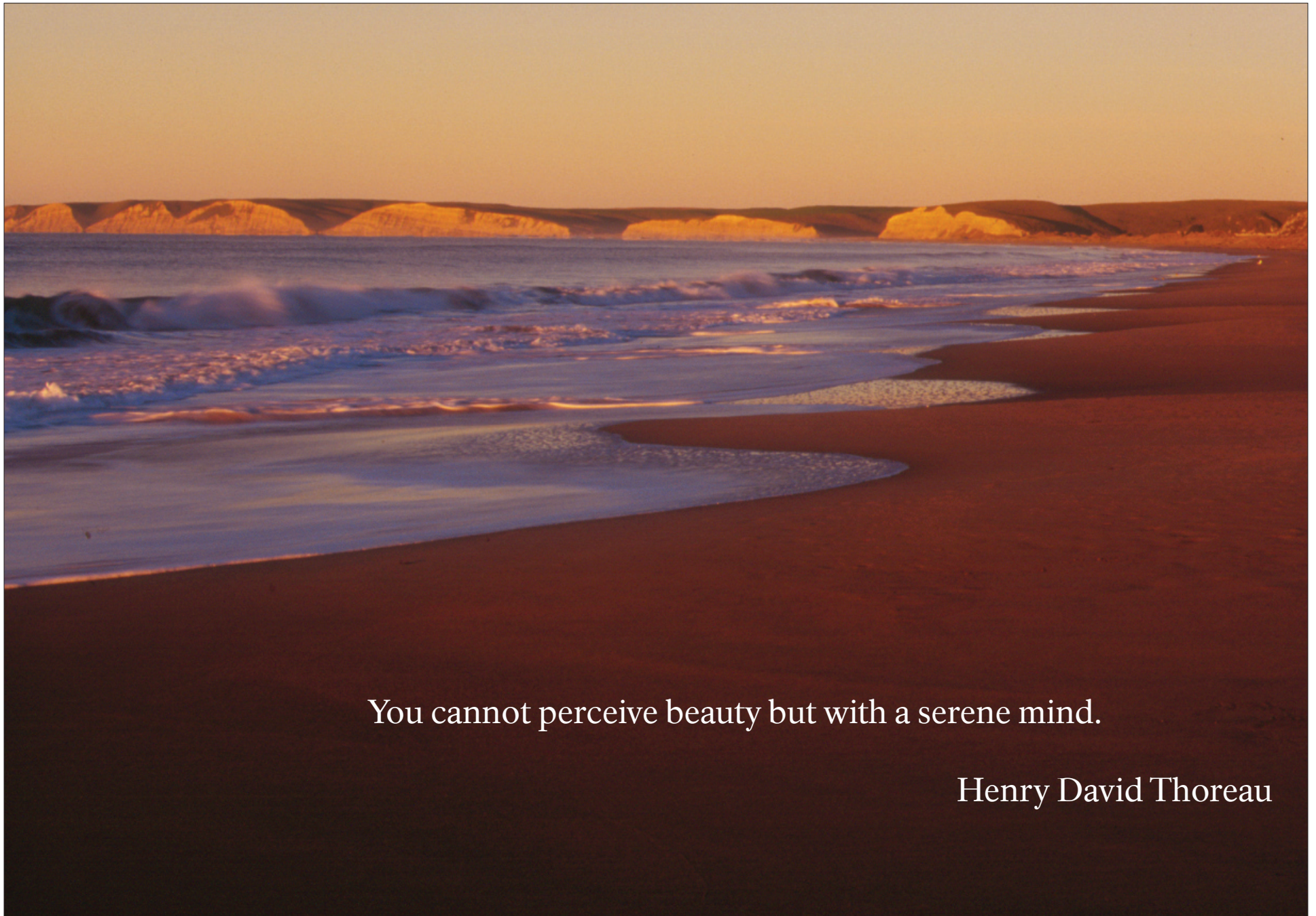




Point Reyes National Seashore 2005 Year in Review





You cannot perceive beauty but with a serene mind.

