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WELCOME!

Welcome and thank you for participating in the Snowy Plover Docent Program at Sands Beach on Coal Oil Point Reserve (COPR)!

Program goals

Overall
The goal of the Plover Docent Program is to assist in the protection of the Western Snowy Plover at COPR by promoting educational opportunities and increasing the level of awareness of beach users and community members.

Specifically

- To protect and preserve the habitat of the Western Snowy Plover on Sands Beach at Coal Oil Point Reserve.
- To communicate information about the natural history and conservation of the snowy plover, its habitat, and COPR.
- To educate visitors of the importance of following regulations which have been implemented to protect the plovers, their habitat, and COPR.
- To facilitate a positive connection between members of the public and the Coal Oil Point Reserve.

The SPDP was established in August 2001. From its beginning, the feedback from docents has been an important aspect of the adaptive management. Please be vocal and active in your involvement; help create the most effective Plover Docent Program possible.

This manual is to help insure your effectiveness as a Docent. It outlines the duties and expectations of Plover Docents, provides documents and information that will supplement your training and provides answers to many of the questions and problems likely to be encountered as a Docent.
The SPDP is the product of the work of many individuals from several groups. The Director of Coal Oil Point Reserve, various board members of the Santa Barbara Audubon Society, coordinators of other Plover Volunteer Programs in Central and Northern California, and others too numerous to mention have all contributed to the inception and development of this program. Now that you are involved in the Program as a Docent, you will also be able to contribute to the further evolution of the Program through your actions and comments.

Sponsors

Coal Oil Point Reserve, UC Natural Reserve System
The mission of the University of California Natural Reserve System 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
The Santa Barbara Audubon Society 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. By focusing on birds and other wildlife, SBAS works to conserve and restore ecosystems for the benefit of humanity and biological diversity. With your help we can create a culture of conservation to help preserve the ecological integrity of our world.
Funding
The University of California, Santa Barbara, Coastal Fund, California Coastal Commission’s Whale Tail Grant Program, Venoco’s Community Partnership Program, and generous contributions from members of the Santa Barbara chapter of the Audubon Society have provided funding for the Snowy Plover Docent Program at Coal Oil Point Reserve.

Acknowledgements
We are deeply indebted to Nelle Lyons, the Chief Ranger in the Bay Area District of the California State Parks, who provided us with a copy of their Volunteer Manual for Half Moon Bay State Beach (March 2000 version), as well as lots of other helpful information. We have also adapted our manual based on the Guadalupe-Nipomo Dunes Western Snowy Plover Docent Program Manual (June 2002 version).
INTRODUCTION

Snowy Plovers at Coal Oil Point Reserve

Historically, the coastal population of the Western Snowy Plover occurred at COPR year round, but in the late 1960’s they abandoned this site for nesting and would return only for the winter. Researchers believe the plovers abandoned this nesting site because they were no longer able to tolerate the high levels of disturbance caused by human recreation on the beach.

In the year 2000, active management for plovers at COPR began; management efforts included habitat restoration on the dunes, installation of educational signs, symbolic fencing of their habitat, and the initiation of the Snowy Plover Docent Program. Less than 2 full years after these efforts began (in June 2001) Snowy Plovers returned to COPR for breeding and have slowly re-established
ever since. The reclamation of an abandoned breeding site is an unprecedented event for Snowy Plovers. This event is extremely exciting not only because of the increased breeding success of our local plover population, but because it opens the door to the potential for plovers to reclaim other abandoned nesting sites if they are managed appropriately. We should not give up on these areas (usually current wintering sites, that were previously used for nesting) -- they may be the key to the recovery of the Pacific Coast Population of the Western Snowy Plover and its removal from the Endangered Species List.

Coal Oil Point Reserve has proven to be a very special, important area for snowy plovers. The Reserve will continue to be managed with a focus on plovers to ensure that it remains a refuge for them throughout the year -- during winter as well as the breeding season.

About Coal Oil Point Reserve

Coal Oil Point Reserve is comprised of several protected coastal habitats that have been set aside to fulfill the University’s mission provide management of the natural area through use of research, education, and public participation. COPR is one of 35 reserves administered by the UC Natural Reserve System and is set aside from the others because of the portion that is non-restricted from public access and use. It is the only reserve faced with the challenge of incorporating public access when developing and implementing its management plan. COPR consists of 157 acres located 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 University of California, Santa Barbara (UCSB). Only 15% of the original Devereux watershed remains undeveloped; COPR comprises the largest contiguous segment of that 15%. The diversity of habitats and wildlife at the Reserve is striking. More than 10 distinct habitat types -- including sandy beach, dunes, salt marshes, coastal scrub, grasslands, vernal pools, and freshwater ponds can be observed during a two-hour walking tour. Devereux Slough, which encompasses a large portion of the Reserve, is considered one of the ten best birding spots in the Western United States.

The Reserve harbors a variety of endangered and rare species of birds such as the White-tailed Kite, California Least Tern, Snowy Plover, and the Belding’s Savannah Sparrow. The beach is an important roosting site for the Snowy Plover and now provides breeding habitat for this threatened species. Plovers commonly bred at this site until the late 1960s and only began to return again in 2001. The Reserve has an obligation under the Endangered Species Act to protect this species from the high levels of disturbance it presently experiences. The Reserve has studied options that maximize protection of plovers and minimize the inconvenience to beach users. The Snowy Plover Management Plan, in conjunction with the Snowy Plover Docent Program, ultimately aims to minimize disturbance to plovers. This is accomplished by increasing public awareness, reducing traffic from the roost area, and informing visitors about the Santa Barbara county ordinance leash law.
History of the Coal Oil Point Reserve Area

In November 1967, the Regents of the University of California purchased 236 acres along the coast from the Devereux School, thus opening the land to the public. This area, which now includes Coal Oil Point Reserve, is comprised of dunes, an estuary, and coastal terraces. During the negotiations to acquire this property, Dr. Ken Norris, the UC System-wide Natural Land and Water Reserve Committee, and UCSB faculty emphasized to the UCSB Chancellor that portions of the property had natural reserve value. During the development of the UCSB Long Range Development Plan of 1968, the dunes on the current “West Campus” property were designated a “Natural Resources” Reserve.

In late 1969, the UCSB Natural Land and Water Reserves (NLWRS) Committee recommended that the dunes, slough, and beach be included as part of a campus ecological Reserve. The University-wide Committee for NLWRS recommended that funds be allocated from its “Establishment Funds” for fencing and to provide housing for a caretaker at the proposed Reserve. Chancellor Vernon Cheadle concurred with these recommendations and requested that the identified areas be managed under the supervision of the campus Natural Land and Water Reserves Committee. The Reserve at this point was called the Devereux Natural Reserve.

The Regents took official action on the incorporation of the COPR into the University NLWRS at their meeting on July 17, 1970. As incorporated, the Reserve consisted of 49 acres. In 1976, the campus NLWRS Faculty Advisory Committee and the UCSB Environmental Quality Committee both endorsed a proposed expansion of the Reserve. In September of 1979, the Reserve was officially expanded to include an additional 68 acres of the West Campus property, including all of Devereux Slough and the grasslands to the west, for a total area of 117 acres. In 2000 an additional 40 acres to west was incorporated in to the COPR.

