

Research & Collections Newsletter



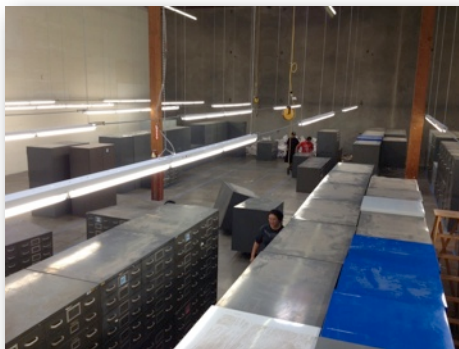
September 2013

re•search (ri-sûrch', rē'sûrch) n. **1.** Scholarly or scientific investigation or inquiry. See synonyms at inquiry. **2.** Close, careful study. **3.** When performed on collections, the *raison d'être* of all great natural history museums.

Collection News

Invertebrate Paleontology

The Invertebrate Paleontology collection (that's right, all 685 cabinets of it) and 92 cabinets of the Malacology collection have been moved from the South and North Grand warehouses to a new building down the freeway in Carson. This huge project, involving dozens of Museum staff and volunteers, began in April 2013 with collection packing (see the *Research & Collections Newsletter* of May 2013). Once the collection was stabilized in its cabinets, the office and collection layout at the new building was carefully



Unloading at the new Carson warehouse.

planned. The actual move took five days in June, including some 12-hour days for museum staff and the hired movers as well. It was completed on June 28, just before the end of the fiscal year. All the time and effort spent packing was well worth it — we haven't found any specimen damage. Now the fun part is over and we're unpacking and settling into the new digs, which are much more modern. Feel free to visit when you're in the neighborhood!



Loading packed cabinets at the old South Grand warehouse.

Ichthyology

Benjamin Victor and Gerard Wellington described a new species of sanddab, *Citharichthys darwini*, from the Galapagos Islands. Several Museum specimens were named as paratypes, including LACM 23671, collected in 1934 by the R/V *Velero III* as part of the Allan Hancock Expeditions.



Rancho La Brea



Dr. Julie Meachen examining *Smilodon fatalis* mandibles.

Dr. Julie Meachen, Assistant Professor in the Anatomy Department at Des Moines University, and graduate student Alexandria Brannick from Marshall University visited the Page Museum collections from June 3 to 7. Dr. Meachen examined *Smilodon fatalis* and *Canis dirus* mandibles for a study on morphological changes through time in using geometric morphometrics. She wants to see if these changes relate to environmental change. Ms. Brannick worked on her thesis, "Temporal Variations in Mandibular Dimensions of *Canis dirus* (dire wolf) at Rancho La Brea," under the

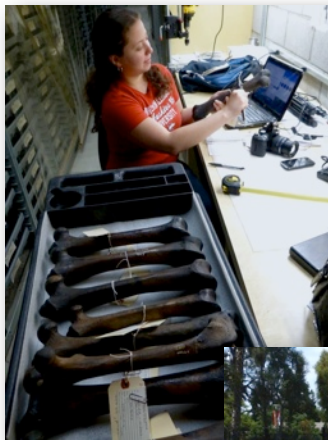
direction of Dr. F. Robin O'Keefe.

Northern Illinois University (NIU) researchers Dr. Virginia Naples, Lindsey Koper and Elise Orellana visited the collections at the Page Museum from June 24 to 28. Burcu Carlon also visited the collections from NIU from May 20 to 24. Dr. Naples worked on *Smilodon fatalis* and *Panthera atrox* forelimb anatomy with help from Ms. Orellana. Ms. Koper continued her research on *Canis dirus* forelimb anatomy.



Elise Orellana taking photographs of felid forelimbs with Dr. Virginia Naples.

Ms. Carlon photographed and measured both the forelimb and hind limb elements of a number of *Smilodon fatalis*, *Panthera atrox*, *Lynx rufus*, *Felis concolor*, *Canis latrans*, and *Canis dirus* specimens. She is using geometric morphometrics to analyze the shape variation in these species' limbs which in turn will help her to understand their locomotion.



Top Left: Burcu Carlon from NIU measuring felid femora.

Right: Dr. Lambert Doezema, Paul Contreras and Ikenna Nwachuku taking gas samples near Pit 3 in Hancock Park.



Dr. Lambert Doezema, Associate Professor of Chemistry and Biochemistry at Loyola Marymount University, visited Hancock Park in July with two of his students, Paul Contreras and Ikenna Nwachuku, as part of an ongoing project quantifying the variety of gases that are given off by the tar seeps. They take their measurements by placing a small metal chamber over the seeps of interest for a 10-minute duration and then taking an air sample inside the chamber. They have acquired a large data set and are hoping to publish in the near future.

Mineral Sciences

A selection of new minerals described recently by Tony Kampf (clockwise from top left): Wernerbauerite $\{[(Ca(H_2O)_7)_2(H_2O)_2(H_3O)_2]\{V_{10}O_{28}\}$, Camaronesite $[Fe^{3+}(H_2O)_2(PO_3OH)]_2(SO_4) \cdot 1-2H_2O$, Eckhardite $(Ca,Pb)Cu^{2+}Te^{6+}O_5(H_2O)$, and Bairdite $Pb_2Cu^{2+}_4Te^{6+}_2O_{10}(OH)_2(SO_4)(H_2O)$.



Polychaetes

The Polychaete Collection is one of the largest in the world, primarily consisting of specimens collected by the Allan Hancock Foundation (USC) or survey collections sent for identification by AHF curators Drs. Olga Hartman and Kristian Fauchald. One of the surveys that came along with the collection when we acquired it in 1988 is a huge set of over 7000 lots (a lot is a container holding 1 to many specimens) from Hardangerfjord, Norway. Its legal status has remained in limbo since 1988 as we were unsure whether it had been donated to the AHF or was a long term loan, and station data was missing. While she was attending the 11th International Polychaete Conference (see below under *Meetings*), collection manager Leslie Harris was able to discuss the matter with Dr. Jon Anders Kongsrud of the Zoological Museum, University of Bergen, the original home of the material. It turns out his museum had been wondering what had happened to the material for years! He was delighted to hear that we had been taking good care of it. Even better, Jon Anders agreed that the specimens should stay here as they have more than enough Norwegian specimens. They are in excellent condition, making the set a most welcome legal addition for comparative studies.

A more recent acquisition is 237 lots of polychaetes from Caribbean Panama. Leslie Harris collected them at the Smithsonian Tropical Research Institute's Bocas del Toro Marine Station in August. Duplicates of each species are in formalin, 95% ethanol, and RNA-later, making them suitable for both morphological & genetic research.

Vertebrate Paleontology



Dr. John M. Harris (far left) and Dr. Samuel A. McLeod (far right) discuss the large Mastodon skull in our Vertebrate Paleontology oversize storage area.

On June 11, Taichi Kato and Hideo Takimoto of the Ibaraki Nature Museum in Japan visited to examine our notable collections and exhibits of Ice Age fossils in preparation for the design and curatorial framework of their forthcoming exhibit about the Ice Age. Dr. John M. Harris, Dr. Samuel A. McLeod, and Vanessa Rhue escorted these special guests around the Museum, highlighting the RanchoLabrean fossils in our main collection, oversize storage, and Age of Mammals exhibit.

During June 17–28, the Department of Vertebrate Paleontology hosted an international guest, Eli Amson, a Ph.D. student from the Muséum national d'Histoire naturelle, Paris, France. Eli is studying the bizarre aquatic adaptations of ground sloths from Peru as part of his dissertation work under the advisement of Christian de Muizon.



Eli takes measurements of our San Josecito Cave skeleton, Nothrotheriops shastensis, from Mexico, in the Age of Mammals hall.

History

The opening of *Becoming Los Angeles* began with a Museum Fellows preview reception held Friday, July 12th whose guests included Francisco Sabichi, donor of the Wolfskill/Sabichi family piano featured in the exhibition.



