



ALOOLKOY

News from the Channel Islands National Marine Sanctuary



NATIONAL MARINE
SANCTUARIES™
CHANNEL ISLANDS



RECREATION IN THE SANCTUARY



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From the Bridge

A Final Farewell

By Matthew Pickett, Sanctuary Manager

Recreation in the Channel Islands National Marine Sanctuary takes many forms—from diving and kayaking to boating, surfing, whale watching, fishing and much more. This issue of the *Alolkoy* examines some of the outdoor activities that make the Sanctuary and the Channel Islands so special to so many people. We hope the wealth of experiences available in Sanctuary waters will inspire you to visit soon.

On a personal note, it is with sadness that I report this will be my last "From the Bridge." I have been selected to become the Chief of NOAA's Remote Sensing Division-Flight Program in Silver Spring, Maryland and will depart in January. While this is a wonderful opportunity, it is difficult to leave the Sanctuary during this exciting time. With the management plan charting a new course and the establishment of marine reserves, CINMS is leading a change for the better in marine resource management.

The Sanctuary Program has experienced tremendous growth over the past five years, and I have been fortunate to be part of it. During my tenure, I have met some extraordinary people who have had a profound impact on my life. I wish to thank everyone in the Sanctuary community; we share a common passion and commitment to the islands and their waters.

As difficult as it is to leave, I am pleased to introduce the new Sanctuary Manager, Christopher Mobley, who will transition into the office over the next few months. Mr. Mobley brings a valuable set of skills in resource management, partnerships and collaboration that will serve the Sanctuary well.

I depart knowing that the talented and enthusiastic CINMS team will continue their extraordinary efforts to protect our local marine environment.



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A CINMS Milestone: Marine Reserves Become a Reality

In October 2002, the State of California created the West Coast's largest network of marine reserves in the Channel Islands National Marine Sanctuary (CINMS). By a vote of 2 to 1, the California Fish and Game Commission established 10 marine reserve areas and two marine conservation areas totaling 132 square nautical miles (175 square miles, see map). This represents approximately 10 percent of Sanctuary waters.

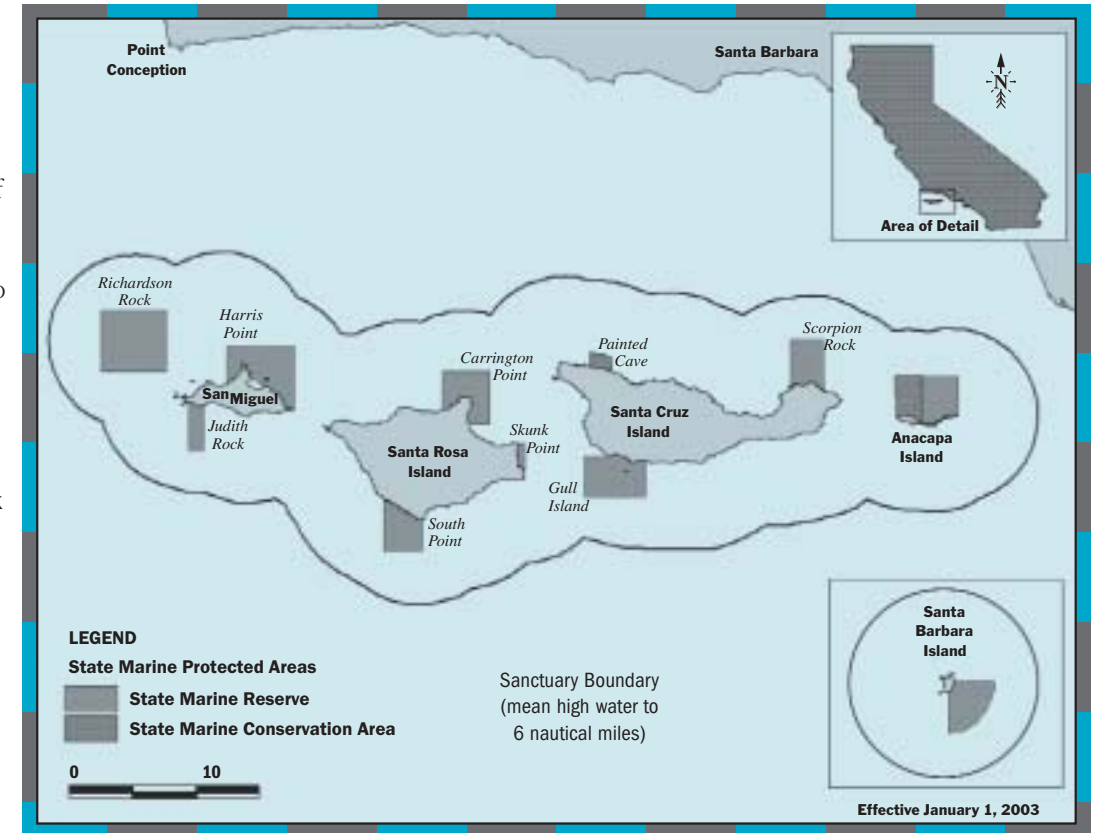
The marine reserves network is designed to:

- *Protect the Sanctuary's biodiversity of plants, animals, and habitats*
- *Sustain valuable commercial and recreational fisheries*
- *Provide reference areas for research and educational opportunities*
- *Preserve the marine environment for all Sanctuary visitors to enjoy*

The 10 marine reserve areas prohibit the taking of all species and the disturbance of all geological and cultural resources. The two marine conservation areas allow lobster diving and recreational fishing for pelagic species like tuna and yellowtail. Commercial lobster trapping is also allowed in the West Anacapa marine conservation area. *Access to, anchoring in, or transit across marine reserve areas for boating, diving, swimming, surfing, or other non-consumptive uses is allowed.*

A Three-Year Process

The Channel Islands Marine Reserves Process to consider and design marine reserves began under the auspices of the Sanctuary Advisory Council (SAC) in 1999. The SAC created a working group of commercial and recreational fishermen, environmentalists, resource management agencies, and members of the public. A science advisory panel and an economic panel provided technical and analytical advice to the working group. Following nearly three years of public meetings and debate, the Sanctuary and the Department of Fish and Game crafted a recommended preferred alternative. The State waters portion of the preferred alternative has been approved by the California Fish and Game Commission.



"We are very pleased that the California Fish and Game Commission accepted the preferred alternative, reflecting a scientifically based network of reserves," said Sanctuary Manager Matt Pickett. "We have forged a strong state and federal partnership with the local community, and we will continue this partnership as we move forward with monitoring and enforcing the marine reserves."

Next Steps

The State will take the lead on implementation of the reserves in State waters, in partnership with the Sanctuary, Channel Islands National Park, and others. The local Sanctuary Advisory Council has formed several community working groups to assist the Sanctuary, Park, and State in developing research and monitoring programs, education and outreach messages and products, and a multi-agency cooperative enforcement plan.

The State's action is the first phase in establishing reserves in the Sanctuary. The second phase will look at establishing reserves within federal waters of CINMS and will begin in January 2003. In coordination with NOAA Fisheries and the Pacific Fishery Management Council, CINMS intends to initiate an environmental review process to complement the State's action in the Sanctuary, guided by the National Marine Sanctuaries Act and the National Environmental Policy Act.

The Way Things Were—Diving in the “Old Days”

By Richard L. Holt

Today's divers who visit the Channel Islands National Marine Sanctuary think they have found a paradise of beauty and spectacular plant and animal life—and they have! We, the old timers who have peeked under the water since the 1950s, also realize that the beauty is still there—but not like in the old days.

SCUBA first made its appearance locally in the mid-1950s, and before the end of that decade many people learned how to use the equipment. Because SCUBA was still new, there wasn't the fantastic gear that there is now. We started with two hose regulators that were clumsy to handle; it was hard to clear the water in the hoses. We also lacked good flotation devices, often using old Navy or Air Force gear as vests. Weight belts were difficult to handle since the clasps had not yet been designed for quick release.

And of course, diving physiology was at its infancy. Many things were

Diving students with abalone catch, 1960.



This giant sea bass, caught in 1960, weighed 425 pounds. Opposite page: a giant lobster from the 1950s.

still unknown about the effects of depth on the human body. The Navy's dive tables didn't always work for sport divers who did not or could not follow the rules as carefully as Navy divers did.

During those years, I instructed over 3,000 students in how to dive safely in local waters. Anacapa and Santa Cruz islands were our favorite dive spots. Students could safely handle both locations, and new divers could experience beautiful diving in less than 50 feet of water. Cliffs, walls, and kelp beds were the best, with lots of animal life in all of them.

Abundant Abalone

Abalone were plentiful in the 1950s and 1960s, both along the mainland shore and at the islands. In fact, they were so plentiful that many of my friends attending college on a shoestring ate that wonderful

meat three or four days a week to save money. In the mid-60s, the numbers started tapering off somewhat, and you had to be a little better at finding them.

Around Anacapa Island and the seaward side of Santa Cruz Island (Yellow Banks), there were fewer divers and more plentiful abalone. We dove for five species in those days: blacks (not worth eating); green (not too bad, but not too good either); red (the biggest and maybe the meatiest); pink (great eating but not plentiful); and finally white (the best but the hardest to find, usually requiring deeper diving).

Giant Fish

Grouper and California sheephead were everywhere. Some grouper and giant black sea bass measured six to eight feet in length and weighed over 400 pounds. We became proficient hunters for these large animals using specially made spear guns with detachable heads and shafts.

After the fish was struck, the shooter would hand the gun and the spear line to his buddy and start to reel out the long

line now attached to the fish. The big animals sounded almost every time, diving to probably well over 200 feet. The trick for us was to hang on for the ride but to inflate the float when we passed about 150 feet and head for the surface.

Riding on the end of that line, we went so fast that sometimes we would almost lose our facemasks. It might take an hour or so for the fish to tire out and head back toward the surface, preceded by the float. We just had to find the float, maneuver the boat to it, and reel in the massive prize.

Legendary Lobsters

In the 1950s and 1960s, lobsters were so plentiful that there were no limits on how many or how big they had to be to take your fill. It was not unusual for us to bring in a half dozen lobsters each, all more than two feet long. On occasion, we collected a prize specimen—as long as three feet from the tip of the tail to the eyes.

Large lobsters were exciting to catch by hand. We learned that they enjoyed having their bellies rubbed. If a lobster was humped up in a crevice and you could tickle its belly, its legs would wrap around your arm and you could easily pull the lobster from its protected hiding place.