For 30 years since its inception, the COPR had minimum funding and no paid staff. Caretakers were volunteers who had the main task of controlling trespassers. In 1997, Dr. Scott Cooper, director of the UC NRS, recognized the potential for COPR to become a more functional reserve and the need for more funding. At this point, the Reserve staff initiated aggressive programs for weed eradication, public outreach, and education and developed a Management Plan for the reserve. These activities resulted in a three-fold increase in class and research use. In 2000, COPR received a full-time funded position for a Reserve Director from the Chancellor. This position allowed the director to focus on fund acquisition and implementation of various programs.

For an excerpt on the Reserve’s history prior to 1970, please see Appendix I: Origins of a Mysterious Ruin: The Campbell’s at Coal Oil Point
Summary of Position

A Snowy Plover Docent is a trained volunteer who maintains a level of expertise about this species and its habitat.

The volunteer/intern position will be responsible for interpreting Western Snowy Plovers and their habitat to beach users, recording basic data, and interpreting COPR rules and regulations to the public in ways that encourage visitors to voluntarily comply with those rules. The docent position is an essential component to successful management of recovering threatened/endangered species.

Commitment

• Volunteers: one, 2 hour shift per week for a minimum period of 12 weeks.
• Interns: Commitment must satisfy specific Internship Program requirements and must at least be equivalent to the volunteer commitment above.

Requirements

• Attend the entire, six hour training sequence: tour of COPR (2 hours), docent training (2 hours), and on-site training (2 hours)
• Commit to a regular, weekly schedule. Please see document entitled, ‘My Commitment to the Western Snowy Plover’.
• Read and know the Docent Training Manual.
• Learn about the snowy plover; use the information provided to understand the importance of the species and its habitat.
• Wear prescribed uniform
• Record basic data during each shift.

Docent qualifications

• A positive and enthusiastic attitude towards engaging people in conversation.
• Ability to communicate well with others and be sensitive to their needs and views.
• Ability to work independently and resourcefully in accordance with Reserve
guidelines.
- Good written, verbal, and observational skills.

Benefits/opportunities
- Expand your awareness, understanding, sensitivity, and appreciation for our local natural areas and wildlife.
- Participate in educating others about an issue that is important to you.
- Gain complimentary membership to Friends of Coal Oil Point Reserve
- Free access and parking at the Reserve before or after your docent shift
- Attend occasional social dinner-meetings with other docents to discuss your experiences out on the beach
- Eligibility for field trip travel and accommodations to Reserves within the UC System for reduced rates; example, Santa Cruz Island.
- Link with other plover volunteer programs throughout California, Oregon, and Washington, and become more involved in local conservation issues.

Additional involvement
If you would like to help beyond the beach...
- Write articles or Letters to the Editor to local papers or newsletters.
- Be on-call for building/repairing fence exclosure.
- Help us produce a pamphlet or other educational materials for use in our program.
- Once-a-month habitat restoration workdays with SB Audubon and Coal Oil Point Reserve.
- The Reserve also needs support in many other areas, please ask us.
- For further educational enrichment see the list of books, websites, and videos under Resources in Appendix G.

THE DOCENT ROLE

The purpose of having a Docent Program at Coal Oil Point reserve is Public Education. What does that really mean?

Basically, it means docents help people learn how to share the beach with Plovers. Given the history of unregulated access to Sands Beach, a wide variety of people use the beach for a host of acceptable and unacceptable recreational activities. Public education is intended, over time, to minimize the unacceptable practices without diminishing the acceptable ones and to implant the idea that Sands beach is part of an ecological reserve (part of the Natural Reserve System) owned by the University of California.
Having a positive Ambassador speaking with people about plovers is the most effective educational tool possible. People like to learn from other people, not from textbooks or other educational media. If you talk to people, you can share your knowledge of Plovers. Once they have begun to learn, they can begin to care. People who care about the plovers will change their behavior.

As a docent, you play two important roles:

1) Educator  
2) Protector

As an educator, you can contact beach visitors by making yourself available and approachable.

Education includes
1. Providing beach users with accurate information on the natural history and biology of snowy plovers  
2. Helping beach users identify snowy plovers and other shorebirds through the spotting scope  
3. Interpreting Reserve rules for beach users and providing an explanation for their existence  
4. Offering brochures and public handouts that are available in the vest pocket  
5. Encouraging questions and learning on all levels
As a **protector**, you may contact beach visitors by intercepting those who are not respecting the Reserve’s regulations or those who pose a potential threat to the plovers. (see “RESERVE RULES AND REGULATIONS”, page 19).

**Protection includes 5 areas of concern:**

1. Dogs
2. Trespassing into protected habitat or 'exclosure'
3. Loitering in the ‘corridor’
4. Crows, skunks, and other predators
5. Activities that are not permitted in the Reserve

1. **DOGS – most common scenarios**

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

As a plover docent, it is your duty to ensure that all dogs, within the Reserve boundaries, are leashed and under the control of the owner at all times.

**Santa Barbara County Ordinance 7-11(a) SBCO** states that all dogs must be in restraint (leash) while in or on public land. The first two violations are $118.70 each. The third and thereafter increases to $166.00.

**Santa Barbara County Ordinance 7-11(b) SBCO** states that it is unlawful to “stake out” dogs and leave them on public lands and the fine is $84.60.

   The owner of an unleashed dog should be asked to leash it. You may explain that there is a county ordinance, enforced by campus police, which carries a potential fine, if cited. If they do not have a leash, request they use one of ours. If they refuse, call campus police.

**If a dog or other animal ever bites you:**

(A ‘bite’ is defined as the skin being broken.) When possible get the owner’s information and ask if the animal has had a vaccination for rabies. If the owner does not cooperate, get a description of the dog and if necessary follow the owner and get as much information about where the dog lives and call the police. An incident like this is similar to a ‘hit-and-run’, but better referred to as a ‘bite-and-run’. Call Animal Control or the city/county officials where the dog lives so they can impound the dog, observe it for rabies, and talk to the owner. Also, if you need medical help, the people treating you should report it to the proper authorities.
2. TRESPASSING
A docent also ensures that the boundaries of the roost exclosure are respected, and appropriately addresses the situation when trespassing does occur.

When a human enters the roost exclosure, do not try to stop the trespasser with shouts or frantic hand signals. Calmly motion them to come out, and advise them of the reasons that the roost is a “No Trespassing” area. Ask them politely to avoid the area in the future. Ample signs should be in place, but are not always present due to high tides and stormy weather. This is why it is important that you are there! If someone is in the roost area and refuses to leave, call campus police.

If you feel that a ball or frisbee game is in too close of proximity of the roost, such that the ball may fall inside the roped area, ask the players to move farther away. A ball or anything that lands in the exclosure may not be retrieved by anyone.

Trespass evidence- several human foot prints cross the fence boundary and continue through the protected habitat.
3. CORRIDOR
The corridor is defined as the sandy beach between the plover fence and the ocean’s edge. Although it is not listed as a Reserve rule, Docents are requested to keep people from loitering there. The corridor is often filled with kelp, or the rack zone, making it an important place for foraging plovers and other shorebirds. Our goal is to keep the corridor uncluttered so that plovers can feed, but allow people to use it to get from one end of the beach to the other.