The piano was purchased in New York by William Wolfskill and shipped around Cape Horn to the harbor in San Pedro. It is thought to be the first one brought to Los Angeles. Also in attendance was 103-year-old artist and former Disney film animator Tyrus Wong, one of the last living ties to Historic Chinatown which was demolished in the 1930s to make way for Union Station. Mr. Wong, pictured with his daughter Kim and Seaver Center Collections Manager Brent Riggs, is viewing the video interactive narration on the City Model that features his life as well as other aspects of the history of China-

town. Mr. Wong remarked that seeing the Chinatown exhibits made this one of the best days of his life.

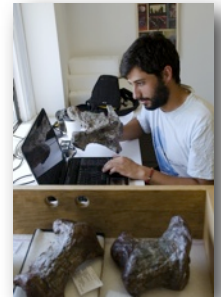
Numerous documents, ephemera items and maps from the Seaver Center for Western History Research are on loan to the Autry National Center. They are on display at the “Jews in the Los Angeles Mosaic” exhibition which opened May 10 and will continue until January 5, 2014. Shown is the show’s curator Karen Wilson with John Cahoon, Collections Manager from the Seaver Center. Ms. Wilson extensively used the resources at the Center for her research.



USC’s Doheny Library’s upcoming exhibit, *Trillion\$: the Awesome Power of the Federal Reserve*, opens Friday, September 27, to celebrate the centennial of the creation of the Federal Reserve. On display will be many pieces of historic currency, military scrip and Depression era coupons borrowed from the Seaver Center’s numismatic collections.

Dinosaur Institute

Visiting graduate student Pedro Mocho from the Universidad Autonoma de Madrid, Spain, examined fossilized elements of the large sauropod “Gnatalie” that have undergone final preparation and are now curated in the Mesozoic collection. Pedro also accompanied the DI crew in the field this summer and provided valuable insight into a very complex bone bed.



Field Work

Herpetology

Introduced Italian Wall Lizards in San Pedro

Greg Pauly and high school student Hayden Kirschbaum have led groups of volunteers and museum staff on five collecting trips to Coastal San Pedro in recent months to capture Italian Wall Lizards, *Podarcis siculus*. In 1994, a resident of this neighborhood smuggled 4 male and 3 female Italian Wall Lizards from Sicily and then released them in his backyard. Over the ensuing 19 years, hundreds of descendants have spread across multiple square blocks with some house lots having incredibly high densities of more than 30 lizards.



An Italian Wall Lizard in Coastal San Pedro. The lizards are captured by noosing them with a thin line at the end of a fishing pole. Although it looks like a ‘sure thing,’ this lizard got away! Photo by citizen scientist and fantastic photographer Bob Worrell.

These lizards may be competing with or even preying upon native lizards; large wall lizards will eat small vertebrates including young of their own species. To determine what impacts the nonnative lizards are having on the natives, Greg and Hayden are using two different approaches. First, with the help of Richard Smart, NHM Coordinator of Citizen Science, they have used a citizen science approach by passing out fliers to 500 homes in and around the area with wall lizards asking people to submit photographs of any lizards they see. This is allowing Greg and Hayden to get a very detailed look at where the native and nonnative lizards occur. Second, they have collected lizards that will be dissected to determine what they are eating and what parasites they are carrying that could be transmitted to the native lizards.

The research is being funded in part by a grant from the Southern California Academy of Sciences that was awarded to Hayden upon him being accepted into the Academy's Research Training Program.

Another new county record gecko

In April, Greg Pauly and citizen scientist Glen Yoshida documented the first established population of Indo-Pacific Geckos, *Hemidactylus garnotii*, in California. These were found in Torrance and reported in the May R&C Newsletter. A few short weeks later, Bob Worrell submitted another photo of an Indo-Pacific Gecko to the Lost Lizards of Los Angeles (LLOLA) project (now expanded to RASCals; see Public Outreach below). This time the observation was in Lake Forest in Orange County. After two visits to the site, Greg Pauly and Bob Worrell were able to confirm an established population spread across at least a city block. This find is a county record and the second record for California. Bob is a passionate and skilled photographer, and he has now joined Greg on several fieldtrips photographing Italian Wall Lizards and other urban wildlife (see above).

In other gecko news, Research Associate Bobby Espinoza and Greg Pauly have continued their efforts to document new populations of nonnative geckos. In August, they followed up on a report to San Gabriel Valley Vector Control and confirmed the existence of an established population of Mediterranean House Geckos in Glendora.

Ornithology

Collections Manager Kimball Garrett spent 5-9 August at the Zurqui field site near San Jose, Costa Rica, as part of Brian Brown's *Zurqui All-Diptera Biodiversity Inventory*. Garrett's role was to capture birds (using standard mist-nets) in an attempt to collect flies of the family Hippoboscidae; many species in this family of "louse flies" or "bird flies" live exclusively within the plumage of birds. Over the week he captured 85 birds and encountered hippoboscid flies on six individual birds, collecting 15 flies likely representing at least 3 species.

Right: Bare-shanked Screech-Owl (Megascops clarkii) captured in a mist-net at Zurqui, Costa Rica. This individual had two species of hippoboscid flies in its plumage.
Photo by K. L. Garrett.



Vertebrate Paleontology

On July 6, Dr. Lawrence G. Barnes and volunteers Lisa and Sean Tohill and Debora Lee traced outcrops of the Sharktooth Hill Bonebed in areas that had not previously been documented by Museum localities. This laterally extensive Middle Miocene marine bonebed crops out over several tens of square miles. Some of it is protected in the Sharktooth Hill National Natural Landmark and on land that is owned by the Tohills.

Dinosaur Institute

Dinosaur Institute (DI)'s Graduate-Student-in-Residence Justin Hall led a crew to Late Cretaceous deposits in the San Juan Basin of New Mexico for the second consecutive year. The Augustyn Dinosaur Expedition crew consisted of Jose Soler and Doyle Trankina from the DI, as well as members from USC, Cal State Fullerton and Johns Hopkins. Several productive new micro-sites were found and collected this season. Two promising, potential quarries for upcoming seasons were identified and some Late Cretaceous sauropod material was collected, which marks the first Late Cretaceous sauropod material in the NHM collections.

Alyssa Bell, PhD student in residence, and Stephanie Abramowicz, Dinosaur Institute Illustrator, visited the University of Kansas.



Late Cretaceous sauropod material that was collected in New Mexico.

There they examined and photographed numerous specimens of the Late Cretaceous diving bird *Hesperornis*. This trip was geared towards Alyssa's PhD thesis, which she will defend this month at USC.



This summer the Dinosaur Institute team returned to Utah for their 7th season at the Gnatalie site. The Haaga Dinosaur Expedition to the badlands of Utah took place from July 15 to Aug 12. This site contains mostly sauropod and some theropod fossils. The team consisted of DI staff members: Doug Goodreau, Jose Soler, Stephanie Abramowicz, Erika Canola, and Luis Chiappe, Dino Lab volunteers: Tony Turner, Susan Russak, Breana Cumberland, Bryan Gee, graduate students, E&E staff members: Ilana Turner, Laurel Robinson, Brayden Moore, and Brian Meredith, BLM members and NHM trustees. The field season was very productive, bringing back a sauropod femur weighing around 640 lbs, theropod femur, and various vertebrae that will be displayed in the Dino Lab while they are being prepared.

*Top: Volunteer Bryan Gee trenching around the theropod femur found at the Gnatalie site.
Below: Crew members working on the sauropod femur that was collected in Utah.*

Meetings, Workshops, and Presentations

Mineral Sciences

Eloïse Gaillou was an invited speaker at the Sainte-Marie-aux-Mines Mineral & Gem show, which was held from June 27 to 30. She gave four lectures (on colored diamonds, and on the collections of the NHM and of the Smithsonian Institution). A complete report can be found at:

<http://bit.ly/15D6Bod>.

This year the show had a special exhibit called *American Treasures*. Museums and private collectors brought their best minerals to exhibit.



Eloïse Gaillou with the organizers of the show in Sainte-Marie-aux-Mines, France.

Rancho La Brea



Participants on the GSA pre-meeting fieldtrip to the Fairmead Landfill Fossil Discovery Center of Madera County, CA. Photo by Eric Scott.

