



# Island Views

The official newspaper of  
Channel Islands National Park

Volume 3, 2005 — 2006



Tim Hauf, www.timhaufphotography.com

## Foxes Returned to the Wild

IN OCTOBER AND NOVEMBER 2004, THE National Park Service (NPS) released 23 endangered island foxes to the wild from their captive rearing facilities on Santa Rosa and San Miguel Islands. Channel Islands National Park Superintendent Russell Galipeau said, "Our primary goal is to restore natural populations of island fox. Releasing foxes to the wild will increase their long-term chances for survival."

For the past five years the NPS has been implementing recovery actions on Santa Rosa and San Miguel Islands to save the island foxes, including captive breeding of foxes and removal of golden eagles. The NPS and The Nature Conservancy began captive breeding of island foxes on Santa Cruz Island in 2002.

Island foxes on Santa Cruz, Santa Rosa and San Miguel Islands have declined more than 95% from 1994 to 2000 due to golden eagle predation, placing them on the brink of extinction. This decline prompted the U.S. Fish & Wildlife Service to list the island fox as an endangered species on March 4, 2004.

In 2003, six foxes were successfully released to the wild on Santa Rosa Island. Two of these released foxes bred in the wild, producing a litter of two female pups. These were the first pups born in the wild on Santa Rosa since 2000. During October

and November 2004, an additional 13 island foxes on Santa Rosa and 10 on San Miguel were released to the wild. The foxes will be returned to captivity if three of the 10 on San Miguel or five of the 13 foxes on Santa Rosa are killed or injured by golden eagles.

Releases from captivity on Santa Cruz Island will not occur this year since these foxes are thought to be at greater risk because they are in close proximity to golden eagle territories. In winter 2003-2004, five of nine foxes released on Santa Cruz were killed by golden eagles and four were returned to captivity.

Since 1999, 35 golden eagles have been removed from Santa Cruz and two from Santa Rosa. Six golden eagles, three adults, and three nestlings, were removed from the island in 2004. Today, it is believed that less than 10 remain. There have been no golden eagle sightings on San Miguel or Santa Rosa for over a year.

The foxes were released as groups of juveniles and as pairs of potential mates. They were chosen for release based on genetics, age, and reproductive success. All released foxes will have radio collars, and staff biologists will monitor their activity patterns, dispersal, and use of habitats on the island.

For more information about foxes and restoration plans on Santa Cruz please see "Restoring Santa Cruz Island" on page 9.

## Full Circle

### Chumash Cross Channel in *Tomol* to Santa Cruz Island

By Roberta R. Cordero  
Member and co-founder of the Chumash Maritime Association

THE COASTAL PORTION OF OUR INDIGENOUS homeland stretches from Morro Bay in the north to Malibu Point in the south, and encompasses the northern Channel Islands of Tuqan, Wi'ma, Limuw, and 'Anyapakh (San Miguel, Santa Rosa, Santa Cruz, and Anacapa). This great, elongated bowl with its irregular rim of coastal mountain contains and nurtures a breathtaking array of maritime habitats. The ancestors of the autochthonous people of the region—we are now known as Chumash—were so well-integrated into and adapted to their habitats that they were able to thrive here continuously and



Robert Schwemmer, CINMS

2004 Chumash Maritime Association crossing

sustainably for some thirteen thousand years before European contact.

As for many indigenous maritime cultures, the canoe is central to our understanding of who we are as a people  
please see CROSSING, 12

## Park and Sanctuary Celebrate 25th Anniversary

Channel Islands National Park and Marine Sanctuary will celebrate their 25th anniversary during 2005. Although Anacapa and Santa Barbara Islands became a National Monument in 1938, it was not until March 5, 1980 that Congress designated the four northern islands, Santa Barbara Island, and the waters for one nautical mile around each as our 40th national park. Later that year, the ocean six

miles out around each island was designated as a National Marine Sanctuary. The park and sanctuary monitor and protect threatened and endangered species, restore ecosystems, and preserve the natural and cultural resources for you and generations to enjoy. Special events will be held during 2005 to commemorate this anniversary. Please visit our website or call the visitor center for more information.

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Tim Hauf

The endangered Channel Islands fox



National Park Service  
U.S. Department of the Interior

## Channel Islands National Park

Named for the deep trough that separates them from the mainland, the islands off the California coast and their encircling waters are home to plants and animals found nowhere else on Earth. Isolation over thousands of years and the mingling of warm and cold ocean currents give rise to the rich biodiversity of these islands. Today, five of the islands, their submerged lands, and the waters within one nautical mile of each island are protected as Channel Islands National Park.

### Mailing Address

Park Superintendent  
Channel Islands National Park  
1901 Spinnaker Dr.  
Ventura, CA 93001

### Phone

805-658-5730

### Park Website

[www.nps.gov/chis/](http://www.nps.gov/chis/)

### E-mail

[chis\\_interpretation@nps.gov](mailto:chis_interpretation@nps.gov)

The National Park Service cares for the special places saved by the American people so that all may experience our heritage.

# Welcome from the Superintendent

The park staff and I wish to welcome you to Channel Islands National Park, one of North America's magnificent treasures. Close to the California mainland, yet worlds apart, the park encompasses five of the eight California Channel Islands (Anacapa, Santa Cruz, Santa Rosa, San Miguel and Santa Barbara) and their ocean environment, preserving and protecting a wealth of natural and cultural resources. The park bridges two biogeographical provinces, and in a remarkably small place, harbors the biologic diversity of nearly 2,500 miles of the North American coast. The Channel Islands are home to over 2,000 terrestrial plants and animals, of which 145 are found nowhere else in the world. Like the Galapagos Islands of South America, isolation has allowed evolution to proceed independently on the islands. Marine life ranges from microscopic plankton to the blue whale, the largest animal to live on earth. Archeological and cultural resources span a period of more than 10,000 years of human habitation.

The protection of these fragile island resources was ensured when Congress, in the act that created Channel Islands National Park in 1980, established a long-term ecological monitoring program to gather information on the current health of resources and predict future conditions. This information provides park and natural resource managers with useful products for recreation planning, conservation and restoration programs, and early identification of critical issues.

The islands were set aside by Congress not only to preserve these resources, but also to provide for your enjoyment. If you visit the



park, you will be one of a very select group. Few people actually see this park because it is not easy to get to—you can't drive to the islands. A short but exciting ocean voyage or a commercial flight in a small airplane is required. The park is one of the least visited of all of America's national parks, with less than 250,000 annual visitors to the islands. The relatively light visitation enhances the islands' feeling of solitude and assists in the protection of fragile resources. In establishing the park, Congress recognized the value of solitude by allowing only controlled, low-impact visitation. So a visit to this national park will always provide

a marked contrast to the bustle of Southern California most people experience. It will always be a place where you can step back in time and experience coastal southern California the way it once was.

We are delighted you are interested in this marvelous place. Thanks for making the effort! We hope our park newspaper encourages you to safely explore and discover Channel Islands National Park while taking care to protect and keep these beautiful and fragile islands unimpaired for future generations.

**Russell E. Galipeau, Jr.**  
Superintendent

## Visitor Information

### Visitor Center

The Channel Islands National Park Visitor Center features a bookstore, a display of marine aquatic life, and exhibits featuring the unique character of each park island. Visitors also will enjoy the 25-minute park movie, "A Treasure in the Sea," in the auditorium.

Channel Islands National Park  
1901 Spinnaker Drive  
Ventura, CA 93001  
(805) 658-5730 [www.nps.gov/chis/](http://www.nps.gov/chis/)

·Hours: 8:30 a.m. to 5 p.m., daily  
·Closed Thanksgiving and December 25

### Outdoors Santa Barbara Visitor Center

This visitor center not only has one of the best views of Santa Barbara, but also offers visitors exhibits and information about Channel Islands National Park, Los Padres National Forest, Channel Islands National Marine Sanctuary and the City of Santa Barbara. Open daily; call for hours.

113 Harbor Way 4th Floor  
Santa Barbara, CA 93109 (805) 884-1475

### Interpretive Information

Books and materials about the park are available for sale through the Western National Parks Association either in the park visitor center or by mail order. This nonprofit organization supports the educational and research programs of the park.

Western National Parks Association  
1901 Spinnaker Dr.,  
Ventura, CA 93001 (805) 658-5730 [www.wnps.org](http://www.wnps.org)

### Interpretive Programs

Weekends and holidays, rangers offer a variety of free public programs. For information about specific program dates and to learn more about the park, call, write, or visit the park's visitor center. On the islands, rangers, and volunteer naturalists offer guided hikes throughout the year.

### 2 Island Views

### Accessibility

The mainland visitor center is fully accessible. Due to their isolation and transportation requirements, the islands are not readily accessible for individuals in wheelchairs or those with limited mobility. Limited wheelchair access is available on Santa Rosa Island via air transportation. Please call the park for information.

### Transportation—How to Get There

#### Boat Transportation

Public boat transportation is available year-round to all five islands by the park concessionaires, Island Packers and Truth Aquatics. In addition, Island Packers offers whale watching trips while Truth Aquatics also offers scuba diving trips.

For departures out of Ventura and Channel Islands (Oxnard) Harbors contact:

Island Packers, Inc.  
1691 Spinnaker Dr.  
Ventura, CA 93001  
(805) 642-1393 [www.islandpackers.com](http://www.islandpackers.com)

For departures out of Santa Barbara Harbor contact:

Truth Aquatics at Sea Landing  
301 West Cabrillo Blvd.  
Santa Barbara, CA 93101  
(805) 963-3564 [www.truthaquatics.com](http://www.truthaquatics.com)

Private boaters may land on all five islands within the park throughout the year. Please see "Private Boat Landing" section (page 21) for more information.

#### Air Transportation

Public air transportation is available year-round to Santa Rosa Island by park concessionaire Channel Islands Aviation. Flights depart from Camarillo Airport. For departures contact:

Channel Islands Aviation  
305 Durley Avenue  
Camarillo, CA 93010 (805) 987-1301 [www.flycia.com](http://www.flycia.com)

*-Private aircraft may not land within park boundaries. All aircraft must maintain a minimum 1000-foot altitude above land and sea surfaces within the park.*

# When to Visit—Through the Year

Visitors often ask what time of year they should visit Channel Islands National Park. Since the park is located in “sunny” Southern California, it may seem that the obvious answer is “any time of year.” And, true, you can visit throughout the entire year. But, believe it or not, we do have seasons here in Southern California. While the seasonal changes are nothing like one would find in Minnesota, there are differences that visitors should take into consideration when visiting the park. Each season has its own character and casts a unique mood over the islands.

In addition, visitors also should be aware that ocean and weather conditions vary considerably from day-to-day and island-to-island. Although this makes planning your visit a little difficult, we must remember that this unpredictable and, at times, unforgiving weather is one of the main reasons that the islands have been afforded so much isolation and protection from the rapid changes seen on the mainland. It is, in part, what makes the Channel Islands such a unique and wonderful place. We encourage you to take the opportunity to fully enjoy the islands throughout the entire year. Channel Islands National Park is truly a place for all seasons.

## Climate

In general, the islands have a Mediterranean climate year-round. Temperatures are relatively stable, with highs averaging in the mid-60s (°F) and lows in the low-50s. The islands receive most of their precipitation between December and March. Spring starts the warming trend toward summer when temperatures average in the low-70s.

**However, visitors must be prepared for high winds, fog, rough seas, and sea spray at any time.** Winds are often calm in the early morning and increase during the afternoon. High winds may occur regardless of the forecast, especially on the outer islands, Santa Rosa and San Miguel (30-knot winds are not unusual). Anacapa, eastern Santa Cruz, and Santa Barbara Islands have more moderate winds. The calmest winds and sea conditions often occur August through October. Dense fog is common during the late spring and early summer months, but may occur at any time. Ocean water temperatures range from the lower 50s (°F) in the winter to the upper 60s in the fall.

## Spring

- Although temperatures are becoming warmer, strong winds often occur during this season. Dense fog is common during the late spring.
- The islands are green and wildflowers reach peak bloom, especially the brilliant yellow coreopsis flowers. During a normal year of rainfall, this occurs by late January through March.
- Western gulls and other seabirds begin nesting.
- Island fox pups are born.



Rainbow and coreopsis, Santa Barbara Island

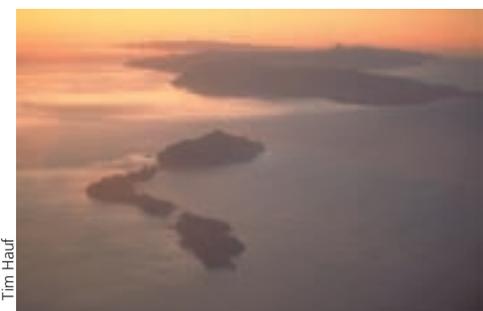
- Spring bird migration is underway.
- End of gray whale watching season.
- California sea lions and northern fur seals start to gather at their rookery sites.
- Peregrine falcons and other landbirds begin nesting.

## Summer

- Afternoon winds are common. Fog diminishes near midsummer. Calm winds and seas become more frequent near the end of summer.
- Ocean temperatures begin to warm, reaching the high 60s (°F) by end of summer. Underwater visibility increases.
- Summer is the ideal time for sailing, snorkeling, diving, kayaking, and swimming.
- The park’s underwater video program begins on Anacapa with live broadcasts at mainland visitor center.
- Seabird and landbird chicks fledge (leave the nest and fly).
- Although the vegetation begins to dry out, some plants like gumplant, buckwheat, poppies, and verbena continue to bloom.
- Whale watching begins for blue and humpback whales.
- California sea lions and northern fur seals begin pupping.
- Most people visit the park during the June through August period.
- Backcountry beach camping season begins on Santa Rosa Island.

## Fall

- The best chance for warm weather, calm winds, and seas continues. However, beginning around October, strong east or Santa Ana



Aerial view of the park and sanctuary

- winds are possible.
- Many consider the fall as the best time of year for snorkeling, diving, kayaking, and swimming. Ocean temperatures may reach 70° (F) in early fall and visibility may reach 100 feet.
- Blue and humpback whale watching comes to an end in early fall.
- Fall bird migration is underway.
- Northern elephant seals begin to gather at their rookery sites in late fall.

## Winter

- Temperatures begin to cool. Winter storms start to appear, with most rain falling between December and March. Nevertheless, beautiful, sunny, clear winter days occur between storms.
- Some of the best sunsets of the year occur during this time of year.
- Gray whale watching begins at the end of December and lasts until April.
- Northern elephant seals begin pupping in early winter.
- Harbor seals begin pupping in late winter.
- Islands begin to turn green and wildflowers start blooming during the late winter months.
- California brown pelicans begin nesting.

## Transportation Information

Island	Frequency of Trips*	Travel Time* (one way)	Landing Conditions
Anacapa	Year-round: 7 days/week	1 hour from Ventura 2 hours from Santa Barbara	Visitors must climb from the boat up a steel-rung ladder to a dock. Once ashore, visitors must climb 154 stairs to the top of the island. Non-landing trips are available.
eastern Santa Cruz (NPS property)	Year-round: 5 - 7 days/week	1 hour from Ventura 2 hours from Santa Barbara	Visitor must climb from the boat up a steel-rung ladder to a pier at Scorpion Anchorage and Prisoners Harbor. All other landings are skiff (small boat) landings on a beach.
western Santa Cruz (TNC property)	Year-round: 2 - 5 days/week	1 hour from Ventura 2 hours from Santa Barbara	Visitors must be prepared for skiff landings. Contact The Nature Conservancy for more information: 213 Stearns Wharf, Santa Barbara, CA 93101 (805) 962-9111.
Santa Rosa	Year-round: 3 - 12 days/month Flights: 7 days/week, year-round	3 hours from both harbors Flight: 45 minutes	Visitors must climb up a 20-foot, steel-rung ladder to a pier or be prepared for beach landings by skiff. Strong winds and rough seas are possible. Plane lands on a graded dirt airstrip. Turbulence is possible.
San Miguel	Spring to fall: 12 days/month Winter: 3 days/month	4 hours from Ventura 4.5 hours from Santa Barbara	Skiff landings on the beach--be prepared to waterproof gear and possibly to get wet. Strong winds and rough seas are possible.
Santa Barbara	Spring to fall: 4 days/month Winter: 2 days/month	3 hours from Ventura 6 hours from Santa Barbara	Visitors must climb a 10-foot, steel-rung ladder to the top of the pier from a skiff. Once ashore, visitors must walk uphill 1/4 mile with 131 long steps to the top of the island.
Multi-island trips (Truth Aquatics)	Year-round: 3 trips/month	Varies depending on destination	Trips include visits to at least two islands. These trips include meals and shipboard lodging.

\*Refer to concessionaire’s transportation schedule for more information.

## Where to Stay—Accommodations and Services

There are no accommodations or services available on the islands. Visitors must bring all their own food, water, and other supplies. Public phones are not available. Primitive camping is available on every island. Please refer to the camping section on page 10 for more information. For accommodations in Ventura or Santa Barbara contact:

Ventura Visitor and Convention Bureau  
89C South California St.  
Ventura, CA 93001 (805) 648-2075

Santa Barbara City Visitor Center  
1 Santa Barbara St.  
Santa Barbara, CA 93103 (805) 965-3021

## Camping

Camping is available year-round on all five islands in Channel Islands National Park. Please refer to the “Camping” and “Backcountry Camping” sections on pages 10 for detailed information.

## Picnicking

Picnic tables are available for day use on all islands except San Miguel. If weather permits, many visitors enjoy picnicking on the islands’ beaches. Visitors must bring their own food and water. Public pit toilets are available on all islands.

continued on page 4

# Park to Revise General Management Plan

Channel Islands National Park (CINP) is one of America's newest and most complex national parks. As one of America's "crown jewels," this park will continue to serve as a model for park management. It is important that park resources, both terrestrial and marine, continue to be preserved and protected for future generations.

The current General Management Plan (GMP) was completed in 1985. Since that time much has occurred, such as completion of the park's major land acquisition effort, expansion of park operations and visitor facilities, and an increase in the number of resource issues we are facing.

In 2001, the park began to revise the GMP that will help guide the park's management policies and direction for the next 15-20 years. This new GMP will provide a vision for the park's future, as well as guidance in resource preservation, protection, and management that

will help achieve that vision. It will also help identify how the National Park Service (NPS) may best protect cultural and natural resources while providing for visitor enjoyment of the park.

The park wants to communicate, consult, and cooperate with all individuals and groups of the interested public in this planning process. We urge you to take advantage of all opportunities in this process to share your vision and support for this magnificent national park. Your participation will ensure a strong public voice to help guide us and will result in a better vision than we alone could provide.

## What is a general management plan?

GMPs identify the overall direction for future management of national parks. They take a long-range, broad, conceptual view, answering the question, "What kind of place do we want this park to be?" GMPs provide a framework for managers to use when making decisions about such issues as how best to protect resources, what levels and types of uses are appropriate, what facilities should be developed, and how people should access the park. All concepts, strategies, and actions in a general management plan must be consistent with the reasons for the park's establishment—the park's purpose, significance, and mission. Federal legislation, such as the NPS Organic Act, the Endangered Species Act, and the National Historic Preservation Act, and NPS policies also direct what the plan can and cannot consider.

The Channel Islands General Management Plan will not resolve all the issues facing the park, provide detailed facility designs or

management actions, or guarantee funding for the park. Rather, this plan will describe the general path the NPS intends to follow in managing CINP over the next 15 to 20 years. Desired resource conditions and visitor experiences that would be appropriate for each part of the park and the strategies for achieving those conditions, will be identified. General locations where certain types of development would be appropriate will also be identified. Specific questions regarding how these desired conditions will be achieved will be answered in new or revised implementation plans, such as resource management plans and interpretive plans that follow the general management plan.

To comply with the National Environmental Policy Act and NPS policy, the GMP will be combined with an environmental impact statement (EIS). The GMP/EIS will identify significant issues and concerns, present a reasonable range of management alternatives, and analyze the environmental impacts of each of the alternatives.

## Why does the park revise its GMP?

The National Parks and Recreation Act of 1978 (P.L.95-625) requires the preparation and timely revision of GMPs for each unit of the national park system. NPS's current GMP was first completed in 1980 and was amended in 1984 and 1985. Conditions have substantially changed since 1985. Among the significant changes that have occurred over the past 16 years: the NPS has acquired new lands on Santa Rosa and Santa Cruz Islands, the condition of several resources has declined (particularly in the marine waters surrounding the islands),

several actions are underway to eliminate non-native species and restore altered ecosystems, park visitation has tripled, and recreational uses and use patterns have changed.

## How can you get involved?

Public involvement is critical to the success of the planning effort. Public input will help the planning team and decision-makers learn about the concerns, issues, expectations, and desires of visitors, interested citizens, people with traditional cultural ties to the park, interest groups, and others. The planning team will share information and seek public input at key points through the planning process. A variety of methods will be used to encourage public feedback, including publishing newsletters, sending public releases to the media, holding public meetings, and posting information on the Internet.

For more information about the planning process contact: Channel Islands National Park, Attention: GMP Coordinator, 1901 Spinnaker Drive, Ventura, CA 93001-4354; or CHIS\_GMP@NPS.GOV. You can also log on to the park's home page at [www.nps.gov/chis](http://www.nps.gov/chis) or the NPS planning web page at [www.nps.gov/planning](http://www.nps.gov/planning). All newsletters will be posted on the web sites, along with an electronic response form. Please let us know your concerns, issues, and thoughts on what should be addressed in the GMP. The CINP planning team appreciates your interest and looks forward to hearing from you.



Lighthouse, Anacapa Island

## Visitor Information

(continued from page 3)

### Hiking

Many trails and roads traverse the islands, providing visitors with spectacular hiking opportunities. These trails and roads range from the maintained, relatively flat, signed trails of Anacapa to the unmaintained, rugged, mountainous, unsigned paths of Santa Rosa. Please see individual island sections for descriptions of these routes. In addition, trail maps, guides, and topographic maps are available at park visitor centers and at island bulletin boards. Hikers need to assume individual responsibility for planning their trips and hiking safely. To increase your odds of a safe hike, decrease your disturbance to wildlife, and lessen damage to resources, visitors should be in good physical condition and must follow the regulations and guidelines in the "Limiting Your Impact" section and those listed below:

- Stay on trails and roads while hiking—**avoid animal trails** which are narrow, uneven, unstable and dangerous. **Cliff edges should be avoided** at all times since they tend to be crumbly and unstable. Stay well back. Children should be supervised at all times by an adult.
- **Carry plenty of water**—one quart for short walks, more for longer hikes.
- Hikers should **never hike alone—use the buddy system**. This allows someone to go for help if you encounter trouble.
- Be aware of **poison oak, "jumping" cholla cactus, ticks, and scorpions**. Poison oak can be identified by its clusters of three shiny leaflets. Some ticks carry disease; check your clothing and exposed skin after hiking.
- In order to help prevent wildfires, **do not smoke on trails or in brush areas**. Smoking is allowed only on beaches or other designated areas.
- In departing from the islands, **visitors are responsible for meeting the boat concessionaire on time**. Be aware of departure time by asking the ranger or concessionaire employees.



