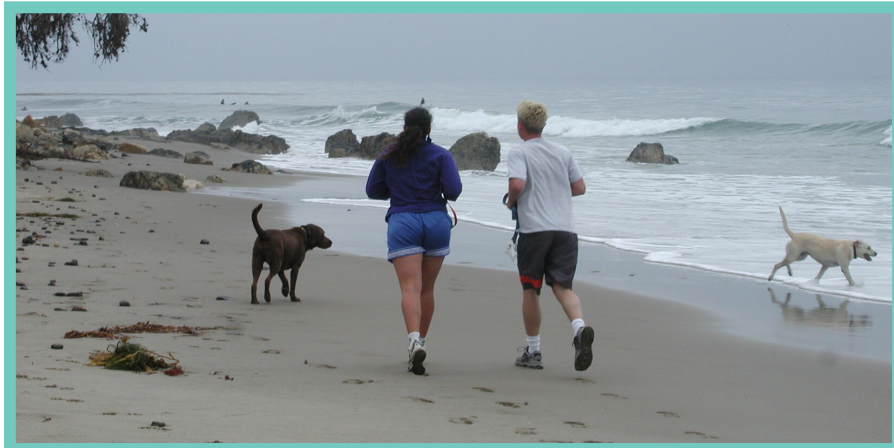
5 Biggest Concerns

① DOGS

Most common scenarios:

- Off-leash with owner
- Leashed to something on the beach and left unattended by owner
- Loose without owner

Ensure all dogs within the reserve boundaries are leashed and under their owner's control at all times.



WHAT TO DO:

If a dog is off-leash:

- Ask the owner to leash their dog
- Offer the owner one of the reserve's leashes if they do not have one
- Explain, if necessary, that there is a county ordinance against unleashed dogs on the beach
- Call Campus Police if the owner refuses to leash their dog
 - They enforce the leash law and will fine the owner

If you are ever bitten by a dog:

- Get the owner's contact information
- Ask if the animal has been vaccinated for rabies
- Get a description of the dog if the owner does not cooperate

"Bite-and-Run"

- Follow the owner to acquire as much information as possible about where the animal resides
- Call Animal Control
 - They can impound the dog, check for rabies, and talk to the owner
 - Animal Control's phone number can be found on the Contact List in Appendix A of this guide
- Call the police to report the incident and get medical attention, if necessary

2 TRESPASSING

Ensure that the boundaries of the protected habitat are respected. Sometimes high tides and stormy weather can make the signs less visible, so you play an important role in maintaining the protected habitat boundary.

WHAT TO DO:

If someone enters the protected habitat:

- Motion calmly and ask them to come out of the boundary
- Inform them that the area is a protected habitat and explain why the "No Trespassing" rule is in place
- Ask politely that they avoid the area in the future
- Explain that the signs should always be in place but may not always be visible due to high tides or stormy weather

If people are playing a frisbee or ball game on Sands Beach:

- Ask the players to move to the east side of the point, towards Isla Vista
- Explain that a ball, frisbee, or other item that lands inside the symbolic fence cannot be retrieved by anyone

If a trespasser refuses to leave:

- Call Campus Police



3 CORRIDOR

The corridor is the section of sand between the plover fence and the ocean. The reserve has "no loitering" signs in place and we ask docents to help interpret this rule to beachgoers who set up in between the fence and ocean. There is a map on your clipboard that helps clarify the beach boundaries that docents are responsible for.

Piles of washed up kelp (wrack) in the corridor make it an important area for Plover foraging. Preventing loitering helps ensure that plovers can feed.

There is no need to approach people who make brief stops, but the actions listed below disrupt the plover's ability to feed and cause other disturbances to their natural behavior.

Most common scenarios:

- Sunbathing
- Ball Games
- Leaving personal belongings (towels, clothing, surfboards)

WHAT TO DO:

- Try to approach beachgoers before they are settled.
- Ask, with a friendly smile, that they move outside the corridor.
- Explain what the corridor is and why they need to move.



4 PREDATORS

Protecting eggs and chicks from predators is important during the breeding season. There are several ways you can help discourage predators from entering the protected area.

WHAT TO DO:

- Use the slingshot found in the Docent Office
 - Bring the slingshot to the beach during your shift if you feel comfortable with your aim
 - Use small pebbles with the slingshot
 - Practice your shot before using the slingshot to fend off crows
 - Be careful not to accidentally hurt yourself or a non-predatory bird
- Throw rocks at crows baseball style if you are uncomfortable with the slingshot



5 ACTIVE RECREATION

Most common scenarios:

- Ball Games
- Frisbee Games

See pg. 9 for a complete list of acceptable and prohibited recreational activities on the reserve. Specific activities are permitted if they do not pose a threat to plovers.

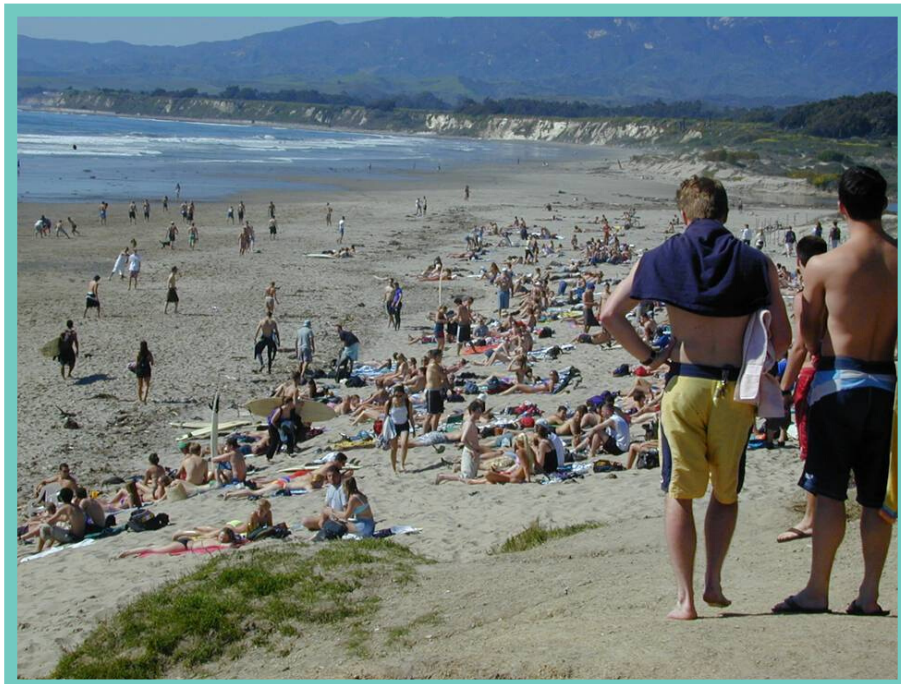
WHAT TO DO:

If a recreational game is anywhere on the reserve, including Sands Beach:

- Ask the players to shift their game to either IV Beach or Ellwood
- Explain that Sands Beach is part of a natural reserve and that ball/frisbee games disturb the wildlife
- Explain that because the area is federally protected, no one (including staff), is able to retrieve a ball or other item from within the fence

If someone is flying a drone:

- Inquire if they have a research permit signed off by the Reserve Director
 - All drone use on the reserve must be for research purposes AND approved by both UCSB and the Reserve Director, Cris Sandoval
- Let them know they can find more information about drone regulations in the Santa Barbara City Ordinance Municipal Code on the UCSB website



Map of Docent Responsibility



Shift Check In & Check Out

CHECKING IN:

1. Arrive at the Docent Office ~ 10 minutes before your shift starts.
2. Review the whiteboard for messages from staff or docents. (During the breeding season, the locations of all nests and chicks are posted so that you can easily locate and point out to beach visitors.)
3. Sign in on the sign in/out sheet with your name, date, and time of arrival.
4. Review the google calendar online to determine who you are relieving and who is relieving you.
5. Look at the tide table on the cork board so you know what to expect while out on the beach.
6. Gather the equipment and head down to Sands Beach.

