

SAN DIEGO NATURAL HISTORY MUSEUM

Field Notes

ISSUE 1 VOLUME 5 FEBRUARY 2014





Of all those who use a will or trust to leave assets to a non-profit organization, only about one-third tell the non-profit(s) of their plans, according to The Stelter Company's 2008 study, "Discovering the Secret Giver."

If you are part of this silent majority, consider sharing your plans with the Museum because we would love to say "thank you." And, this will let YOU decide if you want to be recognized as a member of Live Oaks and receive those benefits. You may be missing out!

Live Oaks members receive:

- Invitations to two annual events featuring a curator presentation in the Sefton Boardroom;
- Behind-the-scenes tours of the Museum's research divisions;
- Invitations to VIP receptions for exhibition openings;
- And more!

For more information, please contact Director of Planned Giving Donna Raub at 619.255.0314 or draub@sdnhm.org.



LIVE OAKS SOCIETY

Field Notes is published three times a year by the San Diego Natural History Museum.

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Cover Image: Northern Cardinal in the Sierra Cacachilas, Baja California. See pages 4-7 for the full story. Photo by Alan Harper.

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San Diego Natural History Museum Mission:
To interpret the natural world through research, education, and exhibits; to promote understanding of the evolution and diversity of southern California and the peninsula of Baja California; and to inspire in all a respect for nature and the environment.

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Ahoy Members,

It's hard to believe that it is already 2014! We have so many exciting things planned for this year that we had to create a new pull-out calendar as part of this and future issues of *Field Notes*.

This spring, I'm proudly wearing an eye patch in celebration of all things pirate. Just this week we unfurled our sails and welcomed in the new exhibition *Real Pirates: The Untold Story of the Whydah from Slave Ship to Pirate Ship*. Read more about the history behind this exhibition on pages 8-9.

Our ultra-talented public programs team has put together a number of fun, family-friendly pirate activities, including an absolutely irresistible mini-pirate playland in the atrium (don't worry, *Camp-o-Saurus* will return in September), a Family Day later this month, and the members-only overnight adventure on March 29.

For the adults in the group, we're also celebrating the opening of this new exhibition at the 3rd annual Fossil Ball on February 22. And you won't want to miss a lecture series by pirate expert and UCSD professor Dr. Mark Hanna on March 27.

Exhibitions like *Real Pirates* are critically important to support the Museum's own treasure chest: our collection of nearly 7.3 million specimens and the many activities and programs that serve over 400,000 individuals every year. Bringing major traveling exhibitions to San Diego is not only part of our mission, but the revenue produced by these exhibitions is the foundation of all of our research and educational activities.

And, speaking of research, I'm immensely proud of the Museum's recent research expedition into an isolated and relatively unexplored area of Baja California Sur. This was a rare opportunity for over 30 staff and volunteers from our herpetology, birds and mammals, entomology, and botany departments to work side-by-side with Mexican field biologists to study the unique flora and fauna of the region. You'll learn more about what they discovered on pages 4-7.

Thank you for your continued support and commitment to the San Diego Natural History Museum, and I hope you will visit us soon. Don't forget your eye patch!

Sincerely,

Michael W. Hager, Ph.D.
President and CEO



EXPEDITION: BAJA

In late October 2013, more than 30 researchers, students, and volunteers converged on a small mountain range near La Paz in Baja California Sur for a binational multidisciplinary expedition. “Binational multidisciplinary expedition” is a mouthful but encapsulates a lot about the Museum’s collaborative approach to research.

The *binational* part is easy: the Museum’s mission is focused on southern California and the peninsula of Baja California. “While our region comprises two countries, it is one natural area,” said Michael Wall, vice president of research and public programs at the Museum. “We work together with our colleagues in Mexico to better understand our shared natural history.”

The *multidisciplinary* part reflects one of the Museum’s core beliefs that collaboration makes better results. “We were lucky to have a geologist from Arizona State University with us on the trip,” remarked Jon Rebman, curator of botany at the Museum. “Steve (Reynolds) pointed out some interesting geological features in the landscape in which I collected some rare plants. We can now use this information to see if it helps locate more populations.” Researchers with specialties in plants, insects, spiders, birds, bats, mammals, lizards, snakes, geology, and fish were represented in the expedition.

The *expedition* part evokes romanticized images of pith helmet-clad scientists hiking through dense vegetation followed by mules overloaded with gear and equipment. Other than the pith helmets, this picture is not too far from the truth. While in close proximity to La Paz, the mountains are rugged and access to the interior high elevation can only be accomplished by foot and mule. Historical collections from the heart of the mountains are very rare, making it a “black hole” of biodiversity information. This is why the Sierra Cacachilas were identified by Museum scientists as a prime location for an expedition.

While the scientists are still sifting through the collections and data, they found several new discoveries with scientific and conservation

implications. Of particular conservation note is the use of the Sierra Cacachilas as an important overwintering area for migratory species of conservation concern. “We found good numbers of the Gray Vireo, 14 in total, always in patches of fruiting elephant trees,” explains Lori Hargrove, postdoctoral researcher at the Museum. Phil Unitt, the Museum’s curator of ornithology, added “This was an interesting discovery since the wintering ecology of the Gray Vireo in Baja California is essentially unknown. But our research with the San Jacinto Centennial Resurvey and San Diego Bird Atlas indicates this species has undergone tremendous decline in its southern California breeding range.”