The taking of big “bugs” back to the boat was sometimes a difficult task. We found that if we wrapped their legs around our legs or stomachs, they would dig in and hold on. Though some bleeding might result, what a prize we had taken!

A New Concept: Conservation

As the 1950s passed and the 1960s wore on, changes started taking place that we “old timers” didn't particularly like—even though we were part of the problem. In those years, no one talked about conservation, a relatively unknown word in relation to the oceans. Nevertheless, as instructors and experienced divers, we did feel that we were contributing to the depletion of ocean resources—despite the fact that what we took was peanuts compared to what the commercial

Giant Sea Bass Monitoring Project

By the 1970s, the population of giant sea bass (*Stereolepis gigas*) in California's coastal waters was at risk of extinction. The species has now been protected from recreational and commercial harvest for two decades. In the mid-1990s, after many years of virtually no sightings, divers noticed giant sea bass aggregating for the summer spawning season (May-September) around the Channel Islands. In 1997, naturalist Kathy deWet-Oleson and her husband Jim Oleson discovered an aggregation site at Anacapa Island and began a monitoring project. The Olesons have logged over 900 dives for this project, and they conduct videotaped surveys at 28 sites around the island year round. With the help of others in the sport and scientific diving community, they are learning about the giant sea bass' essential habitat and complex behavior. For more information visit <http://home.earthlink.net/~kdocean>

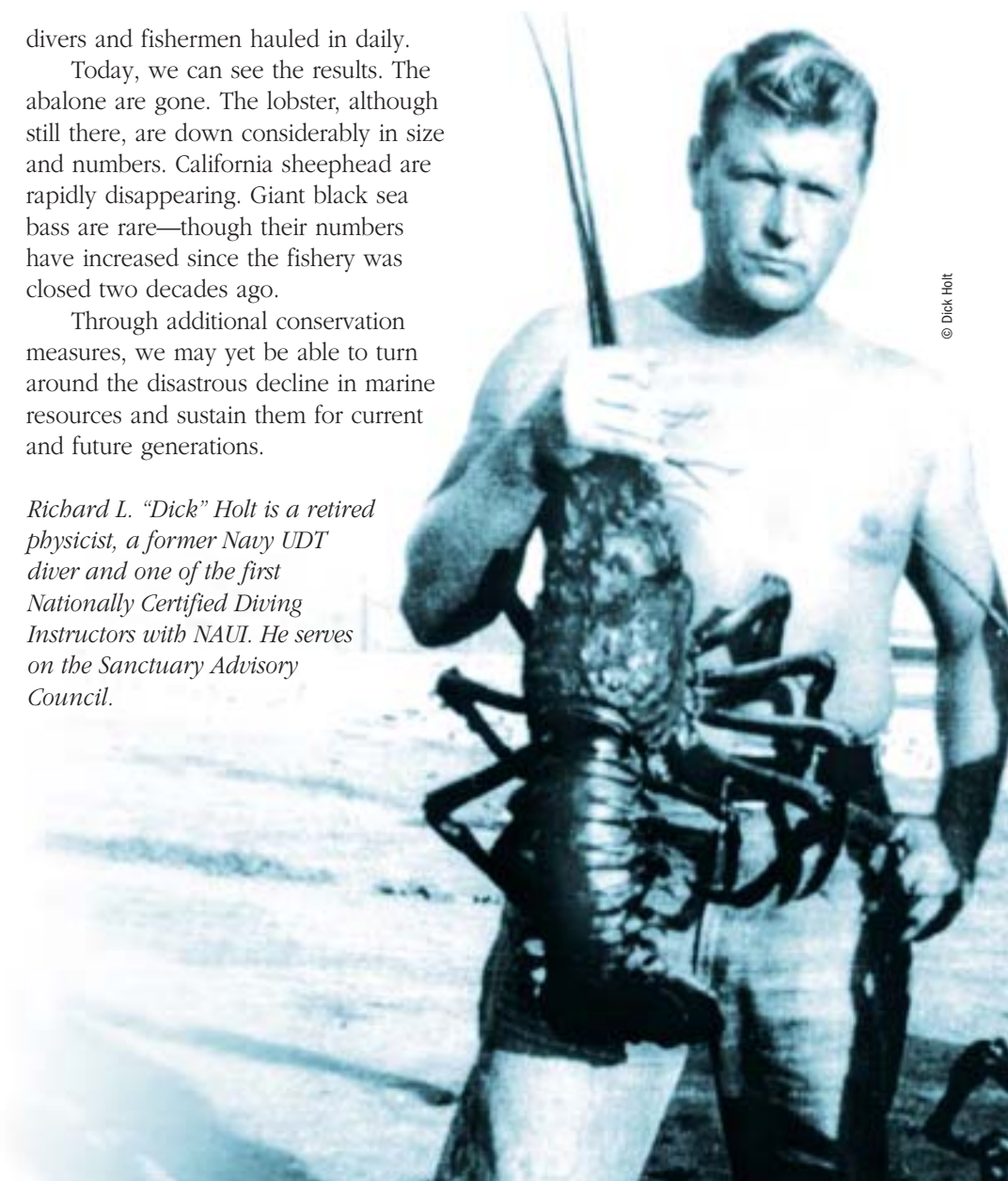


divers and fishermen hauled in daily.

Today, we can see the results. The abalone are gone. The lobster, although still there, are down considerably in size and numbers. California sheephead are rapidly disappearing. Giant black sea bass are rare—though their numbers have increased since the fishery was closed two decades ago.

Through additional conservation measures, we may yet be able to turn around the disastrous decline in marine resources and sustain them for current and future generations.

Richard L. “Dick” Holt is a retired physicist, a former Navy UDT diver and one of the first Nationally Certified Diving Instructors with NAUI. He serves on the Sanctuary Advisory Council.



Whale Sightings: An SNC Logbook

Since CINMS launched the Sanctuary Naturalist Corps (SNC) volunteer program in Spring 2001, over 100 dedicated volunteers have served aboard local marine excursion vessels. These volunteer experts inform passengers about whales and other marine life and collect data on Sanctuary resources. From January – October, migrating gray whales and foraging blue and humpback whales make regular appearances in CINMS. Here three SNC volunteers report on exceptional sightings. For more information about the SNC, visit www.cinms.nos.noaa.gov.

Sardine Roundup ... Humpback Style!

By Valerie Olson

August 1, 2002 will be a day Debra Herring and I will never forget. In mid-morning we came upon two humpbacks with a huge entourage of sea lions and common dolphins. In their midst was a gigantic “bait ball” of sardines. The humpbacks quickly figured out that they could “herd” the fish against the side of the boat, and a lunge feeding spectacle ensued.

The act had several scenes: Scene 1 was fluke and dive. Moments later, in Scene 2, sardines would frantically leap out of the water. The upward rush of a giant whale mouth agape signaled Scene 3, with sardines hurling themselves out of the water to escape from the maw. The whales fed opportunistically on either side of the boat, usually not more than 10 feet from us.

We could predict where the “humpies” were going to rise by looking for the panicked sardines. When one came up with the pleats exactly facing the boat, we could see the barnacles shimmering literally like so much gold. I have never seen anything like that day.

A Whale of a Day

By Don Shubert

A cold and overcast Monday in August started out uneventful, but turned into a spectacular day. From Santa Barbara Harbor we traveled to a spot where blue whales had been seen for the previous month. Sure enough, we encountered a large pod of about 20 blue whales. At one



© Fred Behro



© Brett Mohr

Humpback whales (above) and blue whales (below left) are just two of the many cetacean species that thrill Sanctuary visitors.

point, two large blue whales circumnavigated the boat.

After leaving this magnificent pod, we encountered a mother humpback whale and her calf. Suddenly, the calf breached and came completely out of the water. It was spectacular; however, it was just the beginning. The calf breached approximately 15 times, coming out of the water, twisting in the air, landing on its back, flipping its flukes. The calf put on a great show. In addition, it did at least five spyhops and even appeared to be waving to us.

We were watching the calf when the mom came up right next to the boat. As one of the passengers said, it was almost as if she were saying, “That’s my baby,” and she certainly seemed proud of her calf.

A Special Sighting

By Catherine French

“Look, it’s Shauna,” I yelled excitedly. Fellow SNC volunteer Lee Fleischer and I were out on the water on a beautiful Sunday afternoon. We’d just begun to watch a pod of humpbacks feeding, and as one took a terminal dive, we had a great look at the flukes.

Just moments before we had examined the photo ID of Shauna, the humpback whale. Members of the Sanctuary Naturalist Corps named this whale after our esteemed and beloved Volunteer and Outreach Coordinator, Shauna Bingham.

I brought the picture to the upper deck and waited for the whale to resurface. She was actively feeding with the other whales—gaily fluking and spy hopping. We showed the photo to the passengers, and there was general agreement that it was indeed Shauna. It was exciting to recognize a particular whale, and it also provided a teaching opportunity. We explained how each whale has unique fluke markings that distinguish one from the other, just like fingerprints on humans.

Each time Shauna showed us her flukes, we applauded and cheered. It was a great day in the Channel.

Kayaking: A Channel Islands Island Adventure

By Alex Brodie

Imagine hovering over a kelp forest canopy, or going *under* an island. How about watching fish swim beneath you through aquarium-clear water while a curious young seal plays nearby? These are just some of the things you can experience from a sea kayak in CINMS.

Kayaking is one of the fastest growing sports in the United States. “Sit on top” kayaks and modern materials have made it possible for just about anyone to glide through the water under their own power. The agility of these small craft makes it possible to silently explore areas previously inaccessible to boaters.

Places to Paddle

The varied coastline of the Channel Islands offers kayakers many paddling options. The water around Santa Barbara Island is usually clear, warm, and filled with playful sea lions. Anacapa also has clear water, as well as sea caves and beautiful kelp forests in one of Southern California’s only marine protected areas. Santa Cruz’s 75 miles of coastline offer everything from sea caves—including Painted Cave, one of the world’s largest sea caves—to secluded coves and beaches.

Large white sand beaches beckon from Santa Rosa Island. However, the inclement weather of this island (sometimes called “Santa Windy”) limits visits to only the most experienced kayakers. San Miguel Island is also exposed to westerly winds, but the beautiful beaches and abundant wildlife of Cuyler’s Harbor make it one of the world’s outstanding kayaking experiences.

Rules and Regulations

Kayakers need to know a few rules and regulations. The remoteness of the Channel Islands makes them a perfect

habitat for sea birds and pinnipeds.