Hiking, Webster Point, Santa Barbara Island

### Fishing

To fish in Channel Islands National Park, possession of a valid California state fishing license is required and all California Department of Fish and Game Regulations apply. In addition, twelve Marine Protected Areas (MPAs) surround the islands. Special resource protection regulations apply. Please refer to the "Limiting Your Impact" section (page 20) for additional regulations and guidelines. Visitors may also contact the Channel Islands National Park headquarters and island rangers for more information on marine resources regulations. **Visitors should also be sure to obtain the Channel Islands National Park brochure/map and the Channel Islands National Marine Sanctuary (NOAA/NMS) Protecting Your Channel Islands brochure/map in addition to this newspaper.**

### Watersports

#### Swimming, Snorkeling, and Diving

The kelp forests, sea caves, and coves of the park await the adventurous swimmer, snorkeler, and diver. Some of the best snorkeling and diving in the world can be done right here within the park. These activities are best done on Santa Barbara, Anacapa, and eastern Santa Cruz Islands. Due to extremely windy conditions on Santa Rosa and San Miguel, these activities should not be attempted on these islands by the novice or anyone who is not properly trained, conditioned, and equipped. Please refer to diving publications available in the visitor center for more detailed information on island snorkeling and diving sites.

Since the marine environment can be unforgiving, use extra caution when engaging in these activities. **Ocean conditions are highly variable and sometimes dangerous.** Many beaches on the islands have steep, dangerous shore breaks. The wind and swell generally come from the northwest and become stronger as the day continues. From October through January, visitors must also be prepared for strong east or Santa Ana winds. The ocean currents outside of coves and protected beach areas can be strong and extremely dangerous. These conditions should be carefully considered when planning your trip and entering the water. In addition to the regulations and guidelines listed in the "Limiting Your Impact" section, the following suggestions should also be considered:

- There are **no lifeguards on duty**, so all water sports are at your own risk. Visitors should be

# JASON Expedition: Schools Worldwide Study Park and Sanctuary



Ranger Bill Faulkner and researcher Matt Grinell with Jason student argonauts.

DURING 2002-2003, MIDDLE SCHOOL CLASSES from around the globe embarked on a virtual science journey with world-famous oceanographer Dr. Robert Ballard and the JASON Expedition, hosted by Channel Islands National Park (CINP), Channel Islands National Marine Sanctuary (CINMS), and the Santa Barbara Maritime Museum (SBMM).

The JASON Expedition is a highly acclaimed year-long curriculum that engages middle school students in learning through scientific discovery. Last year's expedition focused on earth, ocean, atmospheric, and space sciences while exploring the terrestrial and marine resources of the Channel Islands. CINP Superintendent Russell Galipeau said, "JASON offered a unique opportunity to showcase the wonderful public resources and stewardship of the park



Dr. Robert Ballard with Jason student argonauts.

and sanctuary, for scientists to pass their knowledge on to young people who were eager to learn, and to build a constituency for protected areas."

*JASON XIV: From Shore to Sea* broadcasted live from Anacapa Island and the Santa Barbara Maritime Museum for two weeks in 2003. Dr. Ballard and the JASON Expedition team, along with regional scientists, worked with a select group of students and teachers to conduct field research activities.

Millions of viewers followed the exploration live via satellite, on the Internet, and on the National Geographic Channel. Thousands of local students interacted with the broadcast through a direct, two-way satellite link to the SBMM and the CINP Robert J. Lagomarsino Visitor Center. Students were introduced to the ecological, archeological, cultural, and scientific value of the

## Parks as Classrooms

Who would like to take a close look at a sea star, examine a pygmy mammoth bone, learn more about "The Island of the Blue Dolphins," or set foot on one of the Channel Islands? Then the park's education program is for you.

Parks as Classrooms is the education program of the National Park Service in partnership with the National Park Foundation. It encompasses many different kinds of experiential education programs at national parks throughout the country. Each year park rangers at Channel Islands National Park share the park resources with over 10,000 students in classrooms and nearly again that many at the park visitor center.

A specially-equipped van can take programs right to the classroom. Programs for local schools cover a variety of natural and cultural history topics for grades 2-5. Programs at the visitor center meet the needs of classes from preschool through university level. All programs are tied to the curriculum students are studying.

There is no charge for these programs. For more information contact the park's education coordinator at (805) 658-5735.

Island Packers, a park concessionaire, has been transporting passengers to the islands for 30 years. Seven different hands-on programs are offered for students. They range from half-day whale watching and marine lab trips to full-day Anacapa and Santa Cruz Island trips. For more information call (805) 642-1393 or visit [www.islandpackers.com](http://www.islandpackers.com).

## Park Launches Jr. Ranger Program

A Junior Ranger program has just recently been established at the park. The program will help children discover and protect the wonders of the islands. A Junior Ranger booklet may be acquired from the visitor center, at boat/plane concessionaire offices, or on the islands from park staff.

California Channel Islands. They also had the opportunity to work with Dr. Ballard in an ocean environment studying the history of diving technology and participate in exciting and fun, educational, online activities.

Two area students were chosen to join Dr. Ballard to help host the broadcasts at the SBMM and on Anacapa Island. Tano Cabugos, a seventh grader at Santa Barbara

Junior High School, and Georgia Broughton, a tenth grader at the Excellence in Education Academy in Monrovia, were two of 28 "Student Argonauts" who shared their first-hand experiences with over one million students and over 35,000 teachers who studied the JASON curriculum in science classes for the school year.

aware of boat landing operations at all times—**avoid water sports near skiffs that are conducting surf landings.**

- Snorkelers, divers, and swimmers should always **use the buddy system.** This allows for someone to go for help if you encounter trouble.
- For your own safety, the law requires divers to **display a dive flag while diving.** It is recommended that spear guns be unloaded at least 50 feet from the beach.
- Before departing, swimmers, snorkelers and divers **should leave an itinerary and/or float plan with someone** who is on shore and can be easily contacted.
- Sea caves can be very dangerous—large waves or swells can fill a cave unexpectedly. Be extremely careful and **wear a helmet at all times when exploring sea caves.**
- Due to cold water conditions (55° to 70° F), **wetsuits and hoods are recommended.**



Snorkeling, Landing Cove, Santa Barbara Island

## Surfing

Depending on the swell direction, surfing can be done at several locations on Santa Cruz, Santa Rosa, and San Miguel Islands. Generally, the north shore is best during the north-west swells of winter/spring and the south shore is best during the south swells of summer/fall. All surf spots are remote and are best accessed by private boat due to the islands' rugged terrain and the hiking distance from the designated landing areas where the park concession vessels drop off visitors. Contact the visitor center or local area surf shops for more information.

## Boating and Kayaking

Please refer to the "Boating and Kayaking" article on page 21.

## Tidepooling

Please refer to the "Tidepooling" article on page 23.

## Rodents and Hantavirus

Hantavirus has recently been found in deer mouse populations at Channel Islands National Park. This mouse-carried virus also has been found in many locations on the mainland. This is a potentially fatal disease, and some basic precautions should be taken.

- **Avoid contact with rodents.** Rodents are hosts for a variety of diseases and parasites, including ticks and fleas, which may carry plague and rabies. Hantavirus is transmitted through the body fluids of the deer mouse, and can become aerosolized when large masses of feces and dried urine are disturbed. People hiking and camping on the islands are considered to be at low risk; rather, most cases of hantavirus infection have occurred when people have cleaned out or lived in buildings that have been inhabited by large numbers of rodents for many years. The precautions for avoiding infection by hantavirus are the same as those for the avoidance of any illness that may be contracted from rodents. When camping or hiking on the islands, the basic practices of cleanliness will reduce your chance of rodent contact.
- **Do not feed any wild animals.** Viruses and diseases are often passed through saliva. To reduce your chances of being bitten, avoid contact with wild animals.
- **Keep food and drink in rodent-proof containers.** On the islands, the mice are mostly active at night, but will also come out during the day while you are away from your site. It is best to keep food and dishes in plastic coolers or other containers that mice cannot chew through. This also applies to trash. It is not recommended to store food within tents, backpacks, or clothing since mice have been known to chew through these items.
- **Prevent entry of mice into your tent.** Mice will go everywhere in their search for food, so keep your tent screen zipped even when you are nearby. Keep your clothing and footwear inside your sealed tent especially at night.
- **Symptoms of Hantavirus infection**  
Infection by hantavirus causes flu-like symptoms followed by acute respiratory distress. If you experience fever, aches, and/or stomach cramps and believe you may have had contact with rodents within the last 30 days, contact your physician immediately and inform your physician that you have had contact with rodents and possibly hantavirus.

# Anacapa Island

Crossing the channel to Anacapa Island, one begins to understand why the island's name was derived from its Chumash Native American Indian name, "Ennepah." Seeming to change shape in the summer fog or afternoon heat, the three islets of Anacapa look like an island of deception or a mirage. Almost five miles long, these islets (appropriately named East, Middle and West Islands) are inaccessible from each other except by boat. They have a total land area of about one square mile (700 acres). Waves have eroded the volcanic island, creating steep, towering sea cliffs, sea caves, and natural bridges, such as forty-foot-high Arch Rock—the symbol of Anacapa and Channel Islands National Park.

Exploring East Anacapa's 1.5-mile trail system allows visitors to experience the island's native vegetation, wildlife, and cultural history. Although for much of the year the island vegetation looks brown and lifeless, the winter rains transform the landscape. Emerging from dormancy, the native plants come alive with color. The strange tree sunflower, or coreopsis, blossoms with bright yellow bouquets that are so vivid and numerous they can sometimes be seen from the mainland. Vibrant red paintbrush, island morning glories, and pale buckwheat add touches of color to the island's palette.

Seabirds are probably the most conspicuous wildlife on Anacapa Island. Thousands of birds use Anacapa as a nesting area because of the relative lack of predators on the island. While the steep cliffs of West Anacapa are home to the largest breeding colony of endangered California brown pelicans, all the islets of Anacapa host the largest breeding colony of western gulls in the world. Western gulls begin their nesting efforts at the end of April, sometimes making their shallow nests just inches from island trails. Fluffy chicks hatch in May and June and fly away

from the nest in July.

The rocky shores of Anacapa are perfect resting and breeding areas for California sea lions and harbor seals. The raucous barking of sea lions can be heard from most areas of the island. Two overlooks (Cathedral Cove and Pinniped Point) provide excellent spots to look down on seals and sea lions in the island coves.

Anacapa's rich kelp forests (ideal for kayaking, snorkeling, and diving) and tidepool areas provide visitors with the opportunity to meet some of the resident ocean animals upclose. Visitors may also catch a glimpse of the fascinating undersea world of the kelp forest without getting wet. During the summer, park rangers dive into the Landing Cove on East Anacapa with a video camera. Visitors can see, through the eye of the camera, what the diver is seeing—bright sea stars, spiny sea urchins and brilliant orange garibaldi—by watching video monitors located on the dock or in the mainland visitor center auditorium. Divers answer questions from visitors while they are underwater with a voice communication system and some help from a park interpreter on the dock. This program is simultaneously transmitted to the mainland visitor center.

Anacapa Island has a rich human history as well. Shell midden sites indicate where Chumash people camped on the islands thousands of years ago. In addition, visitors can view the 1937 light station whose Mission Revival style buildings include the lighthouse, fog signal building, one of four original keeper's quarters, a water tank building, and several other service buildings. The original lead-crystal Fresnel lens, which served as a beacon to ships until an automated light replaced it in 1990, is now on exhibit in the East Anacapa Visitor Center.

## Things To Do

- The perfect place for a half-day, one-day or short overnight camping trip. If you have time to visit just one island, this may be the place.
- Almost all trips to Anacapa are to East Anacapa Island. A limited number of trips are offered throughout the year to Frenchys Cove on West Anacapa Island.
- Although hiking options are limited with only two miles of trails, the scenery is unmatched. Except for the staircase to the top of the island, the trails are relatively flat and easy. Access to West Anacapa is from the water only and is limited to Frenchys Cove.
- Ideal place for swimming, snorkeling, diving, kayaking and fishing (see regulations p. 20). Since Anacapa is a cliff island, access to the water is only at the landing cove on East Anacapa (no beaches) and at Frenchys Cove on West Anacapa.
- Underwater video program is offered during the summer.
- Excellent wildlife viewing—seabirds (gull chicks in early summer), seals, and sea lions.

Refer to related articles for more information.

## Island Facts

- Located in Ventura County.
- Five miles long and 1/4 mile wide
- Average rainfall is between eight and thirteen inches per year.
- The Anacapa deer mouse is only found on Anacapa Island.
- Frenchy LeDreau lived at Frenchys Cove from 1928 to 1956.
- 29 Chumash archeological sites
- 130 sea caves
- The Anacapa lighthouse, turned on in 1932, was the last permanent lighthouse built on the west coast.
- Harbor seals and California sea lions rest and breed on the island.



Lighthouse, coreopsis and Indian paintbrush



Arch rock with tall ship

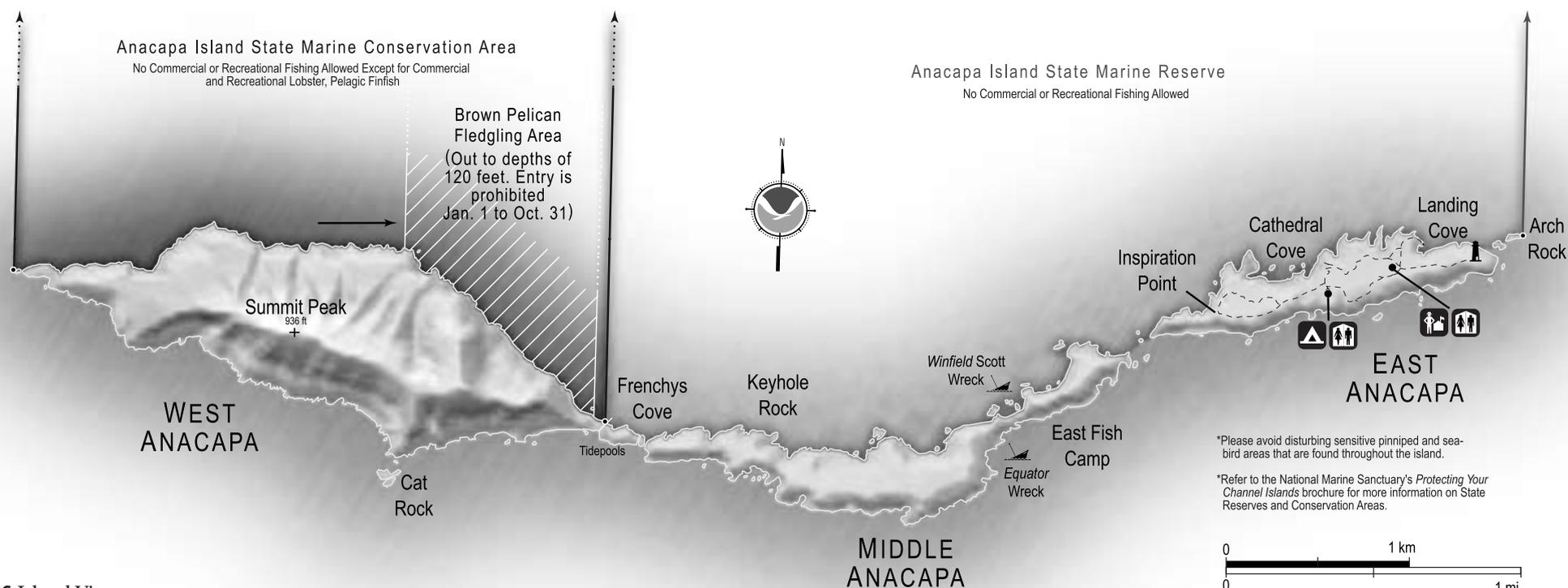


Western gull with chick

## Hiking Information

Destination (from visitor center)	Distance (miles, round trip)	Difficulty	Description
Inspiration Point	1.5	Easy	Extraordinary views. Not to be missed.
Lighthouse	.5	Easy	View the historic lighthouse built in 1932.

- Hikers must stay on trails to protect fragile vegetation and nesting seabirds and for visitor safety.
- Access to Middle (ranger-guided only) and West Anacapa (Frenchys Cove only) Islands is from the water only. Concession trips are offered throughout the year to Frenchys Cove.



# Visit the Kelp Forest Without Ever Getting Wet

Few visitors to Channel Islands National Park are aware that almost half of the park's resources are located beneath the sea. Park boundaries extend one nautical mile around each of the five park islands and encompass one of the most diverse marine environments in the world. Off the southern California coast and within the boundaries of the park lie great forests of seaweed called kelp. These towering ocean plants flourish in the waters surrounding the Channel Islands and are an integral part of the park resources. Over 1,000 species of plants and animals live in the upper 60 feet of the water column in a kelp forest. Seals, sea lions, algae, fishes, and marine invertebrates all blend together under the kelp canopy to form one of the most biologically diverse ecosystems in the world. During the summer, the park offers an underwater video program to give visitors a rare glimpse into a seldom seen world, by taking them on a nature "hike" in a kelp forest.

Traditionally, this unseen yet crucial marine ecosystem has suffered from an out-of-sight, out-of-mind philosophy. Like ocean habitats the world over, the kelp forests of the Channel Islands are increasingly affected by coastal development, offshore oil drilling, toxic dumping, and commercial and recreational fishing—but receive very little human understanding.

With the advent of the underwater video program in 1985 that situation is being remedied. Through advanced underwater technology, many park visitors are enjoying their first journey into the marine world—without ever getting wet! The audience joins the program via television monitors on Anacapa Island or in the visitor center on the mainland. A park ranger dons a special microphone-equipped dive mask for communication to the surface and descends into the kelp forest camera in hand. The camera is turned on and the kelp forest comes to life. From underwater, the park ranger explains what the TV monitors are revealing. The kelp forest and its many inhabitants are un-



CHIS Marine Sanctuary

Garibaldi and diver in kelp forest, Anacapa Island

veiled and explained as the visitors and divers "hike" among spiny sea urchins, iridescent abalone and soft, slow-moving sea cucumbers. Brightly colored fish move through the forest and are captured through the camera's eye. The story of the kelp forest is told, and those that hear it are the very ones who will determine its future. With this program, the seeds of understanding are planted. It is the hope of the National Park Service that from these seeds will grow the desire to preserve and protect this irreplaceable resource.

During the summer, this underwater program is presented twice weekly in the landing

cove of Anacapa Island and broadcast back to the mainland visitor center in Ventura. It is open to the public free of charge and occurs on Tuesdays and Thursdays at 2:00 p.m. Thousands of people have seen this program—foreign visitors, national and local politicians, biologists, environmentalists, teachers, schoolchildren, and the general public from all over the country have participated. Hopefully, few leave unaffected by its message of conservation and protection.



Visitors watching underwater program, Anacapa



Underwater program divers, Anacapa Island

## Restoring Anacapa Island

By Kate Faulkner and Steve Ortega, NPS and Gregg Howald, Island Conservation and Ecology Group

Anacapa Island provides critically important habitat for seabirds, pinnipeds, and endemic plants and animals. The island's steep, lava rock cliffs have numerous caves and crevices that are particularly important for the increasingly rare seabird species, Xantus's murrelet and ashy storm-petrel. The largest breeding colony of the California brown pelican in the United States is Anacapa Island and a unique subspecies of deer mouse occurs only here as well.

The Anacapa ecosystem, however, has been degraded by the presence of non-native black rats (*Rattus rattus*). Rats have been introduced to over 80% of the world's islands, accounting for an estimated 40-60% of all bird and reptile extinctions in the world. On Anacapa, rats were introduced prior to 1940, most likely as stowaways on ships to the island. They have had large impacts on nesting seabirds, preying heavily on eggs and chicks of seabirds as their food source. Approximately 40% of Xantus's Murrelet nests on Anacapa have shown evidence of egg predation. Rats also prey directly on the native island deer mouse.

In the mid-1990s, the park teamed with the Island Conservation and Ecology Group (ICEG) to determine if and how rats could be eradicated from Anacapa Island. ICEG, active internationally in the restoration of island ecosystems through the eradication of non-native species, was aware of several successful eradications of rats from islands, particularly in New Zealand. Rats have been eradicated on over 100 islands worldwide by applying rodenticide bait; trapping alone has never succeeded.

Anacapa Island presented special challenges. The island has extensive steep cliffs, making placement of bait into the territory of every rat difficult. The endemic deer mice would feed on any bait that was attractive to rats. The endangered California brown pelican, extremely sensitive to disturbance, breed and nest on a large portion of the island during eight months of the year.

Following extensive consultation with experts, the park and ICEG determined that rats could be eradicated through the distribution of bait pellets with brodifacoum, the anticoagulant used in the majority of successful rat eradications. This product contains half the amount of rodenticide that is found in products that homeowners commonly purchase in the local grocery store and it would not accumulate in the environment since it breaks down into harmless carbon dioxide in water.

Fortuitously, the American Trader Trustee Council (ATTC), consisting of California Department of Fish & Game, National Oceanic and Atmospheric Administration, and the U.S. Fish & Wildlife Service, had court settlement monies resulting from an oil spill in southern California. The purpose, in part, of the settlement monies was to restore seabird populations injured by the oil spill. The

trustees supported eradication of the black rat from Anacapa Island because it is one of the most significant islands for breeding seabirds in southern California.

The bait application (from a hopper suspended under a helicopter) was scheduled during the fall, the end of the dry season, when rats were very hungry and both visitation and bird populations were low. Protection of the native deer mice had two components: a) holding a small population of mice in captivity, and b) maintaining deer mice in the wild by treating East Anacapa one year prior to treating Middle and West Anacapa.

Phase I, application of bait to East Anacapa Island, was completed in December 2001 and Phase II, treatment of Middle and West Anacapa, was completed in fall 2002. Extensive ecological monitoring pre- and post-rat eradication was conducted to determine the environmental impacts of the project. This monitoring has found substantial recovery of rare seabirds and other native wildlife on Anacapa Island following the eradication of rats. Mouse populations are returning to normal and they are breeding abundantly in the wild, while juvenile side-blotched lizards and slender salamanders are thriving in the absence of rats.

Scientists have recorded a dramatic and positive response by Xantus's murrelets, a rare seabird that nests on the island. Thomas Hamer, of Hamer Environmental, reports, "We have detected increases in the number of birds visiting nesting colonies ranging from 58% to more than two times higher when compared to the number of detections that we recorded per night in any of the previous years." Nest surveys by researchers from Humboldt State University have found 14 murrelet nests, including the first documented on Cat Rock since 1927.

Channel Islands National Park Superintendent Russell Galipeau, comments, "This project was critical to protecting and restoring the rare and unique wildlife on Anacapa. The National Park Service is dedicated to ensuring a diverse, naturally functioning island ecosystem."

Numerous environmental groups endorsed the project including the American Bird Conservancy, Pacific Seabird Group, California Audubon Society, Endangered Species Recovery Council, Audubon Living Oceans, and Jean-Michel Cousteau's Ocean Futures. American Bird Conservancy President, George H. Fenwick, stated, "The Anacapa Island project is precisely the type of well-designed, extensively researched, and responsibly implemented program that the American Bird Conservancy supports and encourages. The long-term benefits of rat eradication on Anacapa Island are enormous for the conservation of one of North America's most distinctive ecosystems."