From May 19 to 22 Collections Manager Aisling Farrell, Lead Preparator Carrie Howard and Research Associate Christopher Shaw attended the 109th annual meeting of the Cordilleran Section of the Geological Society of America (GSA) in Fresno, CA. They also went on the pre-meeting fieldtrip to the Mid-Irvingtonian Fairmead Landfill Fossil Site, Madera County Paleontology Collection and the Fossil Discovery Center of Madera County, CA. The latter is the educational exhibit facility associated with the fossil locality and is operated by The San Joaquin Valley Paleontology Foundation. The following talks were presented at the Symposium on Irvingtonian Paleogeology of Western North America:

Christopher Shaw: *Paleoecological Considerations regarding the Irvingtonian Biota from El Golfo de Santa Clara, Sonora, Mexico.*

Carrie Howard, Christopher Shaw and Fred Croxen: *A Nearly Complete Skull of the Beaver, *Castor canadensis*, from the Irvingtonian badlands of El Golfo de Santa Clara, Sonora, Mexico.*

Eric Scott, Aisling Farrell, Fred Croxen, Christopher Shaw and Richard Hulbert: *New records of Irvingtonian *Tapirus* from the American Southwest.*

Christopher Shaw traveled to Edmonton Canada to present a talk on *Smilodon fatalis* pathologies at the CANQUA-CGRG Biennial Meeting, August 18-22, in Edmonton, Alberta (photo at right).



Research Library

Richard Hulser participated in a panel of expert librarians at the Special Libraries Association annual conference in San Diego in June. In July he was an invited speaker at the University of Toronto iSchool Institute Symposium on Creative Making in Libraries and Museums (<http://www.creativemaking.org/>). Richard talked about some 3D scanning, 3D printing, and rapid prototype projects at NHM and the potential for this technology for accessing rare and fragile books, newspapers and other content sources.

Vertebrate Paleontology

During May 24-25, curator Dr. Xiaoming Wang participated in the 2013 Annual Meeting of the Society for Cenozoic Research (TerQua) in Lawrence, Kansas and he gave a talk about "Cold Comfort: Is Tibet a Cradle of Ice Age Megafauna?"

During June 17-19, the first joint Geological Society of America and Geological Society of China meeting took place in Chengdu, China. The theme was *Roof of the World* and Dr. Xiaoming Wang gave an invited presentation titled *Vertebrate Paleontology in Tibetan Plateau: Progress and Prospects*. Meeting participants were treated with a tour to the Chengdu Research Base of Giant Panda Breeding.



Juvenile Giant Pandas are the star attraction at the Chengdu Research Base.

The 6th *Critical Transitions* workshop, *Critical Transitions Across the Phanerozoic: A Roundtable Workshop on Sino-US Collaborative Research on Major Events in the History of Life during the Past 600 Million Years* jointly funded

by the National Science Foundation (US) and National Natural Science Foundation (China) was held August 4-6 in Kunming, China. Curator Dr. Xiaoming Wang was the main US organizer of this workshop. Besides showcasing current paleontologic research in collaboration between US and Chinese scientists, the workshop is an important conduit to voice issues related to international collaborations.



Dr. Xiaoming Wang gave a presentation titled, "Zoogeography of Cold-adapted Mammals in late Cenozoic: The Link between Tibet and Arctic Faunas."

Dr. Wang also was invited to participate in the mid-term evaluation of the National Basic Research Program of China (973 Program) held August 9-10 in the Western Hills Hotel of Beijing, China. A four-year, 30 million Chinese Yuan grant was launched with a wide-ranging title of *Evolution of Chinese Terrestrial Biotae in Relation to Environmental Changes since 400 Million Years Ago*. Dr. Xiaoming Wang was one of the participants in this grant.

On July 5, Dr. Lawrence Barnes and volunteers Sean and Lisa Tohill and Debora Lee visited the Buena Vista Museum of Natural History in Bakersfield, and continued their re-evaluation of specimens in their collections. At right John Stegall of Buena Vista Museum and Lawrence Barnes compare humeri of desmostylians. There is probably an undescribed species of paleoparadoxiid desmostylian (quadrupedal herbivorous marine mammal) in the Sharktooth Hill Bonebed, and its closest known relative appears to be the new species that is exhibited in our Museum's *Age of Mammals* hall.

Ichthyology

Rick Feeney attended a SCAITE (Southern California Association of Ichthyological Taxonomists and Ecologists) meeting at SCCWRP in Costa Mesa on June 3rd. One of the topics was fish parasites and abnormalities. Rick brought along many examples from the Fish Collection including fish with tumors, eye copepods, skeletal deformities, fin erosion, and ambicoloration.

Malacology

Curator emeritus Jim McLean and Malacology associates Pat La Follette and Ángel Valdés attended the 46th Annual Meeting of the Western Society of Malacologists at the Courtyard by Marriott in San Diego. Ángel chaired an opisthobranch symposium and co-authored three abstracts.

Herpetology

Greg Pauly traveled to the annual Joint Meeting of Ichthyologists and Herpetologists in Albuquerque, NM July 10–15. Greg presented a paper entitled “Phylogenetic relationships and species boundaries among river cooters, with a focus on the federally endangered Alabama Red-bellied Turtle, *Pseudemys alabamensis*.” Greg also served as a judge for the Herpetologists’ League graduate student award.

While driving back to L.A. from new Mexico, Greg took advantage of the monsoon weather and did some night driving near the AZ–CA border. He returned the following morning with many bags of roadkilled frogs for the Herpetology genetic resources collection. He also stopped at a hotel in Blythe, not to sleep, but to catch Mediterranean House Geckos around the lights of the building.

Polychaetes

Collection Manager Leslie Harris and Curator Kirk Fitzhugh both attended the 11th International Polychaete Conference in Sydney, Australia, 4–9 August. Kirk gave a 5-day pre-conference course, *Philosophy of Biological Systematics* (29 July – 2 August) while Leslie was a co-presenter at another pre-conference course, *Identification of Invasive Species*, and a participation in one on microscope photography. Leslie was sole author on 1 poster (*Polychaetes associated with marine debris from the 2011 Japanese tsunami: preliminary results*) and was co-author on a 2nd (Radashevsky et al., *Reciprocal Bocardia [Annelida, Spionidae] invasions in North and South America*). Kirk presented *Towards an assessment of phylogenetic relationship within Polycirridae*. Through intensive networking during the conference, we have been promised future donations and many researchers have expressed an interest in visiting or otherwise using our collections. Several loan requests have already come in as a result, 1 grad student has scheduled a visit, several more have tentatively scheduled visits, and Dr. Sanitha Sivadas (NIO, India) is looking into funding sources for an extended stay between 6 months and 1 year in duration. During the conference Leslie met with Dr. Stephen Keable (Head Collection Manager, Inverts, AM) for a discussion and tour of the Invertebrate Collections, and Ms. Leonie Prater, one of the managers of the Museum’s DigiVol program. This is a large-scale cloud-source digitization project which photographs specimens and associated labels, field books and journals, then makes the images available on the web for interested members of the public to transcribe. One additional bonus to attending the IPC was that Leslie was able to arrange for the formal deposition of the Hårdangerfjord collection (7000+ lots). This came to us as part of the Hancock transfer but has always been in limbo regarding its status.

On 3 May Leslie also presented a paper on *Marine Biodiversity Survey and the Importance of Taxonomy* at the annual Southern California Academy of Sciences meeting at Cal State Long Beach, and 2 repeats of her talk, *Hitchhiking Aliens*, for the Pacific Conchological Club (5 May) and the Aquarium of the Pacific (7 May). The AOP talk went over so well she was asked to present a talk on polychaetes early next year.