Ball playing, sunbathing, and placing personal belongings like surfboards, towels, clothing, etc…are discouraged in the corridor. These activities impact the plovers’ ability to feed may also cause disturbance. Of course, there is no need to approach people who make brief stops while walking within this area. Signs are in place stating “no loitering.” It is best to approach a beachgoer before they become settled, but if this is not possible, approach them with a friendly smile and request that they move outside of the corridor and explain why. A map is available in the clipboard to help clarify the boundaries and the beach layout.
4. Predators
During the breeding season, the focus of your attention shifts to protecting plover eggs and chicks by discouraging crows and other predators from landing in the exclosure.

The slingshot is part of the equipment that should be brought down to the beach during each shift. The slingshot is used (in combination with small pebbles) to discourage crows from landing anywhere near the exclosure. Be sure to practice your shot before trying to scare away a crow, lest you shoot your foot or another bird instead!

5. ACTIVE RECREATION
There are many activities that are not allowed in the Reserve, such as launching a kite board, any type of kite flying, horseback riding, and more. There are others that are permitted, but only if they do not pose a threat to plovers, for instance, football or Frisbee. If ever a recreational game is too close to the exclosure, such that the ball may fall inside the roped area, ask the players to move farther away. A ball or anything else that falls into the exclosure may not be retrieved by anyone.

Your job is to INTERPRET the Reserve’s rules and regulations, NOT TO ENFORCE THEM.

Most of the Reserve regulations are enforceable by law because they pertain to county ordinances or penal codes specific to the University. These include the leash law, no camping or fires, or littering, for example.

Some of the Reserve rules were established to protect the animals and habitats found here. Although they may not be legally enforceable, we still ask visitors to respect them and comply.
PROCEDURES
To Begin and End Your Shift

Checking In:
1. Arrive at the Docent Office ~10 minutes before your shift start time.
2. Review the Activity (dry-erase) Board for messages from other docents or staff.
3. Sign in on the Sign In/Out sheet by writing your name, date, and the actual time you arrived.
4. Review the schedule to determine who you are relieving and the person who is relieving you. Take a look at the tide guide so you know what to expect while out on the beach.
5. Gather the equipment and head down to Sands.

Equipment:
- binoculars
- sandwich board sign
- chair
- clipboard- with data sheets
- vest*
- slingshot

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

Wear the binoculars around your neck (to keep them from getting sandy in a bag). You may have to make two trips.

DON'T FORGET TO LOCK THE OFFICE AND PLEASE DO YOUR BEST TO KEEP BINOCULARS & SPOTTING SCOPE OUT OF THE SAND!

Checking Out:
1. Return materials to proper storage places.
   - file data sheet in the binder labeled "Filled out Data sheets"
   - clean binoculars
2. Sign out by writing the actual time you are leaving.
3. If any supplies need to be restocked or you have any comments/questions for the Coordinator and/or other docents, write it on the dry erase board.
ADDITIONAL PROCEDURES & PROTOCOLS

Parking / Combination Locks
If you drive to the Reserve for your Docent shift, please drive beyond the gate and park in the lot that is next to the Reserve Office and the residence of the Director.

There are only two combinations that you will need to know- one on the entrance gate and docent office. These combinations should only be used by you- and only when you need to park at the Reserve for your docent shift or an event 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. DO NOT GIVE THE GATE COMBINATION TO ANYONE.

If the combinations are ever changed, COPR staff, volunteers, and interns will be notified well in advance.

Permits
At the training, you will be given a permit that corresponds with your specific vehicle. Place it on your dash while parked at the Reserve to prevent receiving a citation.

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

Training
Orientation to the Snowy Plover Docent Program is required for those interested in volunteering. There are three components to become a Snowy Plover Docent: 1) attend a classroom orientation session with a brief tour of the plover site, 2) attend a 2-hour practice shift on the beach, and 3) attend a tour of COPR. Each of these components are offered on a monthly basis.
Supervision
Snowy Plover Docents work under supervision of the Docent Program Coordinator who provides day-to-day guidance, schedules docent trainings and tracks hours, and is available to field questions or concerns from docents. Because the Program takes place on the Coal Oil Point Reserve, the Coordinator and all docents are under the supervision and ultimate direction of the Reserve Director.

Office maintenance
The Docent Office is located right beside the Cliff House at the entrance to Sand's Beach. The office is shared as a depot for all docents to check in and out and also as a work place for the program coordinator. The office also acts as an informational kiosk for Reserve visitors who are curious enough to peek their heads in and ask some questions. Welcome these interactions and provide as much information as possible. The office includes such resources as the monthly docent schedule, sign-in/out sheets, a dry-erase board, and the Plover Binder (see below). The other equipment used for docenting is also stored here. All docents will be able to open the office using a combination lock. We trust you to keep this combination to yourself and to lock the door before you leave.
RULES AND REGULATIONS OF COAL OIL POINT RESERVE

The COPR, where the Docent Program is based, has established rules and regulations to protect the ecological integrity of the Reserve grounds, and to provide for the safety of those who visit. The beach area is subject to both UCSB and Santa Barbara County ordinances, as well as rules specific to the Reserve. Docents, please become familiar with these regulations, so that you may inform others who question you about them, and of course, so that you may knowledgeably abide by them yourselves. These rules and regulations are posted at the entrances to COPR.

Coal Oil Point Reserve Rules and Regulations

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<th>Permitted</th>
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<tr>
<td>Surfing</td>
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<td>Sunbathing (except in front of Plover area)</td>
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<td>Walking/jogging near shore</td>
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<td>Wildlife viewing</td>
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<td>Leashed dogs (except on pond trail)</td>
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<td>Hiking on designated trails</td>
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<td>Photos</td>
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<th>Not Permitted</th>
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<td>Horses and unleashed dogs</td>
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<td>Trespass</td>
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<td>Alcohol consumption</td>
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<td>Bonfires or BBQs</td>
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<td>Camping</td>
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<tr>
<td>Littering</td>
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<tr>
<td>Fireworks</td>
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<td>Activities that disturb wildlife (e.g. kite flying, ball play near plover habitat)</td>
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<tr>
<td>Dogs and BIKE RIDING on pond trail</td>
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<tr>
<td>Motorized vehicles and bike riding</td>
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<td>Firearms</td>
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PUBLIC RELATIONS

Good public relations may be defined as the “development and maintenance of public understanding, appreciation, and support for the objectives and programs” put forth by a specific group or institution (the Docent Program, in our case) (as defined in the HMB Volunteer Manual). Public Relations do 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 a positive contact

Every contact with the public -- whether it be on the beach, through a letter to the editor, or in line at the grocery store represents an opportunity to foster understanding and gain support for our program. Make an effort to be helpful and friendly at all times when dealing with the public. 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 are just on the beach to relax and have fun (just as many of us do when we are not acting as Docents), and they need to be treated with respect and courtesy at all times.