# Santa Cruz Island

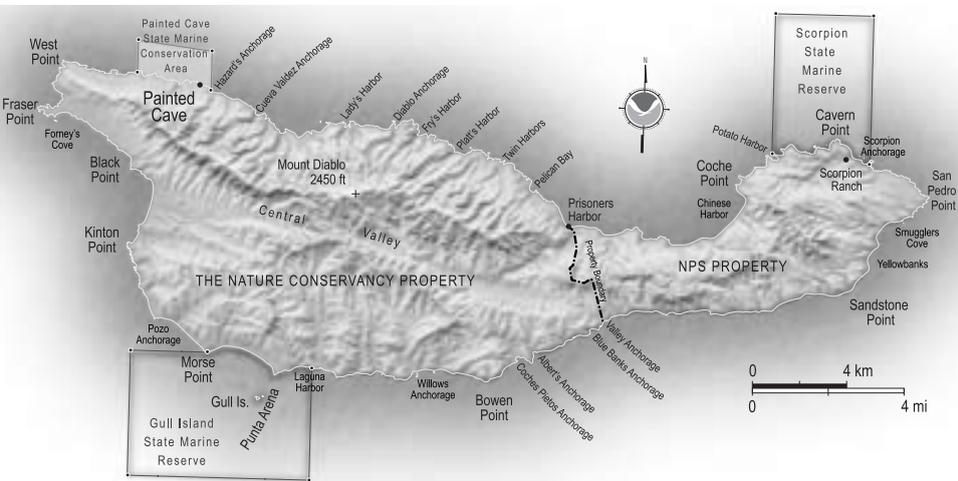
According to legend, Santa Cruz Island was named for a priest's staff accidentally left on the island during the Portola expedition of 1769. A Chumash Indian found the cross-tipped staff and returned it to the priest. The Spaniards were so impressed that they called this island of friendly people "La Isla de Santa Cruz," the Island of the Sacred Cross. Today, the protection and preservation of Santa Cruz Island is divided between The Nature Conservancy and the National Park Service. The Nature Conservancy owns and manages the western 76% of the island, while the eastern 24% is owned and managed by the National Park Service.

In its vastness and variety of flora, fauna, and geology, Santa Cruz Island resembles a miniature California. At over 96 square miles in size and the largest island in California, Santa Cruz contains two rugged mountain ranges, the highest peaks on the islands (rising above 2,000 feet), a large central valley/fault system, deep canyons with year-round springs and streams, and 77 miles of craggy coastline cliffs, giant sea caves, pristine tidepools, and expansive beaches. One of the largest and deepest sea caves in the world, Painted Cave, is found on the northwest coastline of Santa Cruz. Named because of its colorful rock types, lichens, and algae, Painted Cave is nearly a quarter-mile long and 100 feet wide, with an entrance ceiling of 160 feet and a waterfall over this entrance in the spring.

These varied landforms support more than 600 plant species in ten different plant communities, from marshes and grasslands to chaparral and pine forests. 140 landbird and 11 land mammal species, three amphibian and five reptile species, and large colonies of nesting seabirds, breeding seals and sea lions, and other diverse marine animals and plants. Owing to millions of years of isolation, many distinctive plant and animals species have adapted to the island's unique environment, including the island scrub jay and eight plant species found only on Santa Cruz and nowhere else in the world.

The island is also rich in cultural history with 9,000 years of Chumash Native American Indian habitation and over 150 years of European exploration and ranching. Santa Cruz Island, known by the Chumash people as "Limuw" (translates to "in the sea") was home to a dozen villages that housed over 1,000 people. Many of these islanders mined extensive chert deposits for tools and produced "shell-bead money," used as a major trade item by tribes throughout California. The largest village on the island as well as on the northern Channel Islands, "Swaxil," occupied the area of Scorpion Ranch at the time of Spanish contact (1542). Large plank canoes, called "tomols," provided transportation between the islands and mainland. Remnants of their civilization can still be seen in thousands of "shell middens" on the island.

Remnants of the ranching era also can be seen throughout the landscape of the island. Adobe ranch houses, barns, blacksmith and saddle shops, wineries, and a chapel all attest to the many uses of Santa Cruz in the 1800s and 1900s. At the Scorpion Ranch adobe, the massive oven that produced bread for the entire island is still intact.



Smugglers Cove, Santa Cruz Island



Historic chapel, Central Valley, Santa Cruz Island

## Ranch House Rehab

In October of 2003, Channel Islands National Park began the complex task of rehabilitating the Scorpion Ranch House on Santa Cruz Island. The rehabilitation and seismic retrofit included strengthening the unreinforced masonry walls, upgrading the utilities, restoring the second-floor windows, restoring the interior and exterior finishes, and constructing a new stairway to reach the second floor. The work was carried out by preservation specialists from the National Park Service's Historic Preservation Projects program. Eventually, the ground floor of the ranch house will serve as a visitor contact center featuring exhibits about the island's biodiversity and cultural history.

please see Ranch House, 11

## Things To Do

- One-day trips, and short or long overnight camping trips. (Only one-day trips are offered to The Nature Conservancy property, including one of the best hikes in the park—along the coast from Prisoners Harbor to Pelican Bay.)
- Hiking options are unlimited with over 14,500 acres to explore on Eastern Santa Cruz Island.
- Great place for swimming, snorkeling, diving, and kayaking. Beach access is available at Scorpion Anchorage, Smugglers Cove and Prisoners Harbor.
- Shade is available in the campground.
- Birdwatchers will not want to miss the endemic island scrub-jay—only found on Santa Cruz Island and no other place in the world.

Refer to related articles for more information.

## Island Facts

- Located in Santa Barbara County.
- Santa Cruz is California's largest island, almost three times the size of Manhattan. Approximately 24 miles long and up to 6 miles wide; 96 square miles; 62,000 acres.
- Average rainfall—20 inches. Temperature range—20° F to 100° F.
- Painted Cave is one of the largest known sea caves in the world.
- Diablo Peak (Devil's Peak) is the tallest peak on the Channel Islands at 2,450 ft. (730 meters).
- Santa Cruz has the greatest number of plant and animal species of all the Channel Islands.

\*Please avoid disturbing sensitive pinniped and seabird areas found throughout the island.  
 \*No commercial or recreational fishing is allowed in the State Marine Reserves.  
 \*No commercial or recreational fishing is allowed in the State Marine Conservation Areas except for recreational lobster and pelagic finfish.  
 (Refer to the National Marine Sanctuary's *Protecting Your Channel Islands* brochure for more information)

## Partners in Preservation

Both Channel Islands National Marine Sanctuary and The Nature Conservancy are partners with the National Park Service in preserving and protecting the Channel Islands. The sanctuary, designated in 1980, includes 1,252 nautical miles of ocean from mean high tide to six nautical miles offshore of the five islands within the park. The Nature Conservancy, a private, nonprofit organization dedicated to the preservation of natural diversity, owns and manages the western 76% of Santa Cruz Island. Together, the park, the sanctuary, and The Nature Conservancy are a bulwark for cultural and biological diversity, preserving the islands' history and prehistory and protecting vital habitat for scores of marine and terrestrial plant and animal species.



**Channel Islands National Marine Sanctuary**  
113 Harbor Way, Ste. 150      3600 So. Harbor Blvd., Ste. 217  
Santa Barbara, CA 93109      Oxnard, CA 93035  
(805) 966-7107      (805) 382-6149



**The Nature Conservancy (Santa Cruz Island Preserve)**  
3639 Harbor Blvd. Suite 201  
Ventura, CA 93001      (805) 642-0345



Island jay



Cavern Point, Santa Cruz Island

## Hiking Information

Destination (from Scorpion beach)	Distance (miles, roundtrip)	Difficulty	Brief Description*
<b>Historic Ranch</b>	1/2	Easy	View the historic Scorpion Ranch complex.
<b>Cavern Point</b>	2	Moderate	Magnificent coastal vistas and whale viewing.
<b>Potato Harbor</b>	4	Moderate	Spectacular coastal views. No beach access.
<b>Scorpion Canyon</b>	4 (loop)	Moderate to strenuous	A scenic loop hike that includes steep canyon walls and a chance to see the unique island scrub jay.
<b>Smugglers Cove</b>	7	Strenuous	An all day hike with beach access at Smugglers Cove.
<b>From Smugglers Cove:</b>			
<b>Smugglers Canyon</b>	2	Moderate to strenuous	Opportunities to view native island vegetation. Be prepared for uneven terrain and loose rock.
<b>Yellowbanks</b>	3	Moderate	This hike leads to an overlook. No beach access.
<b>San Pedro Point</b>	4	Moderate	For experienced, off-trail hikers.
<b>Montañon Ridge</b>	8	Strenuous	For experienced, off-trail hikers. Great views.
<b>From Prisoners Harbor:</b>			
<b>Prisoners Harbor</b>	1/4 — 1/2	Easy	View the historic Prisoners Harbor area and search for the island scrub jay.
<b>Del Norte Camp</b>	7	Strenuous	Follow the rugged Del Norte trail east to the back-country camp.
<b>Navy Road-Del Norte Loop</b>	8.5	Strenuous	Route includes the Navy Road and the Del Norte Trail. Good views.
<b>Chinese Harbor</b>	15.5	Strenuous	A long hike that ends at the only beach accessible by land on the isthmus.
<b>China Pines</b>	18	Strenuous	Explore the Santa Cruz Island pine grove.
<b>Montañon Ridge</b>	21	Strenuous	For experienced, off-trail hikers. Must be able to read topographic maps.
<b>Pelican Bay</b>	42	Moderate to strenuous	This trail may only be traveled by those that have a obtained a permit in advance from The Nature Conservancy or are accompanied by Island Packers (a boat concessionaire) staff.

- No hiking is allowed beyond the national park boundary onto The Nature Conservancy property. Private boaters, please see page 23 for landing information. The boundary is the property line (marked by a fenceline) between Prisoners Harbor and Valley Anchorage.
- Before hiking, please refer to more detailed descriptions in the hiking guides available at island bulletin boards or mainland visitor center.

# Restoring Santa Cruz Island

Close to the mainland yet worlds apart, Santa Cruz Island is home to plants and animals that are found nowhere else on Earth. Like the Galapagos Islands of South America, the Channel Islands exist in isolation, allowing evolution to proceed independently, fostering the development of 145 endemic or unique species. Santa Cruz Island is host to 70 of these endemic species. Some, like the island scrub jay and the Santa Cruz Island silver lotus, are found only on Santa Cruz Island.

Unfortunately, this isolation has also made these species vulnerable to extinction. The melodic song of the Santa Barbara Island song sparrow and the crimson flower of the Santa Cruz Island monkey flower are no longer heard or seen within the park. The destruction of these species' habitats by non-native, exotic plants and animals have caused their extinction along with eight other rare and unique island species. Once found only on the Channel Islands, they have been lost forever.

In order to save 10 other island species, including the island fox, from the brink of extinction as well as to protect 3,000 internationally significant archeological sites, the National Park Service (NPS) and The Nature Conservancy (TNC) have embarked upon a multi-year program to restore Santa Cruz Island. This restoration program is part of the NPS mission, as mandated by Congress, to preserve unimpaired the natural and cultural resources and values of the national park system for the enjoyment, education, and inspiration of this and future generations.

The NPS, TNC, and natural and cultural resource experts have identified non-native feral pigs and non-native fennel (an invasive weed) as the most significant disturbances to the island's sensitive resources. Both pigs and fennel cause major impacts to native plant communities, rare plant species, and archeological sites.

Pig rooting causes massive destruction of native species, resulting in bare ground that is easily eroded and colonized by invasive weeds, especially fennel. This activity has been a factor in the decline of nine island plant species listed as threatened or endangered by the U.S. Fish and Wildlife Service.

Pig rooting has also damaged a large number of archeological sites on the island that are associated with the Chumash Native American people who occupied the island from at least 9,000 years ago until the early 1800s. Rooting to a depth of three feet has been noted in a number of sites, completely disturbing and desecrating these sacred sites and destroying their archeological value.

In addition, feral pigs have played a pivotal role in the catastrophic decline of island foxes. Piglets provide a year-round food source for



**Non-native, feral pigs damage archeological sites, native plant communities, and rare plants and spread non-native, invasive weeds throughout the island. They also attract new predators to the islands such as golden eagles. The eagles then prey on the endemic island fox, pushing it to the brink of extinction.**

golden eagles, allowing these former rare or occasional visitors to expand their range and establish resident populations on the island and prey on island foxes. Golden eagle predation has placed the fox on the brink of extinction on Santa Cruz, Santa Rosa, and San Miguel Islands.

The consensus among numerous experts is that the eradication of feral pigs is the most important action that can be taken to protect and restore Santa Cruz Island. The NPS has had tremendous success restoring other islands in the park through the removal of non-native animals. The eradication of European rabbits from Santa Barbara Island and sheep and burros from San Miguel Island has resulted in tremendous natural recovery. Feral pigs have also been eradicated from Santa Rosa Island in a similar program.

**San Miguel Island in 1930 when non-native animals overgrazed the island, reducing it to "a barren lump of sand." (top). San Miguel in January 2000. Just 30 years after the removal of non-native animals, vegetation has returned and started to stabilize the island (middle). San Miguel's native vegetation as it appears today above Cuyler Harbor (bottom).**



Experts advise that pigs can be eradicated from Santa Cruz Island if we act aggressively and persistently. Island vegetation is responding rapidly to the removal of feral sheep, completed by the NPS in 1999. However, significant resources may be lost if the pigs are not removed from the island as soon as possible. Therefore, pig eradication along with control of dense stands of fennel will begin in 2005.

Other management actions to initiate recovery of the island ecosystem have already begun. Golden eagles are being captured and relocated to northeast California. A captive breeding program for island foxes has been established as insurance against losses due to golden eagles. Also, native bald eagles are being reintroduced. This predator disappeared in the 1960s due to DDT poisoning. Bald eagles eat fish, seabirds and carrion, not live foxes, and are very territorial. It is expected that once they mature, they will establish territories and drive off any newly arriving golden eagles.

This multi-year program to remove golden eagles, reintroduce bald eagles, breed island foxes, eradicate pigs, and control fennel will help restore Santa Cruz Island to a naturally functioning ecosystem. Once restored, the island will offer one of the last opportunities to experience the nationally significant natural and cultural heritage of coastal southern California.

For further information on the "Santa Cruz Island Primary Restoration Plan," please contact the park headquarters or visit [www.nps.gov/chis/restoringsci/island.html](http://www.nps.gov/chis/restoringsci/island.html).

# Camping

Camping is available year-round on all five islands in Channel Islands National Park in National Park Service-managed campgrounds. There is currently one established campground on each island: above the landing cove on Santa Barbara; on the east islet of Anacapa; at Scorpion Ranch on Santa Cruz; at Water Canyon on Santa Rosa; and above Cuyler Harbor on San Miguel. No camping is allowed on The Nature Conservancy's western 76% of Santa Cruz Island. Limited backcountry camping is available on Santa Cruz and Santa Rosa Islands. Please refer to the "Backcountry Camping" section below for more information.

## Camping Transportation

Because concession boats fill to capacity much faster than campground limits are met, campers must first secure transportation for an overnight trip to Channel Islands National Park. For transportation information, please refer to the "Transportation—How To Get There" section on page 2.

## Camping Reservations

Camping reservations are required for all of the campgrounds. There are no entrance fees to visit the park, however, campground fees are \$10.00 per night per site. Reservations can be made no more than five months in advance. Information required for the reservations includes: camping dates, transportation information, and number of campers. Reservations can be made by calling 1 (800) 365-CAMP (2267) or through the Internet at <http://reservations.nps.gov>. A confirmation notice will be mailed to campers.

## Campground Facilities

Camping conditions are primitive, and users must camp within designated areas. All campgrounds are equipped with picnic tables and pit toilets. **Water is not available at campgrounds and must be brought with you except at the Santa Rosa and Santa Cruz Island campgrounds. No fires are permitted.** Enclosed camp stoves are permitted. Outer island campgrounds (San Miguel and Santa Rosa) have wind breaks for each campsite. Campsites are generally located close to one another. No trash containers are provided; campers must pack out their own trash.

Due to scavenging animals (including birds), **campers are required to store all food and trash in animal- and bird-proof containers.** National Park Service food storage boxes are provided at campsites, but coolers, plastic Rubbermaid-type boxes or other types of containers with sealing lids may be used as well. On Santa Cruz Island, further precautions are needed due to scavenging pigs: 1) do not store any food or trash in tents; 2) if not using food storage boxes, secure pig-proof containers to picnic tables or trees with straps or rope or place food and trash in duffel bags and/or backpacks and hang from trees.

## Weather

Campers should be prepared for a variety of weather conditions, especially on the outer islands. Thirty-knot winds are not uncommon on Santa Rosa and San Miguel Islands. Sturdy, low-profile tents, stakes, and line for securing tents to ground, table, or wind shelters are recommended. Fog can occur on the islands during any season producing cool, damp conditions. All of the campgrounds, except eastern Santa Cruz, are located away from trees and shade. Overexposure to the wind and sun can be a serious problem. Visitors are advised to bring supplies for an extra day in case boats are unable to pick up campers due to sea conditions.

Campground Information				
Island	Required Reservation	Distance From Landing to Campground	Number of Campsites	Campground Capacity
Anacapa	Yes	154 stairs, 1/2 mile	7	30
eastern Santa Cruz (Scorpion Ranch)	Yes	1/2 mile, flat	40	240
western Santa Cruz (The Nature Conservancy)	NO CAMPING ALLOWED			
Santa Rosa	Yes	1 1/2 miles, flat	15	50
San Miguel	Yes	1 mile; steep uphill	9	30
Santa Barbara	Yes	1/2 mile, steep uphill	10	30

## Suggested Camping Gear

Campers must be prepared for the primitive campground facilities and weather conditions. **Supplies and gear are not available on the islands. Gear must be transported up ladders at most landing areas, and carried some distance to the campgrounds.** Packing your gear in backpacks, duffel bags, and containers with handles makes transportation easier. The boat concessionaire requires that items weigh no more than 45 pounds each. On some islands, visitors may get wet during loading and off-loading, so waterproof your gear. An extra pair of shoes packed in waterproof material is recommended. Campers should plan to layer clothing, as weather conditions tend to change from cool and damp in the mornings to bright, warm, and windy during the afternoons. Clothing that protects against wind is advisable year-round. Hiking boots are recommended for most island trails.

Additional "needed" gear includes: hat/visor/cap; sunglasses; windbreaker/light jacket; shirts and pants that can be layered; normal clothing needs; food; sturdy tent; campstove/cooking gear; water (1 gallon per person, per day); sunscreen; flashlight; sleeping bag; matches; and first aid kit. "Suggested" gear includes: bathing suit; gloves; poncho/rain jacket; sneakers/light footwear; towel; seasick pills; garbage bags; camera/film; binoculars; toiletries; and sleeping pads.



Anacapa Island campground



Unloading camping gear, San Miguel Island

# Backcountry Camping

Backcountry camping is available year-round at the Del Norte campsite near Prisoners Harbor on Santa Cruz Island. Also, during certain times of year, backcountry beach camping is allowed on Santa Rosa Island. The National Park Service opened these islands to limited backcountry camping in recognition of their rare wilderness values. As you explore these wild areas by kayak or on foot, please take the responsibility to help us protect and preserve these delicate natural resources for future generations. The following information is just an introduction to backcountry camping in the park. Please refer to the "Backcountry Camping" site bulletin for more information. This site bulletin is available from the park visitor center and is required reading prior to making your backcountry reservations.

**WARNING: While backcountry camping is an incredible experience, it is not for the inexperienced backpacker or kayaker. Due to difficult weather, rugged terrain, and off-trail hiking, backcountry camping is an arduous endeavor and should be undertaken only by experienced, well-conditioned backpackers and kayakers.**

## Santa Cruz Island

Del Norte is currently the only backcountry campground on Santa Cruz Island. It is nestled in a shaded oak grove, about 700 feet above sea level, and provides scenic views of the island's pristine coastline. The hike to the site is 3.5 miles from Prisoners Harbor and 12 miles from Scorpion Anchorage. The campground has four primitive campsites (4 persons per site) and users must camp

## 10 Island Views

within these designated sites. A picnic table, animal-proof container, and pit-style toilet are provided (campers must bring their own toilet paper). Water is not available.

## Santa Rosa Island

Backcountry camping on Santa Rosa Island is currently limited to certain beaches between June 1st and December 31st. Hiking is along the beach and rugged, unsigned dirt roads or unmaintained animal paths. The closest beach for camping is 10 miles from the boat/plane drop-off location. Water is available year-round in some of the island's canyons.

## Weather and Reservations

Campers should be prepared for a variety of weather conditions. Strong winds are not uncommon. Fog can occur on the islands during any season producing cool, damp conditions. Shade is limited and overexposure to the wind and sun can be a serious problem. Visitors are advised to bring supplies for an extra day in case boats are unable to pick up campers due to sea conditions.

Backcountry campers must first secure boat transportation through the park's boat or plane concessionaires or by their own private vessel. Camping reservations are required in advance. For Del Norte, call 1-800-365-CAMP (2267) or visit <http://reservations.nps.gov>. For Santa Rosa beachcamping, call (805) 658-5711.

## History of the Scorpion Ranch House

Laborers and craftsmen of the Santa Cruz Island Company constructed the large masonry building at Scorpion Ranch in 1886-7 to house workers for the Santa Cruz Island Company. The ground floor of the building held the kitchen and dining room for employees at the east end of Santa Cruz Island; workers slept on the upper floor. Masons constructed a built-in bake oven in the end room of the ranch house, which supplied the east end of the island with fresh bread, a staple of the Italian and French immigrants who worked on the island in the late 1900s and early 20th century.

The building was constructed with a steeply-pitched roof, unlike any of the other masonry buildings on the island, with a parapet wall of even steeper pitch on the west end. The builders left a number of rough stone quoins protruding from the west wall, no doubt to accommodate a future addition. Probably soon after construction was completed, the shed roof was raised at the south elevation to enlarge the upstairs rooms, resulting in a decrease in the slope of the roof. Lifting the roof in this manner required the framing and exterior shingling of a wedge of wall space, creating a curious look to the building. At this time the three upstairs windows were also enlarged.



Scorpion Ranch House with bunkhouse in the background

By 1920, the number of workers on the east end of the island had decreased, and Scorpion Ranch was the sole residence area, housing workers from both the Scorpion Ranch and the nearby Smuggler's Ranch. Downstairs, the kitchen and dining room were a gathering place for Company employees, who enjoyed regular fresh bread from the bake oven. Early in the 20th century Mrs. Margaret Eaton recalled the bread baked by a cook named Bourago in the Scorpion bread oven: "The loaf was a foot long, and not round like American loaves, but flat. It had a wonderful thick crust all around it . . . I never tasted any bread so good. The cook had to bake quite a lot of bread every week to feed the seven men at the ranch."

