

SBnature Journal

SANTA BARBARA MUSEUM OF NATURAL HISTORY

PALEO UPDATE

Passing Earth's History on to the Next Generation

BONE BY BONE

Identifying Ancient Birds

GREAT NATURALISTS

John and Peggy Maximus Art Gallery

POLAR BEAR

Brings Climate Conversation to the Sea Center



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SANTA BARBARA
MUSEUM
of
NATURAL HISTORY
2559 Puesta del Sol
Santa Barbara, CA 93105
805-682-4711
Open Daily 10:00 AM-5:00 PM

SANTA BARBARA
MUSEUM of NATURAL HISTORY
SEA CENTER
211 Stearns Wharf
Santa Barbara, CA 93101
805-962-2526
Open Daily 10:00 AM-5:00 PM

Photo by Kim Zsembik

Photo by Stacey J. Byers



A NOTE FROM LUKE

President & CEO

We know that stewardship of our home depends on a deep understanding of this place and our interactions with it.

I am delighted to welcome you back to the Museum and Sea Center for another exciting year. I am often asked to talk about what goes on at the Museum and Sea Center, and this always turns into a much longer than expected conversation because we are involved in so many different activities across the full range of the natural sciences. We are busy with exhibits, public and school programs, collecting and curating specimens, conducting field excavations and studies, and doing active research in our laboratories. We play an ongoing active role in California Condor recovery efforts, and the Sea Center is a participating institution in the endangered White Abalone captive breeding program. We work with numerous other organizations—Santa Barbara Audubon Society, Santa Barbara County Archaeological Society, Channel Islands National Park, Santa Barbara City College, the Santa Barbara Astronomical Unit, and more—to support their affiliated efforts and to broaden the Museum's reach.

When I step back from this long list in order to summarize what all these diverse activities have in common, it is clear to me that the core business of the Museum and Sea Center is to enlarge our understanding of ecological change over time in our region, both the naturally occurring cycles of change, and now in a more focused way, understanding how our activities as a species are dramatically and immediately colliding with the workings of our natural systems. As one of the region's leading scientific institutions, we know that stewardship of our home depends on a deep understanding of this place and our interactions with it.

All of us here at the Museum share with you, through your interest and support of our mission, a commitment to being better stewards of our region and our planet. I am very proud of the Museum and what it does every day. Thank you for walking this journey with us.

Sincerely,

Luke J. Swetland
President & CEO

UPDATE

Centennial Campaign & Fleischmann Auditorium Improvements

In 2018, the Museum successfully completed its \$20 million Centennial Campaign to support extensive renovations and restoration of the Mammal and Bird Habitat Halls, and transitioning Cartwright Interactions Hall to the new Santa Barbara Gallery. Outside, a pedestrian-safe arrival plaza and renovated Backyard and Nature Club House dramatically improved accessibility and spaces for nature play and exploration, while the new permanent Norman F. Sprague III Butterfly Pavilion allows the Museum to hold its ever-popular *Butterflies Alive!* exhibit every summer.

Overwhelmingly positive feedback from guests and the community have made the 12 months of renovations well worth the effort. Summer 2019 will likely bring record attendance as we run the first full season of *Butterflies Alive!* in the new pavilion, and transform the woodland across the creek into *Prehistoric Forest*. Guests will come face to face with giant animatronic dinosaurs,

including a *Tyrannosaurus rex*, *Stegosaurus*, and more.

To build on the momentum of capital improvements, the Museum's Board of Trustees recently approved improvements for Fleischmann Auditorium. Since its completion in 1938, Fleischmann Auditorium has become one of the most used spaces on our campus, seating up to 340 people for dozens of lectures, special events, dinners, and public gatherings. The Auditorium is booked by community organizations multiple times a month throughout the year, and is frequently rented for private events such as wedding receptions and graduation

ceremonies. It also serves as the neighborhood polling station and the venue for science-based traveling exhibits.

While small upgrades have been made to improve the functionality of the building over the decades, the Auditorium has never been modified in a way that would detract from its original architectural and aesthetic grace. The building is fundamentally sound and the Museum remains committed to preserving the look and feel of this wonderful space. However, the facility is in need of a top-to-bottom revitalization to both increase visitor comfort and improve the functionality of the venue for its many and varied uses.