EQUIPMENT

- Binoculars
(wear them around your neck to keep them from getting sandy)
- Sandwich board sign
- Chair
- Clipboard
- Slingshot (optional)
- Vest

(The vest contains labeled pockets for leashes, brochures, and dog biscuits. These are additional supplies available in the office. Please make sure that the pockets have sufficient supplies.)

Don't forget to lock the office and please do your best to keep binoculars and spotting scope out of the sand.

CHECKING OUT:

1. Return materials.
2. Sign out by writing the time you are leaving.
3. Write any supplies that need to be restocked on the whiteboard. You can also leave notes for the other docents or questions/comments for the Conservation Specialist.

Parking & Additional Information

Parking

If you drive to the reserve for your docent shift, please park in the dirt lot next to the greenhouse and Reserve Director residence. More information about parking can be found in COPR's User Guide.

Bike Racks

There are bike racks in front of the docent office for those who prefer to cycle.

Combination Locks

The only combinations you'll need to know are:

1. the code to open the yellow entrance gate
2. the code to unlock the docent office

These combinations should only be used by you when you need to park at the reserve for reasons related to your work as a docent. The only time that you may leave your vehicle parked for personal recreation is either before or after your shift. We trust that you will not give the gate combination to anyone else. If the combinations are ever changed, the COPR staff, volunteers, and interns will be notified well in advance.



Supervision

Snowy Plover Docents work under the supervision of the Conservation Specialist, Jessica Nielsen. She schedules the docent trainings, tracks hours, provides day-to-day guidance, and is available to answer field questions and address docent concerns. Since the program takes place on Coal Oil Point Reserve, the Conservation Specialist and all docents are under the ultimate supervision and direction of the Reserve Director, Cris Sandoval.

Office Maintenance

The Docent Office is located beside the Cliff House at the entrance to Sands Beach. The office is a space for all docents to check in and out. The office also acts as an informational kiosk for reserve visitors who are curious enough to peek their heads in and ask some questions. Please welcome these interactions and provide as much information as possible.

The office includes resources such as the sign in and out sheets, data sheets, docent clipboards, a whiteboard, binoculars, and field guides. Additional equipment used for docent purposes is also stored here. All docents will be able to open the office by unlocking the combination lock. We trust you to keep the combination to yourself and to lock the door before you leave.



Public Relations

Public relations does not simply mean the dissemination of information; in fact, the quality of the communication with the public is key. We must remember not only what we are trying to communicate, but with whom we are communicating. A sincere concern for the welfare of the public should always be at the forefront of our minds.

Making Positive Contact

Make an effort to be helpful and friendly at all times when interacting with the public. Every encounter with the public, whether it be on the beach, through a letter to an editor, or in line at the grocery store represents an opportunity to foster understanding and gain support for our program.

Our goal with the Docent Program is to help people enjoy the beach while learning to share it with other species, not to be the "Plover Police." We need to remember that people use the beach to relax and have fun, just as many of us do when we are not acting as docents. They need to be treated with respect and courtesy at all times.

One thoughtless statement or action by a docent can spoil the positive efforts of many in this program. For this reason, we all need to make a constant effort towards friendly, courteous, and effective interactions with the public when representing or discussing the Snowy Plover Docent Program.

The trick to remaining positive about someone doing something wrong is to give them the benefit of the doubt. About 90% of the trespassers are not paying attention and feel embarrassed by their action. Help them to not feel bad by saying "you may not know, but this area is now protected because of the threatened birds that live here."

There may be times when you experience angry or unreasonable people. If an interaction ever comes to the point where an individual is being aggressive, abusive, refuses to comply, or is a repeat offender, back off and refer the situation immediately to the Conservation Specialist, other reserve staff, or call the police (see the list of important contacts in Appendix A, or the "In the Event of an Emergency" section on pg. 24).

When people are approached by docents, they often have a series of questions. Give them as much information as they need. When you are asked a question you cannot answer, and you cannot find the answer in the manual's reference material, then it's okay to be honest and admit you don't know. It is very important not to give out false or misleading information, even unintentionally, because it can confuse visitors and potentially damage the public relations of the program. Be sure to write down the questions which 'stumped' you and ask the Conservation Specialist about it later, so you can be ready next time.

Do not say: "I am just a docent." You are a trained person with appropriate qualifications that deserves the respect of beach users. Not knowing an answer is acceptable.

You can help spark visitors' fascination about the reserve's natural and ecological value by explaining and interpreting the interrelations of plants, animals, and humans to their environment in a factual and interesting manner. Docents may help acquaint visitors with the great opportunity to both enjoy and preserve the natural environment. Education is the first step toward understanding, appreciation, and eventual support.



Tips for Contacts with the Public

Compiled by Kevin Lafferty, July 2007

The measure of a good interaction is if the contact thanks you when you are finished. Consider the following priority. It is more important to avoid creating a life-time enemy of the program than to get compliance with a rule. Some people feel threatened when someone assumes they have done wrong or when someone forces them to change their behavior. I've tried many approaches, and this has been the most successful.

90% of the time people thank me in situations where they used to curse me.

DONT'S

1) Don't show blame

Never communicate an assumption that the person you are contacting is: wrong, knowingly breaking the rules, or causing a problem

2) Don't be a hero

Step back if things become threatening or physical

3) Don't show anger

Don't yell, curse, threaten, or express anger in return

4) Don't appear to be trying to control someone's behavior or enforce the rules

Don't assume the role of an enforcer (you are an educator)

5) Don't get sucked into trying to win an argument

DO'S

1) Friendly, assertive greeting

Approach with a smile and confidence

"Hi" – with a smile on your face

2) Disarming question (this initiates a conversation in a non-threatening manner)

"Are you from around here?" (my favorite)

"Is this your dog?"

"Do you know about the reserve?"

3) Friendly comment

"That's a friendly dog"

"Kite surfing looks like fun"

4) Identify your role

"I'm a volunteer docent with the Coal Oil Point Reserve"

5) Thank them for NOT being a problem, before you make your request

"Thanks for keeping your pet out of the enclosure, but..."

"Thanks for respecting the rope boundary, but..."

"Thanks for staking your dog while you were out of the water, but..."

6) Request/Inform (always be consistent with reserve policies)

"I came over to let you know we request people to leash their pets on the Reserve."

"I'm letting people know we have a plover nest very close to the fence."

"Would you mind walking along the water's edge?"

Tips for Contacts with the Public (cont'd)

7) Respond sympathetically to them

"I understand that you feel inconvenienced."

"Not everyone knows this is a nature reserve."

"You can leave your stuff by my chair and I will watch it."

"I'd be happy to go over the rules with you."

"I have a leash you can borrow."

"The reserve boundaries can be confusing, let me point them out to you."

"I wanted to let you know so that you won't get a ticket."

"I can point out the plovers to you if you'd like to see them."

"Do you know about the dog beach at Hendry's?"

"Once you are off the Reserve, a docent won't ask you to leash your dog, but the police could still ticket you."

"Leashing helps keep the beach open to dogs."

8) Thank them again (even if they don't comply).

"Thank you for your time."