In 1926, as a result of the partition of the island, the Ambrose Gherini family took over operation of the sheep ranch on the east end. The family evidently made use of the ranch house as an employee residence, although they discontinued use of the bake oven. Photographs from the period between 1930 and 1980 show few changes to the ranch house, and financial records do not indicate any major changes. Though the Gherinis made repairs to the ranch house as necessary, they did not undertake any major renovations of the building, as they found the building to be very sound and durable. Income from the ranch was not great, so little was expended on anything not entirely necessary.

In 1984, the ranch house underwent renovation for use as a base for commercial hunting tours on East Santa Cruz Island. In the spring of 1997, Channel Islands National Park completed acquisition of the Scorpion Ranch and the hunting operation was discontinued. The Park used the building to house island employees until park housing could be constructed just outside the Valley.

## The Rehabilitation Process

The process of converting the ranch house for use as a visitor contact station and ranger offices required the National Park Service to tackle the many problems associated with historic buildings, such as: deteriorated masonry and mortar, deteriorated interior and exterior plasters, a weakened chimney structure, poor site drainage and termite damage. In addition, the building's construction of unreinforced stone and adobe did not meet life-safety standards for historic buildings to withstand earthquakes and the electrical system was substandard. During the preservation process the craftsmen addressed each of the building's problems while ensuring that the original building materials were altered as little as possible. For example, rather than removing the unstable chimney, it was repaired and inconspicuously braced; the wood window sashes were replaced and the frames meticulously repaired, repainted and reinstalled. The same approach was taken during the reinforcement of the adobe and stone walls, though this part of the process was much more complex, requiring drilling into the stone and adobe walls to add long steel anchors.

## Earthquakes and Historic Buildings

Violent, swift, and unpredictable, earthquakes result from sudden movements of the geological plates that form the earth's crust, generally along cracks or fractures known as "faults." If a building has not been designed and constructed to absorb these swaying ground motions, major structural damage, or outright collapse, can result, with grave risk to human life. Historic buildings are especially vulnerable in this regard. As a result, the National Park Service adheres to stringent requirements for seismic retrofit of existing buildings. Despite popular misconceptions, the risks of earthquakes are not limited to the West Coast. Although historic and other older buildings can be retrofitted to survive earthquakes, many retrofit practices damage or destroy the very features that make such buildings significant. Life-safety issues are foremost and, fortunately, there are various approaches which can preserve historic buildings both from the devastation caused by earthquakes and from the damage inflicted by well-intentioned but insensitive retrofit procedures.

## The Seismic Design

When buildings are being rehabilitated, it is generally the most cost effective time to make major upgrades to improve the structural performance of the building. With this in mind, an integrated rehabilitation plan and seismic design for the Scorpion Ranch House was prepared for the National Park Service by Architectural Resources Group in conjunction with Roselund Engineering, both of which are private contractors that specialize in architectural and engineering solutions for historic buildings.

The design is intended to enhance life safety and damage control in the event of an earthquake. The correction of deficiencies such as poor floor-to-wall framing and wall-to-roof framing connections is intended to maximize visitor and employee safety while minimizing the potential for significant earthquake damage. After a major earthquake, the Scorpion Ranch House should suffer only minor damage that is easily repairable.

Substantial testing of the adobe bricks and stone walls was conducted under the direction of a structural engineer. Based on this testing, the engineer determined that seismic strengthening of the Ranch House would best be achieved through the reinforcement of structural elements with anchored ties, mortar joints, braced frames, bond beams, moment-resisting frames, shear walls, and horizontal diaphragms.

## The Historic Preservation Projects Program

The Historic Preservation Projects program is located in Santa Fe, New Mexico, and is part of the Division of Facilities Management of the National Park Service's Intermountain Support Office. Historic Preservation Projects has on staff architects, carpenters, exhibit specialists, and masons who work in partnership with parks, other agencies, partners, and contractors, to help preserve the important buildings and structures located throughout the United States.



Seismic strengthening the ranch house.



Rehabilitation of the Scorpion Ranch House.

## Step Back in Time

A new, free site bulletin that describes the historical farm implements at Scorpion Ranch on Santa Cruz Island is now available to the public on the island or at the mainland visitor center. The implements reveal a period in island history that is hard to imagine in today's technologically advanced world. A period of horse-drawn equipment such as plows, mowers, and hay balers. A period when repairs to this equipment along with the manufacturing of iron fittings, railings, hinges, and other materials were done by a resident blacksmith. A period of self-reliance—of homemade sawmills and other modified equipment that demonstrate how those living on the island adapted to the difficulties of isolated island life and learned to make do with what they had.

Some of this equipment dates back to the Justinian Caire era, which began in the early 1880s. At that time Caire started developing a large island agricultural community that included the production of wine, wool, tallow, meat, and olives. By 1900, wagons, carts, horse hay rakes, hay presses, mowers, gang plows, breaking plows, cultivators, barley seeders, anvils, drills, harrows, windmills, water pumps, and other pieces of equipment were commonplace. In one way or another, many of the implements on display helped in the establishment of a unique island rancho.

The National Park Service is preserving this historic area so visitors always will have the chance to remember and understand this unique part of the island's past.

on this specific place on the earth. Until the missionization of the Chumash people, our waters were filled with watercraft, especially the redwood plank canoe, the tomol, among the most advanced technological achievements of North America's indigenous peoples. Used for both fishing and transportation, these elegant and versatile canoes wove together coastal and island communities in a complex system of trade, kinship and a resource stewardship that was sustained over thousands of years.

The old Brotherhood of the Canoe governed the manufacture and use of the tomols until it was formally disbanded around 1834 because of the decimation of the people and the tomols. However, 142 years later, in 1976, Helek (Peregrine Falcon) was the first tomol to be built in modern times. Her design based on ethnographic and historic accounts as well as archeological data, she was paddled by a crew comprised of ten members of the modern Brotherhood of the Tomol from Tuqan to Wi'ma and then to Limuw in a grueling and much-celebrated journey.

The tomol, 'Elye'wun (Swordfish), was built by the Chumash community in 1996-97 under the leadership of the Chumash Maritime Association. On September 8, 2001, 'Elye'wun made her first and historic crossing from the mainland to Limuw, completing the island circle begun by Helek.

This crossing culminated in a cultural celebration with about 150 Chumash families and friends encamped on the island, marking the first time for almost all of us to make this return to an important origin place of our people.

On September 11, 2004, 'Elye'wun again made the arduous journey from mainland



Robert Schwemmer, CINIMS

The arrival of 'Elye'wun

to the village of Swaxil (at the present day location of Scorpion Valley) where some 200 Chumash and other Native people were gathered to discuss issues affecting Sacred Sites. The 2004 crossing was truly a milestone for the community in that the crew landing 'Elye'wun were five Chumash youths aged 14 to 22, marking a significant passing on of knowledge and experience to our young people. These are part of the generation who are now accustomed to the awesome sight of a traditional canoe in our home waters, giving some of us older ones—who did not even know to hope for such a thing in our own youth!—a profound sense of accomplishment and satisfaction.

As with other coastal indigenous nations, Chumash people are restoring our heritage of intimacy with the sea for the dual purpose of protecting her and as a means of rediscovering our dignity and identity as a people sprung from this place. Against overwhelming odds, what we are seeing is a cultural spirit so compelling that the tree once considered dead has sent up strong, resilient shoots and branches. The resurgence of the canoe is but one example, but one that stands as an icon for what is happening in the hearts of many Chumash



Robert Schwemmer, CINIMS

Carrying the 'Elye'wun to camp

people as we strengthen the knowledge of our heritage.

*The 2004 Crossing was jointly sponsored by Barbareño Chumash Council and Chumash Maritime Association with funding from Seventh Generation Fund and others. Special thanks are due to Jack Byer and support vessel Just Love; Bob Duncan and support vessel Jack Tar; Channel Islands National Marine Sanctuary's Chris Mobley and Bob Schwemmer for support vessel Xantu and camera; Ed Cassano, friend and skipper par excellence; Channel Islands National Park's Ann Huston and especially staff at Scorpion Campground.*

'Elye'wun's 2004 crew: Perry Cabugos (Captain), Marcus Lopez (Captain), Michael Cordero, Roberta Cordero, Michael Cruz, Tom Lopez, Rick Mendez, Oscar Ortiz, Reggie Pagaling, Alan Salazar, Jacqueline Scheinert, Steve Villa, Mati Waiya. The Landing Crew: Marcus V. O. Lopez (Captain), Tano Cabugos, Diego Cordero, Jimmy Joe Navarro, Michael Sanchez

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## ISLAND HOMETLAND: THE VILLAGE OF SWAXIL 2004

By Georgiana Valoyce Sanchez, Elder (Barbareno Chumash Council), CSU Long Beach lecturer

Ancient stories tell of a time when Chumash People lived only on the northern Channel Islands off the coast of what we now call California. The islands were alive with Chumash People, working, laughing, speaking in the language Hutash and Kakunup-mawa had given them. In the stories, Coyote, 'Ashk'a,' and Lizard, 'Onok'ok', tell of island hillsides covered in golden poppies, island poppies found no place else on earth, flowers so beautiful that just the story of their beauty brought healing to the people. 'Ashk'a' and 'Onok'ok' said there were so many poppies that on a clear day, from the mainland, the big island of Limuw, (Santa Cruz Island), shimmered golden in the sun.

On the weekend of September 11, 2004, Chumash families aboard the Islander crossed the Santa Barbara Channel toward Limuw, their ancient island homeland. As they drew near the island coast and pulled alongside the rugged Scorpion Rocks, colonies of pelicans and seabirds scrutinized them. Swaxil, the largest village of the northern Channel Islands was just around the bend. Part of this ancient village site is now Scorpion Campground. Chumash families, arriving in three sepa-

rate crossings, set up camp at Scorpion Campground to await the arrival of 'Elye'wun, the traditional plank canoe of the Chumash. This was the second time, since 1834, that Chumash paddlers would make the historic crossing from the mainland to Limuw. While the families waited for 'Elye'wun, the Barbareno Chumash Council hosted a Symposium on Sacred Sites. Contrary to many sacred site gatherings in the past, this symposium took place at a profoundly significant village site, adding to the historical and cultural dynamic of the event.

The symposium brought together some extraordinary people, grassroots leaders like Rhonda and Rebecca Robles, daughters of the late Ajachemem Elder, Lillian Robles, and nationally known dignitaries, such as Billy Frank, Chairman of the Nisqually Nation of Washington state and recipient of the Albert Schweitzer Humanitarian Award. Good words were spoken, stories were told and songs were sung. Dinner was a tribute to Hutash, the spirit of the Earth, a true celebration of life. The gathering at Limuw reaffirmed and celebrated the relationship of all people to our Mother Earth and reminded all gathered of the sacred places on this earth and of our responsibilities

as caretakers of this land.

From a hilltop above Scorpion Campground, with the wind blowing through the grasses and the sun setting to the west, the sky streaked lavender and gold, the mainland sleepy and purple across the channel, Elders gazed in hushed reverence. Like the Elders on the hilltop, island oak and ironwood, are being replanted throughout the islands. The unique golden poppies of the islands have never left, blooming here and there, wherever they could, a reminder of the resiliency of the Chumash People. Limuw, ancient island homeland of the Chumash, seemed to embrace the Elders that day, reminding us of the sacredness of all life and of our responsibilities as human beings, especially in this time of suffering and war, to live authentic lives of respect and harmony.



Robert Schwemmer, CINIMS

The gathering at Swaxil

# Michumash:

Traditionally the Chumash people lived in an area extending from San Luis Obispo to Malibu, including the four Northern Channel Islands. Today, with the exception of the Islands, Chumash people live in these territories and areas far beyond. Approximately 148 village sites have been identified, including eleven on Santa Cruz Island, eight on Santa Rosa Island, and two on San Miguel Island. Due to the lack of a consistent water source, Anacapa Island was likely inhabited on a seasonal basis. A true maritime culture, the Chumash hunted and gathered natural resources from both the ocean and the coastal mountains to maintain a highly developed way of life. Today we have evidence of more than 13,000 years of Native occupation of the islands, highlighted by the discovery of Arlington Springs Woman. Among the oldest dated human remains in North America, radiocarbon dating indicates she lived approximately 13,000 years ago. This rich, continuing history is a testament to the Chumash people and their Island home.

**What's in a Name:** Michumash is the word from which the name Chumash is derived. Roughly translated, Michumash means "makers of shell bead money," and is the term mainland Chumash used to refer to those inhabiting the islands.

'Achum, or shell bead money was "minted" by the island Chumash using small discs shaped from olivella shell and drills manufactured from Santa Cruz Island chert. The shell bead money was exchanged with mainland villages for resources and manufactured goods that were otherwise unavailable on the islands.

Over time, many Chumash place names have been altered to reflect the uses or perceptions of various other cultures. Anacapa Island, however, retains a name closest to the Chumash Anyapakh, meaning "mirage."

Santa Cruz Island, known by the Chumash people as Limuw, translates to "in the sea," while Santa Rosa Island, or Wi'ma, means "redwood driftwood." Though no translation to modern English is known, San Miguel Island was referred to as Tuqan.

**Limuw—A Story of Place:** Hutash, the Earth Mother, created the first Chumash people on the island of Limuw, now known as Santa Cruz. They were made from the seeds of a Magic Plant.

Hutash was married to the Alchupo'osh, Sky Snake, the Milky Way, who could make lightning bolts with his tongue. One day, he decided to make a gift to the Chumash people. He sent down a bolt of lightning, and this started a fire. After this, people kept fires burning so that they could keep warm, and so they could cook their food.

In those days, the Condor was a white bird. But the Condor was very curious about the fire he saw burning in the Chumash village. He wanted to find out what it was. So he flew very low over the fire to get a better look. But he flew too close; he got his feathers scorched and they turned black. So now the Condor is a black bird, with just a little white left under the wings where they did not get burned.

After Alchupo'osh gave them fire, the Chumash people lived more comfortably. More people were born each year, and their villages got bigger and bigger. Limuw was getting

continued on next page

# The Island Chumash

crowded. And the noise people made was starting to annoy Hutash. It kept her awake at night. So, finally, she decided that some of the Chumash people had to move off the island. They would have to go to the mainland, where there weren't any people living in those days.

But how were the people going to get across the water to the mainland? Finally, Hutash had the idea of making a bridge out of a wishtoyo (rainbow). She made a very long, very high rainbow which stretched from the tallest mountain on Limuw all the way to Tzchimoos, the tall mountain near Mishopshno (Carpinteria).

Hutash told the people to go across the rainbow bridge, and fill the whole world with people. So the Chumash people started to go across the bridge. Some of them got across safely, but some people made the mistake of looking down. It was a long way down to the water, and the fog was swirling around. They became so dizzy that some of them fell off the rainbow bridge, down through the fog, into the ocean. Hutash felt very bad about this, because she told them to cross the bridge. She did not want them to drown. So, to save them, she turned them into dolphins. Now the Chumash call the dolphins their brothers and sisters.

**The Tomol:** Chumash society featured an upper class of chiefs, shaman, boat builders and artisans, a middle class of workers, fishermen and hunters, and a lower class of the poor and outcast.

The brotherhood of the tomol, an elite group of boat builders in the upper echelons of Chumash society, constructed the plank canoe, or tomol, which is the oldest example of ocean watercraft in North America.

Preferably constructed of redwood, which drifted down from Northern California and was collected on Wi'ma (Santa Rosa Island), the tomol ranged from eight to 30 feet in length and held three to ten people.

The tomol was constructed of a single piece of wood for the floor, with three or four rows of planks. Milkweed, yucca, dogbane, or sinew from deer was used as cordage to tie the tomol together. Yop, a glue consisting of a mixture of pine pitch and asphaltum was used to seal the space between boards. Sharkskin was used for sanding, red ochre for staining, and abalone for inlay and embellishment.

The use of the tomol allowed for an elaborate trade network between the islands and mainland, between natives and non-natives, and amongst the island communities themselves.

Today the Chumash Maritime Association, in partnership with Channel Islands National Marine Sanctuary and Channel Islands National Park, continues the tradition of the tomol. In September 2001, paddlers rowed the tomol 'Elye'wun (swordfish) across the Santa Barbara Channel, completing the first channel crossing in more than 125 years. Future Channel crossings are planned.

**Missionization:** The Spanish were the first Europeans to visit the Chumash in 1542. Juan Rodriguez Cabrillo was impressed by the friendliness of the Chumash people who he encountered. However, along with European contact, came European diseases and conflict.

Even relatively minor illnesses, such as the

common cold, were devastating to the previously unexposed people of North America and many Chumash people succumbed to disease.

In an attempt to convert the native population to Christianity and secure the area for Spain against the Russian and Aleut fur traders, the Chumash people were removed from their traditional lands. The Mission Era (1772-1822) was marked by the construction of five Spanish missions in Chumash territory and continued outbreaks of disease, further decimating the population.

The mission system depended on the use of native labor to propel industry and the economy. The social organization of Chumash society was restructured, leading to the erosion of previous power bases and further assimilation.

When California became part of Mexico, the government secularized the missions and the Chumash sank into the depths of poverty. By the time of the California gold rush, the Chumash had become marginalized and little was done to understand or help the remaining population.

**i sari wa; It Will Continue Indefinitely:** Today, Chumash community members continue to move forward in their efforts to revive what was becoming a forgotten way of life. Much has been lost, but Chumash community members take pride in their heritage and their culture.

With a current population nearly 5,000 strong, some Chumash people can trace their ancestors to the five islands that now constitute Channel Islands National Park. The Chumash reservation in Santa Ynez represents the only federally recognized band, though it is important to note that several other Chumash groups exist.

The National Park Service invites you to visit Channel Islands National Park, Santa Monica Mountains National Recreation Area, and other local areas to learn more about the Chumash and other Native American cultures. For more information please write or call:

Channel Islands National Park  
1901 Spinnaker Drive  
Ventura, California 93001  
(805)658-5730

Santa Monica Mts. National Recreation Area  
401 West Hillcrest Drive  
Thousand Oaks, California 91360-4223  
(805)370-2300

Chumash Indian Tribal Elders Council  
Post Office Box 517  
Santa Ynez, California 93460  
(805)688-8446

Candelaria American Indian Council  
1650 Palma Dr.  
Ventura, California 93003  
(805)650-8352

Santa Barbara Museum of Natural History  
2559 Puesta del Sol Road  
Santa Barbara, California 93105  
(805)682-4711

Friends of Satwiwa  
4126 Potrero Road  
Newbury Park, California 91320  
(805)499-2837

# Sukinanikey: To Bring Back to Life

By Julie Tumamait, Chumash Elder

Some of my fondest memories are of the times I spent on the Ventura pier fishing, or at least trying to fish, with my father Vincent Tumamait. I was way too young, 8 or 9 years old, but he gave me a little green fishing pole and my first catch left us laughing in delight as it slipped out of my little hands back into the water. As I stood on that pier my eyes wandered to those large land masses out in the ocean. I never asked anyone what they were; I am not really sure what I would have asked. I would just admire their beauty, especially on a clear day. I have always known that I am a Chumash Native, but exactly what that meant to me at that time, I can't say. I did wonder if there were people living out there. The idea that I come from a long line of descendants, over 13,000 years worth, never crossed my mind. I now know that I descend from the Chumash villages of Nanawani, Swaxil, Lu'upsh and Mashchal on Santa Cruz Island on my father's father's side, and from the village of Hichimin on Santa Rosa Island on my father's mother's side. Both of these families ultimately moved over to the mainland to coastal and interior villages.

Decades after my fishing trips, the opportunity to visit Santa Cruz island presented itself. It was a birthday celebration for Anthony Romero. His daughters Kimberly and Jacy came with him. I was there with my father Vincent and brother Patrick. Ernestine De Soto and her daughter Gina came as well and the trip was arranged by our dear friend Kathy Conti at the Santa Barbara Museum of Natural History. We all sat by the caves at Orizaba singing and praying. We thought that it had probably been at least 150 years since that many Chumash people had been together on the Island.

Looking at those caves along the coast of Santa Cruz Island reminded me of the story of the swordfish people (Elye'wun). Old men with long white beards and bushy eyebrows that hung over their eyes determined the fate of a greedy fisherman. A long, long time ago, a man from the mainland wanted to go fishing on the island. He invited along a young Chumash boy from the Ventura area, and told him he knew of a place where the abalone grew so thick on the rocks that they touched each other. Despite the boy's objections, the man insisted that the boy take all the abalone. The young Chumash boy knew immediately when he saw the Elye'wuns, one twirling the bullroarer overhead and the next playing a flute. Both sat in the opening of a cave; they seemed unaffected by the waves crashing over them. The boy knew that the fisherman had enough of a catch of abalone, but the fisherman wanted more, demanded more, and the boy obeyed. Upon returning home the boy went to his grandmother and told her of the sighting. She gave him a drink of the toloache (datura) to counteract the effects of the encounter. The fisherman drowned on the way home, and that is all. Today many agencies and volunteer organizations are working to protect the marine habitat, just as the Elye'wuns did in the days of old. Even today I remember this story as people try to take more than they need. Hutash (Mother Earth) never forgets and has often reminded us with her vengeance.

Each time I return to the islands I can see them returning to their natural conditions as non-native plants and animals are removed. I have seen the island since the sheep were removed and I am seeing the pine forest return now that the pig population is being reduced. Sukinanikey: to bring back to life; this is what is happening to the islands. This rebirth also marks the return of Native Peoples to our home: to be able to feel the spirit of the ancestors, to bless the return of the Bald Eagles, to realize what devastation DDT has had on the natural balance of the world.

We are watching the return of the Bald Eagle to the islands, and with the removal of the Golden Eagle the small and beautiful Island Fox may have a chance to survive. We hold the Eagle in such great reverence. We see him causing the phases of the moon with his wings as he holds up the upper world, we see him as Wot of all the winged people. His feathers are used in sacred regalia and his down feathers are woven into cordage for ceremony. We have heard of red Ants being wrapped up in the feathers of the Eagle and used in an Ant curing ceremony. We sing and dance to the Eagle. Each one of these great birds has its place in the world and we are helping to restore that delicate balance.

Every one of my trips to the Islands has been unique and special. At the passing of my father Vincent, in 1992, I decided to finish his presentations of Chumash songs and stories. He had been scheduled to welcome a group of native people at the Santa Barbara Museum of Natural History. Soon after that welcome program, I was asked to go to Santa Cruz Island with The Nature Conservancy for a few days to do a program for the guests who came with us. Although I was overwhelmed emotionally, I went; I was filled with anxiety during the boat trip over. The boat stopped at Orizaba to see the Painted Cave and I asked if I could have some private time. While I sat and prayed for my Daddy to be with me to help me through this time, I brought out the ceremonial pipe that was given to me by my Elder, hoping the smoke would take my prayers skyward. As I got up to leave, I noticed a small but very fat woolly black bear caterpillar next to me. I got up to leave, being careful not to harm it, and as I turned to look for it, it had vanished. Three days later as I was in my room preparing my program, I found that woolly black bear on the floor. I picked him up and carried him out to the small island museum. The former caretaker's room now holds Chumash artifacts and pictures of my father, my grandfather and my great-grandfather. I knew in my heart that that little caterpillar was my father telling me that it would be all right and that he would always be with me. Since that time I know that he is with me and I honor his presence.