One thoughtless statement or action on the part of one Docent can spoil the positive efforts of many; 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 Plover Docent Program. The trick to remaining positive about someone doing something wrong is to give them the benefit of the doubt. 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 threatened birds that live here”.

There may be times when you experience angry or unreasonable people. If it ever comes to the point where an individual is being abusive, refuses to comply, or is a repeat offender, back off and refer the situation immediately to the Docent Coordinator or other Reserve Staff or call the police 893-3446 (see “IN THE EVENT OF AN EMERGENCY”).

When people are approached by docents, they often have a series of questions. Give them as much information as they need. When you are posed a question that you cannot answer offhand, and you cannot find the answer in your Manual’s reference material, then be honest and say you don’t know the answer. It is very important not to give out false or misleading information -- even unintentionally -- because it can confuse the visitor and damage the public relations of the Program. Be sure to write down the question which ‘stumped’ you and talk to the Docent Coordinator about it later -- she will help you learn the answer so you will
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.

As Snowy Plover Docents on the Coal Oil Point Reserve, you can help interest the casual visitor in 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, the Docent may help acquaint the visitor with the great opportunity to both enjoy and preserve the natural environment.

Education is the first step toward understanding, appreciation, and eventually support.
FREQUENTLY ENCOUNTERED SITUATIONS

Many of the people who recreate on 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 -- often at a time when they are violating one of them (e.g. walking inside the fenced plover area). In these situations, we want to avoid negative interactions at all costs -- to ensure an enjoyable beach experience for the visitor and 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 (451-2403 or 893-5092) or call campus police (893-3446) immediately.

Here are some common questions and comments from beach users and suggestions on how to field them:

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 costly, using large amounts of energy. If their energy is used to fly from disturbances, it can prevent the other behaviors that they need to survive, such as feed, incubate eggs, and 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 “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/fewer people?
Snowy plovers need an specific type of beach for resting, feeding, and nesting. Plover habitat tends to be wide and 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 on beaches (attracted to garbage left behind by visitors). Plovers have lived here and have been using the beaches much longer than humans, and it is only recently that human encroachment has 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. This beach is very important for wintering birds and once again, a critical breeding site as well.

I just want to play ball with my friends. Why do you want me to move? Active recreation is discouraged near the roost 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 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 can prevent them from feeding on the 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 drift wood? 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.

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.

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 on the Reserve. The area has been set aside as part of a 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 a 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 Marine Mammal Center or Seabird Rehabilitation Center right now and they will address the situation.
Marine Mammal and Bird Care

The following is information on marine mammal and bird care for our area; the National Marine Mammal Health and Stranding Response Program (NMMHSRP) is a federal government program run by the National Marine Fisheries Service under National Oceanic And Atmospheric Association. The goals of this period are “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”. The designated centers for Santa Barbara County are:

<table>
<thead>
<tr>
<th>Dead cetaceans (whales and dolphins)</th>
<th>Santa Barbara Museum of Natural History (805) 682-4711 ext 353</th>
</tr>
</thead>
<tbody>
<tr>
<td>Live marine mammals including pinnipeds (seals and sea lions) and cetaceans (whales and dolphins)</td>
<td>SB Marine Mammal Center (805) 687-3255</td>
</tr>
<tr>
<td>Live birds</td>
<td>Wildlife Care Network (805) 966-9005</td>
</tr>
<tr>
<td>Seabird Rehabilitation Center</td>
<td>June Taylor (805) 967-1028</td>
</tr>
</tbody>
</table>

When leaving information at one of these locations, be sure to give the exact location where you found the animal, date and time, and your phone number in case animal care technicians have any questions.
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. Judgment is important in deciding whether the situation should simply be noted and reported to the Docent Coordinator, or whether it is serious and time-sensitive enough to make an immediate report to the Reserve Manager or Police. Following are the important phone numbers you should know, and the procedures for handling various situations, including whom to call for what type of incident. If you own a personal cell phone, please make sure it is charged and turned on so that 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 any of these phone numbers or procedures, but in case you do, follow these guidelines to decide whom to call or report to:

**Call 911 and 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 Reserve Director and campus police**
- Disturbances approaching violence (including threats to Docents’ safety by angry visitors)
- Property damage in progress (i.e. 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/horses entering plover fenced area who have refused to obey your request to leave.

**Call Reserve Director, campus police, and Animal Control**
- If bitten by a dog or other animal. Please refer to page 13, under ‘DOGS’ for more instruction.

See next page (with “IMPORTANT PHONE NUMBERS”) for who to call if you encounter injured wildlife or hazardous conditions of any kind.

AFTER REVIEWING THE ABOVE LIST, IF YOU ARE STILL UNSURE OF WHAT TO DO, 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 the cell phone number to the police and stay where you are to provide assistance to the officers when they arrive.
✔ If someone has reported the incident to you, try to get that person’s name and phone number, so he or she can be contacted at a later date if necessary. Also try to get as many details about the incident from the reporting person as possible (e.g. what was the suspect wearing/driving, extent of injuries to victim, where and when it happened, etc.) -- and write them all down.
✔ If you are carrying a camera, take a picture of the person and/or dog that caused the problem.

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Important Phone Numbers

<table>
<thead>
<tr>
<th>Service</th>
<th>Phone Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency Medical</td>
<td>911</td>
</tr>
<tr>
<td>COPR Director (Cristina Sandoval, for violations)</td>
<td>Cell 451-2403</td>
</tr>
<tr>
<td></td>
<td>Home 685-0255</td>
</tr>
<tr>
<td>University Campus Police (for violations)</td>
<td>893-3446</td>
</tr>
<tr>
<td>Docent Coordinator, Docent Office</td>
<td>893-3703</td>
</tr>
<tr>
<td>Docent Cell Phone</td>
<td>448-5276</td>
</tr>
<tr>
<td>Marine Mammal Center (for stranded marine mammals)</td>
<td>687-3255</td>
</tr>
<tr>
<td>Wildlife Care Network (for stranded/sick wild birds)</td>
<td>966-0023</td>
</tr>
<tr>
<td>Env. Health and Safety (pollution, hazardous materials)</td>
<td>893-3194</td>
</tr>
<tr>
<td>Seabird Rehabilitation (June Taylor)</td>
<td>967-1028</td>
</tr>
</tbody>
</table>
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.