In an effort to balance the necessary improvements with our budget and desire to reopen the Auditorium as soon as possible, the project is slated to take place from February-November 2019 and cost \$2.8 million. The work will focus on a new energy-efficient heating and air conditioning system, aesthetic and acoustical improvements, better access for guests with disabilities, and a roof replacement.

Thanks to the incredible support of our community, we are over halfway to our fundraising goal, having already secured \$1.7 million. To contribute to this worthy community project, please visit sbnature.org/donate.



BONE BY BONE

Identifying Ancient Birds

Animal bones unintentionally archived by owls in perfect strata show how island fauna changed over time.



Clockwise from top: Collins identifying tiny bird bones, Island Scrub-Jay, Collins in the field on Santa Rosa Island in 2008 (photo by John Storrer).

When someone emails us a picture of a mystery bone, it's usually Curator of Vertebrate Zoology Paul W. Collins, M.A., who identifies it. This past fall, Collins published the results of an epic bone-identifying spree in the form of a paper¹ illuminating the avian prehistory of the Channel Islands. The study is based on 3,509 small bird bones from fossil sites on San Miguel and Santa Rosa Islands dating back to the late Pleistocene (about 12,000 years ago). Collins and coauthors were able to identify 64 species not previously known to have been on the islands during this time, 40 of which were also new to the fossil avifauna of California.

The discovery of Island Scrub-Jay bones at three sites on San Miguel and one site on Santa Rosa was of special significance to Collins, who has maintained an interest in evidence for a historic population of Island Scrub-Jays across Santarosae (the superisland that became San Miguel, Santa Rosa, Santa Cruz, and Anacapa Islands when rising sea levels submerged its lowlands at the end of the last ice age). Collins—whose work on island fauna has informed conservation efforts—has advocated for the reintroduction of Island Scrub-Jays (today found only on Santa Cruz Island) back onto Santa Rosa Island as part of restoration efforts.

The researchers have owls, Native Americans, and archaeologists to thank because many of the fossil bones studied come from caves inhabited by both owls and ancient humans. After a meal, owls cough up everything they find indigestible, including bones. Good nest sites remain in use by generations of owls over thousands of years, so the fossil record at these sites represents small animals preyed upon by owls across the millennia. Archaeologists studied the caves because of their history of human habitation, and the presence of animal bones unintentionally archived by the owls in perfect strata (layers

deposited over time) alerted Collins and his coauthors to the opportunity to examine how island fauna changed over time.

This recent publication represents a new foray into paleontology for Collins, who has studied Channel Islands avifauna since the mid-1970s. His extensive previous work has focused on more recent history, from the 1840s to the present. If you read our May 2018 blog post "Museum Mysteries: The Disembodied Albatross," you know he compiled a massive catalog of Channel Islands bird specimens in museums worldwide, and a 150,000-record list of observations of birds across the islands. At the time of that post, Collins hoped a grant from the Nature Conservancy would help with the project of digitizing those resources to make them available to researchers and the public. Since then, those funds have allowed Collins to hire SBCC student Alex Rodriguez and SBMNH Curatorial Assistant Julia Schorr to enter data into two databases. The bird specimen and sighting databases now hold nearly 10,000 and 51,000 records, respectively. Stay tuned for more developments: in the coming year, Collins will focus his efforts on a book about Channel Islands birds.

¹Collins et al., 2018, "Terminal Pleistocene-Holocene avifauna of San Miguel and Santa Rosa Islands." *Western North American Naturalist*, 78(3), pp. 370-403.

PALEO UPDATE

Passing Earth's History on
to the Next Generation



Morris and Hoffman in the field



Volunteers Cristina Lefemine and Ted Wheat helping out with exhibits and collections.



