# SBnature Journal SANTA BARBARA MUSEUM OF NATURAL HISTORY



#### **SBnature Journal** 2018 VOL. 4, NO. 1

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### A Note from our President & CEO



Hello and thank you to everyone who helped make 2017 such an exciting and wonderful success for the Museum and

We went "all in for insects" at the Museum, and kicked off this theme with our 18th Annual Mission Creek Gala in March. Fleischmann Auditorium metamorphosed into the Bugclub: A Unique Entomological Experience, and guests who at first were reluctant to eat a bug, warmed to the idea as they sipped on our signature cocktails - Beetlejuice and the Millipede Mule. The event was not only entertaining and informative, but helped us raise \$421,000 to support Museum and Sea Center education programs.

Our summer exhibition Bugs...Outside the Box featured larger than life detailed sculptures of more than a dozen of the most amazing insects yet discovered on our planet, and showcased a series of fantastic large scale photographic images of a number of local insects. During the exhibition, our docents staffed the Bug Cart where guests of all ages could hold a variety of insects and learn about their natural history.

We added BugOut Tuesday and Bug Boot Camp programs to expand on the fun and learning by allowing visitors to get up close to many of the most fascinating creatures found all around us. And not to be left out of the celebration, the Sea Center presented Bugs of the Sea - Live Long and Lobster in October to explore the ecology, fishery, research, and conservation of these incredible nocturnal sea creatures.

To continue the festivities, we took a respite from things terrestrial to organize two brilliant community events. On June 3, World Oceans Day, we set an attendance record at the Sea Center with more than 2,000 visitors in one day! Then in August, we turned our telescopes and our attention skyward in the run up to the Great American Eclipse when over 1,000 visitors headed to the Museum to view the eclipse through special glasses or to watch NASA's live feed of totality in Fleischmann Auditorium.

In this issue, I invite you to also read about the Museum and National Park Service's collaboration to prepare the excavation of a remarkable fossilized sirenian (sea cow) and why this discovery will reshape our understanding of the evolution of modern manatees.

We have also included an update on the transformation of the Museum, both inside and out, which launched with renovations in September following an incredibly successful Centennial Campaign.

In short, 2017 was a year filled with a multitude of great events, programs, and scientific discovery, and 2018 promises more of the same. You won't want to miss your regular visits to both the Museum and the Sea Center in the months ahead to experience it all in person.

I look forward to sharing it all with you. Thank you.

President & CEO



We were delighted to begin the Centennial Project's renovations across the campus and a suite of galleries in September 2017. The progress our general contractor Frank Schipper Construction has made on every front in just a few short months is impressive.

The entire area underneath our old Butterfly Pavilion was excavated six feet deep and over 800 tons of boulders were removed. Footings for the new permanent Butterfly Pavilion have been poured and soon construction on the structure will begin. In our Backyard, a new artificial creek is being installed as well as the footings for our much needed accessible boardwalk. Work is also under way along the entire frontage of the Museum and large sections of the roof over the core historic building are being replaced.

In the eastern suite of galleries, which includes Cartwright Hall, Mammal Hall, the Dennis Power Bird Hall, and the Bird Habitat Hall, we are running new electrical and data lines. Soon, the flooring and acoustical panels on the ceiling will be installed so that the spaces can be turned over to the exhibit design and fabrication team in March 2018. Our team of Museum curators, designers, and consultants have been especially busy finalizing the design, installation plans, and interpretive panels that will be placed into the galleries.

Some of the Museum's most important taxidermy specimens were taken to our diorama specialists Dixon Studios in Tucson, Arizona for a top to bottom makeover, and Prey Taxidermy in Los Angeles is working on a number of new pieces. In addition to all of these wonderful specimens, many informative, thought provoking, and delightful additions will be installed in the galleries.









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We are most excited about the transformation of Cartwright Hall of Plants and Insects into our Santa Barbara Gallery. This new incarnation will be your "go to" place for understanding the uniquely diverse, exquisitely beautiful, and delicately fragile Santa Barbara ecosystem.