"I really appreciate your understanding."

9) Helpful responses if someone seems hostile.

"I'm not here to enforce the rules, just to clarify them."

"You can read over the regulations at the entrance to the beach."

"Would you like more information about Santa Barbara County dog policies?"

If they are breaking a rule but not a law

"My job is to let people know what the rules are. Compliance helps us keep the beach open to the public. I'll see if I can reach the Reserve Director on the phone."

If they are breaking the law

"My job is only to ask for voluntary compliance so we don't have to involve the police. I wouldn't want you to get an expensive citation."

Common misconceptions stated by hostile users

This is a public beach.

I can do what I want below the high-tide line.

I'm not bothering anything, leave me alone.

Plovers aren't endangered.

My dog deserves to use this beach as much as the plovers.

My dog doesn't chase birds.

My dog doesn't catch birds.

Those birds are all over the place.

Those birds can go somewhere else.

So what if a bird flies away?

EXCEPTIONS

In some cases, you need to catch someone's attention quickly - before they enter the nesting area or let their dog loose. In those cases, you may need to shout or wave or run. If you do, always apologize and explain your behavior.

"Sorry I yelled at you, but I didn't want you to accidentally step on a nest"

Frequently Encountered Situations

Many of the people who recreate at Sands Beach are unaware that it is part of an ecological reserve, and subsequently are under the impression that there are few limiting rules. Part of your job as a Snowy Plover Docent will be to inform people of these rules. When people are violating rules, we want to avoid negative interactions at all costs to ensure an enjoyable beach experience for the visitor, and look out for your own safety.

You must remember to be diplomatic and explain the reasons behind the rules. Do not ever put yourself in a confrontational situation. If someone gets argumentative or aggressive, contact the Reserve Director or UCSB Campus Police immediately.

Common questions and comments, and how to best respond:

My dog never chases birds.

Even if your dog is not actively chasing plovers and other birds, most birds will react to people and their dogs as if they were predators. Birds will fly from predators - an activity that is energetically costly to them. If their energy is used to fly from disturbances, it can prevent the other behaviors that they need to survive, such as feeding and incubating eggs. Enough disturbances can ultimately jeopardize their ability to reproduce.

So, if I can't run my dog off leash here, where can I?

There is a county ordinance that says dogs must be leashed in public areas. This law is enforced within the reserve boundaries. If you want to walk your dog on the beach at COPR, the dog needs to be on a leash. The eastern boundary of the Reserve is at the graffiti "jail house" and the western boundary is Ellwood Beach, by the Eucalyptus row.

Why can't the birds just move down the beach to where there are no or fewer people?

Snowy Plovers need a specific type of beach for resting, feeding, and nesting. Plover habitat tends to be wide, flat, and open, so they can see potential predators approaching. Sand dunes are an important component and provide a safe place where they can take cover in extreme high-tide conditions and storm events. The plovers can't move down the beach, but we, humans, can.

Just let natural selection proceed - if the bird was meant to die off, then it will.

The decline of the Pacific Coast population of plovers is due to unnatural events, such as human recreation, dogs, development of coastal property, introduction of exotic plants, the expansion of the range of the non-native red fox, and an increase in crows and skunks on the beaches (attracted to garbage left behind by visitors). Plovers have lived here and have been using the beaches much longer than humans. Human encroachment only recently impacted their survival and nesting success. Snowy Plovers used to regularly breed on this beach until it was opened to public access in the late 1960's. For 30 years they did not have any successful nests until the summer of 2001, when 2 chicks were found. Once again, this beach is very important for wintering birds, and is a crucial breeding site.

I just want to play ball with my friends. Why do you want me to move?

Active recreation is discouraged near the roost or nesting site because of the sensitivity of the area. The action of a group of people running around near the roost and tossing a ball through the air is very stressful for the plovers. They are forced to spend a lot of energy in vigilance - watching to make sure that those stomping feet and flying balls are not a direct threat to their safety -- and running or flying away when they do feel threatened. That time and energy is better spent feeding and resting, so that they may have many, healthy chicks during the breeding season.

I've ridden my horse here for years, Can I still ride here?

Horses are not allowed in the reserve or the beach because of the disturbance they cause to wildlife and the erosion they cause on the trails.

I just want to leave my clothes and stuff here while I surf.

Though your belongings are not threatening to a plover, the accumulation of many people's belongings can prevent them from feeding on the insects in the washed up kelp (wrack) in the corridor. It only takes a pile from one person to give the wrong message to others. Please help us be consistent and move your stuff outside of the corridor - outside of the sandy area between the ocean's edge and the roped fence.

Why can't I hang my towel or clothing on the fence post, or driftwood?

The action of standing a piece of driftwood on end (as many surfers do, to easily relocate their stuff at the end of a session in the water) also can pose a threat -- that driftwood becomes a perch for avian predators such as falcons and kestrels.

Why can't I collect and bring home shells, rocks or other treasures on the beach?

The plants, animals, and other items (even rocks or bones) found on the shores of COPR belong to the reserve. The area has been set aside as part of the Natural Reserve System so that the living and non-living items may remain undisturbed, and contribute to a balanced ecosystem.

Why haven't you removed the marine mammal carcass that appeared a few days ago?

The carcasses provide food for many native shore animals. It is a natural process and should also be left undisturbed.

There is an injured marine mammal or sick bird that can't fly, over in the wet sand!

Thank you for bringing this to my attention. The best thing you can do is leave it alone. I will contact the Channel Islands Marine Wildlife Institute (CIMWI) or the Santa Barbara Wildlife Care Network right now and they will address the situation. Would you like me to share their phone number with you so you can call if you see injured wildlife in the future?

Marine Mammal & Bird Care

You can report injured or distressed marine mammals and birds to the National Marine Mammal Health and Stranding Response Program (NMMHSRP) centers in Santa Barbara County. Their contact information and specialization are listed below.

Be sure to give the exact location of the animal using fence markings, the date and time it was found, and leave your phone number in case animal care technicians have any questions.

NMMHSRP is a program run by the National Marine Fisheries Service under the National Oceanic and Atmospheric Association. This program aims to "facilitate collection and dissemination of data, to assess health trends in marine mammals, to correlate health with available data on physical, chemical, environmental, and biological parameters, and to coordinate effective responses to unusual mortality events".

Santa Barbara Wildlife Care Network

(805) 681 - 1080

To report live injured birds in need of rehabilitation.

Channel Islands Marine Wildlife Institute (CIMWI)

(805) 567 - 1505

To report live marine mammals including pinnipeds (seals, sea lions, and sea otters) and cetaceans (whales and dolphins).

Channel Islands Cetacean Research Unit

(805) 896 - 0858

To report dead cetaceans (whales or dolphins).

In the Event of an Emergency

While volunteering as a Plover Docent, you may find yourself in the position to observe conditions that constitute potential or direct hazards or violations. It is part of your duty to recognize and report such conditions. Please do not attempt to handle any situation with which you feel unsure or uncomfortable, always call someone to help you. Judgement is important in deciding whether the situation should simply be noted and reported to the Conservation Specialist, or whether it is serious and time-sensitive enough to make an immediate report to the Reserve Director or police.