More Polychaetes

From June 10 to June 29, Leslie Harris was in Panama at the Smithsonian Tropical Research Institute's marine station in Bocas del Toro. The first two weeks were spent co-teaching a course on *Annelid Taxonomy and Evolution* with Drs. Ken Halanych (Auburn University, Alabama) and Anja Schulze (Texas A & M University). This course was part of the outreach component of their WormNet II NSF AToL funded project — *Assembling the Annelid Tree of Life* 5 year grant spread between several PIs. Ken and Anja covered the molecular and evolution side of things while Leslie's role was to teach the students how to identify worms the old-fashioned way by examining the worms under a microscope. There were 12 students: 3 from Colombia, 2 from the US, and 1 each from Germany, Russia, England, Malaysia, Spain, Russia, and Brazil. They were undergrads to post-docs and their research ranged from basic faunal surveys in understudied areas of the Caribbean to highly technical studies such as animal feeding changes during a hypothesized oxygenation event near the Precambrian-Cambrian boundary and using ultrastructure of polychaetes tubes from deep-sea chemosynthetic environments as a way to understand evolution. Field collecting was done in the morning or sometimes in the afternoon to avoid the frequent tropical rain, using the station's boats to visit good worming spots on Bocas and adjacent islands. The rest of the time was spent on lectures and peering at worms through our microscopes. It turned out that most of the students had little basic taxonomic training and the chance to acquire some experience was the main reason they enrolled in the course. As the only basic taxonomist among the teachers — Ken and Anja being molecular specialists — Leslie spent her time running from student to student answering questions. People rarely left the lab before 10 or 11 at night. As a class project they did a field guide to common marine worms of Bocas del Toro. Each student did from 2 to 5 species. Leslie did most of the photography and processing as few of them were proficient at either and they needed to concentrate on taxonomy. At the end of the second week Ken and most of the students went home. Leslie and Anja stayed for one more week to collect.

Some of the students were so inspired by the course they stayed several days longer to continue working.

The trip was a success in several ways. At the end of the 3 weeks Leslie had 237 lots of polychaetes, each containing 1 to ~20 specimens for deposit here at NHM, supplementing our growing collection of Caribbean polychaetes in formalin and alcohol. The lots have been subsampled for RNA later and DNA barcoding analyses to be done at the Halanych and Schulze labs as part of WormNet II. Many of the Caribbean specimens previously deposited here have been examined and published on by international researchers and the new alcohol-preserved samples will be in demand. The course students are now quite interested in coming to the museum for extended research visits. There should be good collection usage, deposition of specimens, and new publications as a result. Ken and Anja's grant will run for at least 3 more years. As a result of this close interaction they would like to arrange a mutually beneficial arrangement involving the Polychaete Section, the MBC, and WormNet II. Ken is planning to visit within the next couple of months to chat with us about specific projects. The class project — one of the species pages is attached — will be up on the web in a couple of months. NHMLAC will be prominently mentioned throughout along with links to us and to the Polychaete Section.



Elisa Costa-Paiva (Universidade Rio de Janeiro, Brazil) and Catalina Arteaga Florez (Universidad de Antioquia, Colombia) collecting in the surf.



Below right: One of our beautiful live worms, *Notaulax occidentalis*.

History

On July 20, Museum Archivist Cathy McNassor presented a lecture at the Los Angeles County Museum of Art on the history of Rancho La Brea and then led a tour of Hancock Park. This program was sponsored by the Getty Museum in conjunction with their Pacific Standard Time architectural exhibits.



Pebble Beach Concours D'Elegance

Collections Manager Beth Werling and NHM Automotive Consultant Pete Eastwood attended the 63rd annual *Concours D'Elegance* at Pebble Beach on Sunday, August 18. They displayed the History Department's 1957 507 Model BMW with a body custom-designed by its owner, world-renowned industrial designer Raymond Loewy.



Besides designing cars (primarily for Studebaker), Loewy also designed corporate logos, many of which are still in use today, such as the Shell gas company symbol.

In addition to the *Concours* event itself, Ms. Werling attended a number of other automotive meetings while at Pebble Beach including one for the Historical Vehicle Association on August 14.

Dr. William Estrada will be featured in *LATINO AMERICANS*, a landmark PBS documentary that will chronicle the rich and varied history and experiences of Latinos, who have helped shape North America over the last 500-plus years and have become, with more than 50 mil-

lion people, the largest minority group in the U.S. The changing and yet repeating context of American history provides a backdrop for the drama of individual lives. It is a story of immigration and redemption, of anguish and celebration, of the gradual construction of a new American identity that connects and empowers millions of people today. The three-part, six-hour documentary series, narrated by actor Benjamin Bratt, will air nationally on PBS on three consecutive Tuesdays: September 17, September 24, and October 1.

External Funding

Research Library

Five large color lithographs of birds signed by artist Richard Sloan were donated in May to the Research Library by members of the family of Edward Boyer. Pictured with one of the lithographs are Dawn Robinson and Lucien Boyer, who delivered them on behalf of the Boyer family.

The Research Library also received a collection of over 125 books and DVDs from the Sierra Club Library related to natural history of California and the Western region of the United States that will be useful in many ways including support of research and education activities for the NHM Nature Garden.



Public Outreach

Mineral Sciences



In a Curator's Cupboard tour, Alyssa Morgan shows off the first rock donated to the Museum in November of 1913. It is a piece of gold ore from Nevada.

During the Museum's Centennial celebration in June, Eloise Gaillou had a "presentation bar" highlighting her research on diamonds. The following day she and Alyssa Morgan participated in the Curator's Cupboard featuring the 100 year history of the mineral collection.

Research on a ring in the Mineral Sciences collection revealed a surprising mistake in label copy. The gold, enamel and diamond ring supposedly belonged to Empress Catherine II of Russia (based on documentation provided by the former owners). With help from Richard Hulser and gemologist and volunteer Brittany Bednash, Minsci staff discovered the ring was almost certainly from the mid-19th century and not Russian at all! The ring's true original owner remains a mystery...for now! Pat Morrison featured the story on the show *Offramp* on KPCC:

<http://bit.ly/1aTIXYG>.

To learn more, check out Alyssa's blog post:

<http://nhminsci.blogspot.com/2013/07/the-mystery-of-ring.html>

Ichthyology

Javier Gago brought his Marine Biology class from Glendale Community College to visit the Fish Collection on June 22.

Chris Thacker, Rick Feeney and Mario Enriquez participated in Curators Cupboard Centennial on June 9 in the African Mammal Hall. Herpetology and Ichthyology had a combined theme of *Living treasures of Los Angeles, local amphibians, reptiles and fishes*.

Vertebrate Paleontology

On June 9, the Department of Vertebrate Paleontology joined in the Museum's 100th Birthday Bash, featuring fossils from our collections that have been amassed during the past 100 years. Dr. Xiaoming Wang's table titled *100 Years of Collecting Fossils in the Mojave* showcased a bone crushing dog skull, false-saber toothed cat canine, rhino jaw, and a large camel limb. Dr. Samuel A. McLeod (at right) and Vanessa Rhue featured a second table titled, *Over 100 Years of Collecting at Sharktooth Hill*. Visitors were able to touch specimens of a fossil leatherback sea turtle, sharks, and marine mammals while learning about the



Above: This mysterious ring came to the museum in 1974, a gift from a Mr. and Mrs. Haverstick of Santa Monica, CA. Along with the ring was a label of unknown origin explaining that the ring was a gift from Empress Catherine II of Russia (Catherine the Great) to one of her maids-of-honor.



history of research from this world renowned locality. We are most appreciative of the help from our dedicated volunteers, Debora Lee and Stephanie Lapeyre-Montrose, who helped us throughout the day to interact with our guests.

Throughout the summer Vanessa Rhue gave three behind the scenes collections tours to Museum Adventures in Nature participants ranging in age from 8 to 13 years old. These budding paleontologists were able to get a glimpse of the various fossil reptiles, amphibians, sharks, fish, birds, and mammals that comprise our collections. One of the students' favorite localities was that of Gypsum Cave, Nevada, where they were able to touch ground sloth dung.



Howell W. Thomas shows off the recent Vertebrate Paleontology preparation projects to the 5-6th grade class.

On August 3, the Department of Vertebrate Paleontology featured an exclusive event for museum guests in honor of the Discovery Channel's Shark Week. Dr. Lawrence G. Barnes, Dr. Samuel A. McLeod, and Howell W. Thomas hosted a curator's cupboard-style table in the Grand Foyer. The specimens on display afforded the public an up-close and personal look at both extinct and extant sharks.

Vertebrate Paleontology volunteers Sean and Lisa Tohill and Debora Lee participated in the event and brought paraphernalia from the 2012 *Sharkzilla* television episode among other objects of shark curiosity.



Above: Smiles were abundant as Vanessa Rhue and Dr. Samuel A. McLeod allowed students to touch fossils from the museum's collections at the conclusion of their career day talk.