Similarly, the Sierra Cacachilas may serve as an important overwintering ground for several species of migratory bats of conservation interest in the United States. The Sierra Cacachilas are peppered with several abandoned silver mines that now serve as



Gray Vireo observed in the Sierra Cacachilas. Opposite: Sunrise in the Sierra Cacachilas.

roosts for several species of bats. "One mine had two species that are considered sensitive species in the United States," remarked Drew Stokes, bat biologist at the Museum. "The California leaf-nosed bat is a species of special concern, and the lesser long-nosed bat is a federally endangered species." Clearly these migratory bats and birds do not recognize borders, and by studying them throughout their range, our researchers are better able to inform conservation strategies.

Many of the scientists found examples of species previously known only from other areas, but discovered for the first time in the Sierra Cacachilas. "We are still going through our material, but we found at least 12 species in the Sierra Cacachilas previously only known from the Sierra de la Laguna," noted Rebman. Sierra de la Laguna is a biosphere reserve more than 40 miles south of the Sierra Cacachilas noted for having many species

known only from that area. In addition to the plants, researchers found many insects and a few vertebrate species that repeated this pattern. "This expedition is helping us accumulate evidence that the Sierra Cacachilas are an important outlying portion in the range for species primarily restricted further south," remarked Wall. "Outliers are important in evolution. Just think about the uniqueness of Hawaii and the Galapagos Islands."

Of course, no expedition is complete without the discovery of new species, and preliminary results indicate the prognosis is good. Remarking on a large spider found in an abandoned mine, Maria Luisa Jiménez, a spider biologist at the Centro de Investigaciones Biológicas del Noroeste (CIBNOR) said, "It belongs to a genus which isn't known from the peninsula, but I can't identify it to species. It could be a new species." In addition to a few plant species that are



A California leaf-nosed bat, a species that was found in large numbers in the mines.



Left: An orb-weaving spider wraps its prey. Right: The botany team presses plants.

possibly undescribed, the entomologists on the trip are confident they have found some species that are new to science. "Until we get material under the microscope, it is difficult to say for sure," remarked Wall, "but I'd eat my butterfly net if we didn't collect more than a couple new species."

In addition to the potential new species, range extensions, and conservation findings, our researchers are creating a legacy of information for future researchers. Using standardized repeatable survey techniques, they have developed a baseline of knowledge for future comparison. "We aren't just interested in what species are there, but we are interested in how abundant those species are," explained Brad Hollingsworth, curator of herpetology. "Using these standard techniques will allow us to make better comparisons between areas and monitor population changes over time."

Perhaps one of the greatest achievements of the expedition was in developing a stronger collaborative relationship with partners in Mexico to better understand the natural history of our shared region. "The research we do as an organization only gets stronger with collaboration," remarked the Museum's President and CEO Mick Hager. "Periodic binational expeditions like this bring together old friends and create new relationships." It is through these relationships that our researchers continue to fulfill our mission: promoting understanding of the evolution and diversity of southern California and the peninsula of Baja California, and inspiring in all a respect for nature and the environment.

The expedition to the Sierra Cacachilas was made possible through the generous support of The Walton Family Foundation at the recommendation of Museum Trustee Emeritus Christy Walton.



AN UNDERWATER DISCOVERY: The Tale of the *Whydah*

The three-masted, 300-ton galley *Whydah*, the ship upon which the *Real Pirates* exhibition is based, was built as a slave ship in London in 1715 and represented the most advanced technology of her day. She was easy to maneuver, unusually fast and—to protect her cargo—heavily armed. She was built to transport human captives from the West Coast of Africa to the Caribbean, but only made one such voyage before being captured.

In February 1717, the *Whydah* was captured off the Bahamas by Sam Bellamy, one of the boldest and most successful pirates of his day. Bellamy and his crew hoisted the Jolly Roger—the slave ship was now a pirate ship.

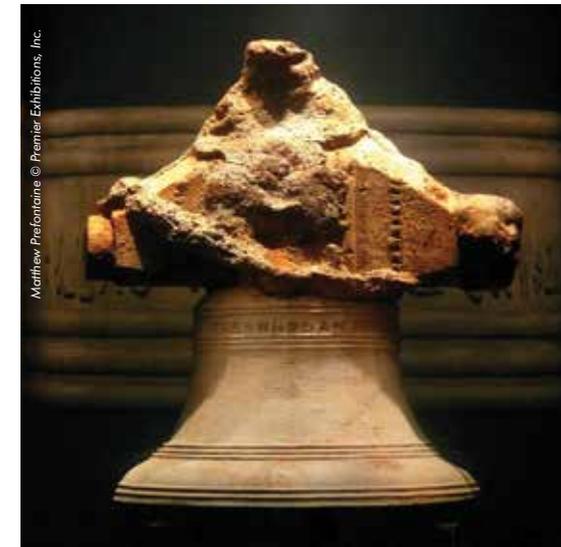
Just two months later, on April 26, 1717, in one of the worst nor'easters ever recorded, the *Whydah*, packed with plunder from more than 50 captured ships, sank off the Massachusetts coast. All but two of the 146 people on board drowned.