The following are important contacts to keep in mind, and a full list of phone numbers can be found in Appendix A on pg. 29. This section also details the procedures for handling various situations, including whom to call for what type of incident. If you own a cell phone, please make sure it is charged and turned on so you can use it in emergency situations during your shift. It is helpful to turn the ring volume on 'high' due to the noise level on the beach. You may not ever need these phone numbers or procedures, but in case you do, follow these guidelines to decide whom to call or report to:

Call 911 and the Reserve Director

- Any medical emergency, which is potentially life-threatening and requires an ambulance (do not attempt to render aid until you have called for help)
- Swimmer needing assistance
- Violence of any type
- Use or obvious possession of firearms

Call Campus Police and the Reserve Director

- Disturbances approaching violence (including threats to docents' safety by angry visitors)
- Property damage in progress (ex: vandalism of signs, fences, vehicles on beach, etc.)
- Off-leash dogs without a visible owner, or owners who refuse to leash their dog.
- Argumentative, vocally uncooperative visitors who harass docents
- People, dogs, or horses entering plover fenced area who have refused to acknowledge your request to leave.

Call Animal Control, the Reserve Director, and Campus Police

- If bitten by a dog or other animal. Please refer to pg. 10 for more instruction.

If you are still unsure of what to do after reviewing the above list, just call the Reserve Director and she will decide whom to further involve, if anyone.

Tips to remember when reporting emergencies:

- Stay calm
- Don't exaggerate or downplay the situation, tell it like it is.
- Give enough information to give a clear picture of what is happening or what has happened.
- Give your cell phone number to the police and stay where you are to provide assistance to the officers when they arrive.
- Get the name and phone number from people reporting incidences to you, so he or she can be contacted at a later date if necessary. Write down as many details about the incident from the reporting person as possible (ex: what was the suspect wearing/driving, extent of injuries to victim, where and when it happened, etc.).
- Take a picture of the person and/or dog that caused the problem, if possible.

Conclusion

On behalf of everyone involved in making this program a reality, thank you for participating in the Snowy Plover Docent Program! We're glad to be involved with such a dedicated group of people, and hope you have a very positive experience as a Plover Docent!



Appendix A: Contacts & Resources

Phone Numbers

It's helpful to keep these important phone numbers in your cell phone for easy access.

Emergency Medical	911
Conservation Specialist - Jessica Nielsen	See Docent Clipboard
COPR Director - Cris Sandoval	See Docent Clipboard - for violations
University Campus Police	(805) 893 - 3446 - for violations
CIMWI (Marine Wildlife Institute).....	(805) 567 - 1505 - for stranded marine animals (live only)
Wildlife Care Network	(805) 681 - 1080 - for sick or stranded wild birds (live only)
Environment Health & Safety	(805) 893 - 3194 - for pollution or hazardous materials

Resources

This list contains books, websites, and videos for further educational enrichment. These resources are excellent ways to stay updated on our local situation environment.

COPR website

<http://copr.nrs.ucsb.edu>

National Wildlife Refuges Website: *Snowy Plovers*

[https://search.usa.gov/search?](https://search.usa.gov/search?utf8=%E2%9C%93&affiliate=fws.gov&query=snowy+plover&commit=Search)

[utf8=%E2%9C%93&affiliate=fws.gov&query=snowy+plover&commit=Search](https://search.usa.gov/search?utf8=%E2%9C%93&affiliate=fws.gov&query=snowy+plover&commit=Search)

National Audubon Society website: Santa Barbara Chapter

<http://santabarbaraaudubon.org/>

Surfrider Foundation: Santa Barbara Chapter

<https://santabarbara.surfrider.org/>

CA Coastal Commission website

<https://www.coastal.ca.gov>

Environmental Defense Center

<https://www.edcnet.org>

Appendix B: Docent Priorities

The most common issues at Sands Beach are listed below with short explanations and recommendations for handling the situation. These activities threaten Plover habitats and are listed in order of importance so that you may prioritize your efforts on busy days.

1 - People or dogs trespassing into fenced areas or dunes

Why? Trespassers cause a huge disturbance to birds. During nesting season this can easily lead to trampling of nests and chicks. Many other species also live in the protected habitat and we have ongoing research projects that may be disturbed by trespassers.

Illegal? YES

What to do? Ask them to move outside of the protected habitat and explain why the area is protected.

2 - Off-leash dogs

Why? Off-leash dogs can chase shorebirds. This causes plovers to waste precious energy by unnecessarily flying, and dogs can seriously injure plovers if they are fast enough to catch them.

Illegal? YES

What to do? Kindly ask that even the most mellow dogs be leashed. This sets a good example for other dog owners at the reserve. The earlier, the better. If possible, talk to dog owners before they get to the fenced area.

3 - Frisbee/football/kites/drones

Why? To a tiny plover, the shadow of a flying object in the corridor can be mistaken for an aerial predator. If a ball/frisbee goes INTO the protected area it is illegal for anyone to retrieve it, even a docent.

Illegal? NO, with the exception of drones. It is illegal to fly drones on UCSB property, and COPR is under UCSB jurisdiction.

What to do? Please ask people to shift their game EAST to the Isla Vista side of the point, or WEST into Ellwood Beach.

4 - People about to set up in the corridor

Why? Plovers feed in the corridor, the area between the fence and the ocean. People laying or leaving their belongings in the corridor prevents plovers, especially chicks, from feeding there.

Illegal? NO

What to do? Assume that anyone with a lot of belongings walking towards the corridor plans on laying down their towels and staying for awhile. Try to chat with them before they get comfortable. Ask them if they can set up at the Sands entrance area - lots of nice sand over there!

5 - People already sitting in the corridor

Why? Loitering in the corridor prevents plovers from feeding.

Illegal? NO

What to do? Many people don't read the signs and don't know not to sit in the corridor so it is our job to let them know! If it's not too busy, you can even offer to help them move their stuff.

See the 5 Biggest Concerns section of this manual on page __ for more information about what to do in these scenarios.

Appendix C: Glossary

Berm - The high, flat area of the beach just above the high-tide line where Plovers rest and feed. On Sands Beach, the berm edge is marked by the row of signs asking people to stay out of the roost area.

Biodiversity - Full range of variety and variability within and among living organisms, their associations, and habitat-oriented ecological complexes. Term encompasses ecosystems, species, and landscape as well as intraspecific (genetic) levels of diversity (Fiedler and Jan 1992).

Community - An association of living organisms having mutual relationships among themselves and their environment and thus functioning, at least to some degree, as an ecological unit (Warner and Hendrix 1984).

Corridor - The section of sand between the plover fence and the ocean.

Critical Habitat - The ecosystems upon which endangered and threatened species exist, according to US Federal Law (Meffe and Carroll 1994).

Disturbance - Any relatively discrete event in time that disrupts ecosystem, community, or population structure and changes resources, substrate availability, or the physical environment. Key descriptors are magnitude, frequency, size of area, and dispersion (Fiedler and Jain 1992). In the Endangered Species Act, disturbance means any activity that cause the animal to change its behavior.

Ecology - The scientific study of the interaction of organisms with their environment, including both the physical environment and the other organisms that live within it (Purves et al. 1995)

Ecosystem - An interacting system of living organisms and their physical environment which is independent of other groups and is self-sustaining, provided it receives radiant energy (Little and Jones 1980). The organisms of a particular habitat, such as a pond or forest, together with the physical environment in which they live (Purves et al. 1995).

Endangered Species - Wild species with so few individual survivors that the species could soon become extinct in all or most of its natural range (Miller 1990).

Endemic - Any localized process or pattern, but usually applied to a highly localized or restrictive geographic distribution of species (Meffe and Carroll 1994).

Or: confined to a particular region, thus often having a comparatively restricted distribution (Purves et al. 1995).

Exclosure - The roped-off area on the beach set aside to exclude humans, dogs, and horses in order to create a protected roost area for the majority of the plover population at COPR.