When you think of geology and paleontology, you might think of imperceptibly advancing processes, but at the moment, our Earth Science Collection is a locus of frenetic activity. Dibblee Collection Manager of Earth Science Jonathan Hoffman, Ph.D., oversees the busy “paleo horde” (we’re not sure they know he calls them that), a team of volunteers who help him preserve specimens. In addition to preparing specimens from our recent excavations, they’ll assist Hoffman in constructing cradles and curation jackets (structures that support and protect specimens) for any heavy and fragile items currently lacking them. The volunteers have a wide range of backgrounds in paleontology, from a 19-year-old who has volunteered for just a year, to two octogenarians with over 50

years of combined experience. Yet they all share Hoffman’s passion for fossils.

One of the most experienced volunteers is noted researcher Don Morris, who served as park archaeologist for Channel Islands National Park for 15 years, then volunteered in the park for the last 18 years. Visitors to our Earth Science Hall have seen our exhibit about the most complete Pygmy Mammoth skeleton yet discovered, which was excavated on Santa Rosa Island in 1994. Morris—and his wife, researcher and historian Susan Morris—worked on that dig, and in fact, it’s Don’s personal National Park Service baseball cap resting in the diorama.

Morris has valuable knowledge to share from many years studying archaeological sites and excavating mammoth bones on the Channel Islands. In November 2018, he returned

to Santa Rosa Island with Dr. Hoffman to begin the process of transferring some of that wisdom to the next generation. Hoffman hit the ground running on Santa Rosa—stabilizing and collecting a 20-25-million-year-old sea cow in the park during his first two years at the Museum (learn more at sbnature.org/seacow)—but still has much to learn from Morris. Both scientists are alert to how the pace of erosion on the island necessitates regular monitoring of significant sites, a task Hoffman hopes to undertake in a continuation of the Museum’s valuable partnership with the park. The rugged landscape poses challenges that may necessitate creative approaches, so stay tuned for further adventures in paleontology!

ANTHRO UPDATE

The Not-So-Lone Woman
of San Nicolas Island



Art by Holli Harmon

Local anthropologists—including our Curator of Anthropology John R. Johnson, Ph.D.—recently presented evidence that the iconic Lone Woman of San Nicolas Island (famously fictionalized in Scott O’Dell’s novel *Island of the Blue Dolphins*) may not have been alone after all. Johnson and colleagues Susan Morris and Steven Schwartz uncovered interviews with local Native Americans recorded by J.P. Harrington (see also page 11). By these accounts, the woman likely had an adolescent son who hid when ships arrived to carry the Nicoleños to the mainland. Together, mother and son remained on the island until the boy was killed in a fishing accident (possibly attacked by a shark or an orca). The discovery explains much of what remained puzzling about the Lone Woman’s story.

 sbnature.org/lonewoman

45 YEARS OF ETHNOGRAPHY

The Legacy of Curator Jan Timbrook, Ph.D.

A rose by any other name may smell as sweet, but according to Curator of Ethnography Jan Timbrook, Ph.D., the naming itself has significance: “When you learn the names of things, all of a sudden you notice them.” Her eyes opened to the botanical world during a class on the plants of California. An anthropology and art major at UCSB, her new knowledge of local plants brought her to the Santa Barbara Botanic Garden, and a year later, she found herself just down the hill, working with the Museum’s then-Curator of Anthropology Travis Hudson.

Timbrook made herself indispensable as they organized and cataloged artifacts. Her first task was to catalog and roll folded Navajo rugs, smoothing out the kinks and identifying their origins. “Then I turned my attention to California Indian baskets, which I’ve been stuck on ever since,” she says. Through diligent outreach, fundraising efforts, and luck, she has grown the Museum’s collection of Chumash baskets from three to 50 (the most in any museum). Chumash weavers have studied these baskets to revive traditional techniques. Visitors have benefited from Timbrook’s expertise in basketry and other aspects of native material culture in the series



Timbrook in the old “rock room,” before the Anthropology Dept. moved to the Collections & Research Center