Sunset at Sand's
REFERENCES

A heap of documents (examples of fliers, posters, signs, whole docent manuals, entire power point presentations, etc.) were provided by various people and programs (along with heaps of encouragement and support) to aid in the development of our docent program. Especially useful were documents and information from Jean Scott, Interpretive Specialist at Marina State Beach; Nelle Lyons, Ranger at Half Moon Bay State Beach; and Sue Abbot, with Point Reyes Bird Observatory and Point Reyes National Seashore. Following are references to some of the specific documents which were markedly helpful in developing our documents and program:

K. D. Lafferty, 2001. Status, Trends, and Conservation of the Western Snowy Plover with a focus on the Devereux Slough populations at Coal Oil Point Reserve, Santa Barbara County, CA. Museum of Systematics and Ecology Environmental Report No. 15, University of California, Santa Barbara
Point Reyes National Seashore. Provided by Sue Abbott.“Simple Things that You Can Do to Help Snowy Plovers” poster.
Poster / Call for Plover Volunteer Docents. Point Reyes Bird Observatory. Provided by Sue Abbott.
Poster / Call for Plover Guardian Volunteers. Marina State Beach, California State Parks. Provided by Jean Scott.
The Remarkable Snowy Plover. Warriner, Jane (Ricky) and John S. Observer, (Journal of the Point Reyes Bird Observatory), Number 88, Spring 1990.
The Federal Register, 1999.
“Threatened Species: Western Snowy Plover” Handout. Half Moon Bay State Beach, California State Parks.
“Western Snowy Plover” Handout. Point Reyes National Seashore and Point Reyes Bird Observatory.
Appendix A: Avian Identification Manual

Family: Plovers (Charadriiidae)

Western Snowy Plover

(Charadrius alexandrinus)
Description: 5-7", (13-18 cm)
A small whitish plover with pale brown upperparts; black legs, slender black bill and small black mark on each side of breast.
Juvenile: Thin black bill, pale ear coverts, pale breast patches, buff-edged feathers on back and wing coverts.
Voice: a plaintive chu-we or o-wee-ah.
Habitat: Flat sandy beaches, salt flats, and sandy areas with little vegetation.
Nesting: 2 or 3 buff eggs spotted with black in a sandy depression lined with a few shell fragments or bits of grass.
Range: Resident along Pacific Coast from British Columbia to Mexico, and along Gulf Coast from Texas to Florida Panhandle. Also breeds locally in interior from California and Nevada, east to Oklahoma and Texas. Also in Old World.
This small sand-colored plover has a perfect camouflage on sandy shores. As soon as it stops running it seems to disappear, blending into its surroundings. The eggs also blend with surroundings. The eggs also blend with dry sand or salty barren soil and are almost impossible to find once the incubating bird slips off them. Inland, these birds feed mainly on insects but along the coast they also take crustaceans, worms, and other small marine creatures.
Family: Plovers (Charadriidae)

Semipalmated Plover
(Charadrius semipalmatus)

**Description:** 6-8", (15-20 cm) A brown –backed plover with white underparts and one black breast band. Bill stubby, yellow-orange, with dark tip. Immature has all black bill and brownish breast band. Larger Killdeer has two black breast bands.

**Voice:** A plaintive two note whistle, *tu-wee* also a soft, rather musical rattle.

**Habitat:** Breeds on sandy or mossy tundra; during migrations found on beaches, mud flats, shallow pools of salt marshes, and lake shores.

**Nesting:** 4 buff eggs, with dark brown and black, placed in shallow depressions sparsely lined with shell fragments, pebbles and bits of vegetation on the tundra.

**Range:** Breeds from Alaska east to New Finland and Nova Scotia. Winters regularly from California and Carolina south along Gulf Coast; rarely found farther north. Like other plovers, the semipalmated forages in short bursts- a quick run followed by a stop- which it scans the sand or mud in front of it for any sign of life before running on. It does not probe like its usual associates, the longer billed sandpipers. Taking most of their food right from the surface, semipalmated plovers prey mainly on small crustaceans and mollusks.
Family: Plovers (Charadriidae)

Black-bellied Plover  
(*Pluvialis squatarola*)

**Description:** 10-13”, (25-33 cm)

A quail-sized plover. Breeding adults grey, with flecks of light and dark above, black on face and breast, and white on belly. Winter adults similar, but face and breast are white like belly. Young birds have upperparts flecked with yellow, breast and belly finely streaked. In all plumages, bold white wing stripe, *white rump*, and *black patch under wing.*

**Voice:** A clear whistled *pee-a-gee.*

**Habitat:** Breeds on tundra; winters on beaches, mudflats, and coastal marshes, and lakeshores.

**Nesting:** 3 or 4 buff eggs, spotted with brown, in a shallow depression lined with moss, lichens, and grass.

**Range:** Breeds in northwestern Alaska and Arctic Canada. Winters mainly along coasts from British Columbia and Massachusetts southward. Also in Eurasia. Most of us see the Black-bellied Plover during the winter or in migration, when it may lack its bold black underparts but is nonetheless conspicuous among the smaller shorebirds that frequently accompany it. It is one of the shier species, usually the first to take flight when a flock of shorebirds is approached.
Family: Sandpipers, Phalaropes, and Allies (Scolopacidae)

Sanderling  
(*Calidris alba*)  
**Description:** 8", (20 cm)  
A starling-sized shorebird with a conspicuous white wing stripe. Summer adults have rufous head and breast, white belly. In winter, rufous area replaced by pale grey and birds look almost white. Bill and legs black.  
**Voice:** *kip* Conversational chatter while feeding.  
**Habitat:** Breeds on tundra; winters on ocean beaches, sand bars, mud flats, and lake and river shores.  
**Nesting:** 4 olive eggs, spotted with brown, placed in a hollow on the ground lined with grasses and lichens.  
**Range:** Breeds in high Arctic tundra from Alaska eastward to Baffine Island. Winters along coasts from British Columbia and Massachusetts southward to southern South America. Also Eurasia.  
One of the most widespread of all shorebirds, the sanderling turns up on almost every beach in the world. As a wave comes roaring in, the birds run up on the beach just ahead of the breaker, then they sprint after the retreating water to feed on the tiny crustaceans and mollusks left exposed.
Family: Sandpipers, Phalaropes, and Allies (Scolopacidae)

Willet

(*Catoptrophorus semipalmatus*)

**Description:** 15”, 38cm

A large shorebird, gray-brown, with a long straight bill. Best identifies in flight by its *flashy black and white wing pattern*. Gray legs and thicker bill distinguish it from Greater Yellowlegs.

**Voice:** A loud ringing *pill-will-willet* and a quieter *kuk-kuk-kuk-kuk-kuk*.

**Habitat:** Coastal beaches, freshwater and salt marshes, lakeshores, and wet prairies.

**Nesting:** 4 olive-buff eggs, spotted with brown, in a nest lined with weeds or bits of shell placed in a depression on open ground or in a grass clump.

**Range:** Breeds from central Canada to northeastern California and Nevada; also along Atlantic and Gulf coasts south from Nova Scotia. Winters along from Oregon and Carolinas southward.

Willetts are conspicuous, noisy birds with several distinctive calls. They separate when feeding but remain in loose contact. If one bird takes flight, all the others will join it; the birds usually fly together, calling back and forth, before dropping down farther along the beach.
Family: Sandpipers, Phalaropes, and Allies (Scolopacidae)

Whimbrel  
\textit{(Numenius minutus)}

**Description:** 17”, 43 cm  
A large shorebird with a \textit{down-curved bill}. Uniform brown or gray-brown above, with bold head stripes and long legs.

**Voice:** A series of 5-7 loud, clear, whistled notes: \textit{pip-pip-pip-pip-pip}.

**Habitat:** Breeds on Arctic tundra, especially near coast; coastal salt meadows, mudflats, and grassy shoreline slopes during migration.