Exotic Species - Species that do not originally belong to an area and were introduced by humans directly or by their activity (Fiedler and Jain 1992).

Extinct - The termination of a lineage of organisms (Purves et al. 1995). A species is considered extinct when no member of the species remains alive anywhere in the world: “The dodo bird is extinct” (Primack 1993).

Habitat - The environment in which an organism lives (Purves et al. 1995).

High Tide Line - The upper edge of the tide on a beach.

Low Tide Line - The lower edge of the tide on a beach.

Invasive - Exotic plants not native to an area and which spread quickly and displace native vegetation (Rerg 1995).

Jail House - The old cement-like structure covered with graffiti on Devereux Beach. It's used as a marker for the eastern boundary of the Reserve; located against the cliff along the shore, east of the Reserve entrance.

Management - Manipulation of nature for a specific goal (Fiedler and Jain 1992).

Habitat Management - Management that ensures the original habitat types are maintained (Primack 1993).

Native - Indigenous; not introduced into a geographical area by man (Little and Jones 1980). Local native: native species that are or were present on a particular location.

Natural History - Information about ecology, evolution, and biology in general about a particular species, population or community.

Non-native - Refer to invasive or exotic.

Population - Any group of organisms coexisting at the same time and in the same place capable of interbreeding with one another (Purves et al. 1995).

Resource - Something in the environment required by an organism for its maintenance and growth that is consumed in the process of being used (Purves et al. 1995).

Reserve Boundaries - For the Docent Program, we use east and west markers on the beach to determine the Reserve's coastline that stretches between them. A 'jailhouse' graffiti art, marks the eastern boundary; its found around the point to the beach entrance, if heading toward I.V. If looking toward Ellwood at the bluff, a large grove of Eucalyptus trees determine the western boundary.

Restoration Ecology - The science and practice of restoring damaged or degraded ecosystems (Purves et al. 1995). Return of an ecosystem to a close approximation of its condition prior to disturbance (National Resource Council 1995).

Slough - A body of water or lagoon composed of channels which run through various land types which create dynamic features for different habitats and wildlife. It has fluctuating water table due to seasonal weather, containing freshwater runoff as well as seawater. It may flood into the ocean and different components of the lagoon may be permanently flooded, dry, or a combination of both simultaneously.

Species - The basic lower unit of classification, consisting of a population or series of populations of closely related and similar organisms. The more narrowly defined "biological species" consists of individuals capable of interbreeding freely with each other but not with members of other species (Purves et al. 1995).

Threatened Species - Wild species that is still abundant in natural range but is likely to become endangered because of declining population numbers.

Wrack Zone - Area of the shore parallel to the ocean and contains large amounts of seaweed and kelp.

Appendix D: Docent Quiz

You made it! Now that your mind is swimming in plover facts and biology, it's time to test yourself on some very important information that you'll be sharing with others on (and hopefully off) the beach. Have fun! The more you know and understand, the more you can teach others. Grab an empty piece of paper and answer the following questions to the best of your ability!

A. Background Info

1. Coal Oil Point Reserve is an _____ Reserve, owned and managed by _____.
2. COPR consists of _____ acres.
 - a. COPR's 2 major habitats are _____ and _____.
 - b. The major creek on the reserve, which has a lower drainage area that flows into the ocean, is called _____.
3. The Snowy Plover Docent Program (SPDP) is sponsored by _____.
4. The SPDP was founded by _____.
5. What is the SPDP mission?
6. What organizations or groups help fund the SPDP?

B. Plover Details

1. The Snowy Plover is categorized as what type of bird? (ex: falcon, songbird)
2. What is the range for the Pacific Coastal Population of the Western Snowy Plover?
3. When are the Snowy Plover wintering and breeding seasons?
4. When do the Snowy Plovers inhabit COPR?
5. (T / F) COPR provides habitat for 10% of the entire pacific coast population, the largest wintering flock of SNPL in central and southern CA.
6. (T / F) It is important to protect plovers during the breeding season, not the winter season.
7. Describe 3 specific Snowy Plover habitat preferences.
8. What shorebird is most commonly confused for the Western Snowy Plover?
 - a. What 3 physical characteristics differ between the two?
 - b. Describe 2 physical characteristics that set them apart.

C. COPR Specifications

1. The distance between the east and west ends of the exclosure is
2. What is the purpose of excluding humans and pets from the exclosure?
3. Name two factors that contributed to the decline of the plover population.
4. List 5 reserve rules.
5. What 6 actions were taken to aid in Snowy Plover recovery at COPR?
 - a. Which action proved to make the largest positive impact?
6. What unique, impressive Plover fact makes COPR a model for other plover management programs?
7. In 2001, when a single chick survived at COPR, it was the first successful plover fledge in over years.

D. Docent Procedures

1. How do you cancel a shift?
2. What are the check-in steps for your weekly shift?
3. How should you best avoid a potentially negative interaction with an uncooperative beach goer?
4. What is the best response in a potentially dangerous or threatening situation?
5. How many of the 30 glossary terms can you define without looking?
6. Where is the list of important phone numbers in this manual?

Docent Quiz Answer Key

A. Background Info

1. Ecological reserve, owned and managed by the UCSB Natural Reserve System (NRS)
2. 170 acres
 - a. Coastal habitats and wetlands
 - b. Devereaux Creek meets the ocean
3. UC Santa Barbara
4. Cris Sandoval, Kendy Radasky, Jennifer Stroh, and Ed Easton founded the SPDP
5. The SPDP mission is to assist the protection of Snowy Plovers at COPR, and to raise awareness in the local community of the importance of the preservation of the snowy plovers and their habitat.
6. UCSB funds the reserve, but COPR also gets funding from UCSB's Coastal Fund, and generous contributions from donors.

B. Plover Details

1. Snowy Plovers are shorebirds in the Plover family
2. Western Snowy Plover are found along the coast from Washington down into Baja, California, Mexico
3. Wintering season is September - March and breeding season is March - September
4. Snowy Plovers now inhabit COPR year round and winter populations are largest
5. True
6. False. It is crucial that plovers are protected throughout BOTH the breeding and wintering seasons. Although there are no eggs or chicks to protect during the winter, it is just as important to minimize disturbances so plovers don't waste valuable breeding energy on escaping potential threats.
7. Dune-backed beaches, uncombed beaches, and costal line with river-mouths
8. Sanderling
 - a. Larger than Snowy Plover, has longer bill to eat invertebrates, and lacks the pale brown upperparts that are telling of the Snowy Plover
 - b. Sanderlings chase the tide in large groups and probe for food in the sand rather than catching insects mid-flight

C. COPR Specifications

1. 800 m
2. It's important for the Plovers to have an area left undisturbed by humans and other animals so they can save as much energy as possible for the breeding season
3. Habitat degradation from invasive plant species and high disturbance rates from humans and other animals including predators, such as crows.
4. 1-no unleashed dogs, 2-no trespassing, 3-no ball games, 4-no drones, 5-no kites
5. 1- habitat restoration
2- establishing a symbolic fence to protect plovers
3- closed the Delta Trail
4- installing signs to educate the public
5- starting the SPDP
6- enforcing the leash law
 - a. The Snowy Plover Docent Program has had the largest positive impact
6. COPR is the first place in history for plovers to re-initiate breeding at a site they previously abandoned.
7. 30 years

D. Docent Procedures

1. **Volunteers:** write "NEEDS REPLACEMENT" next to your name on the Google calendar. If no one signs up or it is an emergency cancellation, contact Jessica to let her know.
Interns: Use the intern contact list to find another docent to take your shift or swap shifts. When you've found a replacement, make the change on the Google calendar. If you're unsuccessful finding a replacement, contact Jessica. If an emergency arises that prevents you from making your shift at the last minute, contact Jessica immediately, and schedule a 'make up'.
2. Check the white board for notes and important information from other docents.
 - a. Sign in on the "Sign In" sheet
 - b. Take your clipboard, binoculars, and new data sheet with you to the beach

3. Remain calm, friendly, and smile. Introduce yourself and explain your reason for approaching them. Stay patient and try to understand where they are coming. Also provide understanding for the situation at hand, while remaining focused and not wavering from your original mission.