Timbrook with Santa Ynez Chumash weavers visiting the basket collection in 2018



Timbrook with Yokuts cooking basket in the Anthropology Collection



Stabilizing frayed parts of a Navajo child’s blanket in preparation for cleaning



of exhibits she developed in Fleischmann Auditorium, revealing the diversity of native artistry through baskets, textiles, beadwork, and more. Timbrook worked with Hudson to organize, translate, and make accessible thousands of pages of field notes by the prolific ethnographer J.P. Harrington, who interviewed native people—including many local Chumash—about their cultures. In 1978, she was approached by Cal Poly Professor Bob Hoover, an archaeologist who had recovered Harrington’s notes on ethnobotany. He needed someone familiar with Spanish, local plants, and Harrington’s challenging handwriting. Timbrook was a perfect fit, and devoted herself to bringing native plant knowledge to

light. The resulting book, *Chumash Ethnobotany*, was published by Heyday Press and later reformulated by Timbrook as her Ph.D. thesis. “So I got my Ph.D. in 2008, when I was 60 years old. It was a very nontraditional career trajectory: I got the job first, wrote the book, and then got the degree,” she laughs. “It’s been kind of a wild ride.”

Over the course of her long career, Timbrook has worked with members of the California Indian Advisory Council, who advise our staff on how cultural heritage collections should be handled and interpreted. Her dedication to facilitating native people’s access to artifacts in her care has been the foundation of the relationships of trust that support her work. She received a great compliment for her efforts when the children of Mary Yee (the last native speaker of any

Chumash language) chose to name our ethnobotanical exhibit the *Sukinani’oy* Garden. *Sukinani’oy*—derived from words Yee shared with Harrington—means “bringing back to life,” as Yee’s descendants felt the Museum was helping revive their culture. The garden is not only a collection of useful plants, but an opportunity to see the plants as the people who first named them saw them. The etymologies reveal beliefs, ecological relationships, and sometimes a sense of humor. (Come look in the garden for “frog’s loincloth.”)

Timbrook “can’t just close the door and walk away.” She’ll be transitioning to the role of curator emerita and will continue to work in the department—and the garden—on the projects that mean the most to her.

WATTS TOWERS SEASHELLS MAKE WAVES IN L.A.



Last winter, SBMNH research appeared in the *Los Angeles Times* with the discovery of an ancient sea cow on Santa Rosa Island. This winter, our scientists are making the *Times* again, with a story from the heart of L.A. itself: the iconic Watts Towers. Curator Emeritus Paul Valentich-Scott coauthored a study¹ of the seashells pressed into the mortar of those whimsical spires. From 1921 to 1954, Italian immigrant folk artist Simon Rodia lovingly constructed these famous steel-and-mortar structures. They've been primarily praised for Rodia's decorative use of human-made objects, but also provide a snapshot of the molluscan diversity of L.A. waters at the time. Rodia reportedly collected shells on foot, carrying a sack on his back along the shore from San Pedro to Long Beach. Considering the structures contain over 7,000 shells, that's a lot of collecting. Valentich-Scott likes how Rodia's use of shells evokes the collector in us all: "It's a human experience. When we're strolling along somewhere, we just naturally pick stuff up, because we want to learn about it."

By analyzing the proportion of shells drilled by predatory moon snails, the scientists confirmed that Rodia collected beach shells (rather than purchasing animals in markets). The study will help conservators preserve the towers' artistic integrity for future visitors; shells weathering out of the structure can be replaced by specimens from the same species, instead of "generic" shells that wouldn't necessarily have suited Rodia's aesthetic intentions. "We can help those conservators save an important piece of art," Valentich-Scott says with pride. "I always like the interface of art and science."

¹Pernet et al. (2019) "The Seashells of an Iconic Public Artwork." *Journal of Conservation and Museum Studies*, 17(1), pp. 1-11.



Valentich-Scott and colleagues visiting the site to identify shells



CHECK-UP WITH DR. FISH

Research Associate
Christine
Thacker, Ph.D.



Small water pancake, also known as the Round Stingray, from Catalina Island

I've been lurking around in the Fish Collection lately, with a book, a bunch of jars, and a pitcher full of alcohol. I've done this before—quite a lot, in fact—but the Santa Barbara collections are all new to me. What I'm doing is checking the fish. They're all dead, some for a very long time, but they still need care. Are their jars OK? Do they need clean alcohol? Are the identifications right? We keep these specimens for research and education, so people can examine them and learn from them, and it's important that the scientific names are correct (sometimes they change!). The book I'm carrying with me is Miller and Lea's *Guide to the Coastal Marine Fishes of California*. It covers most of the fish in our collection, because we have a terrific selection of local coastal fishes. The collection isn't

large, but it's comprehensive, with examples of most of our common fish, sharks, and even rays. I've made some terrific finds so far, like the barreleye, a rare deep sea fish with a jelly face that contains two huge green eyes for seeing in low light. We've also got lots of rockfish, surfperch, and a rare goby from the Sea of Cortez. My favorites so far are the stingrays, also known as water pancakes, which are common off our coast and quite lovely. I'll keep working through the collection in the months to come, and I'll be showing off the best finds on my Instagram at @thackfish.