**Nesting:** 4 olive eggs, heavily marked with brown, in a depression in moss or in a sedge clump on the ground.

**Range:** Breeds in Arctic Alaska and Canada. Winters in southern California, Gulf Coast, and Atlantic Coast north to Virginia. Also in Eurasia. The Whimbrel is found along both coasts, as well as in the interior of the continent. It is still numerous because of its wary behavior and the remoteness of its nesting grounds on the Arctic tundra.
Family: Sandpipers, Phalaropes, and Allies (Scolopacidae)

Marbled Godwit
(*Limosa fedoa*)

**Description:** 18” 46 cm
A crow-sized shorebird, dark and mottled above, cinnamon-buff below, with cinnamon wing linings and long, pinkish, upturned bill.

**Voice:** A loud *kerreck* or *god-wit*, usually heard on breeding grounds.

**Habitat:** Breeds on grassy plains; visits salt marshes, tidal creeks, mudflats, and sea beaches on migration.

**Nesting:** 4 olive-buff eggs, blotched with brown, in a slight depression lined with grass on the ground.

**Range:** Breeds on the central plains from Saskatchewan to Minnesota. Winters on coasts from California and Virginia southward and along Gulf Coast.
Family: Sandpipers, Phalaropes, and Allies (Scolopacidae)

Black Turnstone
(Arenaria melanocephala)

**Description:** 9”, 23 cm
In breeding plumage, *black upperparts, head, and breast*; large white spot in front of eye and white line above eye; fine white spotting from nape across side of breast; white belly. In winter plumage, dusky black with unstreaked white belly. Legs dark. Bill short and slightly upturned. In flight shows a *black and white pattern*.

**Voice:** A grating rattle.

**Habitat:** Breeds in marshy coastal tundra; seaweed-covered rocky shores in fall and winter.

**Nesting:** 4 yellowish-olive eggs, with darker yellow and brown markings, in an unlined depression on an open, pebbly ridge or gravel bar in wet tundra.

**Range:** Breeds on western and southern coasts of Alaska. Winters all along West Coast from Alaska south to Baja and Sonora, Mexico.
Family: Sandpipers, Phalaropes, and Allies (Scolopacidae)

Long-billed Dowitcher
(Limnodromus scolopaceus)

Description: 12" (30 cm)
A snipe-like, long-billed shorebird with white lower back and rump, black and white checkered tail, dark bill, green legs. Summer adults have reddish underparts (including belly), with barring on breast, sides, and flanks, and reddish edges on feathers of upperparts. Winter birds gray overall, with pale eyebrow and white lower back and rump.

Voice: A high sharp keek.

Habitat: Breeds in muskeg; found on mudflats, marshy pools, and margins of freshwater ponds during migration and in winter.

Nesting: 4 olive eggs, spotted with brown, in a grass and moss-lined nest on the ground.

Family: Bitterns and Herons (Ardeidae)

Great Blue Heron
(Ardea herodias)

Description: 39-52”, (99-132cm)
A common large, mainly grayish heron with pale or yellowish bill.

Voice: A harsh squawk.

Habitat: Lakes, ponds, rivers, marshes.

Nesting: 3-7 pale greenish-blue eggs placed on a shallow platform of sticks lined with finer material, usually in a tree but sometimes on the ground concealed in a reedbed. Nests in colonies.

Family: Bitterns and Herons (Ardeidae)

Snowy Egret

(Egretta thula)

Description: 20-27”, (51-69 cm)
A small, delicate white heron with a slender black bill, black legs, and yellow feet. In breeding season, it has long lacy plumes on its back. Immature bird similar to adult, but has yellow stripe up back of leg. Adult Cattle Egret has pale bill, legs, and feet; immature has dark bill, legs, and feet; Much larger Great Egret has yellow bill and black legs and feet.

Voice: A harsh squawk.

Habitat: Marshes, ponds, swamps, and mudflats.

Nesting: 3-5 pale blue-green eggs placed on a platform of sticks in a bush or reedbed or on the ground. Nests in colonies, often with other species of herons.

Range: Breeds locally from Oregon and California east to New England, mainly along coasts but also at scattered localities inland. Winters regularly form California, Arizona, and Virginia south to West Indies and South America. Also resident in tropical America.
Family: Pelicans (Pelecanidae)

Brown Pelican  
(Pelecanus occidentalis)  
Description: 45-54”, (1.1-1.4m)  
A very large, stocky bird with a dark brown body and a long flat bill. Head whitish in adults, with dark brown on hindneck during breeding season. Young birds have dark brown heads and whitish bellies.  
Voice: Usually silent, but utters low grunts on nesting grounds.  
Habitat: Sandy coastal beaches and lagoons, waterfronts and pilings, and rocky cliffs.  
Nesting: 2 or 3 chalky white eggs in a nest of sticks, straw, or other debris, usually on a rocky island near the coast. Nests in colonies.  
Range: Resident of Pacific coast from Southern California south to Chile, dispersing northward as far as southern British Columbia after nesting season. Also on Atlantic coast from North Carolina south to Venezuela.
Appendix B: Snowy Plover Biology and Natural History

(Reprinted from http://refuges.fws.gov/birds/WestSnowyPlover/references.html on 21 February 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).


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).
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 brownii*). 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.
Western Snowy Plover References Cited


**This information was extracted from the Federal Register: March 2, 1995, Page 11768, Proposed Designation of Critical Habitat for the Pacific Coast Population of the Western Snowy Plover; Proposed Rule
Appendix C: More Interesting Natural History on the Pacific Coast Population of the Western Snowy Plover

Updated to 1999

SEASONALITY

The breeding season for western snowy plovers extends from early March to late September, with birds at more southerly locations beginning to nest earlier in the season than birds at more northerly locations. Activities that define the nesting season are courtship, copulation, nest scraping, egg laying, incubation, and rearing of the young to the fledgling stage. The wintering season generally extends roughly from October to February but often overlaps the nesting season with birds arriving on wintering areas as early as midsummer.

MIGRATION BETWEEN BREEDING AND WINTERING SITES

Nesting birds from the Oregon coast have wintered as far south as Monterey Bay on the central coast of California. Birds from Monterey Bay have wintered north to Bandon, Oregon, and south to Guerrero Negro, Baja California (Page et al. 1995a). Birds from San Diego in southern California have wintered north to Vandenberg Air Force Base in Santa Barbara County and south to Scammon's Lagoon, Baja California (Powell et al. 1995, 1996, 1997).

In winter, plovers are found on many of the beaches used for nesting but also on beaches not used for nesting. They also visit manmade salt ponds and estuarine sand and mud flats. In California, the majority of wintering plovers concentrate on sand spits and dune-backed beaches. Some also occur on urban and bluff-backed beaches, which are rarely used for nesting (Page et al. 1986).