Our overarching principal as we thought through these exhibit spaces was the idea of "the Museum as your Field Guide to the region." Where most museums frame their exhibitions as a destination and a complete experience, we are turning that notion on its head. We still want you to visit our new galleries and our amazing living campus environment to learn about the region's various habitats and ecosystems, but it's our hope that you will visit our new galleries and be inspired to become a field naturalist yourself.

The grand reveal for the new exhibit galleries will take place early summer 2018. Later in the summer, our new Butterfly Pavilion will be unveiled – and if the timing and logistics align, we plan to offer a bigger and better *Butterflies Alive!* Soon after, we will have our third "opening" to showcase our enhanced Backyard and Clubhouse, giving us three exciting moments to celebrate success.

Underpinning all of this extraordinary work is the Centennial Campaign, now ending its fourth year. We currently have a Challenge Grant by generous Museum friends wherein we are asked to raise \$10 million in order to receive their \$5 million gift. Thanks to the incredible generosity of our donors, we only have \$441,000 to go to complete this match and bring our total raised to \$18.4 million!

We are actively fundraising and reaching out to those who can help us meet this challenge. Thank you for all of your help in getting us to this pivotal point in the Museum's 101 years of service, science, and education.

For more information about the Campaign visit campaign.sbnature.org.

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# Watch Out for Incoming! and Free Shows at the Gladwin Planetarium

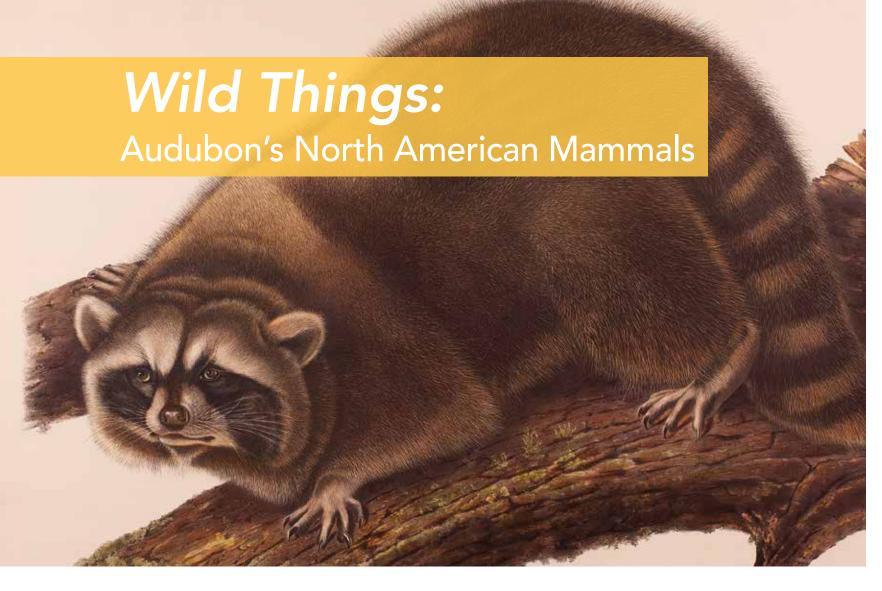
The Santa Barbara Museum of Natural History is blasting off into 2018 with an array of exciting opportunities to explore the universe and space sciences.

We are excited to announce a new show in the Gladwin Planetarium called *Incoming!* a thirty-minute show narrated by *Star Trek's* George Takei that explores how asteroids and comets have collided with our planet throughout history, changing the course of life on Earth and shaping the world we know today. This topnotch show is a production of the California Academy of Sciences, and distributed by Evans & Sutherland. *Incoming!* will be featured on weekends at noon through May 31.

In addition to Incoming! all Planetarium shows will continue to be offered for free with paid Museum admission through the end of May. The Museum's Gladwin Planetarium allows guests to experience the wonders of the night sky as never before with a stateof-the-art digital projection system, full-dome theatre, and live multimedia shows narrated by knowledgeable Astronomers. Shows like Twinkle, Twinkle for Little Stars and Kid's Space Adventure are perfect for families with young children, ranging from 15 to 40-minute show times, respectively. Shows like What's Up and Your Cosmic Quest are geared for guests ages eight and up, and are interactive forty-minute programs uniquely tailored to answer guests' questions about space. Starting January 29, the Museum will be offering Planetarium shows on all weekdays at 3:00 PM—making the Planetarium available seven days a week.