"This was a unique period in our history," said Jeffrey Bolster, professor of early American and Caribbean history at the University of New Hampshire and member of an advisory panel composed of academic and other scholarly experts that assisted exhibition organizers. Bolster added, "Through the cache of artifacts [from the ship] we see a world generally

undisclosed, one in which the Caribbean was the economic center and values were very different, an era before civil rights, before individual liberties, and before democracy was institutionalized. This is a story of the making of America—a true story more powerful than fiction."

In 1984, some 270 years after the *Whydah* sank, underwater explorer Barry Clifford found the first remains of the ship. In a recovery operation that spans more than two decades, Clifford and his team have documented the wreck site and artifacts with digital camera equipment and salvaged thousands of artifacts, not only gold and silver, but everyday objects that shed light on this tumultuous period of American and world history.

"Discovering the *Whydah* was the most exciting moment in my career," said Clifford. "The sheer volume of artifacts, from more than 50 other ships, provides a rare window into the otherwise mysterious world of 18th century pirates. I see this exhibition as the culmination of my many years of work. Most importantly, it is a chance to bring the real story of pirates to the public as it's never been told before—through real objects last touched by real pirates."



Whydah Bell The bell provided confirmation that the wreck site was indeed the *Whydah*, which sank in 1717. Opposite: *Whydah Capture* Artist Rendering by Gregory Manchess.

Members can board a replica of the *Whydah*, view hundreds of artifacts recovered from the ocean floor, try their hand at tying pirate knots, and much more at *Real Pirates: the Untold Story of the Whydah from Slave Ship to Pirate Ship*, a touring exhibition organized by National Geographic and Premier Exhibitions, Inc., on view at the NAT now through September 1.

Coast to Cactus: The Vision

Meet the team and learn more about the building of an exhibition in the first installment of a three-part series about Coast to Cactus.



The exhibition is built in miniature with scale models before it moves to final production.

Construction began last fall on our new core exhibition *Coast to Cactus in Southern California*. This 8,000-square-foot permanent exhibition, scheduled to open in January 2015, tells the story of southern California's unique habitats and biodiversity. *Coast to Cactus* will invite visitors to discover

why one region is home to so many species, why many of these species are critically threatened, and why it matters.

Concepts that have been years in the making and required collaboration among dozens of individuals and organizations are

now beginning to take shape—literally.

Over the past several months, a construction crew has been working on creating the “shell” for the exhibition, which involves demolishing old walls and building new ones, installing support beams and



An artist sculpts a Shaw's agave, a native Southern California plant.

electrical work, and exposing architectural elements of the original building that was constructed in 1933. Skylights that were planned for but never installed—until now—will bring natural light into the space. South-facing windows that were once covered over will now be exposed. The area that at one point housed the public restrooms will be re-imagined as a space that shows how this region has changed over time.

The exhibits themselves have also begun to take shape as ideas became sketches, sketches become models, and models became fabricated exhibits. Developing even one plant that goes into a landform

takes weeks of work, hours of research and analysis, and tons of collaboration among our team and with our partners. For example, our Exhibits team might include a Shaw's Agave on a list of plants they wish to feature, which gets vetted by our curators and scientists to ensure those species do in fact reside in a particular habitat. The designers begin sketching the agave and turning it into a 3D model. These models and sketches (along with numerous reference photos and, sometimes, freeze-dried samples of the actual plant matter) are sent to our partners at the Science Museum of Minnesota and Blue Rhino Studio,

organizations that specialize in exhibit fabrication. After several rounds of revisions and discussions, including input from our botany department, an individual leaf is built and painted, followed by more leaves, which eventually come together to form the life-size Shaw's Agave you'll see in the exhibition.

Developing a new exhibition from scratch is a monumental undertaking, and the team at theNAT is thrilled to see it starting to come together. We hope you are too, and invite you to meet a few members of the Exhibits team to learn about how their work fits into the huge puzzle that is *Coast to Cactus*.



**Michael Field,
Exhibition Designer**

When did you begin working on *Coast to Cactus*?

My family moved to the San Diego area from Canada in 1964 when I was a boy. I think I've been working on *Coast to Cactus* indirectly since I was a kid.

What is your role in the exhibition?

I take all of the great ideas from our exhibits team and find creative ways to present them in a physical form for both fabrication and construction. Working closely with content developers, exhibit designers, architects, and contractors, I strive to create engaging and educational physical exhibits for the enjoyment of our visitors.

What has been your biggest revelation during the process?

One of the biggest revelations I've had while working at theNAT and on *Coast to Cactus* is the richness in the amount

of natural wonders and the rarity of certain plants and animals in this region. The amount of interesting items and specimens in the region as well as our collections is SO vast, making it very difficult for our team to choose what to highlight. It's a good problem to have!