The greatest gift that I can give to my ancestors is to go back to the islands and sing to them, and to repeat the stories of teachings, so that the ancestors will know that we have not forgotten and that "it will continue indefinitely." I SARI WA



Julie Tumamait

# Santa Rosa Island

Santa Rosa Island illustrates the processes of a national park in development. Though the island was included as part of Channel Islands National Park upon the park's inception on March 5, 1980, it wasn't until December 1986 that the island came under the ownership of the National Park Service. Although the former owners run a private hunting operation a few months of the year for introduced deer and elk under a special use permit, visitation is welcome throughout the year.

Located 40 nautical miles from Channel Islands National Park visitor center in Ventura, Santa Rosa is the second largest island in California at approximately 53,000 acres in size. The island's relatively low profile is broken by a high, central mountain range, rising 1,589 feet at its highest point. Its coastal areas are variable, ranging from broad sandy beaches gently sloping toward a dynamic ocean to sheer cliffs plunging toward the turmoil of a sea intent on changing the contour of the land.

As on its larger neighbor, Santa Cruz Island, these varied landforms support a diverse array of plant and animal species. About 500 plant species can be found within nine plant communities, including six plant species which are found only on Santa Rosa and nowhere else in the world. One of these species, the Santa Rosa Island subspecies of Torrey pine, is considered one of the rarest pines in the world—the last enduring members of a once widespread Pleistocene forest. A remnant, mainland subspecies of Torrey pine also can be found near La Jolla, California, at Torrey Pines State Reserve. Santa Rosa Island also hosts over 100 land bird and three land mammal species (including the island's largest native mammal, the endemic island fox), two amphibian and three reptile

species, and colonies of seabirds, seals, and sea lions.

Remains of an ancient endemic species, the pygmy mammoth, have been uncovered on Santa Rosa, along with Santa Cruz and San Miguel Islands. These miniature mammoths, only four to six feet tall, once roamed island grasslands and forests during the Pleistocene. The fossil skeleton discovered on Santa Rosa Island in 1994 is the most complete specimen ever found.

Along with extensive paleontological resources, Santa Rosa Island has rich archeological resources. Home to the Island Chumash until approximately 1820, "Wima" (as the Chumash refer to the island) contains thousands of significant and federally protected archeological sites. Archeological investigations on the island have enabled archeologists to construct a more complete picture of Chumash life on the islands. Radio-carbon dating on some of these sites indicates that humans have been using the island for more than 13,000 years.

Others have come to the island during more recent centuries to exploit its rich resources, sometimes making it their home. In addition to the native Chumash, European explorers, Aleut sea otter hunters, Chinese abalone fishermen, Spanish missionaries, Mexican and American ranchers, and the U.S. military all have left their mark on the Santa Rosa landscape. Visitors can see relics of these occupations in remnants of fishing camps, in the water troughs and fence lines, in the pier where cattle were loaded and unloaded since 1901, in the buildings and equipment of the historic Vail and Vickers ranch at Bechers Bay, in the remains of the military installations, and in a great diversity of sites to be discovered all around the island.

## Things To Do

- One-day trips, multi-day boat trips and overnight camping trips (minimum stay is generally 3 days—Friday to Sunday).
- Be prepared for adverse weather.
- Backcountry beach camping is available during certain times of year.
- Hiking options are unlimited with over 54,000 acres of rugged peaks, magnificent canyons, and beautiful beaches.
- Due to high incidence of strong winds, swimming, snorkeling, diving, and kayaking are limited and recommended for the experienced visitor only.
- Despite the wind, Santa Rosa offers exceptional beach walking on white sand beaches. Access to one of the best beaches, Water Canyon Beach, is just over a mile from the pier in Bechers Bay and just down canyon from the campground.

Refer to related articles for more information.

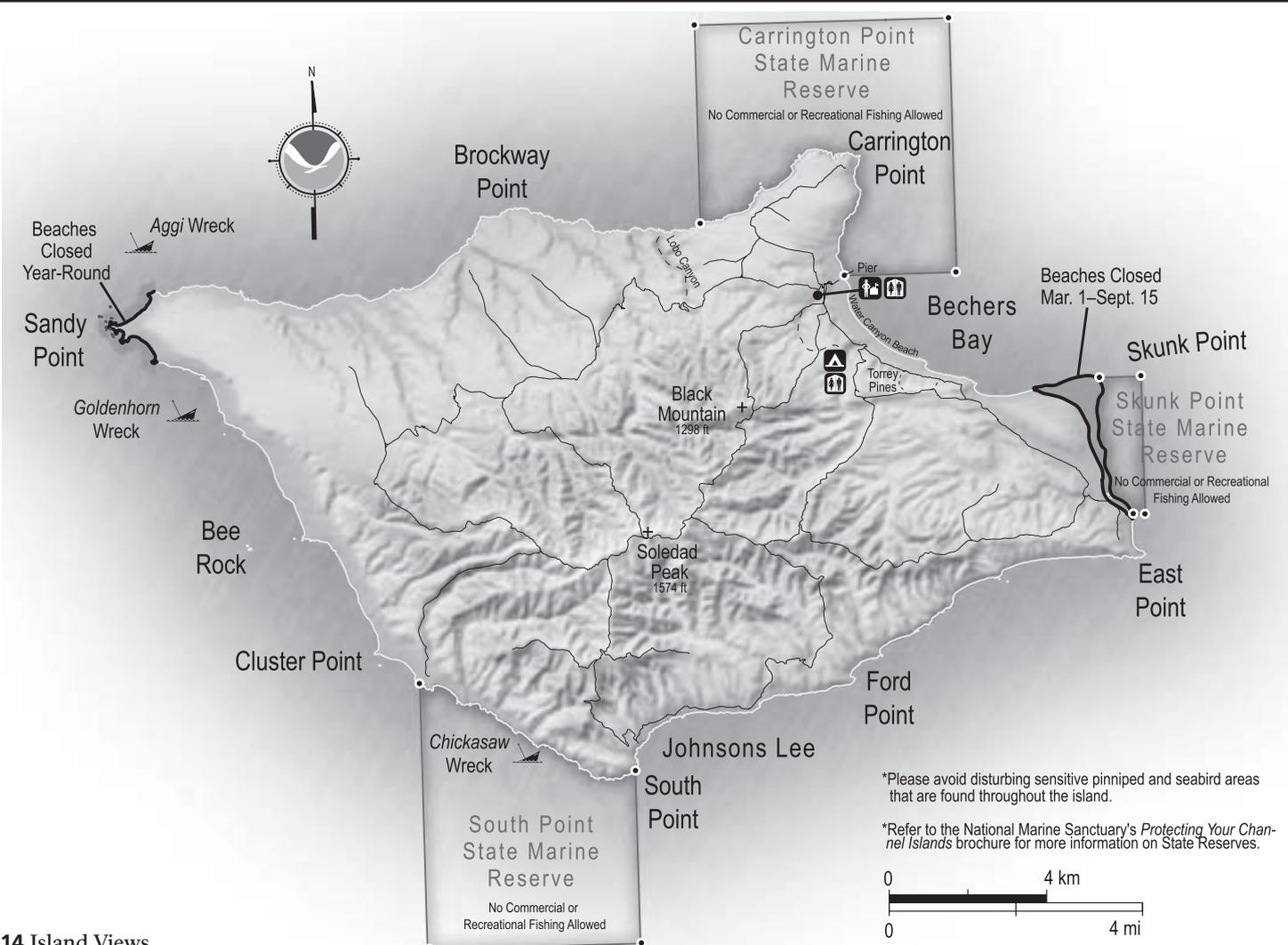
## Island Facts

- Located in Santa Barbara County.
- Approximately 15 miles wide by 10 miles long; 84 square miles; 53,000 acres.
- Santa Rosa Island is 26.5 miles from the nearest mainland, three miles east of San Miguel Island, and six miles west of Santa Cruz Island.
- Average rainfall is 15 inches per year.
- Five endemic plant species occur only on Santa Rosa Island.
- Santa Rosa Island is home to only 3 native terrestrial mammals—the island fox, spotted skunk, and deer mouse. They are all endemic to the Channel Islands.
- The gopher snake is the only species of snake on the island. Other reptiles and amphibians include the alligator lizard, western fence lizard, Pacific tree frog, and slender salamander.

## Hiking Information

Destination (from pier)	Distance (miles, roundtrip)	Difficulty	Description
Water Canyon beach	2	Easy	If the wind is not too strong, this is a wonderful 2-mile-long white sand beach to explore.
East Point	12	Strenuous	A beautiful coastal hike with opportunities to explore the Torrey pines and unrestricted beaches.
Lobo Canyon	13	Strenuous	Spectacular canyon with wind and water sculpted sandstone cliffs, a stream and native plants.
Torrey Pines	5	Moderate	View the Torrey pines and get great views from the top of the grove.
Black Mountain	8	Strenuous	Great views (weather permitting) of Santa Rosa, San Miguel, Santa Cruz and the mainland.

- Please respect the privacy of the ranching operation by following the signed path from the pier through the ranch area.
- Each year for a few months, Vail & Vickers operates a private hunt for stocked deer and elk. During these hunting periods, hiking may be restricted in certain areas. Please check with the ranger before hiking and be aware of the hunting operation.



14 Island Views



Tim Hauf  
Torrey pines, Bechers Bay



Tim Hauf  
Historic barns (1870s), Santa Rosa Island



Bill Faulkner  
1994 excavation of pygmy mammoth

\*Please avoid disturbing sensitive pinniped and seabird areas that are found throughout the island.

\*Refer to the National Marine Sanctuary's *Protecting Your Channel Islands* brochure for more information on State Reserves.



# Jane's Knees: The Wreck of the Jane L. Stanford

By Don Morris, retired Channel Islands National Park archeologist

Amid the plentiful driftwood along the north side of Skunk Point on Santa Rosa Island, a careful eye will observe distinctive fragments of a large wooden ship. At one locality, a series of ship's knees (massive braces that tied a vessel's deck to the side of the hull—think shelf brackets) juts from the sand. Further east eighty feet of massive timbers, tied together with thick iron pins (drifts in nautical speak) form the remnants of a massive backbone (or keelson). What is the story of these remnants?

These are the remains of the *Jane L. Stanford* (*JLS*), the largest wooden ship to wreck within Channel Islands National Park. Over 215 feet long and 41 feet wide, Hans Bendixen made *JLS* specifically for carrying lumber across the Pacific Ocean to destinations such as South Africa and Australia. The ship was rigged as a four-masted barkentine, with square sails on her foremast, a change from the typical lumber schooner fore and aft rigs that plied up and down the California coast at this time. These square sails allowed the *JLS* to easily follow the trade winds on these long voyages. The *JLS* reflects the vigorous lumbering industry in the Pacific Northwest and the expansion of this trade from domestic to foreign markets at the opening of the twentieth century.

"The vessel presented a beautiful appearance this morning. She is painted dark green on the outside to the waterline, below which she is copper painted...The vessel is fitted with the latest steam hoisting and pumping apparatus. The sails will also be raised by steam...The cabins are elegantly finished in maple, walnut, and oak... The after-cabin is finished in white and gold. There are six staterooms here, a bath and toilet room, pantry, etc."—a newspaper account of the launching of the *JLS* on December 20, 1892.

Most of these voyages were pleasant, according to the recollections of a captain's daughter, who recalls playing with shark's eyes for marbles and shark vertebrae necklaces on pleasant voyages to Australia. (Captains often took their families to sea at this time.)

By 1926, the *JLS*, no longer competitive in her original trade, became a fishing barge off Los Angeles and then Santa Barbara, a typical fate for older sailing ships. In 1929, a steamer entering Santa Barbara rammed the *JLS*. Damaged beyond repair but unsinkable, the hulk was a serious navigation hazard. The Coast Guard cutter *Tamaroa* towed the hulk to Skunk Point where twenty-six naval wrecking mines blew the wreck apart over four days, scattering wreckage along two miles of beach. The distant explosions precipitated numerous calls to the Santa Barbara police, thirty miles distant.

Today, visitors can see the principal remnants of the *JLS* mentioned above in a fairly short hike from the campground to Skunk Point (closed from March 1 to September 15 to protect the threatened shorebird, the snowy plover). This fairly level hike also takes the hiker by the Torrey Pines, numerous archeological sites, and along a beautiful and varied coastline.



Tim Hauf

Jane's knees (braces that tied the vessel's deck to the side of the hull), Santa Rosa Island

## Connecting with the Park

By Tom Dore, Park Ranger

The reasons for visiting Channel Islands National Park are as varied as the sand grains in the dunes at Cuyler Beach. The National Park Service understands this and provides opportunities for people to make their unique connection with the place.

It may look like visitors come to camp, or kayak, or bird-watch, but what they could actually be doing is re-creating an old experience. We often remember where or when we were truly alone in nature for the first time, or heard silence for the first time outdoors, when we caught that first fish, or were close to a wild animal.

The smells, sounds, and feelings that are linked to each special place can be enduring and have such a positive effect that we sometimes search for ways to re-create them. Re-create the experience and we re-create the feeling. Perhaps our most exciting experiences in nature are exhilarating because we didn't know what was around the corner or had never been in that situation before. That's adventure.

This park—Anacapa, Santa Rosa, Santa Cruz, San Miguel, and Santa Barbara Islands—is a perfect place to re-create. Here people can find the elements they look for in primitive and wild experiences far from the hints of the human-made landscape. It is a specific time machine: nature and silence.

### The Time Machine

Just before I finish a guided walk out to Inspiration Point on Anacapa, there is a high point on the trail. It's actually the high point on all of East Anacapa Island. Folks may slow there and think they are actually gasping at the view, but I sometimes imagine they feel the Chumash footprints under their feet. There is almost 10,000 years of human history underneath them, of people walking right where they are, of Chumash scraping the meat out of abalone shells, gathering it all up in a kelp net, and climbing back down the steep, volcanic cliff to their plank canoes.

The more adventurous can take their shoes off, step back in time, and feel the crushed shells between their toes as the Chumash did. Little has changed here in all that time, and it is easy to see why they chose this panoramic spot to clean their food.

There are other places on the islands just like this one that have disappeared into the landscape, preserved forever—they will never be disturbed or built on. National Parks protect all of the park's resources and use a tiny portion to show visitors what's so special about the place...so that those visitors can make their own connection back in time.

### Nature

Animals and plants do interesting things on islands, adapting to the isolated environment in different ways. And Santa Cruz Island, the largest of all, has more species diversity than any of the other islands.

Sometimes when I'm done for the day out on Santa Cruz, when the last of the campers finally slide into their sleeping bags and rest their heads on their folded jackets, I imagine them musing over the sights and sounds of the day.

Some may have been lucky enough to see one of the island foxes, perhaps mistaking it for a cat since it's so small compared to the mainland fox from which it descended. Weighing about four or five pounds, the island fox is an example of island dwarfism, how certain animals evolve into smaller species as they adapt to the limited resources of an island ecosystem.

But the chances of spying an island fox are fairly slim right now. It was recently added to the endangered species list, since non-native pigs on Santa Cruz are a year-round supply of food for the recently-arrived golden eagles, which eat the foxes, too. More likely the campers saw an island scrub jay, which is bluer and bigger than its cousin on the mainland. The jay is an example of island gigantism, how some animals evolve into larger species since they don't have competition from the

abundance of species they would encounter on the mainland.

Maybe the campers kayaked near the sea caves, spotting Xantus's murrelets flying just above the water. They might even have seen them dive into the water and flap their wings as they swam deeper and deeper. This rare black and white bird spends its entire life at sea, except for breeding, and relies upon the isolation of our islands as safe harbor when its time to come ashore and have babies. Maybe, too, the campers had sea lions blowing bubbles under their kayaks as they frolicked in the kelp forest. Most seem astounded to learn that the giant kelp can grow two feet each day.

Growing much more slowly on the island is the Santa Cruz Island ironwood with its beautiful and distinctive leaf. They are all that remains of the groves that existed thousands of years ago all over the West. And then there are the stars. Perhaps the campers gazed at the stars before they headed into their tents. Just imagine, some only had to travel 20 miles to see more stars than most folks travel 200 miles to see. Their senses may dilate with their pupils, as the night envelops them.

There is wildness very close to us if we can just let go of our human ways and become an animal within nature. Spending the night on Santa Cruz Island, especially in the backcountry at Del Norte, allows one to fully integrate into the night rhythms of the island's critters and breezes. It's a lullaby you won't soon forget.

### Silence

Silence can be so alien to us that we find ourselves stopping while we walk on some of the islands and say, "Do you hear that?" "What." "The silence." Sounds are such a part of our mainland life that when they are absent it can be startling. The quiet reinforces that we are somewhere far away and, we are getting what we came for.

But there is no silence on Anacapa Island. It's a great place, but not quiet. With the thousands of western gulls cawing most of the year, and the seals and sea lions barking constantly, visitors

might not be able to hear the fog signal every 14 seconds if it weren't so loud. Usually at night, even during the gull nesting season, if it's not too windy, it gets much quieter. That is, until the barn owls go to work. Then there's no sleep for people or for the birds. The sounds of Santa Barbara Island are about the same as Anacapa, but without the lighthouse.

The two big islands, Santa Cruz and Santa Rosa, have isolated beaches and big, deep canyons and valleys that are sometimes soundless. The beaches on the south side of Santa Rosa mirror what Malibu probably looked like 100 years ago. There are coastal bluffs and mountains facing south, no roads or cars or buildings. The soundscape pulses with surf and silence, surf and silence. It's a strict rhythm that one can live one's life by.

The campground at San Miguel is probably the quietest place in coastal southern California. It's not like the west end, where 25,000 elephant seals are jockeying for a mate. The campground is right in the middle of the island, near the monument honoring Cabrillo. Coming up the canyon trail and over the dune from mint-colored Cuyler Harbor, visitors make their way through the shoulder-high yellow coreopsis forest. At this point they notice that the thunder of the surf zone has vanished. On the rest of the way to the campground, the quiet is broken only by the hiker's heartbeat and an occasional raven noting his presence.

Who knows what beguiling silences or deep echoes you might hear on your trip to the islands. Take some time and think about why you go to natural places. What experiences do you strive to re-create? You can probably create a similar experience at Channel Islands National Park and find your own, personal way to connect with nature. Pack your pack and go to Channel Islands, Ventura, or Santa Barbara harbor. There's a boat leaving nearly every day for one of the Channel Islands.

Visit [www.nps.gov/chis](http://www.nps.gov/chis) for more information.

# Incredible Vanishing Kelp Forests

By Gary E. Davis, Chief Scientist, Channel Islands National Park

GLIDING SLOWLY DOWNWARD, THROUGH COOL, CLEAR WATER, WEAVING AMONG THE GENTLY swaying pillars of giant kelp, you know you're entering another world—a forest of sorts, but not one of green trees, birds, or wind. This is a world of kelp, fish, and ocean currents. Through the kelp canopy, sparkling shafts of sunlight filter to dapple the rocks below and enhance the ephemeral impression of shimmering clouds of fish.

Kelp forests change dramatically from season to season and from year to year. Winter storms remove old fronds from the canopy, flooding the seafloor with sunlight, and treating sea urchins and abalone to a feast of drifting kelp fragments. During winter, open, park-like vistas appear briefly, only to vanish again in the spring, when days grow longer, sea temperatures rise, and the kelp grows thickly back, sheltering and shading the understory haunts of lobsters and sponges, scallops and sea snails.

For millennia, kelp forests have provided humans with food, tools, fertilizer, and jewelry. Growing on nearshore, sunlit reefs, kelp forests are easily accessible and among the first parts of the ocean exploited. Kelp itself produces a rich supply of phosphorous, nitrogen, and sugar that fuel the entire system. Chemicals extracted from kelp also improve modern life in numerous ways. Kelp helps to emulsify ice cream, smooth lipstick, and produce the slick paper used in magazines. Abalone shells provided ancient people with smooth, hard materials they could use as bowls and shape into fish hooks and beautiful ornaments that continue to inspire admiration. Kelp and shells are useful in these individual roles, but seen out of their element, they lose their inherent mystery and beauty. Since the advent of SCUBA diving, people have been able to appreciate that beauty by diving in underwater kelp forests. A soaring canopy of kelp towers above the ocean floor like an immense vaulted ceiling, while golden shafts of sunlight pass through the kelp fronds with the same effect as sunlight passing through amber stained glass. Divers looking up at this awesome beauty find the echoing quiet of a cathedral mirrored in the silence of the sea.

A quiet crisis is brewing in our ocean sanctuaries. In Channel Islands National Park, three-quarters of these magnificent underwater forests have vanished in the last 20 years. The cause was not obvious. Kelp harvesters did not cut down the kelp forests. While they removed thousands of tons of kelp from the system every year, they cut only the upper few feet of the rapidly growing canopy near the sea surface. Once a mystery, it is now clear that modern fishing inadvertently cleared kelp forests, just as effectively as pioneers cleared North American forests with axes. The forest's demise resulted from excessive grazing on the bottom. Fishing sequentially removed the largest, most valuable predators



Kelpforest, Anacapa Island



Sheephead

(e.g., sheephead, rockfish, lobster, and sea otters) and large grazers (e.g., abalone, red sea urchins, and sea cows) from kelp forests and adjacent reefs. Small grazer (e.g., purple sea urchins) and filter feeder (e.g., sea cucumbers and brittle stars) populations increased rapidly, without predators and large competitors to control them. Hoards of these animals ate all of the new kelp plants as they tried to settle and grow in areas cleared by winter storms. Eventually, the kelp and all it supported succumbed to this incessant grazing.

Fishing began an unintended cascade of ecological effects that coursed through the forest for decades before scientists detected anything amiss. Urchin barrens and carpets of brittle stars or sea cucumbers replaced the towering forests that formerly sheltered nearly 1,000 species of fish, shellfish, and kelp. These new, simple communities, composed of a small handful of creatures hugging the bottom, offer little shelter or food, and none of the incredible beauty and inspiration of the towering kelp forests they have replaced.

To rebuild kelp forests in the park, we must act soon before species are lost. White abalone are nearly extinct, and many kelp forest species are in jeopardy. Designated as the nation's first endangered marine invertebrate in 2001, white abalone were once most abundant around the California Channel Islands. An experimental captive rearing program now seeks to prevent their extinction, but without improvements in kelp forest health, the next generation will have no home in the wild. Some areas of historic kelp forests must be set aside from fishing to permit normal food webs to form again, so large predators and grazers can balance the system and allow the kelp to grow again. Only then will the forest return. In such a restored environment, white abalone and other species may recover. If we act now, kelp forests will once again awe and inspire divers who venture into the silent world. More importantly, restored kelp forests will nourish those of us who seek peace in the knowledge that our cathedrals of the sea are safe, and that their sanctuary will be unimpaired for the enjoyment of future generations.