More opportunities to explore Astronomy are on the horizon. Be sure to check out the popular Star Parties on the second Saturday of every month when the Museum's Astronomy personnel and the Santa Barbara Astronomical Unit offer public observations of the night sky at the Museum's Palmer Observatory. Star Parties are free for all and run from dusk until 10:00 PM. And make sure to keep your eyes peeled for our upcoming Astrophotography class in the first quarter of 2018.

For more information about all Astronomy programs and to verify Planetarium shows and times, including any additional showings of *Incoming!* please visit sbnature.org.





From now through June 4, over thirty rare and beautifully hand-colored lithographs of mammals by famous artist and naturalist John James Audubon are on exhibit at the Museum's John and Peggy Maximus Gallery.

John James Audubon, famous for his work on the Birds of America, produced the outstanding work on North American mammals in the 19<sup>th</sup> century. While many of America's animals were familiar, they were not described and illustrated in one publication until Audubon and his co-author, Reverend John Bachman, published the Imperial Folio

of Quadrupeds. At the time, information was scarce and much of western America was still poorly known. The project proved challenging partly because of the nocturnal habits of many mammals.

Using a combination of pencil, chalk, crayon, and watercolor, Audubon attempted to capture the life and movement of his subjects. He then hired a printer in Philadelphia to transfer the images from the preparatory watercolors to lithographic stones for making multiples. Published over three years, from 1845–1848, the 150 plates filled three volumes.









The Maximus gallery and *Wild Things* exhibit have become a destination for visitors to the Museum as well as docents and school groups. Children are encouraged to study the art on the walls and learn about the various characteristics of the animals as they play a "match the mammal" game and color postcards. A number of mammal specimens are also on display in the gallery while the Museum's beloved Mammal Hall is undergoing renovations.

Maximus Gallery Curator Linda Miller hopes everyone who visits the exhibit comes away with an appreciation for the artistry of this great naturalist, noting that these antique prints give us a glimpse into history, help us to understand how the sciences developed, and blend art and science in a captivating and beautiful way.

The Museum's collection of more than 3,500 engravings and lithographs represent a sampling of European and American natural history illustrations from the 17<sup>th</sup> to 19<sup>th</sup> centuries. They were made during an era in which the world's flora and fauna were being described for the first time. As European voyages of exploration discovered new lands beyond the boundaries of the known world, naturalists and artists collected and recorded their findings, bringing back vast collections of plants and animals new to science. Once home, the artist's drawings were engraved onto copper plates and published for a public eager to see these exotic new discoveries. Engravings and lithographs of birds, plants, fruit and insects, are represented in the Museum's print collection. Subjects include 19<sup>th</sup> century lithographs of birds and mammals by John James Audubon, hummingbirds by John Gould, reptile and amphibian engravings from Colonial America by Mark Catesby, and 17<sup>th</sup> century German botanicals by Basil Besler.

Entrance to the Maximus Gallery is free with paid admission and is open from 10:00 AM–5:00 PM. For more information, please visit sbnature.org.

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Have you ever collected something from nature but were left wondering what it is and if you're allowed to keep it? Many of us are compelled to collect, yet few of us know the rules. The next wave of Curiosity Lab programming called the Nature Exchange, created and licensed by Science North, is designed to answer those questions.

Officially debuting in the Curiosity Lab on Saturday, February 3, the Nature Exchange is an ongoing program where visitors can bring in natural objects\* from their personal collections and earn points by learning more about their items. Points can be saved and ultimately traded-in for special objects found in the Nature Exchange trading case.

#### How does Nature Exchange work?

Visitors will bring their natural object to our Naturalists in the Curiosity Lab and fill out a tag indicating where the object was found, when it was collected, and by whom. The visitor will then share what they know about the specimen itself or conduct further research to earn more points by using resources in the Curiosity Lab or the Museum Library.