Another major highlight has been the opportunity to uncover and restore the Museum building to its original plan from 1933. Covered and unfinished skylights from that era will be reborn with new windows and trim for the first time. A number of huge windows have been uncovered, allowing sunlight to hit the Museum floor for the first time in decades.

What surprises will be in store for the visitors to this exhibition?

The exhibition will include several "secret" surprises to be discovered by visitors. Some will be triggered by visitors elsewhere in the Museum, like a scampering critter across the patio roof, or a rattlesnake that "rattles" as one walks by. One might even find an opossum family curled up in the corner of the exhibit, checking you out.



Erica Kelly, Exhibition Developer

How did you get into the museum field?

I actually stumbled into it. After studying theater at NYU, I moved to Chicago to work on my master's degree. While there, I began working part time at The Field Museum, where I got my first glimpse of the exhibit development process: how it involved taking a sprawling mass of content and shaping it into a story. It was then I realized I should really be doing this. While it wasn't theater, it was what theater trained me to do: tell stories, create experiences.

Describe a typical workday.

My job is to take scientific content and distill it, giving it structure, theme, and narrative. I also help the designers understand the idea or story enough so that they can give it physical form. If curators are responsible for science and designers are responsible

for the physical space, I'm responsible for the story.

I am always thinking about the visitor's experience. For instance, we wanted to get a better understanding of how much our visitors knew about which plant species are and are not native to San Diego, so we went out on the museum floor and asked them. We were surprised when more than 60% of respondents thought Eucalyptus trees are native (we assumed people knew they were brought here from Australia). Working at a science museum, it's easy for us to forget we might have more specialized knowledge than most people do. But our visitors are a highly diverse group of people coming from different places and backgrounds. We need to keep that diversity in mind and make sure we're creating great experiences for all of our visitors, not just for specialists.

Can you identify a highlight of working as part of the *Coast to Cactus* team?

How one person's idea can evolve once it's shared with the team and all those creative brains and talented people start working together. A good idea can go someplace you never anticipated. It shows

what can happen when you collaborate and share ideas with people you trust. The final product is something greater than any one person could have come up with.



**Jim Melli,
Exhibits Designer**

How long have you worked at theNAT?

I studied entomology at San Diego State University (SDSU), but have always loved to draw and paint. I've worked here on and off since 1976, wearing different hats such as exhibit preparator, freelance exhibit designer/preparator, and ultimately exhibits designer. When I left in 1980, I never thought I'd be back. But, I am here and more in love with the Museum than ever before.

What is your role in *Coast to Cactus*?

I delve a little into content development and what physical form things are going to take. We might decide we're going

to have a landform depicting a Torrey pine on the edge of a cliff. I will sketch what it can look like, will work with content developers and our curators about what animals and other plants live in that habitat, and will work with paleontology to make sure the geology is correct. It's only a 15-foot piece of cliff, but does it look accurate? While we can't replicate nature exactly, we try to create a precise sense and feel.

What is your favorite habitat and why?

The desert is my favorite place to visit and camp. In the exhibition, one my favorite habitats is the crawl-through mud core. Most people look at a mud flat and think it's just mud, but the mud is actually packed with bizarre life forms like worms, fiddler crabs, clams, snails, and fish with strange survival strategies. We have changed scale to make these critters bigger than life, and children can crawl through wormholes in the mud to explore its wonders.

I'm also excited about the fact that we're incorporating live animals into the exhibitions, something for which I have always been an advocate. It offers people a chance to see animals they haven't seen up close before.

New at theNAT

If you've visited the Museum recently, you may have noticed some new experiences in the Sefton Atrium. We have spent quite a bit of time over the last few months observing visitors to see how they are using and enjoying the space and our amenities. We discovered that younger children adore *Camp-O-Saurus*, but realized we could benefit from a complementary activity for older children, tweens, and entire families.

As a result, we soon will be installing a new art project called *Build A Butterfly* in which individuals or a family group can use craft supplies to create a beautiful memory to take home or leave behind as part of our ever-growing butterfly wall. At some point, the butterflies may "migrate" and a new bug will appear—you never know what will be stopping by.

With the opening of *Real Pirates*, our youngest visitors will also enjoy a new activity in the Atrium—Pirate Playland featuring The Scurvy NAT. This small-scale pirate ship will provide hours of role playing and pirating fun. Kids can steer the boat, aim the cannons, and check out all the treasure.

Additionally, you may periodically see a visitor participation area near the entrance to our forthcoming exhibition *Coast to Cactus*. We pose a question to visitors about their favorite habitat and encourage them to post a response on the wall for others to see. We are collecting the responses and using the input in our exhibit development. This area of participation will continue in various phases as

we lead up to the opening of *Coast to Cactus* in early 2015.

We are always looking for new ways to refresh the visitor experience. Our hope is these new activities will give you, your family, and friends exciting opportunities and memories at theNAT. We encourage you to tell us what you think by emailing membership@sdnhm.org.



The Build A Butterfly activity will debut at theNAT this spring.

Kicking Off Camp

Summer is just around the corner, and our camps will drop anchor in no time at all. With the arrival of the special exhibition, *Real Pirates*, summer camp will deliver some real adventure. Beginning the week of June 16 and running through the week of August 18, theNAT will be sailing into the summer with a host of educational activities for young scientists.