## Park and Sanctuary Waters Protected

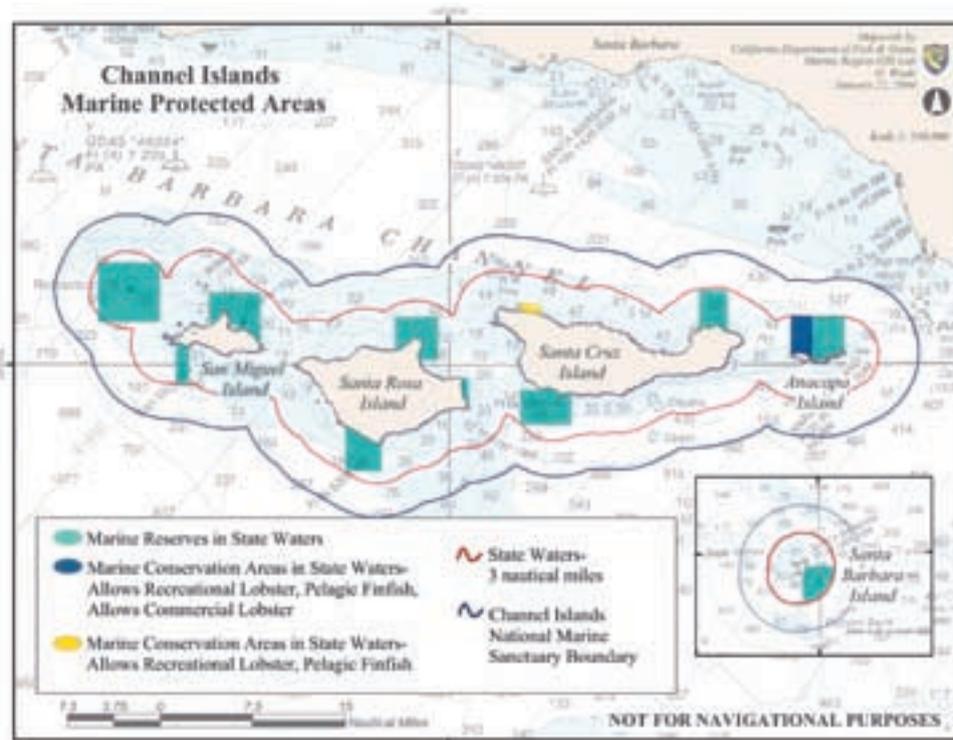
IN OCTOBER 2002, THE CALIFORNIA FISH AND GAME COMMISSION FORMALLY CREATED the largest network of marine protected areas (MPAs) off the West Coast. The decision protects approximately 20% (132 square nautical miles or 175 square miles) of the waters within Channel Islands National Park and Marine Sanctuary. The 12 established MPAs will protect and restore habitats and ecosystems, conserve biodiversity, provide a refuge for sea life, enhance recreational and educational opportunities, provide reference areas for scientists to measure changes elsewhere in the environment, and help rebuild depleted fisheries.

This action allows all Californians to enjoy this diverse wildlife area, while restoring and preserving marine populations for future generations," said former state governor Gray Davis. "I'm delighted that this vote advances our goal of preserving California's natural resources for our children and our children's children."

The plan for a network of MPAs was first proposed in 1998 by a group of sportfishermen. In response, the Department of Fish and Game (DFG) and the sanctuary launched a process that drew upon a group of stakeholders (known as the Marine Reserves Working Group) that developed a range of approaches to address the problem. The stakeholder group included representatives from fishing groups, kelp harvesters, academia, environmental groups, and state and federal government. An independent, blue-ribbon panel of experts advised the Working Group. Four large forums were also held to receive public input. More than 9,000 public comments were received; the majority supported a reserve network in the Channel Islands.

The MPAs extend around portions of state waters surrounding the five islands that form the Channel Islands National Park and Marine Sanctuary: Anacapa, Santa Cruz, San Miguel, Santa Rosa, and Santa Barbara. The alternative adopted by the Fish and Game Commission also includes a recreational-only fishing zone off Santa Cruz Island and an area with limited commercial and recreational fishing off Anacapa Island.

The next phase of this project would expand the network of MPAs into federal waters—those lying beyond the three-mile boundary of state water that encircle each



island. The full system of marine reserves would cover 322 nautical miles (426 square miles) and once adopted by the federal government would make California the home of the largest network of marine reserves in the continental United States.

DFG has developed a comprehensive website at [www.dfg.ca.gov/mrd/channel\\_islands/index.html](http://www.dfg.ca.gov/mrd/channel_islands/index.html) that includes regulations and detailed maps of the newly formed MPAs.

# What's in a Name?

By Jack Gilooly, National Park Ranger

A little bit of history, really. On the Channel Islands, many colorful stories are found behind the place-names: Prisoners Harbor, Painted Cave, China Camp, Frenchys Cove. Some take us back to the pioneer days, when Europeans first plied the California coastline. Others go even further, to the days of the Chumash and Gabrieliño/Tongva, the first island settlers.

One of the Chumash names is still seen today—*Anacapa*, the closest island to the mainland. As an important stopover in Chumash trade routes, the island often appeared as a mirage floating on the horizon. In their Hokan language, it is *anyapakh* or *eneepah*—“ever-changing, deception.” Once anglicized to “Anacapa,” the name stuck, just like Chumash titles on the mainland: Malibu, Simi, Mugu, Ojai.



Ennepha, Las Mesitas or Anacapa Island

The other islands have Spanish names and have gone through many changes since Juan Rodriguez Cabrillo sighted them in 1542. As the first European explorer to sail the California coast, he collectively called them Las Islas de San Lucas. Two hundred-fifty years later, George Vancouver, a British explorer, finalized the individual names we see today.

In 1792—93, Vancouver sailed the North American coast in his two ships, *Chatham* and *Discovery*, searching for the Northwest Passage and checking on Spanish settlements. As he mapped the coast, Vancouver was looking at Spanish charts and picked the names he preferred. For Anacapa, he could have used Las Mesitas, “the little tables,” bestowed by Spanish explorer Gaspar de Portolá. Instead, Vancouver chose *Enecapa* from another map, which became Anacapa on a Coast Survey map in 1854.

Santa Barbara Island was known to the southern Gabrieliño/Tongva people as Siwot (no translation). Then in 1602, Spanish explorer Sebastian Vizcaino made a visit. He was searching for suitable harbors, for trading ships that sailed from the Philippines to Mexico. It is uncertain if he actually stopped at the island or simply arrived in the area on December 4<sup>th</sup>, the feast day of the martyred Roman virgin, Barbara (who is now the patron saint of mariners). The mainland city and ocean channel were also named for this event, as was Anacapa for awhile.

The Chumash call Santa Rosa Island Wima, or “driftwood.” With large logs washing ashore, it was an important boat-building center. The origin of its present name isn't clear, but it appeared on a map Vancouver was using. Another of these maps called it San Miguel, but he had already chosen that one for the westernmost island. The story behind this name is also unknown, but it may have derived from one of Cabrillo's vessels, the *San Miguel*. The Chumash had known the island as Tuqan (no translation).

There is a much fabled story about the naming of Santa Cruz Island. In 1769, the Portolá expedition stopped there for supplies. Back aboard ship, one of the Franciscan friars realized he'd left his staff, which was topped with an iron cross. The next day, as the ship was pulling anchor, a Chumash tomol (canoe) hurriedly paddled out to return the lost staff. In commemorating this small miracle, the island was titled Isla de la Santa Cruz, “Island of the Holy Cross.” Before that, the Chumash called it Limuw, “in the sea.” It was an important manufacturing center for their shell bead industry—native “money,” traded throughout the southwest.

Some island names describe prominent features: Green Mountain, Wreck Canyon, Yellowbanks. On Santa Cruz Island, a giant sea cave is aptly named for its vivid geology and walls covered in lichens and algae: Painted Cave. Other monikers were coined for various interest groups over the years. China Camp and Chinese Harbor were the sites of early abalone fishing camps. At Smugglers Cove on Santa Cruz, poachers sold otter pelts after the first protective laws were passed.

One unusual episode occurred in 1830, on the north side of Santa Cruz Island. It seems the prisons of Mexico were overcrowded, so they loaded some convicts on a ship out of Acapulco and sent them north, to be dropped somewhere in Alta California. Denied permission to land at San Diego and Santa Barbara, the ship's captain decided to drop them off at Santa Cruz. Without the means for survival, they built rafts and floated back to the mainland. Today's maps show their island landing spot: Prisoners Harbor.



Painted Cave, Santa Cruz Island



Christy's Ranch, Santa Cruz Island



Prisoners Harbor, Santa Cruz Island



Sutil Island, Santa Barbara Island

Because many of the island ranchers were Hispanic, some titles include the Spanish words for geographic features: Barranca (ravine or gorge), Campo (field), Grande (large), Llano (level field), Cañada (canyon). On Santa Rosa Island, Cañada Lobo likely describes a big rock next to the road where it crosses the canyon. Lobo means “wolf” or “seal,” but the rock is certainly a seal.

Many island place-names were standardized by the U.S. Coast and Geodetic Survey in the 1850s—70s. When titles varied, they sometimes used the names of fellow surveyors or the Navy crewmen who escorted them. Thus, we have Johnsons Lee on Santa Rosa named for William H. Johnson, who was in charge of early surveys. Cuyler Harbor on San Miguel was titled for Navy Lieutenant Richard M. Cuyler. The Survey labeled Sutil Island off Santa Barbara for one of the ships in the Galiano expedition of 1792. Forney Cove on Santa Cruz was dubbed for Stehman Forney, a topographer completing previous surveys.

The islands are peppered with the names of other characters, notable in their days. Christy Ranch on Santa Cruz was named by Justinian Caire, the island's owner from 1880—97. His wife was Albina Christina, their youngest child Marie Christian—but it was never recorded for which one the ranch was titled, perhaps both.

Nidever Canyon on San Miguel was named for George Nidever, an early owner and sheep rancher there (1863—70), and resident squatter on Santa Rosa before that. During the 1800s, he was perhaps the most famous, and infamous, character on both sides of the Santa Barbara Channel. Bringing the legacy of “mountain man” to the seacoast, Nidever had joined the Walker expedition in 1834, the first to cross the Sierras from the east. He quickly began trapping beaver and sea otters as he made his way down the coast, soon acquiring a ship—and a reputation as a roustabout. On Santa Rosa Island, Nidever once engaged in bloody battle with a rival group of fur-hunting Aleuts.



Nidever Canyon, San Miguel Island



Frenchys Cove, Anacapa Island

But Nidever is most renowned for “rescuing” the Lone Woman of San Nicolas Island in 1854, the last of the early inhabitants. After hearing the legends, he sailed out and discovered her footprints while gathering seagull eggs. He brought her to Santa Barbara, where she lived in his house for a short time before succumbing to disease. An award-winning children's book, *Island of the Blue Dolphins*, chronicles her life alone on the island.

Another classic tale is found at Frenchys Cove on Anacapa, a popular anchorage between Middle and West islets. Raymond “Frenchy” LaDreau, a fisherman, moved into four small fishing cabins there around 1928. Living with his cats for 28 years, he traded fish and lobster for other needs while looking out for the place. After suffering a fall in 1956 at age 80, Frenchy left for the mainland and was never heard from again.

Truly, the islands hold the secrets of those who came before, the explorers and pioneers, cultures, and characters. Though many of their tales have been lost, others await discovery. Who were these people? Where did that come from? If you're looking to unlock a few mysteries of the Channel Islands, it all begins with a name.

# San Miguel Island

Wind and weather constantly sweep across the North Pacific to batter the shores of the westernmost of all the islands, San Miguel. This extreme weather creates a harsh but profoundly beautiful environment. The 9,500-acre island is primarily a plateau about 500 feet in elevation, but two 800-foot rounded hills emerge from its wild, windswept landscape. Although lush native vegetation covers this landscape today, a century's worth of sheep ranching and overgrazing caused scientists in 1875 to describe the island as "a barren lump of sand." With the grazing animals removed, vegetative recovery is in progress. Giant coreopsis, dudleya, locoweed, lupine, buckwheat, coastal sagebrush, and poppies are all recolonizing the island to their former extent, returning San Miguel to its more natural state.

Also making a comeback, after years of hunting, are the thousands of pinnipeds (seals and sea lions) that breed, pup, and haul out on the island's 27 miles of isolated coastline. Hikers who make the all-day, ranger-guided, 16-mile round-trip hike across the island to Point Bennett will never forget seeing one of the world's most spectacular wildlife displays—over 30,000 pinnipeds and up to five different species hauled out on the point's beaches at certain times of year.

Other wildlife include the island fox and deer mouse. Both of these little creatures are "endemics"—they are found only on the Channel Islands. The island fox, the size of a house cat, is the largest land animal on the island. In the waters surrounding San Miguel, the marine animals get much larger. Dolphins and porpoises are often spotted along with gray whales, killer whales, and the largest animal of all, the blue whale.

In the spring and summer the skies are filled with birds. Boaters entering Cuyler Harbor receive a greeting from western gulls, California brown pelicans, cormorants, and Cassin's auklets that nest on Prince Island. Black oystercatchers, with their bright red bills and pink feet, feed along the beach. Terrestrial residents include the western meadowlark, the rock



Spring flowers, Cuyler Harbor, San Miguel Island

wren, and the song sparrow, an endemic subspecies. Peregrine falcons have recently been restored to the island and are nesting successfully once again after years of decimation by the pesticide DDT.

In addition to the variety of natural resources, San Miguel hosts an array of cultural resources as well. The Chumash Indians lived on San Miguel almost continuously for over 11,000 years. Today there are over 600 fragile, relatively undisturbed archeological sites. The oldest one dates back to 11,600 years before the present—some of the oldest evidence of human presence in North America. Juan Rodriguez Cabrillo and his men laid eyes on San Miguel Island in 1542. Upon claiming the island for the Spanish crown, Cabrillo named it "La Posesion." Some stories say that Cabrillo wintered and died on San Miguel Island. No one knows where Cabrillo is buried, but there is a memorial commemorating the explorer on a bluff overlooking Cuyler Harbor.

Other outstanding island resources that visitors may experience on San Miguel include the caliche forest (sand-castings of ancient vegetation), fossil bones of the Pleistocene pygmy mammoths that stood 4 to 6 feet at the shoulders, 150 years of ranching history, and numerous shipwrecks. Whether you are interested in life of the past or life of the present, San Miguel Island has it in abundance. Visit, explore, and enjoy.

## Things To Do

- One-day trips, long overnight camping trips (minimum stay is generally 3 days—Friday to Sunday), and multi-day boat trips.
- Be prepared for adverse weather.
- Hiking options are limited. Visitors may explore a small area on their own—including the 2-mile long Cuyler Harbor beach and the 1-mile trail to the ranger station. To see other parts of the island you must go with a ranger. Rangers are generally available to lead hikes, but check with the park or concessionaires in advance.
- Ideal place for viewing native vegetation, the unique caliche forest, and seals and sea lions (with ranger escort).
- Due to high incidence of strong winds, swimming, snorkeling, diving, and kayaking are limited and recommended for the experienced visitor.
- Despite the wind, Cuyler Harbor is one of the most scenic beaches in the park.

Refer to related articles for more information.

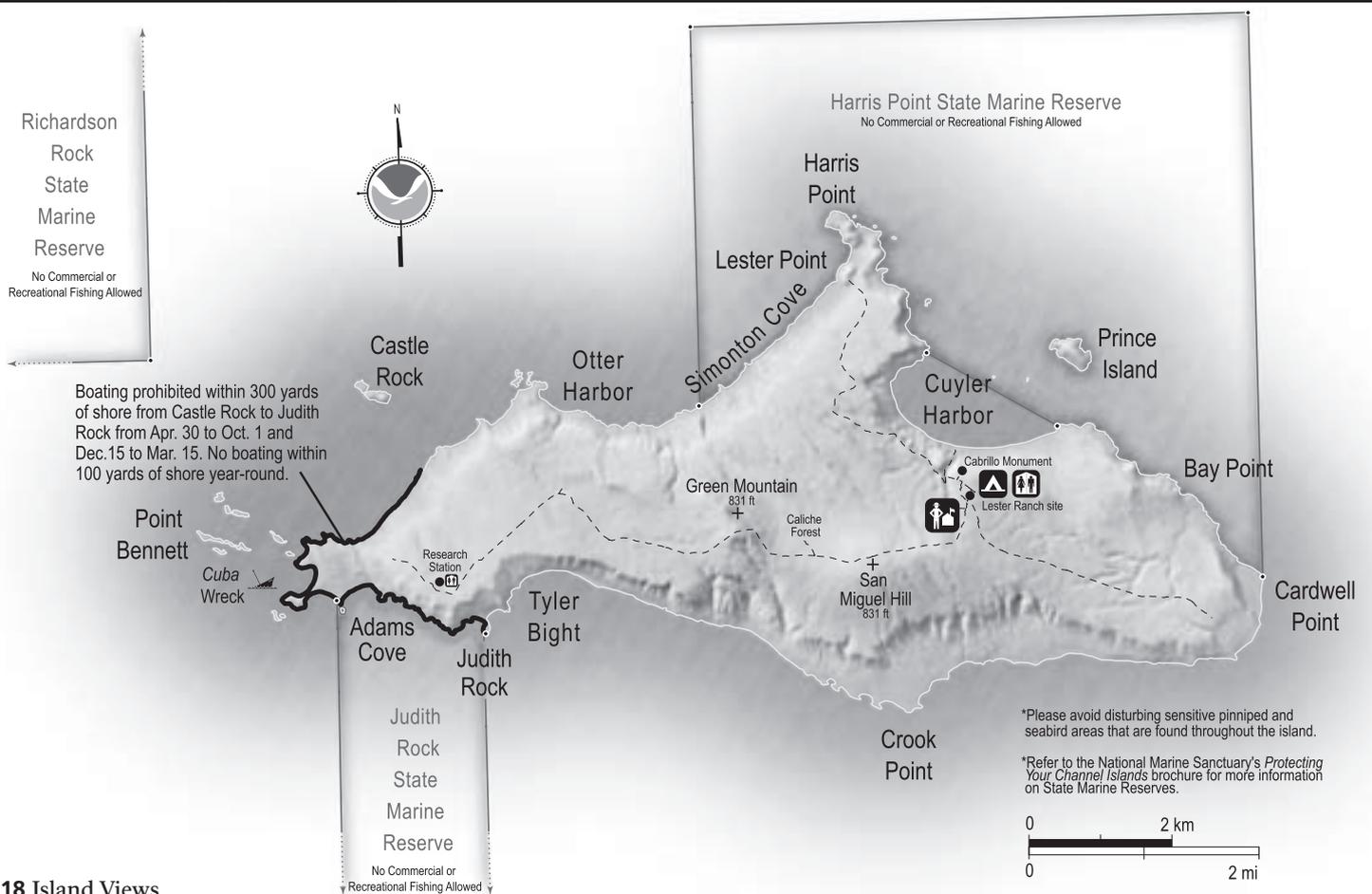
## Island Facts

- Located in Santa Barbara County.
- 14 square miles; 9325 acres; 8 miles long by 4 miles wide.
- The San Miguel Island fox, deer mouse and introduced rat are the only land mammals found on San Miguel Island.
- Up to five different pinniped species and 30,000 individuals can be found at Point Bennett, one of the largest concentrations of wildlife in the world.
- One of the oldest known Chumash archeological sites (11,600 years ago) is on San Miguel Island.
- Over a dozen Channel Islands endemic plants.

## Hiking Information

Destination (from Cuyler Harbor)	Distance (miles, roundtrip)	Difficulty	Description
Cuyler Harbor Beach	2	Easy	A wonderful 2-mile-long white sand beach to explore. Use caution around rockfalls.
Lester Ranch site	2	Moderate	Hike up a spectacular canyon with lush native vegetation to an overlook and two historic sites.
Caliche Forest	5	Strenuous	View sand-castings of ancient vegetation. Must be accompanied by a park ranger.
Point Bennett	16	Strenuous	Continue past the caliche forest with a park ranger to view over 30,000 seals and sea lions.
Lester Point	5	Strenuous	Hikers must be accompanied by a park ranger on this hike to an incredible, windswept overlook.

- Hikers must stay on island trails to protect fragile vegetation and for visitor safety.
- Hikers must be accompanied by a park ranger beyond the ranger station.



Caliche forest, San Miguel Island



Elephant Seals, Point Bennett, San Miguel Island



Cuyler Harbor from Harris Point trail, San Miguel Island

# Seals and Sea Lions

Walking to Point Bennett on the western tip of San Miguel Island requires some stamina, for it is a fifteen-mile roundtrip hike. About half-way across the island, however, there is something that will help spur you on and encourage your feet to keep moving. That something is a sound—faint at first, but gradually getting louder and louder. The noise is a sort of rumble, low and rolling. What can be making this strange sound? As you come over the rise at Point Bennett you find your answer. There are thousands of elephant seals on the beach—flipping up sand over their huge torpedo-shaped bodies, moving like globs of JELLO-O over the sand, and carving out territories to call their own. The originators of the noise that you have been listening to are the gigantic males with their long proboscises that gives the species its name. You are witnessing a timeless ritual of which sound is just a small part.

The elephant seal is one of four species of pinniped (or “wing or feather-footed”) marine mammals that are commonly sighted around Point Bennett. Other species include California sea lions, northern fur seals, and harbor seals. At one time, two other species were found here in abundance—Steller or northern, sea lions and Guadalupe fur seals. While Steller sea lions have not been seen since the 1980s, a few



Elephant seal pups

Guadalupe fur seals are occasionally sighted. Nevertheless, not only are more species sighted at this remote spot than at anywhere else on the planet, but this gathering represents one of the largest congregations of wildlife in the world. Staggering populations of over 70,000 California sea lions, 5,000 northern fur seals, 50,000 northern elephant seals and 1,100 harbor seals breed and pup on the island each year.

The diversity of pinnipeds is part of a larger picture of biological diversity found in the Santa Barbara Channel. San Miguel Island lies in an area of water that overlaps two currents—a cold current moving down the Pacific coast from Alaska and a warm current moving up the Pacific coast from Mexico. Those two currents meet and intermingle not only water, but many of the species associated with corresponding cold and warm currents.

Islands also bring diversity by providing shelf areas where sunlight can penetrate the water, and plants, such as the giant bladder kelp, can grow. The dense kelp forests around the islands provide food and shelter for many varieties of plants and animals. Diversity is also linked to upwelling conditions that exist near San Miguel Island. Upwelling sucks cold nutrient-rich water that normally lies at the bottom of the ocean to the surface, providing food for hundreds of species.

Finally, the isolation of the islands also plays a role. A beach all to themselves with no disturbance from people must be very enticing for seals and sea lions. Therefore, the Santa Barbara Channel, the islands, and Point Bennett, specifically, provide all the necessary ingredients that they need—wide sandy beaches, plenty of food, and others of their kind.

Researchers from the National Marine Fisheries Service, in cooperation with the park, have been studying the seals and sea lions of San Miguel since 1968. Long-term behavior studies on marked animals provide information about reproductive behavior as well as migratory and feeding patterns. Current studies focus on winter feeding and maternal behavior of California sea lions; northern elephant seals’ diving and migration patterns; and, of course, the impacts

of El Niño on the pinniped population. Visit the park’s web site ([www.nps.gov/chis/](http://www.nps.gov/chis/)) for more information on these research projects.