Henry David Thoreau

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Cover image © George Ward

A Message from the Superintendent

Dear Friends of Point Reyes,

This past year marked another successful year protecting the significant resources at Point Reyes National Seashore and providing an exceptional experience to park visitors.

Projects ranging from initiating repair to the only intact Lifeboat Station marine railway system on the Pacific coast, to continued efforts to protect the northern elephant seal and numerous species of threatened and endangered plants and animals continued as one of the Park's trademarks.

As you read on, many of the past year's highlights are illustrated in this document. The park served over 2 million visitors this year and continues to be one of the top thirty most visited parks in the nation. You'll discover the significant strides park staff has made in resource protection, science, visitor services, and facility maintenance. The park staff are some of the most dedicated public servants in the national park system.

We hope you will continue to discover the wonders of this magnificent piece of California. Join us in working to save this coastal sanctuary.

Sincerely,



Don L. Neubacher
Superintendent



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Park Map



One of America's greatest coastlines, Point Reyes National Seashore comprises over 71,000 acres, including 32,000 acres of wilderness are. Estuaries, windswept beaches, coastal grasslands, salt marshes, and coniferous forests create a haven of 80 miles of unspoiled and undeveloped coastline. Located just an hour's drive from an urban area populated by eight million people, the park receives over two million visitors annually. Abundant recreational opportunities include 147 miles of hiking trails, backcountry campgrounds, and numerous beaches.

Geologically, Point Reyes National Seashore is a land in motion. The great San Andreas Fault separates the Point Reyes Peninsula from the rest of the North American continent. Granite bedrock found here matches the bedrock in the Southern Sierra Nevada range. This indicates the peninsula has moved over 300 miles northwest over a period of 30 million years. As wildland habitat is lost elsewhere in California, the relevance of the Point Reyes Peninsula as a protected area with a notably rich biological diversity increases. Over 45% of North American avian species and nearly 18% of California's plant species are found here due to the variety of habitat and uniqueness of the geology. Twenty-seven threatened and endangered species exist within the Seashore.

Point Reyes contains examples of the world's major ecosystem types. For this reason it was internationally recognized in 1988 by the United Nations Educational, Scientific, and Cultural Organization (UNESCO) Man and the Biosphere program and named the Central California Coast Biosphere Reserve.

The cultural history of Point Reyes dates back some 5,000 years ago to the Coast Miwok Indians who were the first human inhabitants of the peninsula and are still here. Over 120 known village sites exist within the park. According to many experts, Sir Francis Drake landed here in 1579, the first European to do so. In response to the many shipwrecks on the treacherous coastal waters, key lighthouse and lifesaving stations were established by the United States Government in the late 1800s and early 1900s. In the early 1800s, Mexican land grantees established ranchos. These were followed by a wave of American agricultural operations which continue to this day in the Seashore's pastoral zone.



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Highlights from this past year



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Monitoring Success

The Seashore continues to monitor the northern spotted owl population as part of our long-term Vital Signs Monitoring Program. The partners in the monitoring program include Golden Gate National Recreation Area, Muir Woods National Monument, Marin Municipal Water District, Marin County Open Space District, and PRBO Conservation Science. The NPS annually monitors over 60 spotted owl activity sites around the county to determine the number of adult owls present each year and we monitor nesting success at a smaller number of sites by counting the number of young owls that successfully fledge out of the nests.

Park staff describe nesting habitat and monitor known threats to spotted owls and their habitat, such as occurrence of Sudden Oak Death near spotted owls sites and the occurrence and breeding status of barred owls. As the barred owls have expanded their range from the east coast to the west coast, spotted owl populations have diminished. Two years ago, the first barred owl in the county was seen at Muir Woods. This year, we had a second record of a barred owl in our study area during the spotted owl breeding season in Olema Valley.

In January of 2004, park staff participated in the range-wide demographic data analysis, which is required every five years under the Northwest Forest Plan. Although we have a shorter study than most of the other 13 areas that submitted data and our results weren't used in all portions of the analysis, we were happy to see our data placed in the larger context of the spotted owl range, since we are the southernmost northern spotted owl population.