After a brief discussion, and if the natural item meets all ethical criteria, the Naturalist will assign a point value for the session. Visitors can either use their awarded points immediately (e.g. trade for a low-point natural item such as a tree ring cookie) or save their points for items of higher value.

## Assignment of points is based on three factors:

#### **Uniqueness:**

What distinguishes the item?

#### Quality:

What is the item's condition?

#### Information:

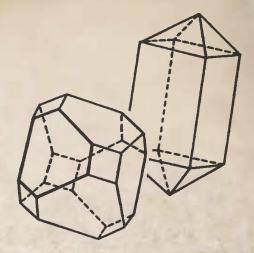
What knowledge can the visitor share about the item?

Points are also awarded for leaving objects where they were found, and providing pictures and stories about them instead.

Nature Exchange helps us demonstrate that knowledge has value. In most cases, what a guest can tell us about their object earns more points than the object itself.

Over time, participants are driven to learn as they aspire to take home high value, ethically collected items. In the process, they learn to become ethical stewards of the natural world.

Nature Exchange operates during the Curiosity Lab's regular hours. For more information about Nature Exchange, please visit sbnature.org.



\*Natural objects include rocks, minerals, shells, bones, and plants. Current wildlife regulations prohibit individuals from possessing bird bones, feathers, nests or eggs as well as marine mammal bones. Living animals, plants and cultural artifacts are also not accepted. No items are allowed from federal lands (e.g. National Parks, Forest Service and Bureau of Land Management property) as well as State Parks.





#### BY JONATHAN M. HOFFMAN, PH.D., DIBBLEE COLLECTION MANAGER OF EARTH SCIENCE



Photo: Chris Everett, Ruben Aguilar-Underwood and Tara Redinger with the sea cow skeleton

Last November a crew embarked on the first Museumled fossil excavation in decades. As crew leader, it was my pleasure to work with promising paleontology students from Santa Barbara City College (SBCC) and the University of California, Santa Barbara (UCSB). We went to Santa Rosa Island to stabilize the skull and skeleton of a sirenian, or sea cow, until we can remove it next summer. This new species is the first sirenian found in Channel Islands National Park (CHIS) and its age is roughly 25 to 20 million years old, making it one of the oldest sea cows found on the West Coast.

The project was a truly unique adventure: we were unearthing an extinct marine mammal on mountains rising from the ocean. Our mornings began with stunning sunrises and breathtaking views on our "walk to work." The crew worked diligently, earning blisters and bruises from hammering through well-cemented rock. We also found pieces of "float" that had weathered out of the overlying rocks. These new sea cow specimens included ribs, vertebrae, and teeth. It did not take long to realize we had a complex ecosystem represented; we found fossils of clams, snails, sharks, and worm burrows. The Museum has already begun working with scientists across the country to study the various aspects of this exciting new locality.

With the specimen protected for the winter, the project ended with some suspense; our boat departure on December 5 was scrubbed due to high Santa Ana winds and we awoke to thick smoke blanketing the island. As ash fell outside our CHIS housing, we watched television coverage of the devastating Thomas Fire. Many of our CHIS colleagues had family and homes threatened by the blaze, so the Superintendent arranged flights to return everyone to the mainland. It was impressive to watch the professionalism of the CHIS employees under dire conditions and I am grateful for their commitment and service.

I hope that the Museum's members and supporters will share my excitement for the future of the paleontology program. I look forward to strengthening our collaborations with SBCC, UCSB, CHIS, and various researchers in our quest to understand and share the prehistory of the Central Coast.



# Estate Gift Endows New Collection Manager Position

In 2004, Thomas Wilson Dibblee, Jr. left a \$1.5 million beguest to the Museum to support a position in Earth Sciences. Funds were initially used to finish digitizing Dibblee's maps. Dibblee was a great-great-grandson of Captain José de la Guerra y Noriega, the Comandante of the Presidio of Santa Barbara. He grew up on Rancho San Julian near Lompoc and studied geology at Stanford University. He personally walked almost every square inch of Central and Southern California and accomplished a nearly unimaginable record of geologic mapping. In 2001, the Museum partnered with Dibblee to publish his extraordinary geologic maps and celebrate his estate designation. "The Museum means so much to me. This is the happiest day of my life," he said.