POLAR BEAR

Brings Climate Conversation to the Sea Center

An approximately nine-foot-tall Polar Bear on loan from Science North (a science museum in Ontario, Canada) now towers over visitors at the entrance to our Sea Center on Stearns Wharf. The taxidermied bear provides a great opportunity for picture-taking, but interpretive text invites Sea Center guests to make their selfies count by sharing awareness of the challenges facing the species as global climate change shrinks their habitat.

The headline for the exhibit panel “Big Bear, Small World” encourages visitors to think about how the fate of the Polar Bear is tied to their own. Melting ice, it notes, “is clearly a problem for Arctic species, yet none of us are immune” to the effects of climate change. “Here in Santa Barbara, climate impacts like rising sea levels, more intense fires, droughts,



The most significant threat facing polar bears is habitat loss due to climate change.

rainstorms, and debris flows have quickly become our new normal. As science continues to detail the specific causes of—and solutions to—climate change, we must respond, for the sake of the natural world and ourselves.”

The Sea Center, which hosts science outreach festivals for Underwater Parks Day and World Oceans Day, has kept its educational programming up-to-date with climate science, but most exhibits were crafted before the current era of overwhelming scientific consensus about the changes we now face, including warming and acidifying oceans. The serendipitous availability of the bear from Science North created an opportunity for the Sea Center to bring more up-to-date climate science information to its exhibits.

According to the U.S. State Department’s website, “the most significant threat facing the long-term survival of polar bears is habitat loss due to climate change.” In recent years, scientists and journalists have observed that as sea ice dwindles, bears have to travel more and burn more calories to catch the seals they eat, forcing them to go hungry.

The Polar Bear will share its story—and continue to impress guests with its size—through October 2019. Sea Center Programs Coordinator Ed Sweeney plans to weave the bear into the curriculum for Nature Adventures spring camps, teaching campers about the animal’s unique adaptations to the Arctic.

The Sea Center is open daily from 10:00 AM-5:00 PM. For more information, visit sbnature.org/seacenter.

 Members are always free



GREAT NATURALISTS

John and Peggy Maximus Art Gallery
Open through May 5, 2019

In the new Maximus Gallery exhibit, *Great Naturalists*, we profile the lives of great naturalists who collected, described and classified living things, as seen through their observations and discoveries.

These naturalists were important figures in the early years of natural history as it changed from a mainly amateur pursuit to today's specialized scientific profession. Modern natural science was built on the work of those who went before, and their portraits are shown with original engravings and lithographs from our art collection. Some were gifted artists themselves while others commissioned illustrations for publication, but they all valued the power of accurate drawings to identify species and convey information.