Our summer camps are designed to inspire and encourage children to have fun while learning about nature and science. Camp favorites

like *Digging into Dinosaurs* and *Nature Explorers* are still on the roster, and we will see the return of camps like *Sea Monsters* and *Bug Hunter*. We are excited to introduce our new exhibition-inspired camps: *Pee Wee Pirates*, *Anchors Away!* and *The Science of Pirates*.

In addition to our half-day camps for pre-K, this summer will see the introduction of full-day camps for both first and second grade and third through fifth grade. In addition, an all-new full-day camp experience for students in sixth through eighth grades will take place July 14-18 and August 11-15.

Museum members will receive priority registration and a discount. Registration for members will begin Monday, March 3, and the following week registration will be made available to everyone. Register online at sdnat.org/summercamp or call 619.255.0210 or 877.946.7797. You can also purchase a T-shirt for your camper so they can remember their experience all year long.

Whether it is dinosaurs, insects, or pirates, we're excited to unlock the mysteries of the natural world with your camper. Don't forget, summer camp at theNAT is where it's at!

JUNE 16-AUGUST 22

SUMMER CAMP!

REGISTRATION BEGINS MARCH 3

Pre-K through 5th Grade
Plus two new week-long camps for 6th through 8th grades

www.sdnat.org/summercamp 619.255.0210 or 877.946.7797

VOLUNTEER NEWS

Nature is the Cure

Are your children looking a bit pale? Are they all wiggles and whining? Do their thumbs hurt from playing too many video games? Take their temperatures. They might be suffering from Nature-Deficit Disorder™. First identified by Richard Louv in *Last Child in the Woods*, Nature Deficit-Disorder is rampant. Children don't get outdoors for many reasons. Electronic devices are seductive, parents are worried about safety, and families have such hectic lives that exploring nature falls to the bottom of the list.

The San Diego Natural History Museum provides the cure, both at the Museum and through our outreach programs. The Canyoneers and the Museum Whalers, two volunteer groups, lead the way outdoors.

The Canyoneers, founded in 1973, guide free public hikes throughout San Diego County. "I always thank the parents when I see the little ones on the hikes," said Canyoneer President John Hopper. "They are our future stewards."

Canyoneers also offer special hikes for schoolchildren. "We'll lead hikes any day of the week and in any area a school

wishes," says Hopper. Finding an area close to the school demonstrates that nature is never far from your doorstep, provided you take the time to look.

A hike is all about engaging the senses. "It's more than seeing pretty plants or giving a lot of dry facts," says Henry Shenkman, longtime Canyoneer. "It's about turning over rocks, sniffing leaves, getting your hands dirty in the

A hike is all about engaging the senses. "It's more than seeing pretty plants or giving a lot of dry facts."

clay, or feeling the softness of a sycamore leaf." To better prepare Canyoneers, Sara Palmer, school groups coordinator at theNAT, recently gave a training that included using her own children as participants in a group exercise. Try explaining the first three laws of thermodynamics to a 9-year-old! That was the challenge for the Canyoneers who are more comfortable pointing out trap-door spiders and insect galls. "Getting down to the kids' level is the key," explained Palmer.

The Museum Whalers, a group founded in 2005, provide naturalist interpretation on board Hornblower Whale and Dolphin Watching cruises. This partnership is a perfect fit for

the Museum. It continues a tradition of whale-watching started in 1957 by Ray Gilmore, a research associate at the Museum. When Hornblower Cruises and Events approached the Museum to form the partnership, volunteers became a part of the equation.

"In our training, we always encourage the new Whalers to approach the children on the boat because once you have

their attention, you have their parents', too," said Museum Whaler President Doris Allsup. Children love to touch, and the Whalers come prepared with props like baleen and whale vertebrae. But it's the sea air and the sea creatures that are the main attraction, and the Whalers are always ready to point out the whales, dolphins, sea lions, and birds that are seen on almost every cruise. Take a child on the ocean for the day, and that child will sleep well that night.

To find out more about Canyoneer hikes and whale watching with the Museum visit www.sdnat.org. To learn more about Nature-Deficit Disorder, visit www.richardlouv.com.



Docent Profile: Carol Telle

Balboa Park has been central in Carol Telle's life. A native of Chula Vista, her earliest memory of the Park was as a 3-year-old attending the 1935 California Pacific International Exposition. As a child, the Park and its museums were a regular destination for her family. During college, her sorority held its meetings at the House of Hospitality. In the 1980s, Carol took a week-long class about Balboa Park through the University of California Cooperative Extension to learn more. At first she couldn't understand how they could fill up five days on one park, but by the end of the week she felt they had only scratched the surface.