Dr. Jonathan Hoffman was hired in summer 2017 as the Dibblee Collection Manager of Earth Sciences at the Museum. He earned his B.A. in Geology at Occidental College and a Master's degree in Geology at the University of Florida. His research has focused on the use of fossil teeth as paleoecological tools, working with fossils in northern Florida, eastern Oregon, northeastern Nebraska, and northern Wyoming.

Estate gifts can be particularly appropriate ways to create named endowments in support of the Museum's core positions and programs. Such endowments create a lasting legacy and ensure that the Museum will continue to be able to attract the very best staff and offer critical services that make a difference.

If you have an interest in learning more about an estate gift, please contact Development Officer for Legacy Giving Rochelle Rose CFRE at 805-682-4711 ext. 179 or rrose@sbnature2.org.



A perfect blend of membership and philanthropy, Leadership Circles' members provide unrestricted operating revenue that is vitally important in sustaining the Museum and Sea Center's educational programs, research, collections, and exhibits - and serves as a core foundation for all we do now and for generations to come. We celebrate the members of the Leadership Circles each year in January at the annual Leadership Circles Dinner, and recognize extraordinary contributions by community supporters, donors, and volunteers with the presentation of the Museum's Legacy Award. The 2017 Legacy Awards were presented to F.G. (Eric) Hochberg, Ph.D., Patty and John MacFarlane, and Donley Olson for their support and dedication in making the Museum the exceptional and beloved institution it is today.

Along with making a significant and long-lasting impact on the Museum, the benefits of being a member of the Leadership Circles include participating on customized field trips...our Leadership Circles Explorations! Just this past year, accompanied by Museum scientists and Museum President & CEO Luke J. Swetland, Leadership Circles' members headed to the Carrizo Plain for the spectacular spring wildflower display and amazing rock art, and also received a behind-the-scenes tour of the beautiful Autry Museum of the American West.

For more information on upcoming Explorations!, other Leadership Circles benefits, or becoming a member, contact Diane Devine at 805-682-4711 ext. 124 or ddevine@sbnature2.org.

(Members of the Leadership Circles of Giving contribute \$1,000 or more annually and include the Patron's, Director's, President's and Collector's Circle levels.)

# A Fantasy Becomes Reality

# BY DANIEL L. GEIGER, PH.D., CURATOR OF MALACOLOGY

Each of the Museum's curators has a specialty that we have studied over decades, in my case marine snails. However, our scientific curiosity occasionally gets the better of us and we venture further afield. Given that Santa Barbara is a world-renowned orchid town, those plants elicited my interest.

A while back I obtained from a commercial plant vendor a specimen labeled Oberonia longissima, but it was not in bloom. I wondered what the flowers might look like and dove into the literature, only to find out that such a name does not exist. It was a pure fantasy name! Eventually it flowered, and I tried to determine its real species. To my even greater surprise, it turned out to be an undescribed species, which I named *Oberonia aureolabris Geiger*, 2017.

It is similar to *Oberonia rufilabris* (Latin for red lip), which is very common in the horticultural trade. One of the distinguishing characteristics is the golden-orange color of the flower, and that is how I came up with the name for the species: *aureo-*, Latin for golden; *-labris*, Latin for lip. To illustrate the species, I took advantage of the Museum's exquisite imaging facilities, and because the flowers are very small, I used specialized macrophotography techniques called z-stacking. This is the same technique that was used in the summer 2017 exhibit, *Bugs...Outside the Box.* Additionally, I fired up the scanning electron microscope to investigate structures at the cellular and sub-cellular level. All that work was necessary to remove any doubt about this new species, and now the plant with a fantasy name can be properly referenced as a real taxon.