Some names will be familiar: Carl Linnaeus, Charles Darwin,

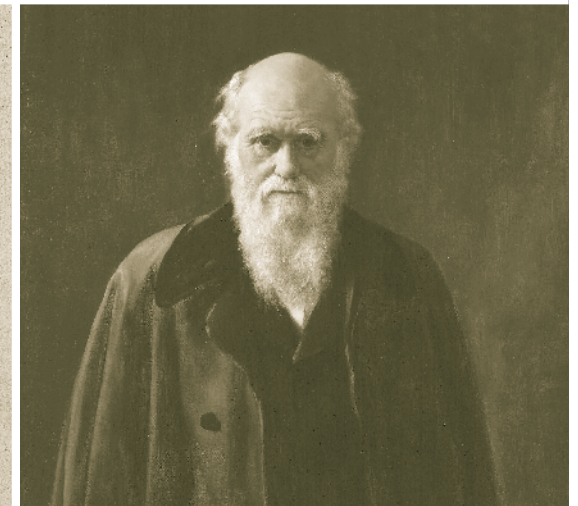
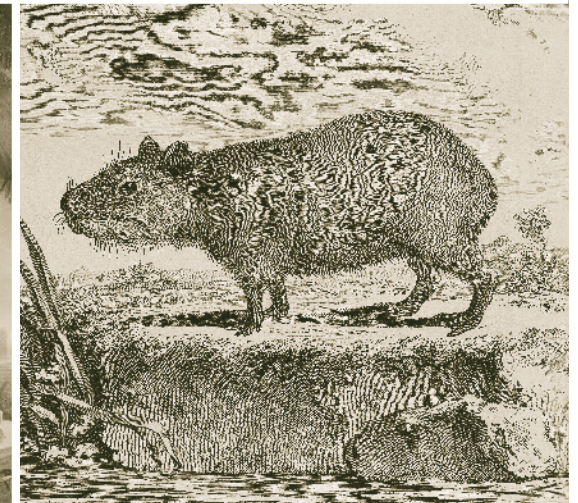
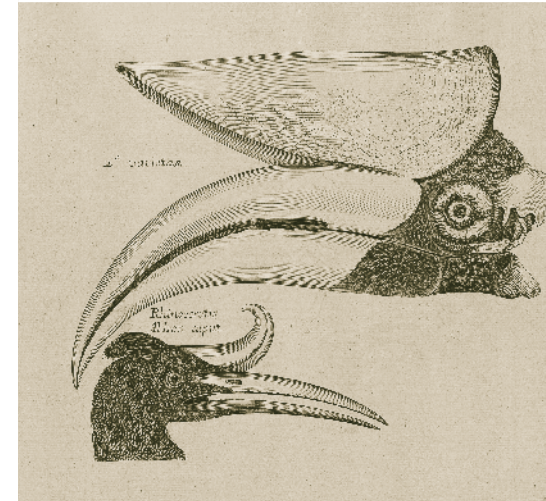
Alexander von Humboldt, and Maria Sybilla Merian. Others, like Georg Rumphius, the Comte du Buffon, Alcide and Charles d'Orbigny, and John Ray were famous in their time but are less well known today. These scientific revolutionaries were seeking a framework with which to understand the natural world. Most took epic journeys of discovery and wrestled with intellectual challenges. It is difficult today to comprehend the breadth of their endeavors given the times in which they lived.

Of local interest are two naturalists who lived in Santa Barbara and built sizable natural history collections. Lorenzo Gordin Yates was a founder of the Santa Barbara Society of Natural History, organized in 1876. He was a specialist in botany, conchology, mineralogy, and paleontology. Today, his

collections reside at the UCSB Cheadle Center for Biodiversity and Ecological Restoration, Stanford University, and here at the Museum.

Our Museum's founder, William Leon Dawson, was drawn to the study of birds as his life's work. He established the Museum of Comparative Oology (the study of bird eggs) in 1916. Initially housed in two small buildings on Dawson's property, the collections were moved to the Museum's present location in 1922. Dawson published *The Birds of California* the same year, complete in four volumes.

The exhibit is open through May 5 in the John and Peggy Maximus Art Gallery next to Bird Habitat Hall and the Museum Library. Entrance is included with Museum admission. For more information, visit sbnature.org/great-naturalists.





Quasars have experiences that last a lifetime and really shape who they are.

GENERATIONS OF EDUCATION

Teen Programs Manager Jenna Rolle and Quasars

Teen Programs Manager Jenna Rolle surveyed alumni from over 25 years of the Museum's long-term work/study/internship program *Quasars to Sea Stars*, and confirmed what her gut already knew: a teen-driven approach works. The students—known as Quasars—sign up for the program early in their high school career, and commit to it until graduation. "During that tenure, they get to explore all of the different aspects of the Museum," Rolle explains, from engaging in scientific research with our curatorial staff to working behind the scenes in exhibits, or with the public in educational programs.