4. The best response to a potentially threatening or dangerous situation is to REMOVE yourself and call campus police.

5. The important phone numbers can be located on page 29 of the manual. There is also a list of important phone numbers in the docent clipboard. It is most convenient for you to save these numbers in your cell phone

Appendix E: COPR History

1967 Regents of the University of California purchased 236 acres along the coast from the Devereux School, thus opening the land to the public. Dr. Ken Norris, the UC System-wide Natural Land and Water Reserve System (NLWRS) Committee, and UCSB faculty emphasized to the UCSB Chancellor that portions of the property had natural reserve value. The dunes on UCSB's current "West Campus" property were designated a Natural Resources Reserve during the formation of the UCSB Long Range Development Plan of 1968.

1968 UCSB created a Long Range Development Plan which included designating the dunes on UCSB's "West Campus" a Natural Resource Reserve. UCSB's Chancellor was convinced by Dr. Ken Norris, UCSB faculty, and the UC System-wide Natural Land and Water Reserve System (NLWRS) Committee that portions of the property had natural reserve value.

1969 UCSB's NLWRS Committee recommended that the dunes, slough, and beach be included as part of a campus ecological reserve. Vernon Cheadle concurred with these recommendations and requested that these areas be managed under the supervision of the campus NLWRS Committee. The NLWRS Committee also recommended that a portion of the "Establishment Funds" be used to install beach fencing and establish housing for a full time caretaker at the reserve.



1970 On July 17, the Regents officially incorporated and COPR into the UC Natural Land and Water Reserve System. At this time, the reserve officially included only 49 acres and was called the Devereaux Natural Reserve.

1976 UCSB's NLWRS Committee and Environmental Quality Committee endorsed a proposed expansion of the reserve. In September of 1979, COPR was officially expanded to include an additional 68 acres of the West Campus property. The reserve was a total area of 117 acres at this time, including all of Devereux Slough and the grasslands to the west.

1997 Dr. Scott Cooper, Director of the UC Natural Reserve System, recognized the reserve's potential to be more functional and acquired more funding for COPR. Reserve staff then initiated aggressive programs for weed eradication, public outreach, and education. A Management Plan was also developed for the reserve and these efforts resulted in a three-fold increase in research and classroom use at the reserve.

2000 UCSB's Chancellor allocated funds for a full time, on site Reserve Director at COPR. For 30 years since its inception, the reserve had minimum funding and no paid staff. The only caretakers were volunteers who were mainly tasked with controlling trespassers. This new funding allowed the Reserve Director to focus on acquiring additional funds for the reserve and implementing a variety of programs.

For additional information about the Coal Oil Point Reserve's history prior to 1970, see the piece [Origins of a Mysterious Ruin: The Campbell's at Coal Oil Point](#) on the following page.



Origins of a Mysterious Ruin: The Campbell's at Coal Oil Point

By Edward Mackie

Below the cliffs at Devereux rests a solitary ruin – a monument to the triumph of a man and the ingratitude of his successors.

Though battered and defaced by the vicissitudes of more than half a century, this ruin recalls a great family and a fabulous era unparalleled in the history of Goleta.

Contemporary chroniclers and the University archives nonetheless are strangely silent on the subject. Though hundreds of passerbies have likely pondered the ruin's origin, had it not been for a casual conversation with Goleta's octogenarian blacksmith the secret of the ruin might have passed away forever. The story proves worth telling both for its human and historical points of interest.

In the winter of 1919 a singularly uniformed figure strode over the cliffs of Coal Oil Point. His name was Colonel Colin Campbell, Lord of the English estates of Wiltshire, Kent, Sussex, and Gloucestershire, an officer in His Majesty's Indian Light Horse Cavalry and son-in-law of Viceroy Lord Curzon.

Campbell, lured by the warmth of Santa Barbara, was amazed at the possibilities of developing the coastal property then being farmed by two locals. He dreamed of recreating his sumptuous estates in England. His own private lagoon, replete with fish and diaphanous swans, would be a private retreat for canoeing at leisure.

For \$65,000 Campbell purchased a 500-acre ranch, including one mile of beach frontage. While well digging crews were drilling shafts for water, Campbell sailed back to England to assemble his household for the long voyage to California.

A fortuitous telegram reached him in London thereafter informing the Colonel that his crews were striking oil, not water. Irrate to say the least, Campbell swiftly wired back his famous reply "Under no circumstances strike oil, we want water!"

Campbell's triumphant return to America, with an array of ten house servants, his wife, three children, and a fortune in memorabilia, was the talk of the entire valley. For a year before moving to the ranch, the Campbell family was lavishly quartered in the palatial mansion of Bonnymede, Montecito.

The first task at hand was paving an access road to the ranch, then reached by a trail – sandy in summer and muddy in winter. The Colonel’s munificent offer to blacktop the rugged road was interspliced with one request – that the heavy loads would be forbidden.

An indignant neighbor, C.A. Storke, father of Thomas Storke, rode over to the ranch and ordered Campbell to pave the road without restriction or Storke would refuse his access forthwith.

The resilient Englishman resented such an imposition and instead purchased a strip of land flanking the old road where he graded a private boulevard, paved it and fenced it off from the existing road. For years afterward, the drive was known as Campbell Road until the county removed the divider fence and combined the two roads into a thoroughfare. Eventually the street was renamed. What was it call... Ah yes, Storke Road.

The majestic boulevard, still used by Devereux School, skirts the lagoon and winds around the forested knolls of cypress and eucalyptus planted by Campbell’s own hand.

Among the outbuildings under construction was the private bathhouse of the Campbell family. There the household and guests would change into beach attire, cook lavish dinners, and hold endless parties during the Roaring Twenties. No less a personage than His Royal Highness Prince George of England was entertained on festooned evenings by the light of the bathhouse fireplace.

The generous-hearted Campbell was never fated to enjoy those endless soirees, however. En route to the ranch from Chicago, he died of a heart attack and was buried at the tip of Coal Oil Point where a granite cross still marks his final resting place. Mrs. Campbell followed him in 1932 and remnants of her family returned to the East.

The Campbell bathhouse soon after fell into a miserable state of despair. During the 40s and 50s local high school students threw wild bawdy parties on the patio (with alcohol, it was rumored).

Each generation contributed its own supply of painted love notes and epigrams to the rapidly dissipating ruin.

It stands now as a mysterious concrete skeleton - a victim caught in the ferment of social progress.

COPR: History in Photos







Appendix F: Plover Habitats at COPR

The most important habitats at COPR for the Snowy Plovers are the wrack zone, intertidal zones, foredunes, slough.

Wrack Zone

Plovers often rest and feed in the wrack zone. This area is easily identified by the piles of kelp and other debris (e.g. old pier pilings, driftwood), and is often located on a slight “shelf” above the moist sand which slopes down toward the water.