Carol loves the ambience of the Park and knew that once she retired from her teaching

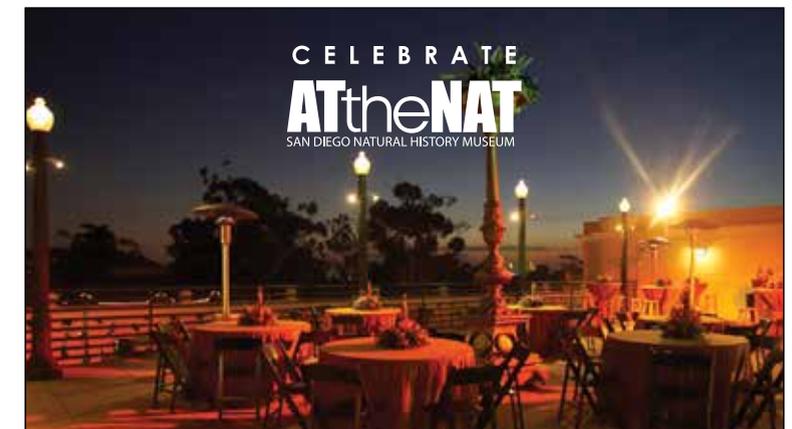
job in the La Mesa/Spring Valley school district, she wanted to volunteer for one of Balboa Park's museums. After many visits with her students to theNAT, Carol decided our Museum was the one.

She joined as a Docent in 1994 and became a Museum member because "it was the hardest museum to get the kids out of." She has been a very active Docent ever since, serving as a president for two terms and training co-chair for 11 years. The majority of now-active Docents were trained under Carol and her co-chair, Carol Wilson, attending a six-month class that includes every aspect of natural history. She currently serves as co-vice president and Docent League representative. The Docents have become her

family. She enjoys the continual learning and personal support she receives from her fellow Docents and the Museum staff. Carol shares her love of the Museum, encouraging her grandchildren and now great-grandson to come as often as they can.

Along with her busy volunteer work at theNAT, Carol has also been a volunteer at Sharp Grossmont Hospital since 1980, contributing over 5,000 hours as a visitor aide in the Emergency Department. She assists the staff with managing visitor relations, ensuring that hospital staff can concentrate on helping the patients.

Carol exemplifies the best in volunteerism, and we are fortunate to have her as part of the Museum family.



For private event inquiries, contact Director of Museum Events Rachel De Quesada at 619.255.0182 or rdequesada@sdnhm.org.

Introducing the Balboa Park Explorer: Your Park. Your Pass.

Have you ever wondered if there is an annual pass to all of the Museums in Balboa Park? Well, now there is!

This exciting new Park-wide program was created to complement your Museum membership and provides free general admission to 17 institutions in Balboa Park for an entire year for one price. TheNAT is delighted to participate in this program.

The Balboa Park Explorer is managed by the Balboa Park Cultural Partnership, the collaborative body and collective voice for 27 diverse arts, cultural, and science institutions. For several years, directors and staff of Park institutions have been working with the Cultural Partnership to develop an annual pass for the entire Park.

The goal of the Balboa Park Explorer is to increase the visibility and attendance of Balboa Park as a whole. With a pass to the Park, you can spend a day visiting multiple Museums without concern for additional admission costs.

While the Balboa Park Explorer

offers general admission to 17 institutions in the park, please remember that your Museum membership includes additional exclusive benefits that you currently enjoy, such as unlimited admission to films, free guest passes, discounts on specially priced exhibitions and educational programs, and much more.

To retain these great benefits, we encourage you to continue your membership with the San Diego Natural History Museum, while also considering the Explorer as a great enhancement to membership that will allow you to explore the full Park. For more information, visit sdnat.org.

New Member Benefits

We're pleased to share that we've increased some of your membership benefits!

Members at the Family and Grandparent levels (\$70) and above can now enjoy the Association of Science and Technology Centers (ASTC) Reciprocal Passport Program. This program gives you free or discounted admission to over 250 science and technology centers around the world. Participating ASTC institutions must be more than 90 miles from the Museum and more

than 90 miles from your residence. Learn more about the ASTC Passport Program at www.astc.org.

How can you take advantage of this new benefit?

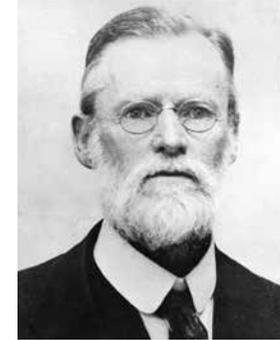
The ASTC logo will appear on your membership cards upon renewal, but if you want to take advantage of ASTC reciprocity before your cards expire, simply call or come in to the Museum to pick up your ASTC sticker.

Additionally, members at the Kate Sessions Circle level (\$175) and above will now be able to bring a guest for free with every visit. We hope you'll use this opportunity to introduce new friends to the Museum.

Members at the Daniel Cleveland Circle level (\$275) and above will receive an invitation to a behind-the-scenes tour of the Biodiversity Research Center of the Californias with a Museum curator.

Thank you for being a member of the San Diego Natural History Museum. We greatly appreciate your support, and if you ever have any questions regarding your membership please don't hesitate to contact us at 619.255.0275 or membership@sdnhm.org.