While common sense dictates that these wild animals be left alone, federal laws also prohibit harassing them. Causing a seal to leave its haul-out site or scaring a bird up from its roost can be considered harassment. (See Watchable Wildlife Guidelines, page 19.)

Some areas are closed to kayakers for part or all of the year, including the pelican reserve at West Anacapa, the beach at Skunk Point, all of the beaches at San Miguel other than Cuyler’s Harbor, and the waters around Point Bennett. It is also against park regulations to land on offshore rocks.

For more information, contact the Channel Islands National Marine Sanctuary (805-966-7107, www.cinms.nos.noaa.gov) or Channel Islands National Park (805-658-5730, www.nps.gov/chis/).

Safety Issues

The old saying “Never turn your back on the ocean” definitely applies to kayaking. The ocean is a dynamic place. Conditions can change quickly with little or no warning. The proper equipment—such as personal flotation devices, helmets, signaling devices, navigational equipment, dry bags, and of course a good kayak and paddle—are a must.

Every year hundreds of kayakers enjoy the caves, coves, beaches, and kelp forests of the Channel Islands. A few hardy souls paddle across the Santa Barbara Channel the way the Chumash did: by preparing physically and mentally, choosing the proper equipment, and picking the right weather. However, most kayakers avoid the potentially dangerous channel crossing and hitch a ride on a private boat or on one of the park

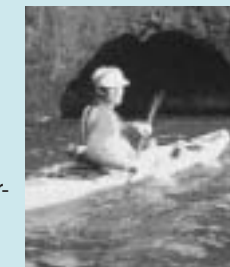


Seabird Alert

Kayakers should stay out of sea caves, including dry caves behind beaches, in spring and early summer when sea birds nest. Seabirds also nest on cliff ledges, inside cave mouths, and under rocks and debris.

On San Miguel and Santa Rosa islands, snowy plovers nest on sandy beaches from mid-March to mid-September. Refer to island bulletins for areas to avoid.

Let seabirds adjust to your presence, and you will be rewarded with displays of interesting natural behavior.



© Alex Brodie

concessionaires. These large, comfortable boats depart from Channel Islands, Ventura, and Santa Barbara harbors. In addition, kayaking outfitters offer trips for beginning to advanced kayakers and provide equipment, lessons, and expert local knowledge.

No matter how you visit the Channel Islands by kayak, it will be an unforgettable experience.

Alex Brodie is a captain for Island Packers. He has been kayaking, boating, diving, biking, and playing on and around the Channel Islands for 20 years.



© Tom Dore

CINMS: A Boater's Paradise

By Jim Brye

What do the Hollywood Bowl, Disneyland, the Dodgers, and the pristine Channel Islands National Marine Sanctuary (CINMS) have in common? First, they are each popular centers of recreation for Southern California's diverse population. Second, each is within a few hours of the other. Fortunately, while CINMS is within easy reach by boat, it is comfortably separate from the mainland's day-to-day mayhem. It serves as a recreational sanctuary for the two-legged species as well as a marine sanctuary for many ocean species unique to these waters.

One does not have to be a boater to enjoy the natural beauty and serenity of CINMS, but boaters have the advantage of easy access to the Sanctuary's 1,252 square nautical miles. The Sanctuary extends from mean high tide to six nautical miles out from the shores of the four northern Channel Islands—Anacapa, Santa Cruz, Santa Rosa, and San Miguel—plus Santa Barbara Island.

The first four islands lie in a line about 60 miles long off the coast, forming the southern boundary of the Santa Barbara Channel. Some of the islands lie as close as 12 miles off the coast, which makes them easily accessible by boat from Santa Barbara, Ventura, or Channel Islands harbors. From the mainland, boaters can reach Sanctuary boundaries in 5 to 15 miles, depending on their point of departure.

The Channel Islands offer numerous protected anchorages for recreational boaters, which provide safe havens in the midst of primitive, beautiful habitats for sea creatures and sea birds. Most anchorages have sandy bottoms for

eco-friendly, secure anchoring. Once on the hook, visiting boaters can enjoy the scenery, kayak in caves, take a swim, or drop a fishing line. With SCUBA or snorkeling gear, they can view the many fascinating underwater inhabitants of the Sanctuary.

Because CINMS has partnered with Channel Islands National Park, recreational visitors can enjoy not only the marine environment but also a unique and culturally rich land-based environment. The islands' hiking trails, campgrounds, and beaches can be reached either by private boats or by commercial boats that provide regular shuttle service.

A few notes before you go:

- Boaters can access real-time weather information at the CINMS web site (www.cinms.nos.noaa.gov) and CINMS weather kiosks at Santa Barbara, Ventura, and Channel Islands harbors.

- Boaters should always file a formal float plan with the harbormaster before departing. Notify family or friends of your float plan. Be flexible with your plans. Weather should always determine your course of action.

- Major shipping lanes lie between the islands and the mainland. Private boaters should use caution when crossing them. All boaters should listen to the Coast Guard notice to mariners broadcast on VHF channel 22 since the waters surrounding the islands are occasionally closed for military operations.

- There are no all-weather anchorages around the islands. It is recommended that one person stay on board the boat at all times.

Popular Landings & Anchorages in CINMS

Anacapa Island: Landing Cove, Frenchy's Cove

Santa Cruz Island: Scorpion Anchorage, Smugglers Cove, Prisoners Harbor

Santa Rosa Island: Water Canyon Beach, Bechers Bay

San Miguel Island: Cuyler Harbor

Santa Barbara Island: Landing Cove



© Jim Brye

- There are no landing permits required for the islands administered by the National Park Service; however there are closed and restricted areas on each island. A landing permit is required to land on The Nature Conservancy property on Santa Cruz Island. Boaters should contact the park ranger on VHF Channel 16 before landing for an orientation, information on daily events, island safety, and landing instructions.

As a frequent visitor to the islands on my sailboat, I find it hard to believe that the Los Angeles metropolis is so close when I'm tucked into a quiet, peaceful anchorage. With pelicans soaring overhead in a clear blue sky and playful sea lions vying for attention off the transom, life doesn't get much better.

Jim Brye is former commodore of the Ventura Yacht Club. He serves on the Sanctuary Advisory Council.

© Jim Brye

Diving in CINMS: A World to Discover

By Kathy deWet-Oleson

From wildly colored inch-long nudibranchs to robust giant sea bass, an amazing variety of marine life awaits those willing to adapt to cold-water diving in the Channel Islands National Marine Sanctuary.

Wetsuits of 6-7mm complete with hoods and gloves or drysuits are the typical choices of most divers here. Many leave the transportation across the Santa Barbara Channel to the sturdy fleet of charter boats that average 60 to 80 feet in length. Diving is typically conducted in buddy pairs, as lack of visibility in the shady, towering kelp forest can make it difficult to tour the reef in larger groups.

Each island in the Sanctuary has its own unique look, both above and underwater. The two smallest islands, Santa Barbara and Anacapa, offer some of the clearest water for diving. Their assemblage of marine life is influenced by the warmer temperate current, and many species like the moray, giant sea bass, garibaldi, California sheephead, and spanish shawl nudibranch prefer this temperature range.

As underwater photography has grown in popularity, so has the popularity of diving in the marine reserve that borders the north shore of East Anacapa. Here, the water from the shore out to 10 fathoms (60 feet) has been a fully protected "no take" zone for more than two

decades. The reserve contains a kelp forest full of flora and fauna, perfect for photographers and divers interested observing marine life.

The largest of the Channel Islands, Santa Cruz, is in a transition zone where the warmer southern current and cooler northern current commingle. Diving around Santa Cruz, you might encounter animals from the warmer temperate waters swimming side by side with animals from the cooler zone.

Santa Cruz is geologically diverse, and this is also reflected in the structure of the varying marine habitats around the island. On the north shore, there are some steep walls and dramatic rocky reefs, as well as sand and mudflats. Many reefs along the eastern and southern sides of the island resemble staircases, evidence of the uplifting forces that helped create the island. The layered structure of this type of reef provides excellent habitat for filter feeding animals such as sponges, anemones, and cup corals, as well as hiding places for cryptic fish like sculpin, greenlings, and juvenile rockfish.

Both Santa Rosa and San Miguel islands are exposed to the predominant wind and swell from the west. The colder current from the north influences the marine life around these two islands. While a sea thick with krill and other

planktonic organisms can reduce visibility for divers, it provides a soup of life for the local marine residents. On the northwest side of Santa Rosa, a favorite destination is the wide, rocky expanse known as Talcott Shoals. Now lacking the thick kelp that once covered the reef, Talcott is still rich with fish and invertebrates. Divers visiting Santa Rosa

Divers Take Note

- If you take game, obtain proper licensing and become familiar with local fish and game regulations.

- Become a natural historian. If you visit a dive site frequently, write down what you see each time and note major changes occurring seasonally or annually.

- Consider participating in the Great Annual Fish Count (www.fishcount.org) or year round REEF monitoring surveys (www.reef.org).



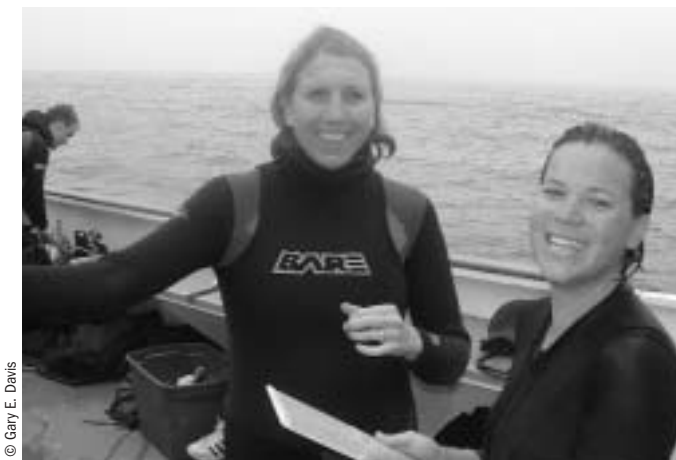
© Kathy deWet-Oleson

will still find a nice kelp forest on the south side of the island at Johnson's Lee.

When San Miguel Island is accessible, the diving can be world class. The marine life here resembles what one might find in the Monterey Bay National Marine Sanctuary. Bright red vermilion rockfish, large rose anemones, and delicate purple California hydrocoral decorate rocky reefs beneath healthy canopies of giant kelp. A closer look will reveal many small fish and invertebrates inhabiting almost every inch of space. When illuminated with a dive light, the color spectrum is amazing.