On August 16, Vanessa Rhue and Dr. Samuel A. McLeod were invited to speak about careers in Paleontology to an assembly of over 200 elementary students from Ascension Catholic School, located just south of the Museum. A Power-Point presentation was given to attentive students ranging in age from Kindergarten to 8th grade.

Research Library

Richard Hulser collaborated with Denise McIver, librarian at California African American Museum to host a walking tour of CAAM and NHM libraries and exhibits on July 13. The attendees included members of the American Library Association Black Caucus and the Special Libraries Association Southern California Chapter. Denise is in the back center of the group in the photo on the left. The *Becoming Los Angeles* exhibit opened that weekend and was a highlight for the attendees.



Rancho La Brea

Preparators Michelle Tabencki and Laura Tewksbury visited McKinley Elementary school on May 10, where children watched a presentation of the Project 23 excavation. During the presentation, the children got to see a fossil cast of a saber-toothed cat, excavation tools, and excavator's clothes. There were discussions about the significance of paleontology and how it affects the world today. Children were encouraged to pursue science in their future careers. Michelle also visited 107th Street Elementary School for their career day on May 17.

Preparator Karin Rice was invited to speak to Janice Tomson's Historical Geology class at Long Beach City College on May 28th. She discussed current excavations and findings at Project 23, as well as the tectonic environment that led to oil formation in the L.A. basin and the natural asphalt seeps.

On June 9, Rancho La Brea's Chief Curator Dr. John Harris, Collections Manager Aisling Farrell, Assistant Collections Manager Gary Takeuchi, and Preparators Beau Campbell and Laura Tewksbury participated in the Museum's Centennial Birthday Bash. They highlighted some real fossils from Rancho La Brea's collections and microfossils from Project 23, along with large



Rancho La Brea staff field questions from the public at the Centennial Birthday Bash at the Natural History Museum on June 9.



Adventures in Nature camp participants met with visiting researcher Lindsey Koper behind-the-scenes at the Page Museum.

prints of Hancock Park showing the early excavations, early collections storage and the Museum's Hancock Hall in the 1920's. A ten minute clip from the popular silent movie *Death Trap of the Ages* also played on a loop. The Natural History Museum was given exclusive rights to excavate at Rancho La Brea in 1913 where they dug 96 sites over a two year period and amassed one of the world's largest terrestrial Pleistocene collections.

The ever-popular *Adventures in Nature* Day Camp was held at the Page Museum during the week of June 24th to 28th. Camp participants were treated to behind-the-scenes tours of the Fishbowl Lab by Beau Campbell, the collections by Aisling Farrell and the excavation site by Michelle Tabencki and Christina Lutz. They also met

with visiting researchers who were working in the collections and were taken on an historical tour of Hancock Park by Michelle Tabencki. Christina and Michelle explained excavation techniques, showed freshly excavated fossils and answered questions about Rancho La Brea and Project 23.

Herpetology

RASCals Citizen Science Project

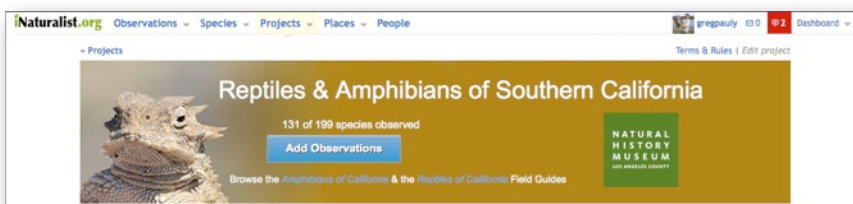
Greg Pauly, in close collaboration with Lila Higgins and Richard Smart, has developed a new citizen science project that expands upon the Lost Lizards of Los Angeles (LLOLA) project. The new project is termed *RASCals: Reptiles and Amphibians of Southern California* (see screenshot below). LLOLA was developed by Brian Brown and Leslie Gordon and was extremely successful in that it generated three very exciting new records of introduced species:

1. The first Mediterranean House Gecko in L.A. County. This story is featured in the Nature Lab, and the new distributional record was just published in the September 2013 Herpetological Review. A big congratulations to Reese and Will Bernstein who documented the gecko; Reese is entering 6th grade and is already published in the peer-reviewed literature!
2. The first state record and L.A. County record for the Indo-Pacific Gecko.
3. The first Orange County record for the Indo-Pacific Gecko.

LLOLA demonstrated that citizen science could readily be used to document introduced species and also to get detailed records of present day distributions of native species. These modern records can be compared to the

historical records provided by museum specimens to assess how ranges have changed through time over the course of urbanization in southern California. But to do this, LLOLA needed to be expanded beyond lizards and beyond L.A. County. Thus, RASCals was created. Since its launch on the *iNaturalist* platform the opening weekend of the Nature Lab exhibit, RASCals has received over 800 submissions! To learn more about the project, check out <http://www.nhm.org/rascals> or the *iNaturalist* project page at <http://www.inaturalist.org/RASCals>.

Note that this news item could be placed in the *Collection News* section above because the data and resources that are being gathered by this project are equivalent to those available in the photographic collections maintained by many of the museum's research sections. Each photo provides information on time and place where the observation was made and an opportunity to verify the identification. However, this news item is placed here in Public Outreach, because this section emphasizes collaborations among various museum departments, and this project is certainly the result of a major collaborative effort with lots of time and energy from Lila and Richard in the Citizen Science Office.



A screenshot showing the header for the main page of RASCals on *iNaturalist*.

Other recent outreach

On Saturday and Sunday June 8 and 9, Herpetology was part of the Centennial festivities. Greg Pauly showcased reptiles and amphibians and promoted RASCals at a “Collections Bar” on Saturday night. The following day, Greg and volunteers Amber Suto and Tanja Wolfmeyer displayed local reptiles and amphibians in the African Mammal Hall while Neftali Camacho led tours of the Herpetology Collection. Greg, Amber, and Tanja used the opportunity to encourage participation in RASCals.

On Saturday June 29, Neftali Camacho provided behind-the-scenes tours for a *Scavenger Safari* that was focused on how specimens are preserved and their importance in research. Then, on Wednesday July 24, Neftali provided tours for the excited kids of *Adventures in Nature*.

On Saturday August 17, Neftali Camacho took the eager public on behind-the-scenes tours of the Herpetology Collection as part of *Curator's Cupboard*, showcasing some of our most impressive specimens including the Chinese Giant Salamander and Komodo Dragon.

BioSCAN

NightWatch

The BioSCAN project has a core mission of exploring L.A.'s biodiversity using thirty long-term insect traps (currently being deployed). We also wanted to enable wider participation by interested public, and also to broaden our sample using alternative insect trapping methods. That led us to design the Citizen Science oriented *BioSCAN: NightWatch* project. Interested L.A. residents picked up an insect night-light trap at NHM, deployed the trap for one night in August, then brought us the catch. The wonderful folks at L.A. Makerspace (<http://www.lamakerspace.com>) collaborated with us to design, prototype, test, and build traps (which ended up costing a budget-friendly \$2.28 each). Every one of the 100 traps was distributed (the photo shows NHM staff assembling the traps into full kits for distribution). By the first week of September, we've received results from over two-thirds of the traps (an astoundingly high return rate for a general-involvement project). We're now working at sorting and identi-

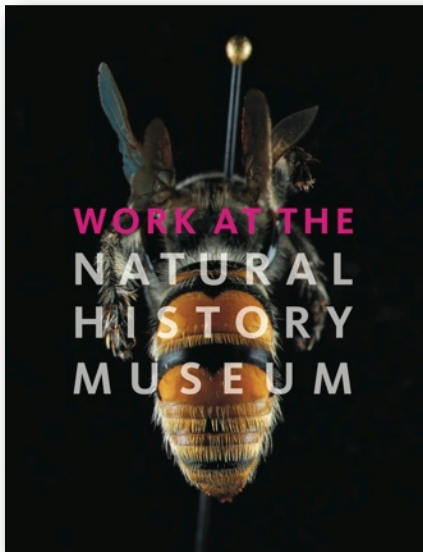


fying the catch.