Our long-term monitoring continues to provide valuable information for environmental reviews for resource management, maintenance and fire management projects.



Pair of spotted owl chicks and an adult



A Visit from the Director and Other Dignitaries

National Park Service Director Fran Mainella visited the Seashore this past April and spoke to all employees and toured several sites and projects including dune restoration at Limantour Beach, spotted owl nesting sites along Inverness Ridge, and large restoration projects like the repair to the historic life-boat marine railway.

Director Mainella also had the opportunity to award Frank Binney the Pacific West Region Volunteer of the Year during a picnic lunch which included many volunteers and various park partners.

During a visit in November, His Royal Highness, the Prince of Wales and Her Royal Highness, the Duchess of Cornwall toured a farmer's market in Point Reyes Station and met with local organic farmers in Bolinas. As a part of their tour, they stayed at Limantour Beach for several hours away from media attention to enjoy the serene setting of the Seashore.



Director Fran Mainella with volunteers and park partners and Pacific West Region Volunteer of the Year Frank Binney, Director Mainella and Superintendent Don Neubacher



Wildlife Monitoring Continues

Wildlife Branch staff worked on projects involving tule elk, black-tailed deer, non-native deer (fallow and axis), non-native wild turkeys, ravens, as well as occasional incidents involving myriad other species.

In September 2004, and again in February 2005, Wildlife Branch staff and volunteers conducted multiple horseback censuses of the Tomales Point elk herd. In January 2005, staff from all park divisions, three universities, two other NPS units and volunteers cooperated to capture 32 adult female tule elk at Tomales Point and Limantour wilderness areas. The purpose of the capture was to apply radio-collars to the cows and release them as part of a multi-year monitoring program to assess the viability of the Seashore's elk population. In the spring of 2005, researchers and wildlife staff captured elk calves and placed expandable radio-collars in an effort to learn more about survival and recruitment of elk in their first year of life. Throughout FY 2005, for the second year, volunteers and staff monitored visitor impacts to tule elk in the heavily visited Avalis Beach and White Gulch areas of the tule elk reserve.

In February 2005, the Non-Native Deer Management Plan/ Environmental Impact Statement was released to the public and a two month public comment period ended on April 8, 2005. A public workshop and a number of media interviews accompanied the releases of the draft plan. A cooperative research project with US Dept of Agriculture in April, 2005 will yield information on the presence of an exotic louse in Seashore axis and fallow deer. This exotic parasite has been documented to cause debilitating disease in native black-tailed deer in Oregon and Washington.

Throughout the year, but particularly during fall of 2004 and spring of 2005, wildlife staff continued to study impacts of ravens to threatened western snowy plovers. Increased numbers of wild turkeys in the Seashore has required increased levels of monitoring of these non-native birds. In cooperation with Marin Municipal Water District and California State Parks, staff will begin using radio-telemetry to track turkey movements and habitat use in the Seashore during the spring and summer of 2006.



Taking vital signs from a female elk at Tomales Point



Using Resources to Teach, Inspire and Reconnect

In 2005, over 5,000 students used Point Reyes as an outdoor classroom through our curriculum-based interpretive programs. Additionally, over 44,000 people attended our ranger-led programs geared for all ages. When attendance at visitor centers and other outreach programs are included, over 700,000 visitor contacts were made by the interpretive staff.

One large project that was completed was the redesign of the Coast and Ocean sections in the Bear Valley Visitor Center. With the financial assistance from one of our partners, the Cordell Bank National Marine Sanctuary, we were able to contract out design and fabrication work of this section of the visitor center that was over 20 years old.

Additionally, the interpretive panels along the Earthquake Trail were redesigned and installed. The redesign was done by park staff with reviews from various experts in the geological field.

Discovery Communications Inc. produced a new park film through their partnership with the National Park Foundation. The film is a huge success and is now being shown at the Bear Valley Visitor Center. The park was also the pilot for an Animal Planet filming which will air in the spring of 2006 on their cable television network.