Despite the fact that the Museum does not have a botany department, we do not forget the plants around us. Be it in the oak wood chaparral at our Mission Creek campus, the Chumash ethnobotany studied by Dr. Jan Timbrook, Curator of Ethnobatony, or beautiful, and sometimes unique, orchids. The Museum is the venue for the fall exhibit of the Santa Barbara Orchid Society, and will also be hosting several events at this year's joint Santa Barbara International Orchid Show/American Orchid Society (AOS) Spring Meeting in March 2018. It includes a new initiative, the Research Roundtable, and as chair of the AOS Research Committee I try to encourage growers and enthusiasts to engage in research projects in an open forum to exchange ideas and ask questions about how to tackle research. This is another great example of how the Museum engages with a variety of audiences.

#### Reference

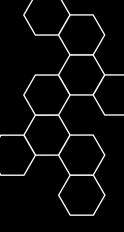
Geiger, D. L. 2017. Studies in *Oberonia 2* (Orchidaceae: Malaxideae): *Oberonia aureolabris*, a new species discovered in cultivation. *Phytotaxa* 329: 173–179. http://www.mapress.com/j/pt/article/view/phytotaxa.329.2.8pdf



## SANTA BARBARA MUSEUM OF NATURAL HISTORY

18TH ANNUAL MISSION CREEK GALA





The Museum hosted the annual Mission Creek Gala on May 13, 2017. **BugClub** was a huge success for the Museum's nature and science education programs raising more than \$420,000. The annual Gala raises money to support nature and science education programs for school children, touching the lives of more than 20,000 students each year.

**SAVE THE DATE:** Saturday, May 5 for the Annual Mission Creek Gala!

- Membership Manager Leana Orsua and Curatorial Assistant Vanessa Delnavaz worked as Rafflettes and are pictured here with Emcee and Honorary Trustee Palmer Jackson, Jr., Blake and Emily Jones (Trustee).
- Stephanie Slosser with Gala sponsors Chris and Marisa Parker, Pam Lewis, Jess Parker, and Susan Parker.
- John Kinnear and Board Chair Bobbie Kinnear, Gala Chair Stacey Byers, and President & CEO Luke Swetland.





- Gala Committee Members Front row: Susan Parker, Board Chair Bobbie Kinnear, and Sheri Eckmann. Back row: Development Director Caroline Grange, Emily Jones, President & CEO Luke Swetland, Gala Chair Stacey Byers, Pam Valeski, and Carolyn Chandler.
- Aerialists from Elevated Dreams entertain guests.
- Tamara Jensen from Joyful Events and Gala Chair Stacey Byers celebrating a successful night.
- Name a Species Raffle winners Alex and Sarah Scheshunoff joined Gala sponsors Hanna and Doug Dreier at the Ladybug Tableau, along with Hannah and Andrew Dal Pozzo.

Photo credit: Baron Spafford





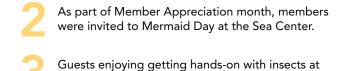












Coordinator Jackie Hunt at Bugs of the Sea.

Trustee Chris Blau and President & CEO Luke Swetland at the Past Trustee Reception at the Sea Center.

the annual Members' Party.

- The 2017 Legacy Awards recipient Donley Olson with President & CEO Luke Swetland.
- The Lumen wines booth was very popular at the Wine + Food Festival.
- The annual Mission Creek Legacy Society dinner recognized people who have named the Museum in their estate plan. Pictured here are Paul Russell, Lynn Kirst, Leslie Power, Karl Hutterer, John Kinnear, and George Handler.





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, call Caroline Grange at 805-682-4711 ext. 109 or cgrange@sbnature2.org.





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Cover photo: "Max" from Eyes in the Sky, an educational project of the Santa Barbara Audobon Society



#### SAVE THE DATE

Cocktails with a Curator Thursday, March 22, 2018

Mission Creek Gala Saturday, May 5, 2018

Members' Party June 1, 2018

The Art of Natural History: Rare Treasures from our Antique Print Collection Maximus Gallery Opening June 22, 2018

Santa Barbara Wine & Food Festival™ Saturday, June 30, 2018

sbnature.org/calendar