The core of the grant-funded program is Quasar-generated curriculum, about to hit a classroom near you. Every summer, Quasars attend weekly classes and take field trips based on a theme (this year: endangered species). In fall, they create a curriculum based on what they learned, such as a geology-themed escape room or a board game about natural selection. Come spring,

they take their curriculum to Santa Barbara Unified School District eighth-grade classrooms. "It's an opportunity for the Quasars to show off the content they created, and inspire students in that classroom to be part of this program and make content they can share."

Mentoring within the program is a big part of what makes Quasars great. Rolle says that when it comes to personal growth, the older students do the heavy lifting. "You empower them, you give them autonomy, you give them the tools they need to succeed, and then they take those tools and show the others how to use them."

Learn more at sbnature.org/teens.



My job here is to plant the seed of curiosity.

Nature Adventures Camps Manager Tyrena Chin, Ph.D., sees herself as a seed-planter. In her role running our camps and classes since 2010, she's seen some of the many generations of students who've passed through the program



over the years. Sometimes she watches that seed of curiosity grow and flower, as in the case of Alexia Vance. Alexia started as a camper, became one of our Quasars, developed curriculum for two camps, and was finally promoted to become a camp instructor. "If she ever wanted my job, she'd be great for it," says Chin.

For the teens who assist, it's an opportunity to build leadership skills. For the kids in camps and classes, it's a chance to have a more in-depth experience exploring science and nature. Brief family visits and school field trips rarely give children the opportunity to study the topics that interest them in depth, but Nature Adventures curriculum gives students time for hands-on activities like building a robot hand or learning CSI fingerprinting skills. Camps and classes cover a wide range of topics—some suggested by the kids themselves—including bugs, fossils, astronomy, and wizarding. Older campers have the opportunity to learn about serious environmental issues and uncover the real science behind sci-fi pop culture.

As adults, we don't always have opportunities to stretch our minds, but Chin finds that when she leads classes parents attend with their children, the grownups are sometimes just as excited as the kids. "Everybody gets to learn."

Register for upcoming camps and classes at sbnature.org/natureadventures.

 Members get discounts

MUSEUM LIFE



1. Thousands of guests find treasures at the December Folk & Tribal Arts Marketplace.

2. Santa Barbara Wine + Food Festival guests enjoy some shade.

3. Nature Adventures Storybook Science camper shows off her three little pigs.

4. National Geographic's 50 Greatest Photographs opens guests' eyes.

5. The new Sprague Butterfly Pavilion hosts its first Butterflies Alive!

6. Designer Marian Mackenzie puts finishing touches on Maximus Art Gallery exhibit Kingdom of California.



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7. Elisabeth Fowler, Luke Swetland, Marianne Sprague, Bobbie Kinnear, and Palmer Jackson, Jr. cut the ribbon on the new pavilion and Backyard.

8. Young visitor enjoys the Backyard's new mud pie station.

9. Artwalk gathers the best of Santa Barbara's painters and artists.

10. Dr. Jonathan Hoffman describes the sea cow fossil discovery to guests at Cocktails with a Curator at the Sea Center.

BEQUEST NEWS

Legacy Giving is Important to the Museum



Jill Vander Hoof

Mission Creek Legacy Society member Jill Vander Hoof passed away on November 22, 2017. Many of us had the great fortune to spend time with Jill, who was a life-long volunteer and friend of the Museum. Her estate, an extraordinary seven-figure gift, will support the Museum Library for many years to come. In honor of Jill, a lovely plaque near her father's (Vertress Vander Hoof) plaque was installed outside their beloved Library. We are grateful for Jill's spirit, generosity, vision, and the wonderful legacy she left to the Museum.



John W. Carson

The Museum received a significant gift from Mr. Carson's estate to support the Entomology Department. He worked as a volunteer for many years, curating specimens, organizing information, and tending to the Library. After Dr. Michael Caterino joined the Museum in 2001 as the chair of entomology, John became a valuable field guide to him, introducing him to important field collecting sites such as Sedgwick Reserve and Arroyo Hondo Preserve, places where John also volunteered as a docent. We are deeply grateful to John for his many years of volunteer service and his generous bequest.



Else (Leinie) Schilling Mullin Bard

Santa Barbaran Leinie Bard and her family had a great interest in natural history, photography, jewelry design, and animals. Leinie was involved with the Museum for 26 years. We received 25% of the residue of her estate from the Schilling Mullin Charitable Trust; her wonderful six-figure gift will support Museum programs and operations.