Park interpretive rangers helping visitors understand the saignificance of the Seashore's resources



Fire Management Activities

One small wildfire occurred at Point Reyes this year. There was tremendous potential locally for larger wildfires due to the vegetative growth from the extremely wet winter.

A total of 225 acres were burned under management prescriptions (also known as prescribed or controlled burning) throughout Point Reyes and the North District of Golden Gate National Recreation Area from September through November. The bulk of the acreage burned under pre-planned objectives were located along Highway One between Bolinas and Olema. Additional burn units were located along Limantour Road and above Drakes Beach. Local fire agencies that assisted in conducting the burns included East Bay Regional Parks District, Novato Fire Department, Skywalker Ranch Fire Brigade, Marinwood Fire District, Bolinas Fire District, Inverness Public Utilities District, Marin Municipal Water District, Nicasio Volunteer Fire Department, and Marin County Fire Department.

Mechanical methods treated another 215 acres to reduce the potential for wildfire ignitions or to reduce the amount of wildland vegetation fuels near structures or other human-made improvements. This work amounted to clearing around over 50 park buildings by mowing, weed-clearing, tree removal, chipping and brushing. Over 30 acres along Highway One, between Bolinas and Dogtown, were treated to reduce the density of the trees. The prescription required to accomplish called for removing by hand and powersaws over 5,000 small diameter eucalyptus trees and chipping the woody debris with mechanical chipper. Another 145 acres of roadside vegetation was mowed along the Highway One corridor to reduce the potential for wildfire ignitions.

Point Reyes National Seashore participated in many fire prevention and public education events stressing the role of fire in the environment throughout the year. A major highlight of this program was the many events conducted to commemorate the 10th Anniversary of the 1995 Vision Fire.

Construction started on the badly needed Bear Valley Fire Cache building in September. This new facility will house the new Type 3 fire engine, hazardous fuels removal crew, and fire administrative staff. The new location will allow closer cooperation and communications between other park staff functions and the fire program.



Controlled burns and thinning of eucalyptus trees



Pacific Coast Science and Learning Center (PCSLC)

Many of the excellent programs of the PCSLC initiated several years ago came into fruition in 2005. More scientists from more institutions and universities are conducting research in the parks of the San Francisco Bay Area Network. In 2005, 51 total research permits were issued in 2005 and 94 total research permits were active.

The Marine Station at Sacramento Landing was open for use in 2005 with the first researchers living at and several groups meeting at the facility, now that there is a new septic and water system to accommodate people living and working at the center. Researchers from Moss Landing Marine Lab and U.S. Geological Survey, for example, conducted side scan sonar and multi beam surveys of the waters of the park on the coast and in Tomales Bay to identify substrate type. Additional existing facilities at PORE, such as the Historic Lifeboat Station are used for a summer, residential program for high school students assisting with research projects.

Under the PCSLC, 15 research projects received some form of financial or logistical support.

Other research projects supported by the PCSLC an inter-tidal fish survey of Tomales Bay and nearshore coastal waters, and a new species to the park, spawning grunion, was identified in Tomales Bay by park staff.



The PCSLC had education programs with 14 partners in 2005, ranging from local elementary schools to colleges such as

Dominican University. The PCSLC collaborated with the Tomales Environmental Learning Center at Tomales High School, for example, to educate students about using GIS (Geographic Information Systems) and GIT (Geographic Information Technology) in characterizing their local watershed for future water

quality analysis projects in the community. Over a three month period, six students met with the GIS database manager of the PCSLC to map the watershed of a tributary of Keyes Creek which includes the Tomales High School Campus.

For the third year in a row, a high school intern worked alongside a researcher from University of California, Davis who is studying the restoration of native oysters in Tomales Bay. This one-on-one mentoring has been instrumental in helping the interns decide on future careers and college choices.

A bi-annual publication of the PCSLC, “Coastal Science Review” shares research supporting science-based management and preservation of coastal resources. This publication was distributed to many audiences including internal, partners, potential funders, community members, and high school students.