Spending the Summer, Scheming the Semester

This past summer was BioSCAN's "first draft" at public engagement at the Demo Table in the Nature Lab. BioSCAN staff (largely USC undergraduates) sorted insect samples and interpreted biodiversity science for visiting guests. Two people worked at the table at a time (see photo): one interpreting and one sorting insects on a research-grade microscope (with the sorting field of view projected on the wall). BioSCAN staff worked in front of the public every day of the week, four hours each weekday and six hours each weekend day, adding up to about 800 person-hours in total for the summer. Public reaction was very positive, and gave us a

strong sense that doing real research in the public eye benefits visitors directly and benefits Research & Collections indirectly by helping to clarify the presence of ongoing research at NHM.



We're now in the midst of recruitment and planning for the upcoming semester. In addition to the dozen students who worked over last summer, we are recruiting about ten more to cover research and curatorial needs of BioSCAN (including time in public in the Nature Lab). Phyllis Sun (Marine Biodiversity Center) is leading the hiring and shift organization. Students (whether work-study, volunteer, or intern) will all be involved in biodiversity research projects, ranging from insect taxon specialization through population genetics and insect trap design. Adam Wall is overseeing the research project development and management (in cooperation with BioSCAN PI Brian Brown, Co-PI Regina Wetzer, Coordinator Dean Pentcheff and Assistant Collections Manager Lisa Gonzalez).

Kathy Omura (Marine Biodiversity Center) is leading the challenging bookkeeping and payment for the diverse workforce. We're looking forward to a busy semester of research, curation, and public engagement.

Malacology

Lindsey Groves led six tours for 50+ happy participants in the *Scavengers Safari* series entitled *Conchs, Cowries and Clams...oh my!* The tours featured micro- and giant gastropods and clams, cowries, and large Humboldt squid. Lindsey also presented The phylum *Mollusca: Diversity at its finest!* to the Page Museum Docents to further their understanding of molluscan faunas that are commonly found in asphalt deposits.

Anthropology

On June 9 NHM celebrated its centennial birthday with a "Birthday Bash" that included presentations of objects and specimens from the collections. The Anthropology department participated by presenting a selection of objects that were excavated from the northwest corner of the museum's grounds when the car park was being built. As in previous presentations of this material, the finds were combined with historic images and maps to allow visitors to get a glimpse of what the area would have looked like prior to the museum's construction.



Visitors were also able to see a selection of items that came to the museum in 1913 and that showed the variety of what was collected in those early years.

History

The History Department recently provided Supervisor Mark Ridley-Thomas with images from the Seaver Center for a permanent display at Supervisor Ridley-Thomas' main office in the Kenneth Hahn Hall of Administration. Among the photos is the image of students posed by Los Angeles city model circa 1980, while it was on display in the Lando Hall of California History.



Centennial Ball After Party

Collections Manager Beth Werling along with assistance from two interns, Jaci Rohr and Jennifer Petes, from the California State University Long Beach program in Costume and Textile Collection Management, displayed the costume Vivien Leigh wore at the Twelve Oaks BBQ in *Gone With The Wind* along with a unique selection of Californio footwear from the 1840s–1860s as part of the Centennial Ball festivities on Saturday, June 8.

Centennial Birthday Bash

Beth Werling, Assistant Collections Manager Ayesha Saletore, and interns Jaci Rohr and Jennifer Petes displayed a selection of objects from the History Department's Transportation and Communications collections for a Museum open house event on June 9th. Among the objects displayed was a salesman's model of a 1920 Marmon automobile along with aviatrix Bobbi Trout's 1930s flight suit. In addition to the History display, staff assisted the William S. Hart Museum with their display on *A Century of Western Films*.

Los Angeles Film Series Screenings

In conjunction with the opening of *Becoming Los Angeles*, the Exhibits and Education Department with the Los Angeles Times sponsored a film series highlighting Los Angeles in film:

Beach Blanket Bingo July 13

The History Department provided an exhibit of its vintage swimsuits in the Otis Booth Pavilion and supplied a Mack Sennett short film, *Be Reasonable*, to be shown before the feature film. Also on display was Buster Keaton's costume from *Beach Blanket Bingo*.

Sunset Boulevard July 19

Silent film memorabilia documenting the careers of the actors in the film along with the stars prominent during the 1920s were displayed in the Otis Booth Pavilion for spectators to enjoy prior to the film. History staff also provided a cartoon, *Mickey's Gala Premiere*, which depicted Gloria Swanson among other stars seen in *Sunset Boulevard*.

L.A. Story July 26

The History Department arranged a display of objects outlining the history of road transportation in Los Angeles to highlight the film's emphasis on the reliance of Angelenos on the automobile. Staff also provided a cartoon before the film.

Who Framed Roger Rabbit? August 2

Artifacts from the History Department's extensive animation collection were displayed in the Otis Booth Pavilion along with a 1920s L.A. Electric Railway's conductor's uniform. The History Department also provided a cartoon before the feature, *You Ought to be in Pictures*.

Collections Manager Brent Riggs spoke before a group of kids from Adventures in Nature in August to generate interest in the photo and documents collections that the Seaver Center offers.



Ince Exhibit at the William S. Hart Museum

The History Department along with its interns, Jaci Rohr and Jennifer Petes, and Hart staff members Margi Bertram and Rachel Barnes, researched, planned and installed an exhibit on the life of producer Thomas H. Ince. Ince produced the cowboy star's early films until the two had a falling out which resulted in a series of lawsuits, all documented in the Hart Collection of papers in the Seaver Center for Western History Research.



The highlights of the exhibit (at left) are Native American costume pieces, which Ince's widow donated to the History Department in the early 1930s. The costume pieces, which were worn in Ince's films made in the 1910s, were recently returned to the History Department by the Los Angeles County Museum of Art who had taken them when the two institutions divided in 1965.

Student Mentoring and Research

Herpetology

This summer Herpetology was booming with activity! We welcomed a returning star and four new students to the section. High school Sophomore Hayden Kirschbaum is conducting field and lab work to examine the impacts of introduced Italian Wall Lizards on native species in Coastal San Pedro. High school Junior, Adam Stanford-Moore is using museum specimens to examine morphological variation among Channel Island gopher snakes and also making comparisons to mainland populations to determine the distinctiveness of the Channel Island populations. Lastly, recent CSU Long Beach graduate Eileen Salas is examining the diet of invasive Red-eared Slider Turtles to assess their impacts on our native Western Pond Turtles. Prior to starting this work, Eileen was volunteering regularly in the collection and working with Neftali to catalog new material and update the collection database.

Odalis Perez also joined the Section this summer as part of the Summer Youth Program. Odalis proved to be a tremendous asset and worked hard preserving specimens, cataloging new material, and integrating new material in the Herpetology Library. We hope we get to welcome Odalis back to Herpetology next summer.

Lastly, recent high school graduate Amber Suto once again spent most of her summer working diligently in the Section. Amber was a full time volunteer last summer and active throughout the year whenever she could find an available weekend. This summer, she joined the section to work both on curatorial tasks and also to conduct a research project examining body size variation in two Channel Island lizards using museum specimens. Many Channel Island species exhibit gigantism or dwarfism relative to mainland populations (for example, the recently extinct Channel Islands pygmy mammoth). Amber is testing whether Side-blotched Lizards and Western Fence Lizards are larger on the islands than on the mainland. Amber has now headed off to begin her undergraduate program at Michigan State University, but we hope to find ways to bring her back next summer.

With a recent surge of acquisitions the help of these dedicated individuals couldn't have come at a better time! When not working on research projects, our amazing volunteers and student workers helped us in all aspects of curation, including topping off specimen jars with ethanol, field collecting, tissue sampling, specimen preservation, specimen identifications and data entry.

Research Library

Summer graduate interns Yvette Khalafian, UCLA and Tristan Gable, University of North Texas library schools worked with other volunteers on projects regarding the library collection and services. Their projects were respectively an enhancement of the design of the library's website presence and cataloging approximately ninety 19th century books. Pictured are Clarice De Veyra (UCLA), Toni Rodriguez (recent SJSU graduate), and Lin Rhys Pyatt (USC) housing rare books in custom built acid-free containers.



Vertebrate Paleontology



Jose works on fossil preparation.