Divers in private boats should consult the online CINMS Weather Kiosk (www.cinms.nos.noaa.gov) when planning a dive trip to Sanctuary waters.

Kathy deWet-Oleson is a naturalist and underwater photographer who has dived Sanctuary waters since 1980.



© Gary E. Davis

CINMS Education Coordinator Julie Bursek (left) consults with West Coast Sanctuary Education Liaison Claire Johnson during the Great Annual Fish Count—a favorite event for local divers.

Experiencing the Channel Islands

By Tom Dore

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

It may look like people come to camp, or kayak, or look at birds, but what they could actually be doing is chasing an old experience that felt really good. People remember where or when they were truly alone in nature for the first time, or heard silence for the first time outdoors, when they caught their first fish, or were close to a wild animal.

The smells, sounds, and feelings that are linked to each of our special places are so important to us, and have such a positive effect on us, that we search for ways to re-create them. Many of our most exciting experiences in nature were so because we didn't know what was around the corner. We had never been in that exact 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 experience far from hints of the human-made landscape: specifically, the time machine, nature, and silence.

The Time Machine

Just a little ways before you get to Inspiration Point, there is a high point on the trail. It's actually the high point on all of East Anacapa Island. You may slow there and think you are gasping at the view, but what may actually be happening is that you feel Chumash footprints under your feet. Almost 10,000 years of people walking right where you are, scraping the meat out of abalone shells, gathering it up in a kelp net, and climbing back down the steep, volcanic cliff to a plank canoe.

You can take your shoes off, step back in time, and feel the crushed shells between your toes as they did. Nothing has changed here in all that time, and you can easily see why they chose this panoramic spot to clean their food.

There are other places just like this one on the islands that



© Tom Dore



© Tom Dore

Above: Juan Rodrigues Cabrillo monument on San Miguel Island.
Below: Taking it easy on Santa Cruz Island.

have disappeared into the landscape, preserved forever—never to be disturbed or built on. National parks protect all of the parks' resources and use a tiny portion to show visitors what's so special about the place...so those visitors can make their own connection back in time.

Nature

Islands do interesting things to animals and plants. As you slide into your sleeping bag and rest your head on your folded jacket, you summarize your day and put it into perspective.

You saw an island fox that you thought was a cat because they're so much smaller than mainland foxes—but they still are the biggest native animal on these islands. Even so, they're dying off because non-native pigs are breeding here and luring golden eagles, which eat the foxes, too.

You saw a scrub jay that was twice as big and deeper blue than any scrub jay you've ever seen. A blue whale that was not blue at all, but at least twice as big as the humpback you were so impressed with. The giant kelp grows two feet a day. Let's see, you'd be 29,240 feet tall if you grew that fast.

You barely saw a squad of Xantus's Murrelets flying just off the water. The Island Packer boat goes 25 knots, so they must have been going at least 30. They spend their whole lives at sea, except for breeding, and their entire species trusts only a couple of tiny islands here to have their babies.

You walked through a forest of ironwood trees. The park naturalist said they're here because this is the only place left that remotely resembles the swampy climate that existed thousands of years ago in their historic groves all over the West.

Now, why were those sea lions blowing bubbles under your kayak? That is so weird. You've never seen this many stars less than 200 miles from your house and you're only 20 miles away. There's something inspirational about staring straight up into a starry sky. Your pupils and senses are so dilated that understanding comes easy.

Humans and their pets aren't the only animals on earth. There is wildness very close to us if we can just let go of our human things and become an animal with them. Then it feels good to be out there.



© Jeff Foote

Harbor Seal.

Silence

Silence is so alien to us that we find ourselves stopping while we walk on some of the islands and saying, "Do you hear that?" "What?" "There's no noise." Sounds are such a part of our mainland life that when they are absent, we're shocked. 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 whistling most of the year and the seals and sea lions barking constantly, you wouldn't 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 you or the birds.

Santa Barbara Island's about the same but without the lighthouse. The

Camping and Hiking How-Tos

For detailed camping and hiking information, call Channel Islands National Park, (805) 658-5711 or visit www.nps.gov/chis/

Reservations for National Park Service campgrounds on the Channel Islands are available through Biospherics Inc. at (800) 365-CAMP (2267) or <http://reservations.nps.gov/>. Free permits for backcountry beach camping on Santa Rosa Island are available on a seasonal basis.

Hikers should check with park rangers before hiking on the islands due to the possibility of seasonal closures and island-specific restrictions. Stay on trails, carry plenty of water, and never hike alone.



© Tom Dore

two big islands, Santa Cruz and Santa Rosa, have isolated beaches and big, deep canyons and valleys that get soundless. The beaches on the south side of Santa Rosa are identical to what Malibu probably looked like 100 years ago: coastal bluffs and mountains, no roads or cars or buildings. The soundscape pulses with surf and silence, surf and silence. It's a strict rhythm you can live your life by. You can arrive by kayak or foot and camp there and not see another person for weeks.

The campground at San Miguel is probably the quietest place in coastal Southern California... not at the west end where 25,000 elephant seals are jockeying for a mate, but right in the middle of the island near the monument honoring Cabrillo's resting place.

Coming up the canyon trail and over the dune from mint-colored Cuyler Harbor, make your way through the shoulder-high yellow coreopsis forest. About then you'll notice the thunder of the surf zone has vanished. On the rest of the way to the campground, the quiet is broken only by your heartbeat and an occasional raven noting your presence.

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 unique way to connect with nature. Pack your pack and go to Channel Islands, Ventura, or Santa Barbara harbors. There's a boat leaving every day for one of the Channel Islands.

Tom Dore is a park ranger for the Channel Islands National Park.







© Tom Dore


Exploring tidepools at Frenchy's Cove, West Anacapa Island.

Local Recreation Resources in CINMS

Note: These charts include operators located at the three local CINMS departure points: Santa Barbara, Ventura, and Channel Islands harbors.

SANTA BARBARA HARBOR			
Name	Address	Phone/Fax/Web	Activities
TRUTH AQUATICS/SEA LANDING SPORTFISHING (CINP Island Concessionaire)	301 West Cabrillo Blvd. Santa Barbara, CA 93101	805-962-1127 www.truthaquatics.com	<ul style="list-style-type: none"> • <i>Island Hiking and Camping</i> • <i>Kayaking</i> • <i>SCUBA Diving/Snorkeling</i> • <i>Sport Fishing</i> 
CAPTAIN DON'S WHALE WATCHING	219 Stearns Wharf Box G Santa Barbara, CA 93101	805-969-5217	<ul style="list-style-type: none"> • <i>Whale Watching</i> • <i>Natural History Tours</i>
CONDOR CHARTERS	Santa Barbara Harbor	805-882-0088 888-77WHALE www.condorcruises.com	<ul style="list-style-type: none"> • <i>Whale Watching</i> • <i>Natural History Tours</i> • <i>Kayaking</i> • <i>Marine Floating Labs</i>
PADDLE SPORTS OF SANTA BARBARA	117-B Harbor Way & 100 State Street Santa Barbara, CA 93109	805-899-4925 888-254-2094 www.kayaksb.com	<ul style="list-style-type: none"> • <i>Kayaking</i> • <i>Sport Fishing</i>
SANTA BARBARA SAILING CENTER	133 Harbor Way Santa Barbara, CA 93109	805-962-2826 www.sbsailctr.com	<ul style="list-style-type: none"> • <i>Whale Watching</i> • <i>Natural History Tours</i> • <i>Sailing</i> 
SUNSET KIDD SAILING	125 Harbor Way Santa Barbara, CA 93109	805-962-8222 www.sunsetkidd.com	<ul style="list-style-type: none"> • <i>Whale Watching</i> • <i>Natural History Tours</i>

CHANNEL ISLANDS HARBOR, OXNARD			
Name	Address	Phone/Fax/Web	Activities
CHANNEL ISLANDS AVIATION (CINP Island Concessionaire)	305 Durley Avenue Camarillo, CA 93010	805-987-1301 www.flycia.com	<ul style="list-style-type: none"> • <i>Aerial Tours</i>
ISLAND PACKERS CHANNEL ISLANDS HARBOR (CINP Island Concessionaire)	3600 South Harbor Blvd. Oxnard, CA 93035	805-382-1779 www.isle.net/~ipco	<ul style="list-style-type: none"> • <i>Whale Watching/Natural History Tours</i> • <i>Island Hiking and Camping</i> • <i>Kayaking</i> • <i>Marine Floating Lab</i>
CAPTAIN HOOK'S SPORTFISHING	3600 S. Harbor Blvd. #1150 Oxnard, CA 93035	805-382-6233 www.captnhooks.net	<ul style="list-style-type: none"> • <i>Sport Fishing</i> 
CHANNEL ISLANDS KAYAK CENTER	1691 Spinnaker Drive Ventura, CA 93001	805-644-9699 www.cikayak.com	<ul style="list-style-type: none"> • <i>Kayaking</i>
CHANNEL ISLANDS MARINE FLOATING LAB	4151 S. Victoria Ave. Oxnard, CA 93035	805-382-4563	<ul style="list-style-type: none"> • <i>Whale Watching</i> • <i>Natural History Tours</i> • <i>Marine Floating Labs</i> 
CISCO'S SPORTFISHING	4151 S. Victoria Ave. Oxnard, CA 93035	805-985-8511 www.ciscos.com	<ul style="list-style-type: none"> • <i>Whale Watching</i> • <i>Natural History Tours</i> • <i>Sport Fishing</i>

VENTURA HARBOR			
Name	Address	Phone/Fax/Web	Activities
ISLAND PACKERS (CINP Island Concessionaire)	1867 Spinnaker Dr. Ventura, CA 93001-4353	805-642-1393 www.isle.net/~ipco	<ul style="list-style-type: none"> • <i>Whale Watching/Natural History Tours</i> • <i>Island Hiking and Camping</i> • <i>Kayaking</i> • <i>Marine Floating Labs</i>
LIBERTY DIVE CHARTERS	1567 Spinnaker Dr. Suite 203-59 Ventura, CA 93001	805-642-6655	<ul style="list-style-type: none"> • <i>SCUBA Diving</i> • <i>Snorkeling</i> 
PEACE	1567 Spinnaker Drive Suite 203-393 Ventura, CA 93001	805-643-6309 www.peaceboat.com	<ul style="list-style-type: none"> • <i>SCUBA Diving</i> • <i>Snorkeling</i>
SPECTRE DIVE CHARTERS	1567 Spinnaker Dr. Suite 203-59 Ventura, CA 93001	805-483-6612 spectre@calboatdiving.com	<ul style="list-style-type: none"> • <i>SCUBA Diving</i> • <i>Snorkeling</i>