Western Snowy Plovers Recovery Efforts

Since 1995, the National Park Service and PRBO Conservation Science have been implementing a recovery project for the breeding western snowy plover population within Point Reyes National Seashore. Beginning in 2001 and continuing to the present, the snowy plover recovery program initiated a volunteer stewardship and education effort. Through this program, docents patrol Seashore beaches on weekends and holidays, providing general park information and snowy plover education to the visiting public.

This breeding season around 35 snowy plovers were observed daily and this fall the numbers will rise to nearly 200 snowy plovers that over-winter at Point Reyes. In 2005, a total of 17 nests were enclosed with protective fencing to keep predators out, and there were 12 successful nests producing 34 chicks. At the season's close, 17 chicks survived to fledge from Point Reyes beaches, which is about the same number for the past three years.

While predation rose this year because of the presence of a nesting peregrine falcon near Kehoe Beach, the number of human disturbances declined due in large part to the effort of docent volunteers. Docents logged over 434 hours and contacted well over 1,243 visitors on weekends and holidays. Of those visitors contacted, 120 were documented to have changed their behavior as a result of contact with docents. This includes people who left restricted areas, walked closer to the water, leashed their dogs, or walked pets in appropriate areas.

Additionally, over 50 acres of coastal dune habitat were restored in the plover nesting area over the past three years with funds from the Cape Mohican Oil Spill Restoration Program, the National Park Service and the Fish and Wildlife Foundation. The plovers responded positively to this habitat enhancement program because the beach was not dominated by the invasive non-native European beach grass. Of the 12 successful nests this season, 11 broods visited for some amount of time in the restored habitat and two nests were successfully produced there.



Docents and park rangers, using displays and personal communications, have reduced the number of plover disturbances over the past several years



Pinniped Monitoring

The harbor seal pupping/breeding season began in early March with the first pups reported at Drakes Estero. Around 30 volunteers participated in monitoring harbor seals at 10 colonies ranging from Tomales Point to San Francisco Bay on nearly 200 surveys between March and July. The combined maximum pup count for all sites during the breeding season was 1,107 pups. Drakes Estero and Double Point contributed the largest percentage of pups (56%) and the majority of seals during the molt season (55%). The overall maximum count for all sites during the pupping season was 3,474 and for the molt was 4,242. Most disturbances occurred at Bolinas Lagoon and Drakes Estero/Limantour Estero complex, and contrary to expectation, most disturbances occurred during weekdays rather than weekend days.

The elephant seal pupping/ breeding season ended in mid-March 2005 but weaned pups remained on the beaches until around May. The population grew again in 2005 to an estimated pup count of around 620 and a low mortality before weaning of <25% due to the mild winter. Again, no new sub-colonies were formed in 2005; however, the Chimney Rock colony continues to grow with 83 pups documented in 2005 compared to 55 in 2004.



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Giacomini Wetland Restoration

In July, the Seashore, National Park Foundation (NPF) and Point Reyes National Seashore Association (PRNSA) were notified by the Gordon and Betty Moore Foundation of a grant for \$2.54 million to support restoration efforts on the Giacomini Wetland. This was a great start to the effort to raise an estimated \$5 million for restoration. The project also received funing support of \$150,000 from the National Fish and Wildlife Foundation. Restoration planning is ongoing, with the EIS/EIR anticipated in early 2006.



Staff completed development of the Long-term Restoration Monitoring Program for the Giacomini Wetland.

Horseshoe Pond Restoration to Coastal Lagoon

Major deconstruction at the Horseshoe Pond site was completed in September 2004. Monitoring of the site in 2005 showed dramatic changes to the restoration site, including extensive enlargement of the restored west channel outlet, development of an ebb channel and flood delta within the former pond area, removal of European beach grass and iceplant from the beach interface, and recovery of the restored quarry and road access.