Thank you Jose for your enthusiastic attitude and Photoshop expertise! Thank you Alex for your efficient work ethic and fossil identification work!

The Department of Vertebrate Paleontology was also pleased to have Sarah Knowlton and Tristan Reinecke join our volunteer team during the month of July. Both Sarah and Tristan are high school students interested in pursuing paleontology as a career. They each contacted the Museum to learn how they could get involved in serving the needs of our department while advancing their knowledge of the discipline. Thank you Sarah and Tristan for your assistance in the preparation and identification of fossils from the Round Mountain Silt of Kern County!

For the second year in a row the Department of Vertebrate Paleontology participated in the *Expo Summer Youth Program*, which provides local teens with part-time jobs for the purpose of preparing them for college and the workforce. This year we were pleased to have two summer interns: Jose Bahena and Alexandria Garcia-Pinks. As a result of their efforts, we were able to make progress with the digital mapping of our oversized collections, prepare fossils from our 2013 field work collecting initiatives, scan Museum publications for our archives, and add to the identification of shark teeth from our collections.



Tristan (at left) and Alex (at right) work on the identification of shark teeth.

We wish all our High School student interns and volunteers a productive school year!

History

Collections Manager Brent Riggs congratulates several students who interned under Mr. Riggs in the Seaver Center and are finding success in the archival field. UCLA Master's in Library and Information Science graduate Emily Wittenberg is the museum's new Digital Collections Archivist in Marketing and Communications. 2013 UCLA Master's in Library and Information Science graduate Maria Angel Diaz received the 2013 Harold T. Pinkett Minority Student Award to attend the August 2013 Society of American Archivists Annual meeting in New Orleans, where she participated in a panel and presented a talk on her work with minority community archives. She has recently been hired as a Project Archivist at the Autry Museum of the American West. 2012 UCLA Master's in Library and Information Science graduate Jessica Geiser has recently been hired as a Project Archivist at California State University, Northridge.



Kristin Contreras, a Masters candidate in the History program at California State University, Northridge, will be interning in the Museum Archives for the fall semester. Ms. Contreras is the third student from this program to intern in the Archives.



Dinosaur Institute

Graduate Student in Residence Diana Pomeroy was awarded a Masters in Geology from Cal State Long Beach.

Volunteers and Research Associates

Anthropology

Selena Pasillas began volunteering with Anthropology on May 15 and has since put in many hours of invaluable hard work. Some may recognize Selena from when she worked as an NHM Guest Relations Associate but she is now concentrating on her graduate studies at UCLA; focusing on Mesoamerican history and culture. Selena has proved to be a highly effective volunteer, capable in all assignments and with an abundance of knowledge in the field. Her specific interests in diet, healing practices, and osteology have already enhanced our understanding of some of the objects we've come across as she helps us process and re-house items from the Ethnology collections. In particular, these interests have led to the initiation of compelling research of several necklaces of human and animal teeth from New Guinea.



Selena assists with the cleaning and re-housing of a very large feathered headdress from New Guinea.

Research Library

Librarians from the local chapter of Special Libraries Association on a Saturday in August volunteered to help clean organize and shelve over 2,000 books still in Dewey classification. Books deemed appropriate to keep in the library collection will be converted to Library of Congress classification and added to the library's online catalog.



Echinoderms



Several employees from the WM Keck Foundation spent the morning of August 28th working in the Echinoderms collection with collection manager Cathy Groves. Alison, AnnaLee, Matt, and Suzanna assisted with the monumental task of checking and replenishing the alcohol level of samples in the wet collection. By the time lunch rolled around and their day of volunteering came to a close, the enthusiastic Keck crew had inspected 2,000 bottles containing preserved sea stars. Impressive! We are extremely grateful for their help.

History

Dedicated Seaver Center volunteer Lynne Eisler was honored for her outstanding achievements at the Volunteer Recognition Night on April 30th. Pictured is Lynne in between Collections Managers John Cahoon and Betty Uyeda.



Distinguished Visitors

Rancho La Brea

Taichi Kato (assistant Curator, Paleontology) and Hideo Takimoto (head of Research and Collections) of the Ibaraki Museum of Nature, Ibaraki, Japan visited the Page Museum on June 10 and 12 to discuss their plans for a proposed special exhibit on the Ice Age at their museum. They would possibly include some replicas of La Brea fossils as part of the exhibit. The exhibit is scheduled to open in March 2015. The Ibaraki



Science writer Abigail Tucker, Dr. John Harris, and Laura Tewksbury at Project 23's Box 13.

Nature Museum has been a sister museum to the Natural History Museum since 1998 and has a long term loan of one of our mounted *Smilodon fatalis* skeletons on exhibit.

Abigali Tucker, Science journalist and staff writer at Smithsonian magazine, is working on a book about cats and their ancestors, to be published by Simon and Schuster in 2015. She toured the Page Museum and the Project 23 excavations this summer to research her book.



Dr. John Harris showing parts of the collection to Taichi Kato from the Ibaraki Museum in Japan.

Ichthyology

Mike Horn (CSU Fullerton) visited the Section of Fishes in May with two students to look at atherinopsid fishes from the Gulf of California.

Vertebrate Paleontology

During May 6–7, Jack Conrad, Assistant Professor of Anatomy at the NYIT College of Osteopathic Medicine, visited our collections to examine our fossil squamata materials as part of his ongoing phylogenetic research about the origin of snakes and lizards.



During May 15–17, Meghan Balk, Ph.D. student at the University of New Mexico, visited our collections to examine our expansive *Carcharocles megalodon* teeth as part of her thesis work.

During June 3–5, Douglas Long, Research Associate at the California Academy of Sciences, visited our collections to study early Miocene and Pliocene fishes in addition to the latest Miocene and earliest Pliocene records of *Carcharocles megalodon* sharks.



During June 27–28, Susumu Tomiya, Ph.D. student at University of California at Berkeley, returned to visit our collections as part of his ongoing research of the fossil mammals in the Eocene Sespe Formation. Susumu recently published a paper this past June in *Palaeontologia Electronica* titled, *New carnivoraforms (Mammalia) from the middle Eocene of California, USA, and comments on the taxonomic status of 'Miacis' gracilis*, citing specimens from our Vertebrate Paleontology collections (<http://palaeo-electronica.org/content/2013/435-eocene-carnivoraforms>).



On June 21, Meredith Rivin, Associate Curator of Paleontology at the Cooper Center in Orange County, visited our collections to examine our elephant seal skulls from the Palos Verdes Sand.



On August 1, Lu Yao, a graduate student at the University of Chicago, visited our collections to take geometric morphometrics using a 3D digitizer (below inset) of our

Channel Islands pygmy mammoths and Columbian mammoths as part of her research on island animal dwarfism.



On August 8, Eric Scott, Curator of Paleontology at the San Bernardino County Museum, and Christina Lutz, Preparator at the Page Museum, visited our collections to continue their research on fossil horses from Gypsum Cave, Nevada.



Malacology

Bryan White (CSU Fullerton) visited Malacology to deliver some recently collected mollusk dredgings to Malacology Research Associate Pat LaFollette. Ángel Valdés (Cal. Poly. Pomona) made four visits, singly and with grad students including Jessica Goodheart, Luiza Saad, Jermaine Mahguib, Samantha Cooke, Sarah Madero, and Katherine Molk. Maxine and Robert Dearborn (West Hills, CA) brought a suite of fossil specimens from the Mio-

cene Topanga Formation for identification confirmation. Craig Crepl (Catalina Marine Society) interviewed Lindsey Groves and Jody Martin (Crustacea) for an article he was writing for *OceanBights Magazine* for the Catalina Marine Society. Nicole Bitler (Univ. Chicago) visited to examine and photograph specimens of *Nucella lamellosa*, *N. ostrina*, *Littorina sitkana*, and *L. subrotunda* for her research on phenotypic variation and range expansions of these species. To earn school credit, Nathaniel Coleman (Monrovia H.S.) volunteered for a day in Malacology and sorted and identified Pleistocene invertebrates from Santa Rosa Island.



Nicole Bitler (University of Chicago) examining specimens of *Littorina* in the Malacology collection.