CHANNEL ISLANDS INFORMATION AND VISITOR CENTERS		
CHANNEL ISLANDS NATIONAL MARINE SANCTUARY www.cinms.nos.noaa.gov Santa Barbara Office 113 Harbor Way, Suite 150 Santa Barbara, CA 93109 (805) 966-7107 Southern Office 3600 South Harbor Blvd., Suite 217 Oxnard, CA 93035 (805) 382-6149	CHANNEL ISLANDS NATIONAL PARK VISITOR CENTER 1901 Spinnaker Drive Ventura, CA 93001-4354 (805) 658-5730 www.nps.gov/chis/ SANTA BARBARA MARITIME MUSEUM 113 Harbor Way, Suite 190 Santa Barbara, CA 93109 (805) 962-8404 www.sbmm.org SANTA BARBARA MUSEUM OF NATURAL HISTORY 2559 Puesta del Sol Road Santa Barbara, CA 93105 (805) 682-4711 www.sbnature.org	OUTDOORS SANTA BARBARA VISITOR CENTER (CINMS, CINP, Los Padres National Forest multiagency visitor center) 113 Harbor Way, 4th floor Santa Barbara, CA 93109 (805) 884-1475 THE NATURE CONSERVANCY 213 Stearns Warf Santa Barbara, CA 93101 (805) 962-9111 CABRILLO HIGH SCHOOL AQUARIUM 4350 Constellation Rd. Lompoc, CA 93436 (805) 733-1028 www.cabrillo-aquarium.org

2002 In Review: Management and Research

Management Plan Revision

Work has continued on finalizing the Draft Management Plan (DMP) and Draft Environmental Impact Statement (DEIS). Program plans (research, education, resource protection, and cultural resources) were recently updated by staff and incorporated into the DMP. Preliminary program plans were distributed to the Sanctuary Advisory Council (SAC) for review and comment.

The DEIS is being slightly restructured to accommodate the recent NOAA decision to defer selection of a preferred boundary alternative at this time. As was stated to the SAC in July by National Marine Sanctuary Program Director Dan Basta, internal federal agency review and clearance of the DMP/DEIS will take place this fall and winter, with public release of these documents expected in spring 2003.

Mike Murray has assumed the role of Management Plan Coordinator for CINMS. In addition, Sarah MacWilliams has been hired on contract to assist with the management plan revision process.

Marine Reserves Process

Throughout 2002, the Sanctuary Advisory Council (SAC) remained engaged with the marine reserves issue, working with Sanctuary staff to prepare for the establishment of reserves in State waters of CINMS by:

- *Creating an Ad-Hoc Group that outlined the types of biological and ecological information to monitor and marine science experts to consult. A Fall 2002/Winter 2003 workshop will bring together marine scientists, agency staff and interested parties to build a monitoring plan.*
- *Advising NOAA economists on social and economic parameters to monitor. A Fall 2002/Winter 2003 workshop will bring leading economists and local constituents together to develop monitoring plans.*
- *Convening an enforcement working group including local divers, boaters, the general public, and regional enforcement agencies (Coast Guard, Channel Islands National Park, NOAA Fisheries, CINMS, and the Department of Fish and Game). The agencies are working on a Memorandum of Understanding that details respective enforcement roles and resources to share, such as boats and personnel.*
- *Assembling a Sanctuary Education Team (SET) that consists of agency staff and local educators to develop educational and outreach products on reserves. SET will work with the Enforcement Group to develop interpretative enforcement materials, such as maps with reserve boundaries and regulations.*

MPA Exchange Program

CINMS participated in an international marine protected area (MPA) exchange program hosted by the Council on Environmental Cooperation (CEC). Goals of the program were



CINMS staff and project partners deploy an ROV during Sanctuary Quest 2002.

to develop a common understanding of opportunities and challenges faced by MPA managers throughout North America; to identify best practices and tools for dealing with these issues; and to develop ties among peers.

From March 18-22, Sean Hastings visited the Sian Ka'an Biosphere Reserve on the Yucatan Peninsula in Mexico. From May 27-31, Mike Murray visited the Race Rocks MPA and Pacific Rim National Park on Vancouver Island, British Columbia.

During the week of April 15-19, CINMS hosted five visiting MPA practitioners from Canada and Mexico. Sanctuary staff provided the visitors with training sessions on all aspects of CINMS operations. A series of field trips included the Cabrillo High School Aquarium and Scorpion Ranch on Santa Cruz Island.

Participants in the exchange discovered striking similarities among the challenges faced by American, Mexican, and Canadian MPAs in the areas of community-based planning, marine mammal protection, marine reserves, user issues, conflicts, and resolutions.

RESEARCH

Plumes and Blooms

Ongoing Plumes and Blooms trips with UCSB, on an average of once a month, continued to be conducted aboard chart-

ed vessels operated by Sanctuary staff. This project has been ongoing since 1996 and yields considerable meaningful data on essential physical oceanographic characteristics and water quality of the Sanctuary and surrounding waters. During 2002, Plumes and Blooms cruises were conducted on a chartered vessel, the *R/V Spirit*. Upon delivery of the new catamaran, cruises will resume on the twice-monthly schedule aboard the Sanctuary's vessel.

Sanctuary Quest 2002

In April, the NOAA ship *McArthur* arrived in the Channel Islands as a part of the Sanctuary Quest West Coast Expedition 2002. This expedition involved using a U.S. Navy remotely operated vehicle (ROV) to explore the depths of the Sanctuary. Partners in this project included the U.S. Naval Facilities Engineering Services Center, California Department of Fish and Game, the Channel Islands National Park, the U.S. Geological Survey, and UCSB's Marine Science Institute.

In addition to conducting ROV surveys, U.S. Geological Survey scientists used sidescan sonar to map the seafloor around San Miguel and Santa Cruz islands. This work continued efforts underway since 1998 that have mapped over 700 square kilometers of habitat around Anacapa, Santa Cruz, Santa Rosa, and San Miguel islands. The *Xantu* provided transportation support for NOAA's Sanctuary Quest 2002, shuttling scientists, photographers and other personnel to and from the *McArthur*. The *Xantu* also served as a photo platform from which some of the operations were documented. (Photos are available on disk and print at CINMS office.)

Seabird Research

CINMS supported several research projects focused on seabirds during 2002. Monitoring of Xantus's Murrelets at Anacapa and Santa Barbara islands continued this year. This work is conducted in partnership with the U.S. Geological Survey (USGS), Humboldt State University, Hamer Environmental LP, California Institute of Environmental

Studies and Channel Islands National Park. CINMS also provided transportation and support for Cassin's Auklet research by USGS at Prince Island (San Miguel) and Ashy Storm-Petrel research at Santa Cruz Island.

In February, the annual Pacific Seabird Group meeting was held in Santa Barbara. CINMS was a major supporter of this event. Over 250 seabird researchers attended the meeting and presented papers and posters of their work.

Catamaran Construction

Construction of the new CINMS research vessel, a 62' catamaran, named *Shearwater*, is completed. Delivery of the vessel is expected in December, with research projects scheduled to begin shortly thereafter. The vessel is outfitted with state-of-the-art technologies and will be available to support research projects of management interest to the Sanctuary. Please contact Sarah Fangman (sarah.fangman@noaa.gov) if you would like to charter the vessel.

New Sanctuary Manager

On November 1, Christopher T. Mobley became manager of the Channel Islands National Marine Sanctuary. For the



Ashy Storm-Petrel.

last three years, Mobley has worked on policy, funding, and administration of salmon recovery efforts as the Pacific Salmon Coordinator for NOAA Fisheries. He also has a strong background in coastal resource management, research, public outreach, and interagency coordination—including extensive experience in building partnerships and collaborating with state and federal agencies, local governments, tribes, businesses, nonprofit organizations, and user groups.

Former Sanctuary Manager LCDR Matt Pickett has been named chief of NOAA's Remote Sensing Division-Flight Program in Silver Spring, Maryland, where he will pilot a citation jet on photogrammetry and remote sensing missions.



CINMS' new 62-foot catamaran, christened *Shearwater*, will provide a platform for Sanctuary research starting in December 2002.

Education and Outreach

Waves on Wheels (WoW)

The new Waves on Wheels (WoW) Program is making a splash in Santa Barbara County! A partnership between CINMS and the Santa Barbara Museum of Natural History, with participation from the County of Santa Barbara Coastal Resource Enhancement Fund (CREF), WoW provides dynamic, inquiry-based marine science lessons for students in Grades K-6. Additional support for the Waves on Wheels van comes from the Lennox and Williams-Corbett Foundations.

During the school year, the WoW van travels throughout Santa Barbara County to provide classroom programs that meet state science standards for each grade level. In the summer, WoW offers fun educational programs for summer camps on a variety of marine topics. WoW also maintains a presence at community events and festivals.

To learn more, visit the museum's website at <http://www.sbnature.org>. WoW school programs are available Tuesdays through Fridays from October through May. Thanks to the generosity of the Towbes and Wells Fargo foundations, scholarships are available for Title I schools. To schedule a WoW Program, please contact the School Services Registrar at the Santa Barbara Museum of Natural History at 682-4711, ext. 315.

Sanctuary Naturalist Corps (SNC)

The annual SNC Volunteer Recognition Dinner was held on September 17 at the Chase Palm Park Center. In 2002, volunteers turned in over 10,000 hours of service to the program.

JASON Lecture Series

Channel Islands National Park and Channel Islands National Marine Sanctuary are cosponsoring the JASON Project lecture series at Ventura Harbor's Visitor Center Auditorium, 1901 Spinnaker Drive. These free lectures by JASON project host researchers take place on Wednesday evenings from 7 to 8 pm.

Upcoming lectures include:

- Dec. 4 John Johnson, Native Peoples
- Dec. 11 Tim Coonan, Island Fox
- Jan. 8 David Kushner/Holly Lohuis, Kelp Forests
- Jan. 15 Tanya Atwater, Geology
- Jan. 22 Julie Tumamait-Stenslie, Chumash Elder

For more information call Carol Peterson at (805) 658-5735.



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© SARAH JOLLY

The Waves on Wheels (WoW) van brings exciting lessons in marine science to K-6 students throughout Santa Barbara County.