Based on this first year of monitoring, the NPS has successfully restored natural hydrologic and ecological process to the site. The



site looks much more like the 1940s aerial images depict, and we have also observed changes in the beach condition, with accumulation of sand to the east, and scouring to the west. Ultimately, the water regime at the site will be controlled by shoreline process.

The most important factor to the long-term evolution of the site is the expansion of the tidal channel and export of pond accumulated fine sediment and organic material under prevailing northwest wind conditions. Observations of the ebb flow channel in conjunction with wind does show that the finer particles are entering the water column and moving out of the system.

Ultimately, park staff anticipate expansion of the intertidal marsh habitat, continued development of tidal channels within the former pond area, and seasonal lagoon closure within the area. As the geomorphic conditions evolve, so to will the aquatic and intertidal habitat. In addition, it is possible that the east and west arms of the area may develop different water regimes, potentially resulting in more diverse and unique estuarine habitat within the area.



March 2002 (top) and January 2005

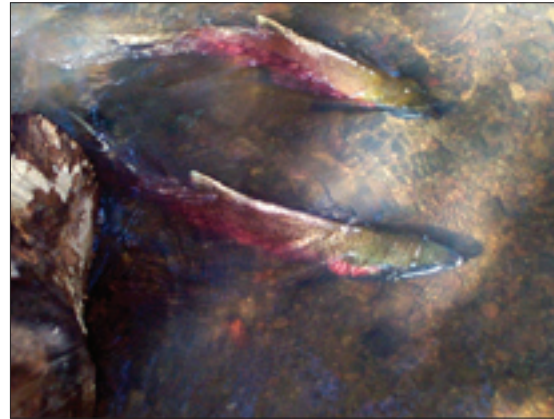
Coho Salmon and Steelhead Trout

Fisheries program staff completed annual monitoring on Olema, Pine Gulch, Redwood, and Cheda Creek. In addition, staff completed the Fisheries Inventory & Monitoring protocols for peer review.

Adult salmonid spawner surveys – Between December and February staff and volunteers conducted multiple spawner surveys on Olema, Pine Gulch, Redwood, and Cheda Creeks. We had our highest historic watershed spawner numbers in Olema, Cheda, and Redwood Creeks. Viewing conditions were good, and we actually observed two good peaks in December and January. We observed a total of 92 redds in mainstem Olema Creek and 45 redds on John West Fork. Our estimate of adult coho in Olema ranged from 243-328 (using the Area Under the Curve method) with a Peak Live Dead (PLD) index of 184 fish. On John West Fork we estimated a total of 98 to 132 coho (AUC estimate) with a PLD index of 86 fish. Coho spawners were also observed in Pine Gulch Creek and Cheda Creek, including one pair upstream of the 2000 fish passage restoration project.

Spring Smolt trapping – Outmigrant smolt trapping was conducted on Olema, Pine Gulch, and Redwood Creek. Conditions (high spring rainfall totals) this spring resulted in limited trapping at all sites.

Summer Juvenile Surveys – Staff completed summer juvenile surveys at 25 index reach locations, and snorkel surveys covering 10 kilometers of Olema Creek and 7 kilometers of Pine Gulch Creek.



Coho salmon in Olema Creek



Visitor and Resource Protection

The Visitor Protection Division had a productive year in FY 2005 with an emphasis on resource protection through law enforcement.

Efforts were made to deter marijuana growing within the park and as a result, no grow sites were discovered this year. This was a major improvement from the last few years when several sites have been discovered with associated resource damage.

Investigations into burglaries of cars parked at trailheads resulted in felony prosecution of two individuals after they were identified from a store video using stolen credit cards. Alert Park Rangers apprehended them in the park. The case was turned over to the Marin County Sheriff's Office when evidence in the suspect's vehicle was discovered which tied them to numerous other thefts from cars outside the park.

One of the major incidents this year was the shipwreck of the Christopher M. This boat, a 65' former navy patrol vessel, had mechanical difficulties and came ashore on and damaged Duxbury Reef at Bolinas Point, a sensitive environmental area. Working with cooperating agencies, the park responded to the wreck, dealt with spill issues and debris cleanup, and removed the wreckage from the reef. A long-term monitoring effort is now in effect to determine damage to the reef ecosystem.