These pinnipeds are protected by spending at least part of their lives in a national park—or are they? Some threats to these animals know no boundaries. Threats made by water pollution, plastics and debris in the ocean, oil spills, overharvesting of fisheries, toxins, and pesticides affect even isolated areas like Point Bennett. These threats can also affect people. Without protection, the spectacular rituals performed on the beaches of Point Bennett can become a thing of the past. Generations to come may only experience the grandeur of Point Bennett through stories and photographs.

People can make sure pinnipeds of the park and world survive into the future. Simple things like recycling plastics can make a difference to a curious young sea lion looking for something to play with. That plaything does not need to be a piece of plastic webbing that may strangle it. The most important action people can take is to visit Point Bennett. Discover the world of the pinnipeds for yourself—then tell others how important it is to keep the rituals continuing.

## Whale Watching

The waters surrounding Channel Islands National Park are home to many diverse and beautiful species of cetaceans (whales, dolphins, and porpoises). About one third of the cetacean species found worldwide can be seen right here in our own backyard, the Santa Barbara Channel. The 27 species sighted in the channel include gray, blue, humpback, minke, sperm, and pilot whales; orcas; Dall’s porpoise; and Risso’s, Pacific white-sided, common, and bottlenose dolphins.

This diversity of cetacean species offers a great opportunity to whale watch year-round. The most common sightings are of gray whales from mid- to late-December through mid-March, blue and humpback whales during the summer, and common dolphins throughout the entire year. Whales and dolphins can be seen either from shore or from a boat. The best shore viewing is from a high spot on a point that juts out into the ocean. Some examples include Point Dume in Malibu, the Palos Verdes Peninsula near Los Angeles, and Point Loma in San Diego. The park visitor center has a tower with telescopes, which can be used for whale watching as well as island viewing. Watching in the early morning hours, before the wind causes whitecaps on the water’s surface, will provide you with the best opportunity to see whales from shore.

Closer viewing of whales is possible from public whale watching boats or private boats. Whales

have been known to approach boats quite closely. Under the Marine Mammal Protection Act, boaters must stay at least 100 yards from whales unless the whale chooses to approach the boat.

Many whales are on the endangered species list and should be treated with special care. All whales are protected by the Marine Mammal Protection Act; it is illegal to disturb or harm any marine mammal. Boaters who use private craft to watch whales must remember to stay at least 100 yards away from whales. Boaters who frighten or interrupt the whales’ activities by approaching too close could drive the whales away from food or young calves. Please remember that whales are wild animals and can be unpredictable.

We need to continue to explore the world of whales and dolphins. The well-being of the cetacean population is a good indication of the health of the ecosystem. Our ability to bring these species into the next century and beyond is an indication of the future of life on this planet. Every day we learn more about these mysterious and unique creatures that dwell beneath the water, yet rise above it to breathe.

The park concessionaires offer whale watching during the year. Please refer to the “Transportation—How To Get There” section for contact information.

### Whale Habits

Whether you are watching from shore or in a boat, here are a few distinctive habits to look for.

**Spouts.** Your first indication of a whale will probably be its spout or “blow.” It will be visible for many miles on a calm day, and an explosive “whoosh” of exhalation may be heard up to 1/2 mile away. The spout is mainly condensation created as the whale’s warm, humid breath expands and cools in the sea air.

**Breaching.** No one knows why whales perform this most spectacular of their behaviors. It may be part of the courtship display, a signal, an effort to dislodge parasites, an expression of stress, or just for fun. When breaching, three-quarters or more of the whale’s body bursts forth from the water, pivots onto its side or back, and falls back with an enormous splash.

**Diving.** Diving is preceded by whales thrusting their tail flukes out of the water. Typically, whales make a series of shallow dives, followed by a deep dive.

**Footprints.** Ripples caused by the vertical thrusts of the tail as the whale dives are called “footprints.”

**Spyhopping.** Whales and dolphins are believed to have reasonable vision in air as well as water. On occasion, a whale will extend its head vertically from the sea. Supported by thrusting flukes, the whale’s head can rise 8-10 feet above the surface, sometimes turning slowly for thirty seconds or more before slipping back underwater.



Blue whale with spout



Breaching humpback whale



Blue whale fluke



Gray whale spyhopping

# Limiting Your Impact

## Regulations and Guidelines for Protecting Natural and Cultural Resources

The protection and preservation of your park's biological, cultural, and historical resources is a major mission of the National Park Service. By following the regulations and guidelines listed below, you can help protect these rare and unique treasures of Channel Islands National Park for future generations to enjoy.

In addition to the regulations listed below, visitors must comply with all regulations in Title 36, Code of Federal Regulations (CFR) and the Superintendent's Compendium. Visit [www.nps.gov/chis/](http://www.nps.gov/chis/) for a complete list of regulations.

### Regulations

- As in all national parks, natural and cultural resources are protected under federal law. **Visitors may not collect, harass, feed, or otherwise harm the native wildlife, plant life, or other natural and cultural resources** of Channel Islands National Park. These include, but are not limited to, vegetation, animals, rocks, shells, feathers, and other natural, archeological, and historic features within the park.

- Under federal law it is illegal to feed, touch, tease, frighten, or intentionally disturb wildlife, including seabirds, seals, and sea lions.** They are very sensitive to any type of human disturbance, especially during nesting and pupping seasons. Visitors should stay at least 100 yards away from wildlife. **Do not directly or indirectly feed the native wildlife.** Wildlife can become habituated to human food by being fed. Once habituated, these animals will beg for food, becoming nuisances to visitors. In addition, habituated animals may bite and transmit diseases, and may consume plastics that obstruct their digestive systems, causing them to starve. **Secure your food and garbage at all times.** [Title 36CFR 2.2 (a)(2)]

- Take or disturbance of any archeological site or artifacts, including shipwrecks and middens, are violations of state and federal law.** Help preserve more than 10,000 years of Native American Indian island culture and other cultural resources by having respect for these sites.

- To protect wildlife, landing is prohibited on all offshore rocks and islets.** [Superintendent's Compendium 36 CFR 1.5 (a)(1)]

- Visitors may not set foot ashore inside sea caves, including, but not limited to ledges and beaches.** [Superintendent's Compendium 36 CFR 1.5 (a)(2)]

- The use of personal watercraft is prohibited in park waters** (1 nautical mile around each island). [Title 36CFR 3.25 (a)-(c)]

- Private aircraft may not land within park boundaries. All aircraft must maintain a minimum 1000-foot altitude above land and sea surfaces within the park.**

- Pack out what you pack in.** There are **no trash cans** on the islands. Please do not place trash in outhouses.

- No pets** are allowed on the islands.

### 20 Island Views

- No smoking on trails or in brush areas.** Please smoke only in designated areas.

- Charcoal or other types of open fires are prohibited on all islands (except from Dec. 1 to May 15 in designated areas at Scorpion beach on eastern Santa Cruz Island).** Camping stoves and gas grills are allowed.

- Clean your tents, boots, and other gear before coming to the islands** to prevent the introduction of non-native seeds.

- Possession of a valid **California state fishing license and an Ocean Enhancement stamp are required to fish**, and all California Department of Fish and Game regulations apply. In addition, twelve California State Marine Protected Areas have been established in the Channel Islands. Special resource protection regulations apply. **Visitors should be sure to obtain the Channel Islands National Park brochure/map and the Channel Islands National Marine Sanctuary (NOAA/NMS) brochure in addition to this newspaper for more information on fishing restrictions within the Marine Protected Areas.**

- The national park boundary extends one nautical mile around the islands. Within this area, there are several agencies that have management responsibility and regulations. For complete information regarding these regulations, **please refer to the National Marine Sanctuary's brochure** available at the park visitor center or visit [www.dfg.ca.gov](http://www.dfg.ca.gov).

### Specific Island Regulations

#### Santa Barbara

- No commercial or recreational fishing is allowed in the State Marine Reserve.**

#### Anacapa

- West Anacapa Island is the largest breeding rookery on the West Coast for the endangered California brown pelican. In order to protect this nesting area from disturbance, **West Anacapa (except at Frenchys Cove) has been designated as a protected research natural area and is closed to public entry.** Frenchys Cove beach is accessible for day use without a permit. To protect the cliffside nests of the endangered California brown pelican, **the waters out to 120-foot depth from the northeast facing cliffs of West Anacapa are closed to entry by any craft, including kayak, from January 1 to October 31.**

- Visitors to Middle Anacapa Island must be accompanied by a ranger.**

- No commercial or recreational fishing is allowed in the State Marine Reserve.**

- No take of living or non-living marine resources is allowed in the State Marine Conservation Area except recreational take of spiny lobster and pelagic finfish and commercial take of spiny lobster.**

#### Santa Cruz

- No commercial or recreational fishing is allowed in the State Marine Reserves.**
- No take of living or non-living marine**

**resources is allowed in the State Marine Conservation Area except recreational take of spiny lobster and pelagic finfish.**

- A **landing permit is required for visitors (including private boaters) to enter The Nature Conservancy property** on Santa Cruz Island. See page 21 for more information.

- To protect nesting ashy storm-petrels and Xantus's murrelets and their habitats, Bat Cave and caves #3 and #4 within the Cavern Point Cove cave complex are closed year-round.** With over 100 nests, Bat Cave hosts the largest nesting colony in the world for the rare ashy storm-petrel. The Xantus's murrelet is proposed for state and federal endangered species listing. [Superintendent's Compendium 36CFR 1.5 (a)(1)]  
Bat Cave: UTM 11S 0262623, 3770695  
Lat. N34°03'07.2", Long. W119°34'25"  
Cavern #3 & #4: UTM 11S 0263641, 3770901  
Lat. N34°03'16.0", Long. W119°33'41"

#### Santa Rosa

- No commercial or recreational fishing is allowed in the State Marine Reserves.**

- From **March 1 to September 15**, the coastline from and including Skunk Point to just north of East Point is **closed to landing or hiking** to protect the nesting area for the snowy plover, a federally listed, threatened shorebird.

- Camping and landing are prohibited year-round at beaches around Sandy Point. Please refer to Backcountry Beachcamping site bulletin for other closures.**

#### San Miguel

- No commercial or recreational fishing is allowed in the State Marine Reserves.**

- All of the shoreline of San Miguel is closed to public landing or entry with the exception of Cuyler Harbor.**

- Hikers must be accompanied** beyond the ranger station by a park ranger. Call the visitor center for arrangement.

### Guidelines (all islands)

- Avoid approaching areas (sea caves, offshore rocks, cliffs, and beaches) with birds, seals, and sea lions that are roosting, nesting, or pupping. Look ahead and give animals a 100-yard clearance if possible. Be alert for birds that you may not be able to see around guano-covered rocks and pinnipeds hauled out on secluded beaches.** Seabirds and shorebirds are disturbed easily and may knock their eggs out of or abandon their nests if they are flushed suddenly. Adult birds will stay away from the nest while people are in the area. The eggs or chicks may overheat in the sun without parental protection. Gulls and ravens are less shy of people and will take advantage of a disturbance to steal eggs and chicks. Entire colonies have been lost this way. Pupping harbor seals, sea lions, and other pinnipeds are also sensitive to any type of human disturbance and may abandon their pups. Be careful not to disturb

seal pups that appear stranded on beaches. These pups are being weaned by their mothers. In addition, all of these animals are easily disturbed when resting or preening on rocks or secluded beaches at the water's edge. Rest periods are important to their energy budget. Approach new territory slowly and quietly. If you see animals close by, quietly move away. There may be more animals than you first see.

- It is recommended that visitors avoid sea caves, including dry caves behind beaches, during the spring and summer when seabirds are nesting.** Entering caves and/or making loud noises in these areas may cause seabirds to abandon their nests. Pelagic cormorants nest on tiny ledges of sea cliffs and just inside the mouths of caves. Xantus's murrelets, pigeon guillemots and ashy storm-petrels nest in crevices, ledges, and under rocks and debris inside caves. Many seabirds leave their nests alone while feeding, so even if birds are not present, a misplaced step could crush an egg or chick by moving a loose rock. Bats also hibernate in some of the dry sea caves and waking them can cause a fatal depletion of energy reserves. There may be resting birds and pinnipeds in caves and on offshore rocks even after the breeding season. Under federal law it is illegal to disturb and/or harm these animals. Be cautious of pinnipeds resting on rocks or beaches in the backs of caves. Startling a pinniped that you can't see in the dark could be hazardous for you as well.

- Avoid using artificial light when viewing wildlife and at anytime while in sea caves.** Birds, pinnipeds, bats, and other animals are all easily disturbed by artificial light.

- In order to be rewarded with displays of interesting natural behavior, never chase any animals and do not try to see how close you can approach them.** If an animal starts to look alarmed (appears agitated or starts watching you), then you are too close. Even though it may not show obvious agitation, being too close can cause severe stress. Sit calmly at a safe distance. Let the animal's natural curiosity take over and it may approach you. Let seabirds, pinnipeds, foxes, and other animals adjust to your presence and you will be rewarded with displays of exciting natural behavior. For your safety as well as theirs, do not approach sick or injured animals. Alert a ranger or a wildlife rehabilitation center.

- Avoid disturbance of nesting and pupping wildlife and take advantage of the islands' best weather by kayaking during September and October.** Most seabirds, shorebirds and pinnipeds have completed their reproductive cycles by this time. In addition, calm seas and light wind are common during these months.

- Remember, these animals have nowhere else to go.** Help educate others. Let's protect our wildlife for all to see.

# Boating and Kayaking

Boating (excluding personal watercraft—see regulations on page 20) and kayaking are unique and rewarding ways to experience the pristine marine environment of Channel Islands National Park. You will find solitude and splendor. Here you will also face new challenges and may encounter unexpected dangers. This section is designed to help in planning a safe, enjoyable, and environmentally sound sea kayak trip in the park. Private boaters and kayakers (referred to collectively as “boaters”) may land on all five islands within the park throughout the year.

## Planning Your Trip

To help you decide which island to visit, specific island information is available from the visitor center through publications, exhibits, and the park movie. Some of the best kayaking within the park can be found on Santa Barbara, Anacapa and eastern Santa Cruz Islands. Due to extremely windy conditions, kayaking on Santa Rosa and San Miguel should not be attempted by the novice or anyone who is not properly trained, conditioned, and equipped. Detailed boating information about the channel and islands may be obtained from the U.S. Coast Guard’s (USCG) “Local Notice to Mariners” publication by contacting the Coast Guard at (510) 437-2981. Cruising guides to the Channel Islands are available from the visitor center bookstore, and nautical charts are available at local marine stores. Refer to the National Oceanic and Atmospheric Administration’s (NOAA) National Ocean Survey charts 18720, 18721, 18725, 18727, 18728, 18729, and 18756.

Visitors with their own kayaks who would like to explore the park may contact the park concessionaires, who will transport kayaks on their public trips for an extra fee. The concessionaires offer year-round transportation to the islands for day visits and camping trips. Kayakers may also paddle from the mainland across the channel to the islands (due to conditions, most of these cross-channel trips are limited to Anacapa Island). However, **this is not for the novice or anyone who is not properly trained, conditioned, and equipped.**

Currents, shifting swells, and strong winds can stretch a normal 3- to 4-hour trip to Anacapa Island into a 6-hour struggle. The strongest currents are often encountered near the island. The paddle from Oxnard or Ventura to Anacapa Island also takes the kayaker across some of the busiest shipping lanes in California. Potentially dense fog and ship speeds of 25 to 35 knots present a special hazard to kayakers while crossing the channel.

## Weather

Conditions in the Santa Barbara Channel and around the islands are variable and the ocean is unforgiving. Only experienced boaters with vessels capable of withstanding severe weather are advised to make the cross-channel passage. Boaters should obtain the latest weather broadcast provided by the NOAA Weather Service by calling (805) 988-6610, visiting their web site at [www.wrc.noaa.gov/](http://www.wrc.noaa.gov/) and by monitoring weather radio on VHF-FM 162.475 MHz (weather station 3) for

marine forecasts and VHF-FM 162.55 MHz (weather station 1) and VHF-FM 162.40 MHz (weather station 2) for land-based observations.

Weather conditions vary considerably in the channel. The calmest winds and sea conditions often occur August through October, making kayaking ideal. Kayaking is possible during other months, but with a much greater chance for adverse wind and seas with sudden unexpected changes. High winds may occur regardless of the forecast. Forty-knot winds are not unusual for Santa Rosa and San Miguel Islands. Anacapa and Santa Barbara Islands have more moderate winds.

Winds are often calm in the early morning and increase during the afternoon. Generally the wind comes from the northwest, but from October through January kayakers must also be prepared for strong east or Santa Ana winds. Dense fog is common during the summer months, but may occur at any time, making chart and compass navigation mandatory. Ocean currents of considerable strength may be encountered both near and offshore from the islands. Ocean water temperatures range from the lower 50s (°F) in the winter to the upper 60s (°F) in the fall.

***There are no public moorings or all-weather anchorages around the islands. It is recommended that one person stay on board the boat at all times. Boaters are responsible for any damage to the resources caused by their boat.***

## Safety

**Float Plans:** Boaters should always file a formal float plan with the harbor master before departing. Family and/or friends should also be informed of your float plan. Names and addresses for the boaters, as well as emergency phone numbers, should be listed. Plans should also include the number of boats (this includes kayaks) and boaters on the trip as well as the color, size, and type of craft used. Any survival and special emergency equipment should be listed (EPIRB, VHF, food rations, flares, etc.). The place, date, and time of departure and return should be logged as well as destination(s). This information can be invaluable for a search operation if something goes wrong. Remember to be flexible with your plans. Weather should always determine your course of action.

**Shipping Lanes:** Major shipping lanes lie between the islands and the mainland. Boaters should be aware of their location and use caution when crossing them. All boaters should listen to the USCG notice to mariners broadcast on VHF channel 22 since the waters in and surrounding the park are sometimes closed for military operations.

**Sea Caves:** Sea caves can be very dangerous—large waves or swells can fill a cave unexpectedly. Be extremely careful and *wear a helmet at all times when exploring sea caves.*

**General Kayak Safety:** Safety requires good planning and common sense. Sea kayaking is potentially hazardous, even for experienced kayakers. Before embarking on your Channel

## Landing Information

Island	Permit Required	Fee	Landing Areas	Landing Facility
East Anacapa	No	No	Landing Cove	Small dock*
Middle Anacapa	Yes*	No	Schedule with ranger	Rocky shoreline
West Anacapa	No	No	Only at Frenchys Cove	Beach
eastern Santa Cruz (NPS property)	No	No	Anywhere	Beach; pier at Scorpion and Prisoners
western Santa Cruz (TNC property)	Yes*	Yes*	TNC designated areas	Beach
Santa Rosa	No*	No	Anywhere*	Beach; pier in Bechers Bay
San Miguel	No*	No	Only at Cuyler Harbor*	Beach
Santa Barbara	No	No	Landing Cove	Small dock*

**\* Please see specific island information below for details.**

## Kayak Outfitters

Visitors may kayak with one of several outfitters that offer a variety of different kayak trips to the Channel Islands. The trips are moderate to strenuous in nature, but some do not require previous kayaking experience. Most kayak excursions are offered from May through October.

Adventours Outdoor Excursions Aquasports	(877) 467-2148 (800) 773-2309 (805) 968-7231	Channel Islands Kayak Center Paddle Sports Southwind Kayak Center	(805) 984-5995 (805) 899-4925 (800) SOUTHWIND
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Islands sea kayaking adventure, be sure to obtain current weather and sea conditions information. Carefully selecting and equipping your paddlecraft is essential. Craft should be of a sea kayak design. Paddlers will help insure a safe and rewarding trip for themselves if they have the following: 1) a seasoned veteran sea kayaker as a group leader; 2) equipment familiarity and ability to use it in an emergency; 3) ability to right the craft or to assist others who have capsized; 4) ability to brace the vessel in breaking seas and to deal with high winds; 5) ability to prevent, recognize, and treat hypothermia and other medical emergencies in wilderness conditions; 6) ability to read nautical charts and to plot a course; 7) a filed “Float Plan” with the harbor master’s office or with a responsible mainland contact; and 8) contact island rangers at the beginning and end of a paddle.

## Landing Permits and Procedures

There are no landing permits required for the islands administered by the National Park Service (NPS); however, there are closed and restricted areas on each island. Please refer to the “Limiting Your Impact” section on page 20 for information on regulations and guidelines. A landing permit is required to land on The Nature Conservancy (TNC) property on Santa Cruz Island. It is recommended that boaters contact the park ranger on each island before landing for an orientation, information on daily events, island safety, landing instructions, weather conditions, or camping check-in. Park rangers occasionally monitor VHF Channel 16. Channel 16 is a hailing frequency only, and rangers will instruct you to switch to another channel upon contact. If you cannot hail the park ranger on the island on which you plan to land, try contacting one of the other island rangers on a neighboring island, as island canyons and mountains sometimes obscure radio transmission. Boaters may land according to the following procedures. *Please note that rocks or islets on or near any of the islands are closed year-round to any landing.*

**Santa Barbara Island:** A permit is not required to land or hike on Santa Barbara Island. Access to the island is permitted only at the landing cove. The landing dock is available for unloading purposes only. No craft, including kayaks and inflatables, should be left moored to the dock. Please lift your inflatables up to the upper landing.

**Anacapa Island:** A permit is not required to and or hike on East Anacapa Island or at Frenchys Cove. West Anacapa (except Frenchys Cove) is a

protected research natural area and is closed to visitors. Visitors are allowed on Middle Anacapa by permit only and when accompanied by a park ranger. The moorings near the landing cove at East Anacapa Island are reserved for use by the NPS, the USCG, and the park concessionaire only. Private boaters must anchor a reasonable distance from these moorings. *This is not an all-weather anchorage. It is recommended that one person stay on board the boat at all times.* The landing dock is available for unloading purposes only. No craft, including kayaks and inflatables, should be left moored to the dock. Please lift your inflatables and kayaks up to the lower landing.

**Santa Cruz Island:** Boaters may land on the eastern 24% of Santa Cruz Island without a permit. This area is owned by the NPS and is east of the property line between Prisoners Harbor and Valley Anchorage. No buoys are available at any landing area. Buoys are reserved for the NPS and the USCG. A pier is available at Scorpion Anchorage and Prisoners Harbor. Due to surf and swell conditions, boaters should use extreme caution when making surf-landings at any beach, especially Smugglers Cove and those beaches facing south and southeast between San Pedro Point and Sandstone Point.

A permit to land on the other 76% of Santa Cruz Island is required from TNC. A fee is charged and no overnight island use is permitted. Contact (805) 642-0345 for a permit; allow 10—12 days for processing. For more information, visit [www.nature.org/](http://www.nature.org/)

**Santa Rosa Island:** Boaters may land along coastline and on beaches without a permit for day-use only. Beaches between and including Skunk Point and East Point are closed from March 1st to September 15th in order to protect the threatened snowy plover. The beaches around Sandy Point are closed year-round. Boaters may not use the mooring buoys in Bechers Bay. They are reserved for the NPS, the Coast Guard, and the park concessionaire.