Volunteer and Outreach Coordinator Shauna Bingham reported that the capacity of the program is 90-95 volunteers, and the number of interested applicants far exceeds the current openings available. Information on 2003 training class is available at www.cinms.nos.noaa.gov. In 2003, CINMS will partner with Channel Islands National Park on piloting the SNC as a multi-agency program.

The SNC program was featured on the cover of the *Ventura County Star* on Labor Day.

JASON XIV: From Shore to Sea

During the 2002-03 school year, the nationally acclaimed JASON Project is focusing on CINMS with JASON XIV: From Shore to Sea. The JASON team is exploring the terrestrial and marine ecosystems that extend from the California coast to the Sanctuary to learn how such systems affect life on our planet.

The JASON XIV curriculum for Grades 4-9 was unveiled at the National Educators Conference in Milwaukee, Wisconsin on June 19-21. CINMS Education Coordinator Julie Bursek presented lectures about CINMS during the conference. CINMS Scientific Advisor Satie Airame, Ph.D. is a host researcher for JASON XIV.

Representatives from CINMS have worked in partnership with Channel Islands National Park, Santa Barbara Maritime Museum, Santa Barbara Museum of Natural History, and the Santa Barbara and Ventura County Offices of Education to develop teacher workshops, community events, a lecture series, and a local Channel Islands Student Argonaut program around JASON XIV.

Schools participating in the JASON Project utilize the award-winning curriculum, videos, and gated online community throughout the year. The project's live expedition broadcast from CINMS

will take place from January 27-February 7, 2003. For more information, visit www.jasonproject.org/jason14/home.

Oceans to Classrooms

CINMS worked with UCSB's Marine Science Institute to develop Oceans to Classrooms, a floating laboratory program that facilitates interactions between ocean science researchers, teachers, and students through professional development workshops, producing new ocean science research-based curriculum, and coordinating student field trips to MSI ocean science labs and field sites.

These efforts focused on recent ocean science research to create hands-on activities based on the scientific method, as well as to teach the required state standards. Five pilot floating laboratory programs took place aboard the whale watch vessel *Condor Express* this spring, with over 500 students from Santa Barbara and Ventura counties participating to test the new curriculum.

Great Annual Fish Count (GAFC)

The 10th anniversary Great Annual Fish Count kickoff event was held at Chase Palm Park in Santa Barbara California on June 29. Special guest Gary Davis provided the keynote address. On June 30, GAFC divers representing Paradise Dive Club, Channel Islands National Marine Sanctuary, and REEF (Reef Environmental Education Foundation) headed out aboard the *TRUTH* to Santa Cruz Island to count fish. A living journal article, complete with pictures taken by Gary Davis, is posted on the CINMS web site, www.cinms.nos.noaa.gov.

CINMS/REEF Field Survey

CINMS and REEF cosponsored a four-day field survey to assess fish populations in CINMS from September 18-21. Thirty volunteer divers trained in fish identification techniques conducted four dives per day at selected locations around Santa Barbara, Santa Cruz, and Santa Rosa islands. The goals of the trip were to survey new sites within CINMS and fill in gaps in the REEF database. A

total of 246 surveys were completed at 11 dive sites, recording 68 species.

Immersion Institute

Representatives from the Mystic Aquarium's Immersion Institute visited CINMS in September to survey potential locations for remote camera placement at Anacapa Island. The National Marine Sanctuary Program is partnering with the Immersion Institute to install remote camera systems at all 13 national marine sanctuaries, providing visitors to the Immersion Institute with an opportunity to explore the nation's national marine sanctuary system.

Weather Kiosk

In September, a new weather kiosk was installed at the fuel dock in Channel Islands Harbor to serve boaters heading out to the Channel Islands. An additional weather kiosk has recently been installed at the Cabrillo High School Aquarium. The kiosk at the aquarium features a large plasma viewing screen, a pictorial interpretation of the Beaufort scale, and a tabletop exhibit of CINMS sea surface temperature ranges.

New & Improved Web Site

What's new on the web? Check out the newly designed CINMS home page (www.cinms.nos.noaa.gov) and visit the newest features, including "Seabird of

the Month" and a "What's New" page listing events, activities, and articles about CINMS.

Along with designing and implementing the new home page, CINMS Web Developer Amy Cale has added new and more meta tags into the source code of the site, which has allowed more web search engines to find CINMS web pages. The result has been a marked increase in visits to the CINMS web site, which took top honors in July for the National Marine Sanctuary Program.

Foreign countries that frequently visit the CINMS site include Argentina, Australia, Belgium, Brazil, Canada, Denmark, France, Germany, Italy, Japan, Mexico, Netherlands, New Zealand, Singapore, Spain, Switzerland, and the United Kingdom.

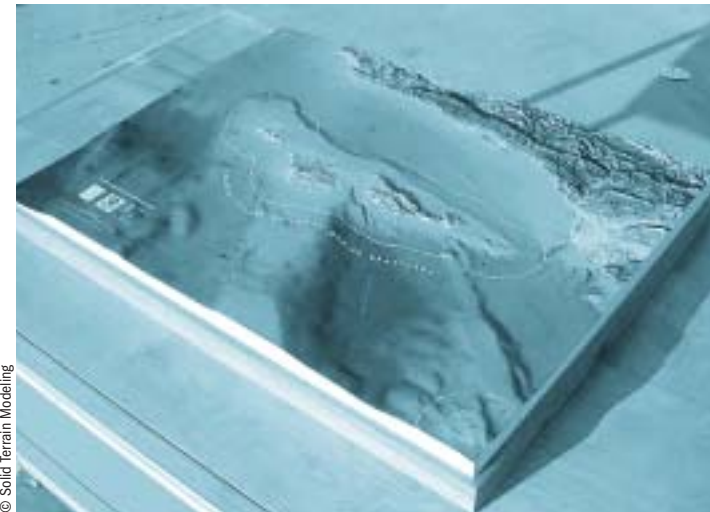
CINMS Educational CD-ROM and Encyclopedia of the Sanctuary

CINMS has worked with Greenmeadow Entertainment to develop an interactive, multimedia CD-ROM about Sanctuary programs and resources. The Ocean Channel, through support from the National Marine Sanctuary Foundation, has developed an encyclopedia of 100 species of fish, mammals, invertebrates, and algae found in CINMS. "Encyclopedia of the Sanctuary" will be an integral part



© Gary E. Davis

Participants in the Great Annual Fish Count celebrated the event's 10th Anniversary with a dive at Santa Cruz Island in June 2002.



A new 3-D model of the Channel Islands and their surrounding waters serves as a dynamic teaching tool at Sanctuary-sponsored events and workshops.

of the CINMS educational CD-ROM and serve as a model for future development at other sanctuaries. The encyclopedia is available online at www.ocean.com/encyclopedia. The CD-ROM will be available from CINMS in early 2003; for updates, visit www.cinms.nos.noaa.gov.

National Marine Sanctuary Program Minigrants

CINMS education staff were leads on writing two National Marine Sanctuary Program minigrants, both of which were funded in 2002.

One of the minigrants will create a network of West Coast sanctuaries (CINMS, Monterey Bay, Cordell Bank, Gulf of the Farallones, and Olympic Coast) that will work with teachers and students to conduct intertidal and sandy beach monitoring programs. The Long-term Monitoring Program and Experiential Training for Students (LiMPETS) Network will use field-based workshops and emerging technologies to engage teachers and students in marine monitoring efforts. The network is establishing a web site, providing teacher training opportunities, and producing classroom and field toolkits. The first LiMPETS training workshop will be held at the Headlands Institute near San Francisco on March 13-16, 2003.

The second minigrant will create a new Naturalist/Interpreter Certification Program for the National Marine Sanctuary Program. The program's goal is to produce a better-informed naturalist/interpreter corps, who in turn can provide educational outreach to the general public. Phase I, now in progress, includes developing protocols and standards, web page templates for course content, logo patches for certification, and a sample manual. Phase II will be scheduled on a site-to-site basis as sanctuaries develop site-specific content and organize training programs.

CINMS' Sanctuary Naturalist Corps program will serve as a model for developing training modules and certification requirements. In addition to CINMS, participating sanctuaries include Stellwagen Bank, Hawaiian Islands Humpback Whale, Flower Garden Banks, and Thunder Bay.

Discover CINMS in Adult Education

Curious about CINMS? Learn more by joining your friends in Adult Education! Every semester, Sanctuary representatives teach a class titled "Discovering Channel Islands National Marine Sanctuary."

The three-session course explores the Sanctuary's rich habitats and marine life—from mammals and seabirds to inhabitants of rocky reefs and sandy bottoms. Other topics include shipwrecks, current Sanctuary research, and marine reserves. An optional field trip visits the Sanctuary for a whale-watching excursion.

The class is held alternately in Santa Barbara and Ventura, with the next class scheduled for May 2003 in Santa Barbara. For updates, visit www.cinms.nos.noaa.gov.

Channel Islands 3D model

CINMS worked with Solid Terrain Modeling to use satellite data to create an accurate, full-color physical terrain model of the Channel Islands and the surrounding waters. This 3' x 4' x 3' model will be used at educational events and workshops.

Channel Islands Boater Brochure

CINMS is collaborating with the U.S. Power Squadron, the Channel Islands National Park, and the County of Santa Barbara to produce a boater brochure for over 30,000 registered boaters in Ventura County. The brochure will include information on boating safety, weather conditions, CINMS weather kiosk locations, emergency VHF radio procedures and contact numbers, marine reserves, seabird closures, CINMS and CINP regulations, and local harbor bilge and waste pump-out station locations. The brochure will be distributed in 2003.

Tomol Crossing Video

CINMS is working with the Chumash Maritime Association, the Santa Barbara Maritime Museum, and Michael Hanrahan on developing an educational video to document the historic Tomol Crossing and Chumash Community gathering on Santa Cruz Island in September 2001. CINMS staff members Nancy Berenson and Robert Schwemmer were interviewed for the video.



The historic Tomol Crossing of the Santa Barbara Channel in September 2001 will be preserved for posterity on an educational video.

Watchable Wildlife Guidelines

By Brady Phillips and Trevor Spradlin

Wildlife viewing and other nature-based recreational activities are primary reasons why people visit the Channel Islands National Marine Sanctuary. The islands and their surrounding waters provide opportunities to view an amazing variety of marine species.

For the most part, wildlife viewing has resulted in positive benefits, including new economic opportunities for local communities and increased public awareness and stewardship for marine resources. However, there is growing evidence that marine wildlife can be disturbed and/or injured when viewing activities are conducted inappropriately.