PAGES FROM THE PAST



Charles Russell Orcutt

The pages of history of this Museum are full of colorful characters, and none more so than Charles R. Orcutt, the quintessential citizen scientist, collector, and entrepreneur. Born in Vermont in 1864, Orcutt was a self-educated man who moved with his family to San Diego and immediately began exploring the area with his father, who was an early horticulturalist and owned a local nursery.

In 1882, Charles accompanied his father and scientist Charles Parry on a collecting trip to Ensenada in Baja California. After that grand adventure, Orcutt was hooked. His natural history travels throughout his lifetime took him on numerous adventures not only in Baja California, but the entire area of southern California, mainland Mexico, Central America,

and finally to the Caribbean, including Jamaica and Haiti. He was particularly interested in collecting and learning about new cactus species, which earned him the nickname of "The Cactus Man."

He also worked tirelessly trying to establish many local serial publications, ranging from his *West American Scientist* to a myriad of other titles including *Cactography: All About Cacti*—over 40 publications in all.

Orcutt participated in the early founding of the San Diego Society of Natural History, the parent organization of our Museum. Orcutt was elected a life member in 1885, and later donated many specimens to our botany, marine invertebrate, paleontology, and herpetology collections. Over the years Orcutt collected at least 45 new taxa, including 15 plant species and one genus that were named in his honor. Many plant names exist today with the specific epithet of *orcuttii* as a reminder of his dogged collecting in our study area.

Some of the descendants of Charles Orcutt

still live in the San Diego area, including the George and Lonnie Muenkel family and the Bill Orcutt family. Last summer, several generations of family members came to the research floor of the Museum for a specially arranged behind-the-scenes tour of each science department. Curators and collection managers had pulled specimens out of the collections so that family members could look at the original labels and hand-written notes made by Charles Orcutt and appreciate the work he had accomplished in his lifetime. Who knows—it is possible that some of the youngest members of the family may be inspired to follow in the footsteps of their intrepid relative!

For more information on Orcutt, visit the About Us section of www.sdnat.org.



The Orcutt family today

SAN DIEGO NATURAL HISTORY MUSEUM
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San Diego, CA 92112-1390

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ARRR YOU READY?

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Buy tickets at sdnat.org or at the Admissions Desk.

PREMIER EXHIBITIONS

*Real
Pirates*

PREMIER
EXHIBITIONS

An exhibition from  NATIONAL GEOGRAPHIC

theNAT

SAN DIEGO NATURAL HISTORY MUSEUM



Family Programs

Join us for family-friendly activities at the Museum. All events are free with admission and free for members.

Family Days

From September through May, the Museum hosts a monthly Family Day celebrating a new exhibition or a fascinating aspect of natural science. Conduct an experiment, make a craft to take home, and take part in a variety of activities for a fun and educational family experience. You might even have a chance to meet one of our scientists. All Family Day activities are held between 11 AM and 3 PM.

Monday, February 17: Pirates

Pirates have dropped anchor at theNAT! Learn more about some of the first naturalists.

Sunday, March 16: Science Family Day (Park-wide)

Celebrate the natural sciences as we kick off the San Diego Science and Engineering Festival.

Saturday, April 26: Trash to Treasure

Get creative and go green. Make trash into treasure you can take home.



Wacky Science Sundays with Ms. Frizzle

Get ready to explore the wild and wacky worlds of mysterious creatures, fascinating habitats, and phenomenal science. Join the Frizz and friends for performances every Sunday at 12:15 and 2:15 PM. Learn about a different theme every month.

February: Sea Lions

March: Spiders

April: Butterflies

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Nature & Me Storytime

Calling all budding naturalists! Nature & Me Storytime is held the second Thursday of the month at 10:15 AM. All ages are welcome (ages 1-5 suggested) with a parent or guardian.

February 13: Pirates

March 13: Birds

April 10: Amphibians

Dates and times subject to change. Please visit www.sdnat.org for a full list of events, exhibitions, and films.

Happenings

Saturday, February 22, 6 PM

Fossil Ball

Arrr you ready? Shake your booty at our annual gala. This year we're celebrating with *Real Pirates*. Tickets start at \$350. Contact fossilball@sdnhm.org or 619.255.0182 for more information or to purchase tickets.

Monday, March 3, 2014

Summer Camp Registration Begins

Don't miss out on summer camp at theNAT. Registration begins March 3 for members and March 10 for non-members. Please visit sdnat.org/summercamp for more information.



SUMMER CAMP!

Saturday, March 29, 6 PM

Night at the Museum

Spend the night at the Museum during this family-friendly overnight. Don your PJs and prepare for an adventurous evening of treasure hunts, crafts, and exploring the Museum after hours. Guests have the opportunity to view *Real Pirates*.



Member Events

Friday, March 7, 6 PM

Member Night: *Real Pirates* and *Great White Shark 3D*

Join us for a members only night featuring *Real Pirates* and our newest film, *Great White Shark 3D*. Don your best pirate attire and prepare to swim with the sharks in our Giant Screen Theater. Tickets are \$15 and include admission to *Real Pirates* and *Great White Shark 3D*. Official invitations with RSVP information will be sent to members via email. Pre-registration is required for this event.