Intertidal Zone

When the tide is low and the beach isn't highly populated, Snowy Plovers often venture out to feed in the intertidal zone, or part of the beach with wet sand. Human activity is often focused on this part of the beach, so Plovers tend to retreat to the wrack zone in the late morning and afternoons.

Foredunes

Snowy Plover breeding sites are often located on beaches backed by dunes. Foredunes, the dunes closest to the flat sand of the beach, play an important role how nesting pairs select their site. Scientists do not know exactly why this is, because they do not often place their nests directly in the foredunes. The dunes may provide a source of sand to ensure a wide, expansive beach (another preference for nesting), or perhaps they provide some measure of wind blockage. It could also be that the plovers retreat into the dunes during very high tides and storm events.

Slough

Snowy Plovers seem to congregate at the mouth of the slough. This is usually the flattest, widest part of the beach, and offers them a clear view of potential predators and disturbances.

With lots of water and sand movement on a daily, lunar, and annual basis, the location of each of these habitat types is constantly in flux. For instance, winter brings sand loss, breakage of the slough mouth, and dramatic changes in the physical profile of the beach and dunes. The snowy plovers, as well as all of the other animals and plants that use the beach to feed, rest, and reproduce, are adapted to a dynamic life at this intersection of land and sea.

8 Guidelines for Good Public Relations

These guidelines will help you in your new role as a docent, and are taken from the Half Moon Bay Plover Volunteer Manual.

1. Speak TO people, not AT them. A cheerful greeting can go a long way!
2. Smile at people. It takes 72 muscles to frown and only 14 to smile!
3. Be friendly and helpful. You play an important role at COPR, share your knowledge!
4. Be genuine. Allow your speech and actions to show your joy in what you're doing.
5. Be generous with praise, and cautious with criticism.
6. Be genuinely interested in people. You can like almost anyone if you try.
7. Be considerate of others' feelings, it will be appreciated.
8. Be mindful of the opinions of others. There are three sides to controversy; yours, the other person's, and the right one.

Appendix H: Biology & Natural History

This information was taken from the Federal Wildlife Services in 2001.

Western Snowy Plover

The western snowy plover, which is one of twelve subspecies of the snowy plover (Rittinghaus 1961 in Jacobs 1986), is a small, pale colored shorebird with dark patches on either side of the upper breast. The species was first described in 1758 by Linnaeus (American Ornithologists' Union 1957).

I. Breeding and Wintering Areas

A. Breeding Habitat

The Pacific coast population of the western snowy plover breeds in loose colonies primarily on coastal beaches from southern Washington to southern Baja California, Mexico. On the Pacific coast, larger concentrations of breeding birds occur in the south than in the north, suggesting that the center of the plovers' coastal distribution lies closer to the southern boundary of California (Page and Stenzel 1981). In Baja California, Mexico, snowy plovers are distributed across 28 sites, with concentrations at six coastal lakes (Dra. Graciela De La Graza Garcia, Director General of Conservation Ecology and Natural Resources, United States of Mexico, in litt., 1992).

Other less common nesting habitat includes salt pans, coastal dredged spoil disposal sites, dry salt ponds, and salt pond levees and islands (Widrig 1980, Wilson 1980, Page and Stenzel 1981). Sand spits, dune-backed beaches, unvegetated beach strands, open areas around estuaries, and beaches at river mouths are the preferred coastal habitats for nesting (Stenzel et al. 1981, Wilson 1980).

B. Breeding Areas

Based on the most recent surveys, a total of 28 snowy plover breeding sites or areas currently occur on the Pacific Coast of the United States. Two sites occur in southern Washington--one at Leadbetter Point, in Willapa Bay (Widrig 1980), and the other at Damon Point, in Grays Harbor (Anthony 1985). In Oregon, nesting birds were recorded in 6 locations in 1990 with 3 sites (Bayocean Spit, North Spit Coos Bay and spoils, and Bandon State Park-Floras Lake) supporting 81 percent of the total coastal nesting population (Oregon Department of Fish and Wildlife, unpubl. data, 1991). A total of 20 plover breeding areas currently occur in coastal California (Page et al. 1991).

Eight areas support 78 percent of the California coastal breeding population: San Francisco Bay, Monterey Bay, Morro Bay, the Callendar-Mussel Rock Dunes area, the Point Sal to Point Conception area, the Oxnard lowland, Santa Rosa Island, and San Nicolas Island (Page et al. 1991).

C. Wintering Areas

The coastal population of the western snowy plover consists of both resident and migratory birds. Some birds winter in the same areas used for breeding (Warriner et al. 1986, Wilson-Jacobs, pers. comm. in Page et al. 1986). Other birds migrate either north or south to wintering areas (Warriner et al. 1986). Plovers occasionally winter in southern coastal Washington (Brittell et al. 1976). The recent discovery of snowy plovers wintering near Cape Shoalwater in Pacific County, Washington, represents the northernmost record of wintering snowy plovers on the Pacific coast (Scott Richardson, Washington Department of Wildlife, pers. comm., 1994). From 43 to 81 plovers wintered on the Oregon coast between 1982-1990, primarily on 3 beach segments (Oregon Department of Fish and Wildlife 1994).

The majority of birds, however, winter south of Bodega Bay, California (Page et al. 1986). Wintering plovers occur in widely scattered locations on both coasts of Baja California and significant numbers have been observed on the mainland coast of Mexico at least as far south as San Blas, Nayarit (Page et al. 1986). Many interior birds west of the Rocky Mountains winter on the Pacific coast (Page et al. 1986, Stern et al. 1988). Birds winter in habitats similar to those used during the nesting season.

II. Reproduction and Population Information

A. Nesting and Reproduction

Widely varying nest success (percentage of nests hatching at least one egg) and reproductive success (number of young fledged per female, pair, or nest) are reported in the literature. Nest success ranges from 0 to 80 percent for coastal snowy plovers (Widrig 1980, Wilson 1980, Saul 1982, Wilson-Jacobs and Dorsey 1985, Wickham unpubl. data in Jacobs 1986, Warriner et al. 1986).

Instances of low nest success have been attributed to a variety of factors, including predation, human disturbance, and inclement weather conditions. Reproductive success ranges from 0.05 to 2.40 young fledged per female, pair or nest (Page et al. 1977, Widrig 1980, Wilson 1980, Saul 1982, Warriner et al. 1986, Page 1988). Page et al. (1977) estimated that snowy plovers must fledge 0.8 young per female to maintain a stable population. Reproductive success falls far short of this threshold at many nesting sites (Widrig 1980, Wilson 1980, Warriner et al. 1986, Page 1988, Page 1990).

B. Breeding Site Decline

Historic records indicate that nesting western snowy plovers were once more widely distributed in coastal California, Oregon, and Washington than they are currently. In coastal California, snowy plovers bred at 53 locations prior to 1970 (Page and Stenzel 1981). Since that time, no evidence of breeding birds has been found at 33 of these 53 sites, representing a 62 percent decline in breeding sites (Page and Stenzel 1981). The greatest losses of breeding habitat were in southern California, within the central portion of the snowy plover's coastal breeding range. In Oregon, snowy plovers historically nested at 29 locations on the coast (Charles Bruce, Oregon Department of Fish and Wildlife, pers. comm., 1991). In 1990 only 6 nesting colonies remained, representing a 79 percent decline in active breeding sites. In Washington, snowy plovers formerly nested in at least 5 sites on the coast (Eric Cummins, pers. comm., 1991). Today only 2 colony sites remain active, representing, at minimum, a 60 percent decline in breeding sites.