Public awareness is necessary to effectively address wildlife disturbance issues, since most people do not intentionally place the animals or themselves at risk. For example, it has been well established that it is harmful and dangerous to closely approach, handle, or feed terrestrial wildlife (bears, deer, raccoons, nesting birds, etc.). These same concerns also apply to marine wildlife.

The Watchable Wildlife program is a partnership of federal and state wildlife agencies and nonprofit organizations formed to educate the public and commercial operators about safe and responsible wildlife viewing practices. The program has three immediate goals: to enhance wildlife viewing opportunities; to provide education about wildlife and its needs; and to promote active support of wildlife conservation.



Common dolphins can be seen in the Sanctuary year round.

NOAA's Ocean Service (through the National Marine Sanctuary Program) and NOAA Fisheries have worked with Watchable Wildlife program partners over the past five years to develop specific guidelines for the marine environment. These guidelines are consistent with wildlife protection laws and conservation efforts.

CINMS and NOAA Fisheries are planning a Marine Wildlife Viewing Workshop for Santa Barbara in early 2003. Check the CINMS web site for updates.

Basic marine wildlife viewing guidelines include the following:

Look in the right place... at the right time

Many species live only in specific habitats such as kelp forests, tidepools, or the open ocean. In addition, the seasons and the time of day are important factors in viewing wildlife.

Keep your distance

Use binoculars, spotting scopes, and zoom lenses to get a closer view. Avoid the temptation to get close, and move away slowly if an animal changes its behavior. If a wild animal approaches you, stay calm and try to back away. Maintain your distance from nests, rookeries, and resting areas. Please

remember that for some species (such as marine mammals), "harassing" is against the law.

Do not touch wildlife even if it appears to be sick, injured, or orphaned

Wildlife that appears to be sick or injured may actually be resting, particularly seals. Young birds and animals that seem orphaned may have parents foraging or observing nearby. Closely approaching



Pelagic bird watchers enjoy a wealth of sightings in the Sanctuary.

these wildlife may interfere with parental care. If you see wildlife that you believe is injured or orphaned, notify local wildlife authorities such as the Marine Mammal Center (805-687-3255) or for birds, the Santa Barbara Wildlife Care Network (805-563-3636).

Do not use calls, whistles, or other artificial means to attract wildlife

Calls, whistles, and recordings may disturb and confuse wildlife and interfere with their communication.

Never feed wild animals

Feeding wildlife is known to be harmful and can deprive young animals of learning important survival skills, cause animals to sicken or die from ingesting unnatural or contaminated food, and habituate animals to humans which is dangerous to both them and to people. Please remember that for some species (such as marine mammals), feeding is against the law.

Leave pets at home

Pets may startle, chase, and even kill wildlife. Likewise, pets can be injured or killed by a threatened or disturbed wild animal.

For more information visit: www.watchablewildlife.org or www.nmfs.noaa.gov/prot_res/MMWatch/MMViewing.html

Brady Phillips works on management plan reviews for NOAA's National Marine Sanctuary Program. Trevor Spradlin is a marine mammal biologist for NOAA Fisheries' Office of Protected Resources.

CINMS and the National Submerged Cultural Resources Program

Research

During Sanctuary Quest: West Coast Expedition 2002, a multidisciplinary team of scientists conducted reconnaissance dives to the shipwreck *Pacbaroness* utilizing the U.S. Navy's *MaxRover* remotely operated vehicle (ROV) tethered to the Navy's research vessel M/V *Independence*. Participants included researchers from CINMS, NOAA Hazmat, NOS Special Projects Office, and UCSB's Marine Science Institute.

The goals of the expedition were to determine the condition of the shipwreck and to collect sediment samples of the surrounding area for analysis. Although the shipwreck lies outside the CINMS boundary, there is a concern that the toxic cargo and fuel oils could pose a threat to Sanctuary marine resources. The expedition was made possible through a cooperative partnership with the Naval Facilities Engineering Service Center at Port Hueneme. The Navy's ROV was equipped with one still camera and three video cameras, providing real time observations of the shipwreck site during the survey.

On September 21, 1987, the bulk-carrier M/V *Pacbaroness* collided with



A Van Veen bottom sampler is lowered during the *Pacbaroness* expedition.



Pacbaroness expedition science team onboard the MV *Independence*. Left to right: top row, Robert Schwemmer (CINMS); second row, John McDonough (NOAA), Sarah Fangman (CINMS), Venice Gerwe (Navy); third row, Dave Lott (NOAA), Dana Wilkes (NOAA), Matt Kelly (CINMS), Shauna Bingham (CINMS), John Brooks (NOAA), Donna Schroeder (UCSB), John Lindsay (NOAA), Greg Cooper (Navy); bottom row, Todd Crawford (Navy).

the car-carrier M/V *Atlantic Wing* approximately 11 nautical miles southwest of Point Conception. The *Pacbaroness* sank in over 1,400 feet of water with a cargo of 21,000 metric tons of finely powdered copper concentrate. The vessel was also carrying 339,360 gallons of fuel oil and 10,015 gallons of lubricating oil. Initial surveys indicated that approximately 20,000 gallons of oil spilled from the wreckage, and that some copper concentrate escaped into the water from breached cargo holds.

Sidescan images from 1987 indicated that the *Pacbaroness* was resting on its keel, oriented in a north-south direction with the bow pointed to the south-southwest. The ship appeared to be twisted and fractured into three pieces. This scenario was subsequently confirmed by ROV photographic inspections—the first conducted by UCSB and International Underwater Contractors in 1988 and the second in 2002 by the Channel Islands team.

Video footage and still photographs from the July 9-11, 2002 expedition provide direct evidence of the fractured ves-

sel and a buildup of the surrounding sediment zone. Sediment samples were sent to a Seattle lab to be analyzed for copper and polynuclear aromatic hydrocarbons (PAHs). Samples collected around the *Pacbaroness* and a nearby control site are also being evaluated to investigate potential impacts on macroinfauna. Reports will be forthcoming in January 2003 when all analyses have been completed.

Education

In January, Cultural Resources Coordinator Robert Schwemmer presented a paper at the Society for Historical Archaeology Conference at Mobile, Alabama. The paper addressed the submerged cultural resources (SCR) programs of the Channel Islands, Monterey Bay, Gulf of the Farallones, Cordell Bank, and Olympic Coast National Marine Sanctuaries (NMS). Combined, these five sanctuaries encompass over 12,000 square miles of submerged bot-

tomlands and include the remains of approximately 1,000 ship and aircraft casualties. In recent years, surveys have been conducted to locate and record these historic resources.

Additional lectures were provided to the public as part of the shipwreck lecture series at the Santa Barbara Maritime Museum (SBMM). Topics included the history of the passenger steamer *Cuba* that shipwrecked at San Miguel Island in 1923, as well as the West Coast Shipwreck Database.

A special education page titled "Plugged-In" appeared in a February 2002 issue of the *Santa Barbara News-Press*, featuring shipwrecks as the theme with a focus on the CINMS shipwreck *Winfield Scott*. This page was a collaborative effort involving CINMS and SBMM through the Museum Educators' Roundtable. The educators, in a cooperative partnership with the *Santa Barbara News-Press*, help promote learning among young readers in natural science, history, technology, and art.

Outreach

The *Cuba* exhibit was installed at the Santa Barbara Maritime Museum in July. The first of five CINMS shipwreck exhibits to be featured at the museum, it was funded by CINMS and the National Marine Sanctuary Program (NMSP).

The exhibit includes a 6.5-foot model of the intact passenger cargo steamer. Positioned below the model is a diorama of the current shipwreck site, complete with marine overgrowth. The visitor experience allows the public to read and view illustrations about individual artifacts found at the shipwreck site and attempt to locate them on the seafloor. The visitor then selects the corresponding button, which highlights the artifact both on the diorama and on the model.

Historical artifacts from the *Cuba* and ephemera from the Pacific Mail Steamship Company are included. SBMM Executive Project Director Betsy Mitsunaga, SBMM Associate Curator Angela Scott, and Coastal Maritime Archaeology Resources (CMAR) President Mark Norder were instrumental in developing this exhibit.

Resource Protection

During February, representatives from CINMS and NMSP identified the shipwreck *Jacob Luckenbach* in the Gulf of the Farallones NMS as the source of the San Mateo mystery oil spills.

After confirming the *Luckenbach* as a source point of oil discharge, NOAA alerted the United States Coast Guard (USCG) who collected samples in the water column above the shipwreck site. USCG tested the samples and compared them to recent spills and historic footprints; as a result, the *Luckenbach* is now the possible source of oil spills dating back to 1992 and earlier.

USCG has since hired a contractor to extract the bunker "C" oil utilizing a 400-foot barge moored over the site. The *Luckenbach* is considered a historic resource due to the vessel's roles in World War II and the Korean War. The West Coast Shipwreck Database has been expanded to provide additional history; visit www.cinms.nos.noaa.gov/shipwreck/dbase/gfmns/jacobluckenbach.html

Right: On August 5, 2002 the *USS Monitor's* turret was brought to the surface after being submerged for 140 years off Cape Hatteras, North Carolina.

NMSP Submerged Cultural Resources Programs

2002 has seen numerous collaborations among members of the Submerged Cultural Resources (SCR) Program team of the National Marine Sanctuary Program (NMSP).

In January, representatives from NMSP, Monitor National Marine Sanctuary, and CINMS met with and provided presentations to the diving community, educators, and the Sanctuary Advisory Council at Thunder Bay NMS & Underwater Preserve.

In April, a CINMS representative attended the Marine Protected Areas Social Science Workshop in Monterey, serving on a focus group to address cultural resource programs and issues.

During July and August, CINMS worked with the staff of the Monitor NMS during the Monitor 2002 Gun Turret Recovery Expedition. The project was successful with the full recovery of the turret and its delivery to The Mariners' Museum at Newport News, Virginia for conservation.

In September, the Pacific Coast Maritime Archaeological Summary (PCMAS) workshop was hosted at the SBMM. Participants included staff from CINMS, NMSP, and SBMM, federal and state agencies, the private sector, and academic institutions from Alaska, Washington, Oregon, and California. The workshop was funded by NMSP, and SBMM was contracted to produce a draft report summarizing Pacific Coast submerged archaeological resource inventories. Workshop participants were asked to review and make recommendations on how the data would best serve SCR managers, setting the stage for future collaborative shipwreck exploration.