WINTERING

In western North America, both the interior and Pacific coast populations winter mainly in coastal areas from southern Washington to Central America (Page et al. 1995a). A small number winter at two locations on the Washington coast, the northernmost being Midway Beach in Pacific County (S. Richardson, Washington Department of Fish and Wildlife, pers. comm. 1998). Fewer than 100 plovers winter at 9 locations on the Oregon coast, probably as many as 2,500 along the mainland California coast, and hundreds more in each of San Francisco Bay and the Channel Islands (Page et al. 1986). The majority of wintering plovers on the California coast are found from Bodega Bay, Sonoma County, southward (Page et al. 1986). Because of their similarity of appearance, wintering individuals from the interior and Pacific coast populations are virtually indistinguishable.
REPRODUCTIVE SUCCESS

The fledging success of snowy plovers varies greatly by location and year. Even plovers nesting on neighboring beach segments may exhibit quite different success in the same year. For example, the percentage of chicks fledged on different beach segments of Monterey Bay in 1997 varied from 11 to 59 percent and averaged 24 percent overall (Page et al. 1997). During the prior 13 years, the percentage of young fledged on Monterey Bay beaches averaged 39 percent (Page et al. 1997). From the former Moss Landing salt ponds (now the Moss Landing Wildlife Area) in Monterey Bay, the fledging rate of chicks ranged from 13.2 percent to 57.1 percent (mean = 41.4 percent) from 1988 to 1997. In San Diego County, the fledging rate of chicks ranged from 32.6 to 51.4 percent (mean = 41 percent) from 1994 through 1998 (Powell et al. 1997).

Reprinted (in part, and reformatted) from the Federal Register:
Appendix D: The Snowy Plover at Coal Oil Point Reserve

The HABITATS at COPR which are important to the snowy plovers include:

Wrack Zone, Intertidal, Foredunes, Slough or Lagoon Mouth

Wrack Zone

The plovers do most of their resting and a lot of their feeding within the wrack zone — the area just above the mean high-tide line where kelp is deposited on the sand. 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

At low tide, and when the beach is quiet (with little human activity), snowy plovers often venture out of the wrack zone and down onto the wet sand, or intertidal zone, to feed. Since human activity (walkers, joggers) is often focused on this part of the beach, plovers tend to retreat back to the wrack zone in the late mornings and afternoons, when the beach gets busy.
Foredunes

Snowy Plover breeding sites are often located on beaches which are backed by dunes. The presence of **foresetdunes** (dunes closest to the flat sand of the beach) seems to play an important role in site-selection for nesting pairs. Scientists do not know exactly why this is -- because they do not often place their nests directly in the foresdunes. Perhaps the dunes 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 Mouth

The snowy plovers at Coal Oil Point Reserve (and at other sites) often seem to congregate around the **slough mouth**. 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 (e.g. 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 which use the beach to feed, rest, and reproduce, are adapted to a dynamic life at this intersection of land and sea.
Appendix E: Teaching Tools

Five Suggestions for Good Teaching by Joseph Cornell:

1) TEACH LESS, AND SHARE MORE  It is important for an adult to share their inner self with the child. Only by sharing our deeper thoughts and feelings do we communicate to and inspire in others, a love for the earth. When we share out own ideas and feelings, it encourages a child to explore respectfully, their own feelings and perceptions.

2) BE RECEPTIVE  Receptivity means listening, and being aware. It is one of the most richly rewarding attitudes you can cultivate while working with children. The outdoors brings out a spontaneous enthusiasm in the child that you can skillfully direct toward learning.

3) BE SENSITIVE. Respond to the child’s present mood and feelings. Expand the child's interests by teaching along the grain of his own curiosity. When you respect his/her thoughts, you will find your time with him flowing easily and happily.

4) FOCUS THE CHILD’S ATTENTION WITHOUT DELAY. Involve everyone as much as you can, by asking questions and pointing out interesting sights and sounds. Some children are not used to watching nature closely, so find things that interest them, and lead them bit by bit into the spirit of keen observation. Let them feel that their feelings are interesting to you, too.

4) LOOK AND EXPERIENCE; TALK LATER. At times nature’s spectacles will seize the child in rapt attention. But even if those special sights are lacking, the child can have an experience of wonder by just watching quite ordinary things with close attention.

5) A SENSE OF JOY SHOULD PERMEATE THE EXPERIENCE. Children are naturally drawn to learning if you can keep the spirit of the occasion happy and enthusiastic. Remember that your own enthusiasm is contagious, and that it is perhaps your greatest asset as a teacher.

SPECIAL TIPS FOR WORKING WITH CHILDREN

Summary of abilities and affinities by age-group:

- Preschoolers learn best when activities stress seeing, hearing, touching, and smelling.
- Elementary and middle school children use their senses to help them describe, organize and solve problems.
- High schoolers can use their experiences and information to develop abstract ideas about the whole or its parts.
Eight commandments of good public relations

These are good guidelines for general public relations, and many will apply to your work as a Docent.
(Taken from the Half Moon Bay Plover Volunteer Manual)
1. Speak to people, not at them -- nothing is as nice as a cheerful word of greeting.
2. Smile at people -- it takes 72 muscles to frown, only 14 to smile =)
3. Be friendly and helpful -- if you would have friends, be friendly.
4. Be genuine -- allow your speech and actions to demonstrate your joy in what you are doing
5. Be generous with praise -- and cautious with criticism.
6. Be genuinely interested in people -- you can like almost everyone if you try.
7. Be considerate of the feelings of others -- it will be appreciated.
8. Be thoughtful of the opinions of others -- there are three sides to a controversy; yours, the other person’s, and the right one.

Awaken people’s curiosity. It is enough to open minds; do not overload them.  
Put there just a spark. If there is some good flammable stuff, it will catch fire.

Anatole France

[The interpreter] is at his best when he discusses facts so they appeal to the imagination and to reason, gives flesh and blood to cold facts, makes life stories of inanimate objects.

Enos Mills

The purpose of interpretation is to stimulate the reader or hearer toward a desire to widen his horizon of interests and knowledge, and to gain an understanding of the greater truths that lie behind any statements of facts.

Freeman Tilden

Interpretation is a seed not a tree.

A bunch of rangers sitting around a table in the Storer College Room at the Mather Training Center.
Appendix F: Glossary of Terms

**Berm**  The high, flat area of the beach just above the high-tide line. The plovers can usually be found resting or feeding here. The edge of the berm is marked on Sands Beach 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).

**Critical Habitat**  According to US Federal Law, the ecosystems upon which endangered and threatened species exist (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).

Or: 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**  This encompasses the roped–off area on the beach (____m), set aside to exclude humans, dogs, and horses while creating 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 (Pureves et al. 1995)
Or: 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** A cement-like, barred cage covered with graffiti, 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.


**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; has fluctuating water table due to seasonal weather, containing freshwater runoff as well as seawater; may flood into the ocean; 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 G: Resources

Resources
This list contains books, websites, and a video for further educational enrichment. Some of the websites are updated regularly, offering an excellent way to keep current with our local situation at Sand’s Beach, COPR.

Coal Oil Point Reserve Homepage: [http://CoalOilPoint.ucnrs.org/](http://CoalOilPoint.ucnrs.org/)
This web site contains Area and Site Maps, Species lists, a birders checklist, visitor info, a bird picture album, and this entire manual along with reprints of Snowy Plover articles. And more.