C. Breeding Population Decline

In addition to loss of nesting sites, the plover breeding population in California, Oregon, and Washington has declined 17 percent between 1977 and 1989 (Page et al. 1991). Declines in the breeding population have been specifically documented in Oregon and California. Breeding season surveys along the Oregon coast from 1978 to 1993 show that the number of adult snowy plovers has declined significantly at an average annual rate of about 7 percent (Oregon Department of Fish and Wildlife 1994). The number of adults has declined from a high of 142 adults in 1981 to a low of 30 adults in 1992 (Oregon Department of Fish and Wildlife 1994; Randy Fisher, Oregon Department of Fish and Wildlife, in litt., 1992). If the current trend continues, breeding snowy plovers could disappear from coastal Oregon by 1999.

In 1981, the coastal California breeding population of snowy plovers was estimated to be 1,565 adults (Page and Stenzel 1981). In 1989, surveys revealed 1,386 plovers (Page et al. 1991), an 11 percent decline in the breeding population. The population decline in California may be greater than indicated; the 1989 survey results are considered more reliable than the earlier estimates, which may have underestimated the overall population size (Gary Page, pers. comm., 1991).

Although there are no historic data for Washington, it is doubtful that the snowy plover breeding population in Washington was ever very large (Brittell et al. 1976). However, loss of nesting sites in this state probably has resulted in a reduction in their overall population size. In recent years, fewer than 30 birds have nested on the southern coast of Washington (James Atkinson, pers. comm, 1990; Eric Cummins, pers. comm., 1991). In 1991, only one successful brood was detected in the State (Tom Juelson, Washington Department of Wildlife, in litt., 1992).

D. Wintering Population Decline

Survey data also indicate a decline in wintering snowy plovers, particularly in southern California. The number of snowy plovers observed during Christmas Bird Counts from 1962 to 1984 significantly decreased in southern California despite an increase in observer participation in the counts (Page et al. 1986). This observed decline was not accompanied by a significant loss of wintering habitat over the same time period (Page et al. 1986).

III. Adverse Impacts and Effects of Management Actions

A. Habitat Loss

The most important form of habitat loss to coastal breeding snowy plovers has been encroachment of European beachgrass (*Ammophila arenaria*). This non-native plant was introduced to the west coast around 1898 to stabilize dunes (Wiedemann 1987). Since then it has spread up and down the coast and now is found from British Columbia to southern California (Ventura County). European beachgrass is currently a major dune plant at about 50 percent of California breeding sites and all of those in Oregon and Washington (J.P. Myers, National Audubon Society, in litt., 1988).

Stabilizing sand dunes with European beachgrass has reduced the amount of unvegetated area above the tideline, decreased the width of the beach, and increased its slope. These changes have reduced the amount of potential snowy plover nesting habitat on many beaches and may hamper brood movements. The beachgrass community also provides habitat for snowy plover predators that historically would have been largely precluded by the lack of cover in the dune community. Cost effective methods to control or eradicate European beachgrass have not yet been found.

B. Human Impacts

In the habitat remaining for snowy plover nesting, human activity (e.g., walking, jogging, running pets, horseback riding, off-road vehicle use, and beach raking) is a key factor in the ongoing decline in snowy plover coastal breeding sites and breeding populations in California, Oregon, and Washington. The nesting season of the western snowy plover (mid-March to mid-September) coincides with the season of greatest human use on beaches of the west coast (Memorial Day through Labor Day). Human activities detrimental to nesting snowy plovers include unintentional disturbance and trampling of eggs and chicks by people and unleashed pets (Stenzel et al. 1981, Warriner et al. 1986, P. Persons, in litt., 1992), off-road vehicle use (Widrig 1980, Stenzel et al. 1981, Anthony 1985, Warriner et al. 1986, Page 1988, Philip Persons, in litt., 1992); horseback riding (Woolington 1985, Page 1988, Philip Persons, in litt., 1992); and beach raking (Stenzel et al. 1981). Page et al. (1977) found that snowy plovers were disturbed more than twice as often by such human activities than all other natural causes combined.

C. Effect of Controlling Human Intrusion

In the few instances where human intrusion into snowy plover nesting areas has been precluded either through area closures or by natural events, nesting success has improved. The average number of young fledged per nesting pair increased from 0.75 to 2.00 after the nesting site at Leadbetter Point, Washington was closed to human activities (Saul 1982). Similarly, vehicle closure on a portion of Pismo Beach, California, led to an eight-fold increase in the nesting plover population (W. David Shuford, Point Reyes Bird Observatory, in litt., 1989). After beach access was virtually eliminated by the 1989 earthquake, fledging success increased 16 percent at Moss Landing Beach, California (Page 1990).

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D. Impact of Predation

Predation by mammalian and avian predators is a major concern at a number of nesting sites. Western snowy plover eggs, chicks, and adults are taken by a variety of avian and mammalian predators. These losses, particularly to avian predators, are exacerbated by human disturbances. Of the many predators, American crows (*Corvus brachyrhynchos*), ravens (*C. corax*), and red fox (*Vulpes*) have had a significantly adverse effect on reproductive success at several colony sites (Wilson-Jacobs and Meslow 1984, Page 1988, John and Jane Warriner, Point Reyes Bird Observatory, in litt., 1989, Page 1990, Stern et al. 1991). Accumulation of trash at beaches attracts these as well as other predators (Stern et al. 1990, Hogan 1991).

E. Effect of Predator Management

At most active breeding sites few measures have been implemented specifically to protect snowy plovers. Artificial measures have been used at several nesting sites to improve snowy plover nesting success. In 1991, the California Department of Parks and Recreation and the Service conducted plover nest enclosure studies on National Wildlife Refuge and State property in the Monterey area. Hatching success of plover nests in enclosures was 81 percent as compared to 28 percent for unprotected nests (Richard G. Rayburn, California Department of Parks and Recreation, in litt., 1992, Elaine Harding-Smith, U.S. Fish and Wildlife Service, pers. comm., 1992). Use of nest enclosures at Coos Bay North Spit resulted in up to 88 percent nesting success, compared to as low as 9 percent success for unprotected nests (Stern et al. 1991, Randy Fisher, in litt., 1992). Nest enclosures continue to be used at the above sites. The Service recently finalized a predator management plan for Salinas River National Wildlife Refuge, which proposes management measures to reduce red fox populations on the Refuge (Parker and Takekawa 1993).

F. Effect of Management Actions

In a few areas in California, including the Marine Corps Base at Camp Pendleton, plovers have benefited somewhat from protective measures taken for the endangered California least tern (*Sterna antillarum browni*). At Vandenberg Air Force Base in southern California, beaches are closed to all foot and vehicular traffic during the least tern nesting season (Donna Brewer, U.S. Fish and Wildlife Service, pers. comm., 1991).

Dogs and cattle have been restricted from some beaches at Point Reyes National Seashore (Gary Page, pers. comm., 1991), and some beaches on Federal land in Oregon have been closed to vehicles to protect plovers and other wildlife (Charles Bruce, pers. comm., 1991). Leadbetter Point in Washington (Fish and Wildlife Service), a 5-acre spoil disposal site in Coos Bay (Bureau of Land Management), and a 25-acre spoil disposal site in Coos Bay (Corps of Engineers) are the only nesting sites where human access has been restricted in the past specifically for plover nesting. In 1993, at Oregon Dunes National Recreation Area, the Forest Service used temporary fencing and signing to direct beach visitors away from snowy plover nesting areas. At Coos Bay, Oregon, the Corps of Engineers is proposing two projects to create or improve plover nesting habitat using dredged spoils.

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