© U.S. Navy (Eric Tilford)

Channel Islands Marine Sanctuary Foundation

The Channel Islands Marine Sanctuary Foundation (CIMS F) is a 501(c)(3) nonprofit organization founded in 1995 to support the management, research, and educational goals of the Channel Islands National Marine Sanctuary. The Foundation and the Sanctuary work together to preserve this special area for present and future generations.

1st CIMS F Luau Cruise & Auction

On Sunday, September 22, community members, Sanctuary staff, and local officials gathered for an evening cruise aboard the *Condor Express*. The event raised over \$10,000 for equipment on CINMS' new research vessel plus over \$6,000 for additional Sanctuary programs.

Special guests included Jean-Michel Cousteau, auctioneers Assemblymember Hannah-Beth Jackson and John Palminteri from KEYT3 News, and a representative from Congresswoman Lois Capps' office. Items up for auction included island kayak trips, a chance to participate in an aerial survey of the Sanctuary, and a day with an underwater film crew.



© CINMS

A very special thank you to Nancy Berenson for coordinating this event, as well as to the crew of the *Condor Express*, Endless Summer Bar & Grill, Avery Wu Design, Bob Talbot Productions, Paddle Sports, Anacapa Dive Center, Island Packers, Aquasports, and everyone who donated live and silent auction items.

Foundation Programs

Alolkoy

In partnership with the Channel Islands National Marine Sanctuary, the Foundation produces the *Alolkoy* newsletter. *Alolkoy* covers a wide range of issues affecting the Sanctuary, as well as research, education, and public policy initiatives.

Collaborative Marine Research Program

This innovative program involves commercial fisherman in gathering vital data on natural resources, biophysical processes, and effects of human activities in order to help the Sanctuary make informed management decisions. Fishermen bring highly developed skills and expertise about the Sanctuary to this effort.

Sanctuary Naturalist Corps

The Foundation supports the Sanctuary Naturalist Corps (SNC), a program in which volunteers receive specialized training on the natural history of the Sanctuary, the Santa Barbara Channel, and the Channel Islands. SNC volunteers provide interpretation aboard participating whale watch vessels and collect important data on marine mammals, visitor use, and marine debris.

UCSB Shoreline Preservation Course

The Foundation sponsors the UCSB Shoreline Preservation



© CINMS

Guests at the first CIMS F Luau Cruise included CIMS F Board Member Jim Sloan, Sanctuary Research Coordinator Sarah Fangman, Sanctuary Manager Matt Pickett, and Santa Barbara Maritime Museum Director Ed Cassano. Below left: special guest Jean-Michel Cousteau.

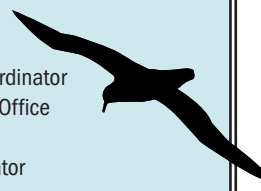
Course that enables students to meet local scholars and researchers who study shoreline preservation, restoration, and environmental issues. Students learn about topics such as "Wetland Restoration," "Shoreline Cleanup and Recovery," and "Issues of the Gaviota Coast: Biology and Public Policy."

How You Can Help

Please send your gift to the Channel Islands Marine Sanctuary Foundation and help keep our Sanctuary healthy! Your tax deductible donation can be mailed to Channel Islands Marine Sanctuary Foundation, 113 Harbor Way, Suite 150, Santa Barbara, CA 93109. For more information about the Foundation or to make your gift via credit card, visit www.cisanctuary.org.

CINMS STAFF

LCDR Matthew Pickett – Sanctuary Manager (through Oct. 31, 2002)
 Christopher Mobley – Sanctuary Manager (starting November 1, 2002)
 Satie Airame – Scientific Advisor
 Nancy Berenson – Outreach Project Coordinator
 Shauna Bingham – Volunteer and Outreach Coordinator
 Julie Bursek – Education Coordinator, Southern Office
 Amy Cale – Web Developer
 Kathy deWet-Oleson – Special Projects Coordinator
 Sarah Fangman – Research Coordinator
 Laura Francis – Education Coordinator, Santa Barbara Office
 Sean Hastings – Resource Protection Coordinator
 Lorri Herr – Program Support Specialist
 LCDR Andrea Hrusovsky – Executive Officer
 Matt Kelly – Vessel Technician
 Sarah MacWilliams – Management Plan Assistant
 Mike Murray – Advisory Council and Management Plan Coordinator
 Bob Schwemmer – Cultural Resources Coordinator
 Michael Smith – Volunteer and Outreach Administrator
 Ben Waltenberger – Physical Scientist
 Rebecca Young – Database Coordinator



CALENDAR OF EVENTS

2002

DECEMBER

December 5-6 California Fish and Game Commission Meeting, Monterey Beach Resort Hotel, Monterey, CA
 December 26 Gray Whale Watching Trips Begin (December - May)

2003

JANUARY

Jan. 1 – Feb. 4 Sanctuary Naturalist Corps New Volunteer Training Class
 Jan. 27 – Feb. 7 JASON XIV: From Shore to Sea mission to the California Channel Islands
 January 31 JASON XIV: Community Lecture at the Arlington Theater in Santa Barbara featuring Keynote Speaker Dr. Bob Ballard
 January – March Channel Islands Harbor Celebration of Whales: Whale Watching Excursions

FEBRUARY

February 5 JASON XIV: Community Lecture at the Buena High School Auditorium featuring Keynote Speaker: Dr. Bob Ballard
 February 6 – 12 Tall Ships at Channel Islands Harbor (*Lady Washington & Hawaiian Chieftan*)
 February 11 Sanctuary Naturalist Corps Monthly Volunteer Meeting
 February 15 – 17 Ventura County Maritime Museum Anniversary Celebration
 February 27 Marine Wildlife Viewing Workshop, Santa Barbara

MARCH

March 2 Channel Islands Harbor Celebration of Whales
 March 9 Pt. Mugu Whale Festival
 March 10-14 Pacific Fishery Management Council Meeting, Red Lion Hotel, Sacramento, CA
 March 11 Sanctuary Naturalist Corps Monthly Volunteer Meeting
 March 27 – 30 National Science Teacher's Association
 2003 National Convention, Philadelphia, Pennsylvania
 March 29 – 30 Santa Barbara Whale Festival and Street Fair

APRIL

April 8 Sanctuary Naturalist Corps Monthly Volunteer Meeting
 April 20 Earth Day

MAY

May 13 Sanctuary Naturalist Corps Monthly Volunteer Meeting
 Date to be announced Santa Barbara City College Adult Education Course "Discovering the Channel Islands National Marine Sanctuary"

JUNE

June 10 Sanctuary Naturalist Corps Monthly Volunteer Meeting
 Dates to be announced Great Annual Fish Count Fish Identification Seminars—check www.fishcount.org for schedule

Natural Sightings

• Pacific Gray Whale (*Eschrichtius robustus*) southern migration, December through February



© Laura Francis

• Tidepooling is excellent in the winter months, November through February

• Northern Elephant Seal (*Mirounga augustirostris*) pupping and breeding season on San Miguel Island, January and February

• California Brown Pelicans (*Pelecanus occidentalis californicus*) nesting on Anacapa and Santa Barbara islands, January and February

• Pacific Harbor Seal (*Phoca vitulina*) pupping season, San Miguel Island, February through May

• Pacific Gray Whale (*Eschrichtius robustus*) southern migration, December through February; and northern migration, mid-February through May

• Peak egg-laying season for California Brown Pelicans (*Pelecanus occidentalis californicus*), Anacapa and Santa Barbara islands, March and April

• Brant Geese (*Branta bernicla*) migration between Mexico and Alaska, March through May

• Western Gulls (*Larus occidentalis*) begin nesting on the Channel Islands in March

• Xantus's Murrelets (*Synthliboramphus hypoleucus*) breeding/nesting on the Channel Islands, March through July



© CINP

• Grunion (*Leuresthes tenuis*) peak spawning season, Southern California beaches, late March through early June

• Island Fox (*Urocyon littoralis*) pupping on the Channel Islands, March and April

• Double-Crested Cormorants (*Phalacrocorax auritus*) begin nesting on the Channel Islands in April

• Red-Necked Phalaropes (*Phalaropus lobatus*) present in CINMS, April and May

• Blue Whales (*Balaenoptera musculus*), Fin Whales (*Balaenoptera physalus*), and Sei Whales (*Balaenoptera borealis*) present in CINMS, late May through September

• Humpback Whales (*Megaptera novaengliae*) present in CINMS, May through August

• California Sea Lion (*Zalophus californianus*) pupping and breeding season, May through July

• Endangered Least Terns (*Sterna antillarum browni*) present in CINMS, May through August

• Pink-Footed Shearwaters (*Puffinus creatopus*) and Sooty Shearwaters (*Puffinus griseus*) present in CINMS, May through October



© Don Desjardins

• Ashy Storm-Petrels (*Oceanodroma homochroa*) and Black Storm-Petrels (*Oceanodroma melania*) present in CINMS, mid-May to mid-October

For more information on the events listed here, please contact CINMS at (805) 966-7107 or visit www.cinms.nos.noaa.gov
 For more information on meetings of the California Fish and Game Commission, visit www.dfg.ca.gov/fg_comm/2002mtgs.html
 For more information on meetings of the Pacific Fishery Management Council, visit www.pcouncil.org/events/future.html

JASON XIV

FROM SHORE TO SEA



During the 2002-03 school year, JASON XIV: From Shore to Sea is engaging students in Grades 4-9 and their teachers in an exciting journey to explore the Channel Islands region. The waters of the Channel Islands National Marine Sanctuary, the islands of Channel Islands National Park, and the densely populated California coastline are serving as a "laboratory" for studying nature's dynamic systems.

The JASON XIV Research Team uses an interdisciplinary, multimedia curriculum to explore:

- Physical geography of the Channel Islands region
- History of the region's maritime culture
- Native Chumash culture
- Marine and terrestrial ecosystems
- Tools and methods of scientific research
- Geology and geologic history
- Watershed studies
- Inter-relationships of ecosystems
- Management and monitoring of natural resources

JASON XIV partners include Channel Islands National Marine Sanctuary, Channel Islands National Park, Santa Barbara Museum of Natural History, Santa Barbara Maritime Museum, NASA, and UC Santa Barbara, and Santa Barbara and Ventura County offices of education.

SAVE THE DATES!

JASON XIV's live expedition broadcast from CINMS will take place from January 27 - February 7, 2003. For more information, visit: www.jasonproject.org/jason14/home

CHANNEL ISLANDS NATIONAL MARINE SANCTUARY

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National Oceanic and
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