[http://refuges.fws.gov/birds/WestSnowyPlover/references.html](http://refuges.fws.gov/birds/WestSnowyPlover/references.html)
Reprinted in February, 2001

*Snowy Plover Public Education and Docent Program.* SB Chapter of the National Audubon Society website.
[http://www.rain.org/~audubon/sbasplvrdocents.html](http://www.rain.org/~audubon/sbasplvrdocents.html)


Surfrider Foundation Homepage
Surfrider SB Chapter:
[www.rain.org/~sfrdrsb/](http://www.rain.org/~sfrdrsb/)


CA Coastal Commission website.
[http://www.coastal.ca.gov/](http://www.coastal.ca.gov/)

*The Daily Nexus.* (UCSB’s Campus publication)

Environmental Defense Center website.
[http://www.edcnet.org](http://www.edcnet.org)

Community Environmental Council website.
Appendix H: The Docent Self Quiz

You've made it! Now that your mind is swimming in plover facts and biology, it's time to test yourself on some basic, but 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 may teach others.

A. Background Info.:

1. Coal Oil Point Reserve is an ________________ Reserve, owned and managed by _________________________________.

2. Give the following information about COPR-
   a. size (in acres)
   b. its 2 primary habitats
   c. Name of the major creek within the Reserve, having a lower drainage area that meets the ocean

3. Who sponsors the Snowy Plover Docent Program (SPDP)?

4. Who founded the SPDP?

5. What is the Snowy Plover Docent Program’s Mission?

6. How is the SPDP funded?

B. Plover Biology:

1. The snowy plover is categorized as what type of bird? Ex) songbird, falcon?

2. Give the range for the Pacific Coastal Population of the Western Snowy Plover.

3. List the time periods for SNPL winter 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 plover habitat preferences.

8. Name the shorebird that is the most commonly confused for the Western Snowy
Plover, and what 3 physical characteristics differ between the two?

9. Now name 2 behavioral characteristics that set them apart.

C. COPR-Site Specifications:

1. Give the distance of the exclosure from east to west ends.

2. What is the purpose for excluding humans and pets from the exclosure?

3. Name two factors that impacted the plover population, contributing to its decline?

4. Name the 5 Regulations of the Reserve.

5. Management strategies for plover recovery vary widely up and down the coast.
   a. What 6 actions were taken to aid in the recovery at the Reserve?
   b. Out of these, which has proven to make the largest positive impact?

6. What is so unique and impressive about the plover management at the Reserve, that sets it aside from other plover areas, allowing it to serve as a model?

7. The survival of the single chick at COPR in 2001 was the first successful plover fledge in over--------yrs.

D. Procedures:

1. In order to cancel a shift, one must....

2. What are the steps for checking in for a weekly shift?

3. The best way to avoid a potentially negative or uncooperative interaction is too...

4. The best response in a potentially threatening or dangerous situation is....

5. Where are the 'IMORTANT PHONE NUMBERS' located? If you can't find them, where else might you quickly find them?

6. Of all the 30 glossary terms, how many can you define without looking?
Answers

A. Background Info.:

1: Ecological reserve, owned and managed by the University of California Natural Reserve System (NRS).

2: 
   a. ~150 acres of land  
   b. coastal habitats and wetlands  
   d. Devereux Creek meets the ocean

3: The Santa Barbara Chapter of the National Audubon Society.

4: Cris Sandoval, Kendy Radasky, Jennifer Stroh, Ed Easton.

5: The mission of the Snowy Plover Docent Program (SPDP) is to assist the protection of snowy plovers at Coal Oil Point Reserve, and to raise awareness in the local community of the importance of the preservation of the snowy plovers and their habitat.

6. Shoreline Preservation Fund, generous contributions from members of the SB Audubon Society, and a Whale Tail Grant, a funding program through the California Coastal Commission.

B. Plover Biology:

1. The snowy plover is a shorebird, in the plover family.

2. The Western Snowy Plover ranges along the coast from Washington down into Baja, California, Mexico.

3. Winter season: September – March; Breeding season: March – September.

4. In June 2001, as breeding re-initiated, they began to inhabit COPR year round. Still, the largest number is found here during the winter.

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 essential during this time to keep disturbance rates to the plovers at a minimum so they will not expend excessive energy flying away from potential threats (wasting the energy that is needed for successful breeding).
7. 1: flat, wide, dune-backed beaches  
2: costline where river-mouths occur  
3: natural beaches that are not combed  

8. The sanderling.  
   a. it is a bit larger than the snowy plover  
   b. has a conspicuous white wing patch, and lacks the pale brown upperparts  
      as well as the black mark on the each breast side of the snowy plover  
   c. its bill is longer, more blunt shaped for probing in the wet sand for  
      invertebrates  

9. Behavioral differences  
   a. sanderlings run in and out with the tide, usually running together on the  
      beach in large groups; plovers usually don’t.  
   b. plovers will run and stop to catch an insect in mid-flight. This type of  
      predation is referred to as “hunt and peck predator”. Sanderlings usually  
      probe for food in the sand, not the air.  

C. COPR-Site Specifications:  

1. 1,300 feet, ~400m  

2. To provide and area that will be left undisturbed by humans and other animals.  
   Plovers expend large amounts of energy, flying away from potential dangers or  
   threats. When people, dogs, and horses stay out of the area plovers are often found  
   resting in the sand. They rarely take flight unless disturbed, and therefore save the  
   valuable energy needed for reproduction.  

3. A. high disturbance rates from humans and other animals  
   b. habitat degradation (development, invasive plant species)  
   c. predators such as crows  

4. Rules of Coal Oil Point Reserve  
   1: No Firearms  
   2: No BBQs/no flash fires.  
   3: No Camping  
   4 Permit is required to park in West Campus parking lot.  
   5. Dogs must be leash on entire reserve property.
5.a 1: Habitat restoration
2. Roost exclosure
3: Closure of the delta trail.
4: Education Signs.
5: Docent Program
6: Enforcement of the leash law.

5b. The Snowy Plover Docent Program

6. It is the first place in history, for Plovers to re-initiate a breeding site that they had previously abandoned.

7. 30 years

D. Procedures

1. Shift cancellation procedures:
   1) Use the contact list (other side of this sheet), to find another docent to take your shift or swap shifts. You may email, phone, or do both.

   2) When you’ve found a replacement, inform the coordinator of the changes, and schedule a ‘make up’.

   3) If you’re unsuccessful finding a replacement, contact the coordinator. If the coordinator is unable to help, you are ultimately responsible, and must show up. Plan in advance.

   4) If an emergency arises, that prevents you from making your shift at the last minute, contact the coordinator immediately, and schedule a ‘make up’.

   5) ‘Make ups’ must be scheduled to keep your commitment of 2 hours per week.

2. Signing In:
   • Acknowledge the "Plover message board" for notes or new important info
   • Sign in on "sign in sheet"
   • Take with you down to the beach the backpack, sandwich board, and spotting scope.
   (* The backpack should contain the clipboard & new data sheet, binoculars, leaches, a camera, call phone, and your Plover manual)

3. Remain calm, friendly, and smile. Try listening, once you’ve introduced yourself and have explained your reason for approaching them. Maintain a level of patience, and try to understand where they are coming from as you 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.

4. The important Phone number can be located on page 25 of the manual. They are also pre-programmed on the docent cell phone.

5. At least half of them.
Appendix I: Origins of a Mysterious Ruin: The Campbells 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. Irate 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.