Sunday, April 13, 9 AM

Members Only Treasure Hunt

Search for pirate treasure before the Museum opens to the public! Treasure hunt to be followed by family activities and a Ms. Frizzle show featuring butterflies. Official invitation with RSVP information will be sent to members via email. Pre-registration is required for this event.

For more information on membership, please visit sdnat.org/membership or call 619.255.0275.

Lectures

Thursday, March 27, 7 PM

Pirate Science: The Role Pirates Played in the Birth of Modern Natural History

Pirates traveled to many places forbidden to most ordinary sailors, making them a valuable resource on the peoples, flora, and fauna of regions around the globe. Their adventures coincided with the rising interest in natural science during the late 17th century. Mark G. Hanna, assistant professor of history at the University of



California, San Diego, will explain how pirates were in many respects the early progenitors of the citizen scientists who founded the San Diego Natural History Museum.

Thursday, April 24, 7 PM

Piracy Today: Captain Mark Cedrun on the Rescue of Captain Phillips



In April 2009, the American cargo ship *M/V Maersk Alabama* was en route to Kenya when it was captured by Somali pirates. It was the first successful pirate seizure of an American ship since the early 19th century. After a four-day standoff, the siege ended with a rescue by the U.S. Navy. Hear a first-hand account of

the event from Captain Mark Cedrun, Commanding Officer of the *USS Boxer* (LHD 4), who participated in the rescue of Captain Richard Phillips. This mission was depicted in the 2013 feature film *Captain Phillips* starring Tom Hanks.

Thursday, May 16, 7 PM

Forty years of Photographing the Natural World

Join award-winning photographer Tom Mangelsen on a journey from the prairies of Nebraska to Alaska and Antarctica as he speaks about his life's work as a photographer. Mangelsen, whose work has appeared in *National Geographic*, *Audubon*, and *Newsweek* and who was named 2011 Conservation Photographer of the Year by *Nature's Best Photography*, will also be signing his books, including *The Natural World*, *Images of Nature*, and *Polar Dance*.



Exhibitions

Through September 1, 2014:

Real Pirates: The Untold Story of the Whydah from Slave Ship to Pirate Ship

View more than 200 artifacts, including cannons, swords, coins, gold, and jewelry, recovered off the coast of Cape Cod from the first authenticated pirate ship discovered in U.S. waters. Additional charge applies for admission.

Through May 4, 2014:

Ecosystems of San Diego County

Explore the work of 14 San Diego artists who have been commissioned to photograph areas throughout our incredibly diverse region.

Opening May 17, 2014:

The Natural World: Photographs of Thomas D. Mangelsen

Through panoramic photographs and journal excerpts, follow award-winning photographer Thomas D. Mangelsen to 10 of the world's largest great places, from the jungles of India to the plains of the Serengeti.

Always on view:

Fossil Mysteries

From dinosaurs to mastodons, travel through 75 million years and dig into the rich fossil history of southern California and Baja California.

Skulls

Take a look at 200 of the weirdest, wildest, and most fascinating animal skulls from our research collection.

Water: A California Story

All life depends on it, including ours. Learn how a changing climate affects our water supply, and see some of the live animals that depend on this vital resource.

Films

Through February 28, 2014:

Titans of the Ice Age 3D

Titans of the Ice Age transports viewers to the beautiful and otherworldly frozen landscapes of North America, Europe, and Asia ten thousand years before modern civilization.

Through June 30, 2014:

Dinosaurs Alive! 3D

Narrated by Michael Douglas, *Dinosaurs Alive!* takes audiences on a journey with the world's preeminent dinosaur hunters as they uncover evidence that the descendants of dinosaurs still walk (or fly) among us.

Opening March 1, 2014:

Great White Shark 3D

Unravel the mystery of the creature we love to fear, and go to the depths of human daring to learn the true story of its role atop the oceanic food chain.

Always on view:

Ocean Oasis

Produced by the San Diego Natural History Museum, *Ocean Oasis* takes viewers on a fascinating journey into two remarkably different, but inextricably linked worlds—Mexico's Sea of Cortés and the Baja California desert. Witness the beauty of life in Baja California's rich waters and seemingly barren land.

Visit sdnat.org for the current film schedule.

Visit Us

The San Diego Natural History Museum (TheNAT) is a flagship institution in Balboa Park featuring the regional natural history and unique biodiversity of southern California and Baja California.

TheNAT has five floors of exhibitions, a 3D theater, and San Diego's only Foucault pendulum. Through its permanent collection, special exhibitions, numerous educational programs, and the opportunity to see scientists at work, the Museum fosters in visitors of all ages a lifelong love of learning about nature and the environment.

Balboa Park
1788 El Prado
San Diego, CA 92101
619.232.3821
www.sdnat.org

Hours

10 AM – 5 PM Daily
Closed Thanksgiving Day and Christmas Day

Admission

	General Admission	General Admission plus <i>Real Pirates</i>
Members	Free	\$15
Adult	\$17	\$27
Senior (62+)	\$15	\$24
Military, College Student (with ID)	\$12	\$21
Youth (13-17)	\$12	\$21
Child (3-12)	\$11	\$18
Child 2 and under	Free	Free