The Christopher M wreckage (above), removal of debris by helicopter, and oil sheen in tidepool



Improving Habitat for Native Species

During fiscal year 2005, the Point Reyes National Seashore Vegetation Team made great strides towards removing invasive nonnative species from threatened habitats, improving conditions for the many listed plant species we are responsible for, and managing our range management, fire ecology and fire planning programs. Highlights this year include:

Seashore Restoration and Conservation Programs -
Over 13 acres of initial Cape-ivy removal was accomplished at lower Glenbrook Creek, Dogtown, Chimney Rock, Pierce Point residence site, Nunes Ranch, Niman Ranch, Rift Zone, Randall Spur, RCA Creek, Fern Creek, Home Ranch, Pelican Point, Marshall Beach, Lairds Landing, Muddy Hollow, and portions of the Palomarin sites. Follow up work was conducted on 8.53 acres of last year's initial removal sites. Photomonitoring was done for many of the sites.

OSPR Cape Mohican Oil Spill Sandy Beach Restoration -
Approximately five acres of initial removal of European beachgrass and 16.8 acres of follow up treatment were completed in the areas north and south of the mouth of Abbotts Lagoon. This project will ultimately restore 25 acres of critical dune habitat, and already federally listed species have moved into the restored area and expanded their range. Two plover nests were within the restored area, and several male plovers used the area to rear chicks. In the area restored by heavy equipment, almost 200 lupine and 18 beach layia seedlings were found growing from newly exposed seed.

Habitat Restoration Volunteer Program - Funding was acquired from the Volunteer In Parks program to provide transportation for six groups of high school students to participate in iceplant and European beachgrass removal and learn about coastal dune habitat conservation issues. Financial support was also provided for the 7th Rare-Plant-a-Thon. Four volunteer internships were provided housing and weekly stipends for weed removal and rare plant monitoring. Volunteers contributed 1,725 hours to the vegetation program.

California Exotic Plant Management Team - The California Exotic Plant Management Team (CaEPMT) expanded to four teams, serving 12 parks ranging the entire length of the California coast. The CaEPMT treated 80 species over a 9-month period. Projects ranged from sea level along the shore of Channel Islands National Park, to the high Sierran wilderness in Devil's Postpile National Monument (8,000').



pre (2002) and post treatment (2005) of European beachgrass at Abbotts Lagoon



A Year of Major Repair and Construction

Facility Management had a successful and engaging 2005. The Roads division removed and re-installed the dirt roof at the Kule Loklo Dance House, trenched and assisted with the water line installation for the new Fire Cache, graded 51.5 miles of unpaved road surfaces, mowed 80 acres of defensive fire fuel breaks, chip sealed 6,800 sq. ft of Limantour Road and graded and graveled L Ranch Road. The Trails division rerouted Horse Trail, restored and upgraded the Elephant Seal Trail and Overlook, brushed 80 miles of trails, landscaped campgrounds, and supervised Youth Conservation Corps enrollees. Building and Utilities staff upgraded and repaired the beaches water system, assisted with the building of the Bear Valley Fire Cache, built the IT office within the B&U facility, and constructed the Bear Valley Visitor center picnic area restroom using green materials.

Construction included the project to restore the Historic Lifeboat Station Marine Railway, the Fire Pro project to construct the Headquarters Fire Facility, construction and rehabilitation of the Wildcat Water System, and the rehabilitation of the Drakes Beach sewer system and the installation of the fire suppression system.

Facility Management assumed the park lead for the preparation of the three year audit for the August 2005 Environmental Audit Program and incorporated sustainable design in all projects and enhanced operational commitment to sustainable practices. Staff participated on the Park and Regional Sustainability Committees and participated in the “Greening Charrette” at San Francisco Maritime NHP. Facility Management staff facilitated the construction of and lead the Seashore’s Environmental Management System.





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United States Department of the Interior
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Point Reyes National Seashore
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