Suzanne Roberts

A Santa Barbara resident, Suzanne was the widow of John G. Roberts. The couple left 15% of their estate to the Museum. John G. Roberts enjoyed hikes with his father and daydreams of flying over ridgelines instead of having to hike them. He flew helicopters for the Army Corps of Engineers in Alaska and flew planes all over the world as a distinguished Army aviator. Suzanne became his co-pilot in the air and in life in 1969.

New Charitable Gift Annuity Program

New way to support the Museum

The Museum now offers Charitable Gift Annuities (CGA) as a way to support the Museum and provide donors with a fixed amount of income for life. We require a minimum age of 65 (first annuitant) and a minimum commitment of \$25,000. In addition to a fixed, guaranteed, partially tax-free lifetime income, a CGA provides an immediate tax deduction, and for gifts of appreciated stock, partial relief from capital gains tax.

SAMPLE ONE-LIFE RATES ARE 5.6% at age 70, 6.2% at age 75, 7.3% at age 80.

For more information contact Development Officer - Legacy Giving Rochelle Rose, CFRE at 805-682-4711 ext. 179 or rose@sbnature2.org.

CGA calculators are also available on our website at sbnature.org/legacygiving.



LEADERSHIP CIRCLES BEHIND THE SCENES

Science Salons

The objects in our collections document the history of our planet and support our growing knowledge of the interrelationships of life. Our curators and scientists preserve and study these specimens, facilitating the broader work of understanding and protecting the world around us. Science Salons provide members of our Leadership Circles of Giving with the opportunity to spend one-on-one time with these scientists, to better understand their work.

These evenings illuminate the important connection between collections and ongoing research. In 2018, Curator of Malacology Daniel L. Geiger, Ph.D. revealed

tiny species he observed using our scanning electron microscope; Dibblee Collection Manager of Earth Science Jonathan Hoffman, Ph.D., shared the fossilized skull of the recently excavated sea cow from Santa Rosa Island; and Curator of Anthropology John R. Johnson, Ph.D., gave guests the inside story on topics ranging from the famous Arlington Springs Man to this year's publications in *Science*. Museum Librarian Terri Sheridan's new walking tour of our historic campus highlighted unique architectural features and the lives of individuals who played a part in our history. These are just a few examples from a very full program that represented many facets of research.

The Museum is planning some fascinating Science Salons for 2019 at both our Museum and Sea Center campuses. To learn more about the Leadership Circles of Giving and our behind-the-scenes Science Salons, contact Development Officer Diane Devine at 805-682-4711 ext. 124, ddevine@sbnature2.org or visit our website sbnature.org/leadership-circles.

The Museum's most philanthropic level of membership, members of the Leadership Circles contribute \$1,000 or more annually and include Patron's, Director's, President's, Collector's, and Chairman's Circle giving levels.

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2559 Puesta del Sol
Santa Barbara, CA 93105

SBnature Journal is a publication of the Santa Barbara Museum of Natural History. As a Member benefit, issues provide a look at the Museum's exhibits, collections, research, and events. The Santa Barbara Museum of Natural History is a private, non-profit, charitable organization. Our mission is to inspire a thirst for discovery and a passion for the natural world.

For information about how to support the Museum, contact Caroline Grange at 805-682-4711 ext. 109 or cgrange@sbnature2.org.



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Cover photo: Dibblee Collection Manager of Earth Science Jonathan Hoffman, Ph.D. conducting fieldwork in Channel Islands National Park.

PREHISTORIC FOREST

*Come face-to-face
with dinosaurs on the
banks of Mission Creek!*

SAVE THE DATE

- **Cocktails with a Curator**
FRIDAY, MARCH 15
- **Mission Creek Soirée**
SATURDAY, MAY 18
- **Butterflies Alive! and Prehistoric Forest**
SATURDAY, MAY 25–
MONDAY, SEPTEMBER 2
- **Members' Party**
FRIDAY, MAY 31
- **Santa Barbara Wine + Food Festival**
SATURDAY, JUNE 29

For more information on upcoming events visit sbnature.org.