**San Miguel Island:** Overnight anchorages are restricted to Cuyler Harbor and Tyler Bight. Visitors may land *only* on the beach at Cuyler Harbor. Visitors may walk the beach at Cuyler Harbor and hike up Nidever Canyon to the ranger station. To hike beyond the ranger station, visitors must be escorted by a ranger and have a permit. Call (805) 658-5711 *prior* to mainland departure to obtain a permit.

# Santa Barbara Island

The smallest of the Channel Islands is deceptive. From a distance, this one-square-mile island looks barren, uninteresting, and forlorn. Upon closer examination, the island offers more than one would expect—an island of resting elephant seals, blooming yellow flowers, tumbling Xantus's murrelet chicks, and rich cultural history. Santa Barbara Island is the center of a chain of jewels, a crossroads for people and animals.

Santa Barbara Island is 38 miles from San Pedro, California. The smallest of the California Channel Islands, it is only one square mile in size, or 639 acres. Formed by underwater volcanic activity, Santa Barbara Island is roughly triangular in outline and emerges from the ocean as a giant, twin-peaked mesa with steep cliffs. In 1602, explorer Sebastian Vizcaino named Santa Barbara Island in honor of the saint whose day is December 4<sup>th</sup>, the day he arrived.

Visitors to Santa Barbara Island can witness the incredible recovery of the island's plant life and wildlife after years of habitat and species loss due to ranching and farming activities, including the introduction of non-native plants, rabbits, and cats. Although nonnative grasses still dominate the landscape, native vegetation is recovering slowly with the help of the National Park Service's resource management program. After winter rains, the native plants of the island come alive with color. The strange tree sunflower, or coreopsis, blossoms with bright yellow bouquets. Other plants, like the endemic Santa Barbara Island live-forever, shrubby buckwheat, chickory, and cream cups, add touches of color to the island's palette.

This recovery of native vegetation, along with the removal of non-native predators, has aided in the re-establishment of nesting land birds. Today there are 14 land birds that nest annually on the island. Three of these, the horned lark, orange-crowned warbler, and house finch, are endemic subspecies found only on Santa Barbara Island.

Unfortunately, the island's recovery did not come soon enough for

the endemic Santa Barbara Island song sparrow. The destruction of this sparrow's sagebrush and coreopsis nesting habitat and the presence of feral cats led to the extinction of this species in the 1960s. This sparrow, which was found only on Santa Barbara Island and is now lost forever, was one of the smallest forms of song sparrow, differentiated by its very grey back.

Seabird colonies have also benefited from the recovery of Santa Barbara Island. The island is one of the most important seabird nesting sites within the Channel Islands, with 11 nesting species. Thousands of western gulls nest every year on the island, some right along the trailside. Fluffy chicks hatch in June and mature to fly away from the nest in July. The steep cliffs also provide nesting sites for the endangered brown pelicans, three species of cormorants, three species of storm-petrels, and one of the world's largest colonies of Xantus's murrelets.

The rocky shores of Santa Barbara Island also provide resting and breeding areas for California sea lions, harbor seals and northern elephant seals. These marine mammals feed in the rich kelp forests surrounding the island. The raucous barking of the sea lions can be heard from most areas of the island. Overlooks, such as the Sea Lion Rookery, Webster Point, and Elephant Seal Cove, provide excellent spots to look down on seals and sea lions. Visitors can also jump in the water to see what lies beneath the ocean surface. Snorkeling in the Landing Cove, visitors can see bright sea stars, spiny sea urchins, and brilliant orange garibaldi fish. California sea lions and occasional harbor seals frequent the landing cove waters, and the surrounding rocky ledges.

All of these incredible resources can be experienced by hiking the six miles of trails and by snorkeling, swimming, or kayaking along the island's coast.

## Things To Do

- One-day trips and long overnight camping trips (minimum stay is generally 3 days—Friday to Sunday).
- The entire island is accessible through the six miles of scenic trails. Unlimited and exceptional island coastal views await the visitor.
- Ideal place for swimming, snorkeling, diving and kayaking. Since Santa Barbara Island is a cliff island, access to the water is only at the landing cove (no beaches).
- Excellent wildlife viewing—seabirds, seals, and sea lions.
- Great place to see recovery of native vegetation. Wonderful wildflower displays in the spring.

Refer to related articles for more information.

## Island Facts

- Located in Santa Barbara County.
- One square mile in size.
- Average rainfall is 12 inches per year.
- The endemic, threatened island night lizard occurs only on Santa Barbara, San Nicholas, and San Clemente Is.
- Home to 14 endemic plant species and subspecies that occur only on the Channel Islands. Forms of buckwheat, dudleya, cream cups, and chicory are found only on Santa Barbara Island.
- The island's cliffs offer perfect nesting habitat for one of the world's largest breeding colonies of Xantus's murrelets, a rare sea bird.
- Squatters lived on the island before government leasing began in 1871.



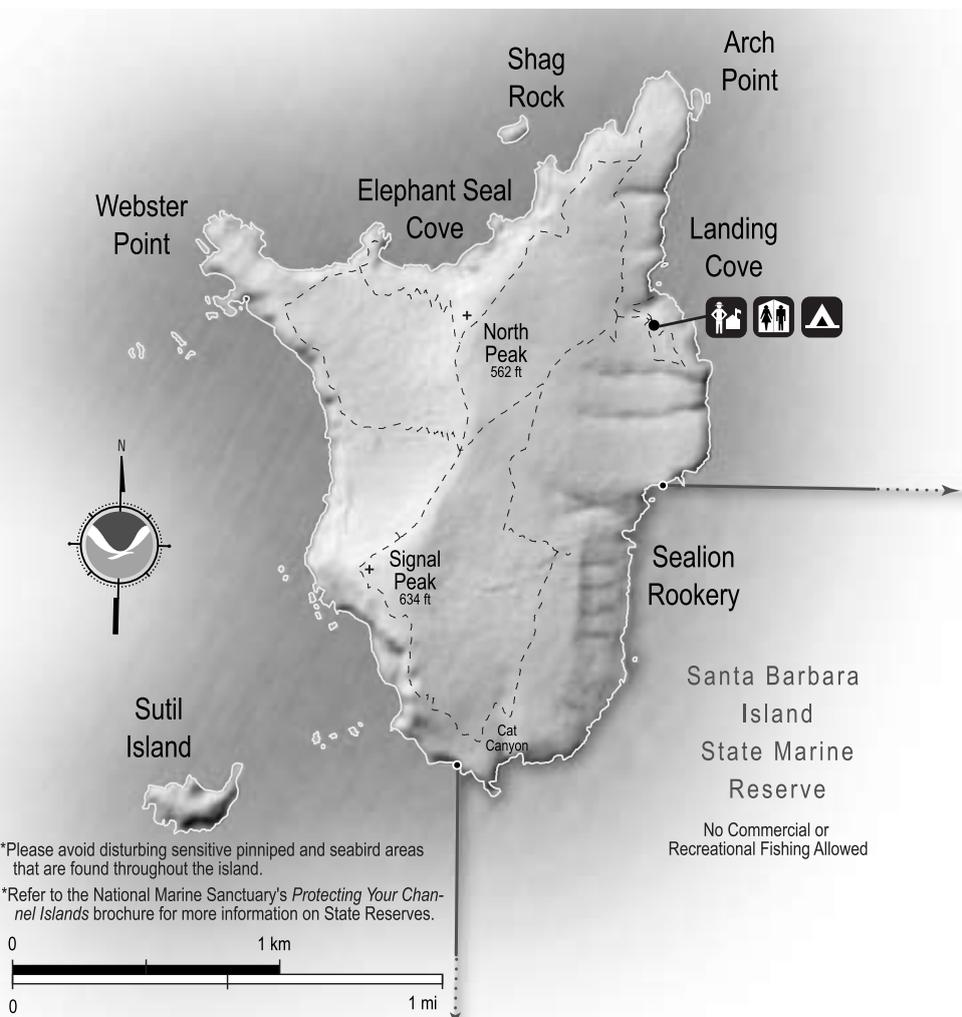
Island night lizard



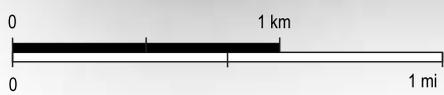
Santa Barbara Island live-forever



Xantus's murrelet chick



\*Please avoid disturbing sensitive pinniped and seabird areas that are found throughout the island.  
\*Refer to the National Marine Sanctuary's *Protecting Your Channel Islands* brochure for more information on State Reserves.



Coreopsis near arch point

## Hiking Information

Destination (from visitor center)	Distance (miles, round trip)	Difficulty	Description
Arch Point	2	Moderate	Great views and wildflowers in season.
Elephant Seal Cove	5	Strenuous	View elephant seals from steep cliffs.
Sea Lion Rookery	4	Moderate	View seal lions as they haul out on the coast.

- Portions of trails are subject to closure when pelicans are nesting from January - August.
- Hikers must stay on island trails to protect vegetation, nesting seabirds, and for visitor safety.

# Seabird Monitoring

Researchers from UC Irvine and UC Davis began seabird monitoring in Channel Islands National Park (CINP) during the 1970s when the park had a National Monument designation. During that era, George Hunt directed research on gulls and murrelets at Santa Barbara Island, while Dan Anderson and Frank Gress worked on cormorants and pelicans at Anacapa and Santa Barbara islands. The Seabird Monitoring Program at CINP was implemented in 1985 based on protocols used by these researchers.

Currently, CINP staff conducts monitoring on all of the park islands while several other agencies and individuals conduct independent and joint seabird monitoring projects within the park boundaries as well. In recent years, seabird monitoring on Santa Barbara Island has been completed with assistance from Point Reyes Bird Observatory (PRBO), USGS Biological Resources Division (BRD), and UC Irvine. Monitoring of Cassin's auklets at Prince Island (San Miguel Island) has also become a joint venture between CINP, PRBO, and BRD. UC Davis's Frank Gress monitors California brown pelicans at Anacapa Island in conjunction with research projects.

Twelve of seventeen species breeding within park boundaries are monitored (see side bar). For each species, monitoring efforts attempt to determine the nesting effort (number of nests built), chicks fledged (number of chicks that mature to flight stage), and population estimates of adult birds.

## Monitoring Activities at Santa Barbara Island

Santa Barbara Island (SBI) and its adjoining rocks (particularly Sutil Island) form one of the major breeding colonies for seabirds in the Channel Islands. No predators occupy the island except for native deer mice. Three species of storm-petrels, three species of cormorants, and California Brown Pelicans all nest here, as

does a large portion of the world population of Xantus's murrelets. For these reasons, CINP has focused its monitoring efforts on SBI.

**California Brown Pelicans:** Pelicans at SBI generally begin nesting in early February, although they have initiated nesting as early as December. The geography at SBI allows the entire colony to be monitored. Counting of the nests and young takes place twice a month in March and April and then every four to five weeks until September. All monitoring activities are conducted from a safe distance using spotting scopes, as the species is extremely sensitive to human disturbance.

The nesting effort from year to year at SBI ranges from 600—800 nests. The birds generally lay three eggs and raise one to three young. Incubation is 28 days. The chicks fledge at 15 weeks. After the chicks have fledged, a park biologist goes into the subcolonies and accounts for every nest, checking for young chick mortality and unhatched eggs. Most pelican chick mortality occurs at less than five weeks.

**Cormorants:** Monitoring of Brandt's and pelagic cormorants begins in early March. Monitoring of double-crested cormorants begins when they initiate nesting in April. These birds are extremely sensitive to human disturbance and must be observed from a distance using spotting scopes. Cormorants typically lay three to seven eggs and raise two to four chicks. Incubation takes approximately one month. The SBI cormorant population has exhibited a slow decline over the last decade. Aerial monitoring of cormorants throughout the Southern California Bight is supervised by Harry Carter of USGS/BRD.

**Western Gulls:** Monitoring of western gulls begins the third week of April after the gulls have courted and built their nests. This population has seen substantial growth on SBI in the past decade. In 1990 there were 1,000 nesting

pairs; in 2001, the total was 7,000 nesting pairs. Gulls lay two to three eggs and raise one to three young. Incubation is 28 days, and chicks fledge at around six weeks.

Western gulls nest on the ground and are more resilient to human disturbance than many other seabird species. Biologists monitor the birds using three grids of 100 x 100 meters set up in the middle of the colony. They walk through the grids periodically, marking nests and noting nest contents, banding and weighing chicks, and observing chicks through the fledging stage to record productivity.

**Pigeon Guillemots:** Monitoring of pigeon guillemots begins in early March. These birds nest in sea caves. At SBI, biologists monitor from two observation points, counting adults as they "raft" (a behavior in which adult birds gather in groups on the water and "sing"). It is possible to tell when adults begin feeding young as they can be seen carrying fish into the caves. Pigeon guillemots lay one to two eggs and raise one to two chicks. Incubation takes approximately one month.

**Xantus's Murrelets:** Every year park personnel travel to SBI in early March to begin monitoring Xantus's murrelets. Murrelet nest sites are checked every five days to determine nesting effort and hatching success. Many of these sites have been monitored since the mid-1970s.

Xantus's murrelets nest in rocky crevices or under shrubs located on the steep slopes, laying two eggs per nesting attempt. The first egg is often left unattended during the daytime while the female forages, building up reserves in order to lay the second egg. This leaves the first egg vulnerable to predation. Incubation of both eggs begins once the second egg is laid. Because incubation for the first egg is delayed, both chicks hatch at the same time, about 35 days after incubation begins. The chicks are

## Seabird, Shorebird, and Wading Bird Species Breeding in CINP

Ashy Storm-Petrel  
Black Storm-Petrel  
Leach's Storm-Petrel  
California Brown Pelican  
Double-crested Cormorant  
Brandt's Cormorant  
Pelagic Cormorant  
Great Blue Heron\*  
Snowy Plover  
Killdeer\*  
Black Oystercatcher\*  
Western Gull  
Pigeon Guillemot  
Xantus's Murrelet  
Cassin's Auklet  
Rhinceros Auklet\*  
Tufted Puffin\*  
\*not monitored

ready to go to sea with their parents when they are just two days old. They are fed and raised to fledging completely at sea and do not return to land until they themselves are ready to breed.

Adult murrelets are extremely susceptible to human disturbance, and learning more about the population is difficult. In recent years occupancy of nesting sites on Santa Barbara Island has appeared to decline. The species was formerly listed as a "Category 2" species by the U.S. Fish and Wildlife Service. Now that this category has been eliminated, there has been some interest in proposing Xantus's murrelets for listing as threatened or endangered.

# Tidepooling

Due to their relative isolation and protection, the tidepools in Channel Islands National Park are some of the best within southern California. Anemones, sea stars, urchins, limpets, periwinkles, chitons, barnacles, mussels, and many other beautiful species can be seen at numerous pristine tidepool sites, including Frenchys Cove on Anacapa. Check with the park's boat concessionaires for trips to these tidepooling areas.

The area between the land and the sea is not distinct, but is a zone of transition. This area may be covered with water during high tide or exposed to sunlight during low tide. Life in this intertidal region must be the hardest within the marine environment—able to withstand hours of exposure and the incessant pounding of the energy-filled surf.

Intertidal life has adapted to the sea and the land. When looking at a tidepool area, notice how plants and animals may be found in certain areas and not in others. Those living in the upper splash zone are tolerant to sunlight, heat, and water loss and have either a means to "shelter" themselves or the ability to move into an area of greater moisture. An animal with a tightly closed shell or a shell firmly attached to rock will hold water within, so that it does not require water surrounding it at all times. Animals found in rock crevices and submerged pools usually require more moisture to prevent them from drying out.

How an animal feeds often depends on its ability to move. An animal that moves about is able to search for its food. Some graze the rocks for algae, while others feed on settled debris. An animal that remains stationary feeds on food particles suspended within water.

Because space is a limiting factor, there is competition between organisms. Many animals and plants are found in a small area, some may live on each other, or use an old shell as a surface on which to live. This is one important reason why collecting is not permitted—you may be taking away a home.

Although hardy against the forces of nature, the plants and animals of the intertidal zone cannot entirely endure the impact of humans. Since individuals interact with one another, minute



Tim Hautf

Tidepooling, Santa Barbara Island

changes in the area could disrupt the entire community. While exploring, please keep in mind these tidepool tips:

- Watch your step! The rocks can be very slippery and there may be small animals on the rocks.
- Keep an eye on the waves. The surge can sneak up on you.
- Take your time and look carefully. Tidepool organisms are often very small and camouflaged.
- Do not collect anything! Not only is it unlawful, but if animals and shells are taken, there may be nothing left for others to enjoy.
- If you pick up an animal to observe, please place it back where it was found. That particular spot is its home territory.
- Although you may not know the animals by name, through simple observation a great deal of information can be learned. Consider, for example, what keeps it from drying out? Why doesn't it get swept out to sea? Does it search for food or wait for food to come to it?

# Volunteer Retires

IN OCTOBER 2001 CHANNEL ISLANDS NATIONAL PARK CELEBRATED the “retirement” of park volunteer Ms. Jane Helm after 20 years of dedicated service. Since 1981, Jane devoted more than 1,000 hours annually in staffing the information desk at the park’s visitor center. Always cheery and willing to answer a variety of questions, Jane helped countless visitors plan a trip to the islands. She also spent much of her days educating the public about the wonders of their national park. Jane’s wealth of knowledge undoubtedly encouraged many to take that first trip, and the staff always received high praise about Jane from a grateful public.

For five of her volunteer years, Jane was the first visitor center volunteer coordinator. In addition to staffing the desk, she helped recruit, train, and schedule volunteers. The quality of her efforts can be seen in the friendships she has cultivated among park personnel and fellow volunteers. Many of Jane’s trainees remain with the park today. Her love of the Channel Islands and the people she worked with can only be described as inspirational. Thank you, Jane, for all your wonderful work and dedication.

Channel Islands National Park has many other volunteer opportunities besides visitor center duty. Opportunities include interpretive naturalist, scientific data entry, historic research, trail maintenance, vegetation restoration, and much more. Some of our recent volunteer projects have included island fox pen building on Santa Rosa and San Miguel Islands, as part of the island fox captive breeding program and recovery effort; Del Norte Trail maintenance; planting native plants in the campground on eastern Santa Cruz Island; beach clean-up on eastern Santa Cruz Island; and many others. Although the park can never repay its volunteers for their valuable contributions, we do our best to make your time happy and fulfilling.

As for the volunteering itself, “never a dull moment” is the going catchphrase. While some of the jobs are continuous, others finish and then it’s on to something else, for as long as you wish to stay. And if that’s as long as Jane Helm was with us—well, it is hard to put into words our level of appreciation. Simply said, every park employee knows we could never provide the service we do without our incredible volunteers.

Many thanks again to Jane and every National Park Service volunteer. We couldn’t do without you.

For volunteer information and applications contact, Volunteer-In-Parks Coordinator at: Channel Islands National Park  
1901 Spinnaker Drive, Ventura, CA 93001  
(805) 658-5700 [www.nps.gov/chis](http://www.nps.gov/chis)



## Sanctuary and Park Volunteer Opportunity



Channel Islands Naturalist Corps (CINC) is a group of specially trained volunteers dedicated to educating visitors to Channel Islands National Marine Sanctuary and Channel Islands National Park. Members provide education about the unique resources found within the sanctuary and park to thousands of local residents, tourists, and school children annually. CINC volunteers also participate in numerous local outreach events and collect valuable research on marine mammals and other important resources.

Volunteers accepted into the program are specially trained in a 5-week training class with topics including sanctuary and park resource protection programs, interpretation techniques, and an overview of the physical, biological, and cultural aspects of the Santa Barbara Channel and Channel Islands.

During the first year of service, CINC volunteers represent the sanctuary and park on board local whale watch vessels and educational cruises. After one year of service, additional training opportunities are available to become certified to lead island hikes. Get involved in your sanctuary and park to help protect the ocean and islands through education and research.

Volunteer requirements include: 1) being at least 18 years of age; 2) enjoying working with people (strong public speaking skills desired); 3) knowledge of, or desire to learn about, the natural and cultural history of the Santa Barbara Channel and Channel Islands; 4) attending the required training and professional development sessions; 5) committing to one year of volunteer service with a minimum of 8 hours per month in the field and 3 hours per month at volunteer meetings; and 6) ability to handle up to 8 hours at sea on power and/or sailing vessels.

For information about our upcoming volunteer orientation and training classes programs please call (805) 382-6149 or visit [http://channelislands.noaa.gov/edu/edu\\_natc.html](http://channelislands.noaa.gov/edu/edu_natc.html).

## “Greening” the Park

The park has implemented several energy-efficient and renewable energy projects to help reduce pollution, save taxpayers money, and make park visits more pleasant experiences. Many of these projects have been funded from the Green Energy Parks program, an interagency partnership between the Department of the Interior and the Department of Energy that seeks to implement sustainable energy projects in parks across the country.



Sea Ranger II

“Green” Boats: The park recently launched a new “green” boat, the Sea Ranger II, to transport park staff and supplies to the islands. The Sea Ranger II runs on a renewable, organic based fuel called biodiesel, which is made from used vegetable cooking oils. The fuel is nontoxic to marine life, significantly decreases exhaust emissions, reduces the demand on petroleum resources, and demonstrates the viable application of alternative fuels in the marine service. Vegetable-based hydraulic fluids are also used in the entire vessel’s hydraulic system.

The vessel has several other sustainable features. The bottom paint contains no heavy metals that are traditionally used to restrict marine growth on the boat’s hull. This method sloughs toxins into the environment. Instead, the “green” bottom paint that was chosen utilizes a photosynthetic process, where the paint, in the presence of sunlight, produces hydrogen peroxide that inhibits marine growth. “Dripless” shaft packing glands were also installed. This design feature creates a dry bilge where no oily water is produced and therefore, can never be released into the environment. Traditional bearings that are water-cooled produce two hundred gallons of hazardous materials requiring disposal every month. Over the thirty-year life expectancy of this vessel, 72,000 gallons of hazardous waste will not be generated due to this design. Additionally, the boat’s interior contains plantation teak from sustainable forests, recycled laminate flooring, and 100% post-consumer nylon fiber carpet.

The park’s other vessels have undergone several modifications to reduce environmental impacts. The Pacific Ranger had a “bulbous bow” installed to reduce friction and wake resistance (resulting in an 18% fuel savings), uses a “purafiner” oil filter system to reduce oil change cycles by 78%, and uses refined oil as lubricant and biodiesel fuel. The Ocean Ranger had new, low emission engines installed with help from a grant from the Ventura and Santa Barbara County Air Pollution Control Districts. These new engines reduce the boat’s emissions by 4.54 tons of NOx per year. In addition, the boat uses biodiesel fuel.

Other Sustainable Energy Projects: The park has implemented nearly 100 other renewable energy applications, including 73 solar electric systems, four wind energy systems, five alternative energy vehicles (CNG), water conservation, and recycled component building materials.



National Park Service  
Department of the Interior

Channel Islands National Park  
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Ventura, CA 93001