Sabrina Drill and Jessica Chen (UC Cooperative Extension) hand carried a loan return of introduced freshwater mollusks and discussed the effects that these introduced species have on their environment. Richard Squires (CSUN, Geological Sciences) used the Malacology collection for comparative purposes in determining the identifications of some fossil mollusks. Natalie Martinez (USC Biology) continued photography of oyster specimens as part of her research using the Malacology camera setup.



Malacology volunteer Nathaniel Coleman (Monrovia H.S.) sorting and identifying Pleistocene invertebrates from Santa Rosa Island.

Dinosaur Institute

Dr. Martin Sander is visiting the Dinosaur Institute on a 6 month sabbatical from Institut für Paläontologie, Universität Bonn, Nussallee 8, D-53115 Bonn, Germany. Dr. Martin Sander's research focuses on the paleobiology of dinosaur and other Mesozoic tetrapods. He is also interested in conducting field work in the Triassic of Nevada, in collaboration with the DI, and collecting some of the earliest known North American ichthyosaurs.



Polychaetes

One of our May visitors, Dr. Segio Salazar-Vallejo (ECOSUR, Mexico) stayed on and continued to work with our collections until the middle of June. He was joined by colleague Dr. Luis Carrera-Parra (ECOSUR) for 3 weeks at the end of May. UCSB grad student Nick Schooler came twice during this period to drop off specimens and for identification help.

History



Former Los Angeles Times art critic Suzanne Muchnic is utilizing the collections of the Seaver Center as well as Museum Archives for her book-in-progress on the history of the Los Angeles County Museum of Art.

History Curator Emeritus Tom Sitton visited the Seaver Center to present a copy of his newly released history of the County Board of Supervisors, *The Courthouse Crowd, Los Angeles County and Its Government, 1850–1950*, published by the Historical Society of Southern California. Note the picture at right shows the old court house building behind Dr. Sitton.



Recent Publications

- Kampf, A. R.**, Hughes, J. M., Marty, J., and Nash, B. P. (2013) Wernerbaurite, $\{[(\text{Ca}(\text{H}_2\text{O})_7)_2(\text{H}_2\text{O})_2(\text{H}_3\text{O})_2]\{\text{V}_{10}\text{O}_{28}\}$, and schindlerite, $\{[\text{Na}_2(\text{H}_2\text{O})_{10}](\text{H}_3\text{O})_4\}\{\text{V}_{10}\text{O}_{28}\}$, the first hydronium-bearing decavanadate minerals. *Canadian Mineralogist* 51, 297-312.
- Kampf, A. R.**, Mills, S. J., Nash, B. P., Housley, R. M., Rossman, G. R., and Dini, M. (2013) Camaronesite, $[\text{Fe}^{3+}(\text{H}_2\text{O})_2(\text{PO}_3\text{OH})]_2(\text{SO}_4) \cdot 1-2\text{H}_2\text{O}$, a new phosphate-sulfate from the Camarones Valley, Chile, structurally related to taranakite. *Mineralogical Magazine* 77, 453-465.
- Kampf, A. R.**, Mills, S. J., Housley, R. M., Rossman, G.R., Marty, J., and Thorne, B. (2013) Lead–tellurium oxysalts from Otto Mountain near Baker, California: X. Bairdite, $\text{Pb}_2\text{Cu}^{2+}_4\text{Te}^{6+}_2\text{O}_{10}(\text{OH})_2(\text{SO}_4)(\text{H}_2\text{O})$, a new mineral with thick HCP layers. *American Mineralogist* 98, 1315-1321.
- Kampf, A. R.**, Mills, S. J., Housley, R. M., Rossman, G.R., Marty, J., and Thorne, B. (2013) Lead–tellurium oxysalts from Otto Mountain near Baker, California: XI. Eckhardtite, $(\text{Ca,Pb})\text{Cu}^{2+}\text{Te}^{6+}\text{O}_5(\text{H}_2\text{O})$, a new mineral with HCP stair-step layers. *American Mineralogist* 98, 1617-1623.
- Kampf, A. R.**, Mills, S. J., Housley, R. M., Rossman, G. R., Nash, B. P., Dini, M., and Jenkins, R. A. (2013) Joteite, $\text{Ca}_2\text{CuAl}[\text{AsO}_4][\text{AsO}_3(\text{OH})]_2(\text{OH})_2 \cdot 5(\text{H}_2\text{O})$, a new arsenate with a sheet structure and unconnected acid arsenate groups. *Mineralogical Magazine* 77, 2811-2823.
- Kampf, A.** (2013) Structural insights gleaned from Palermo's two newest minerals, falsterite and nizamoffite. 6th International Symposium on Granitic Pegmatites, Bartlett, New Hampshire, May 26-31, 2013. Abstract Volume, p. 67-68.
- Merilees, B. and **McLean, J.H.** 2013. Ian McTaggart Cowan (1910-1920) and his contributions to west coast malacology. *The Festivus* 45(7):59-62, figs. 1-4.
- Morgan, A., Kampf, A., and Gaillou, E.** (2013) Gem and mineral treasures in Los Angeles at the Natural History Museum. *InColor* 22 (Spring 2013), 24-31.
- Nizamoff, J., Falster, A., Simmons, W., **Kampf, A.**, and Whitmore, R. (2013) The paragenesis of falsterite and nizamoffite, two new zinc-bearing secondary phosphates from the Palermo No. 1 pegmatite, North Groton, New Hampshire. 6th International Symposium on Granitic Pegmatites, Bartlett, New Hampshire, May 26-31, 2013. Abstract Volume, p. 91.
- Pusterla, N., Hagerty, D., Mapes, S., VanGeem, J., **Groves, L.T.**, Dinucci, M., Fielding, L.C., and Higgins, J.C. 2013. Detection of *Neorickettsia risticii* from various freshwater snail species collected from a district irrigation canal in Nevada County, California. *The Veterinary Journal* 197(2):489-491, figs. 1-3.
- Rojas-Runjaic, F. J. M., P. E. Salerno, J. C. Señaris, and **G. B. Pauly.** 2013. Terraranans of the Lost World: a new species of *Pristimantis* (Amphibia, Strabomantidae) from Abakapá-tepui in the Chimantá Massif, Venezuelan Guayana, and additions to the knowledge of *P. muchimuk*. *Zootaxa* 3686 (3): 335–355.
- Spinks, P. Q., R. C. Thomson, **G. B. Pauly**, C. E. Newman, G. Mount, and H. B. Shaffer. 2013. Misleading phylogenetic inferences based on single-exemplar sampling in the turtle genus *Pseudemys*. *Molecular Phylogenetics and Evolution* 68: 269–281.
- Suarez-Morales, E., **Harris, L.H.**, Ferrari, F.D., Gasaca, R. 2013. Late postnaupliar development of *Monstrilla* sp. (Copepoda: Monstrilloida), a protelean endoparasite of benthic polychaetes. *Invertebrate Reproduction & Development*, DOI: [10.1080/07924259.2013.816787](https://doi.org/10.1080/07924259.2013.816787).

Wang, Y., Y. Xu, S. Khawaja, B.H. Passey, C. Zhang, **X. Wang, Q. Li, Z.J. Tseng, G.T. Takeuchi**, T. Deng, and G. Xie. 2013. Diet and environment of a mid-Pliocene fauna from southwestern Himalaya: Paleo-elevation implications. *Earth and Planetary Science Letters* 376(0):43-53.

Zhang, Z., **Chiappe, L. M.**, Han, G., and Chinsamy, A. (2013) A large bird from the Early Cretaceous of China: new information on the skull of enantiornithines. *Journal of Vertebrate Paleontology*, 33(5):1176-1189.

Staff Departures and New Staff

History

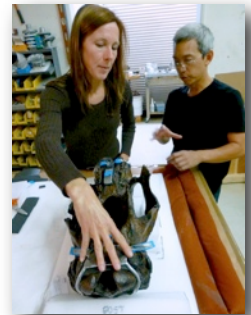
Ayesha Saletore, after two years as an Assistant Collections Manager in the Material Culture Section, left the History Department to pursue a master's degree at Claremont College. Prior to working in the History Department, Ms. Saletore served as the Site Administrator for the William S. Hart Museum.

Lalena Vellanoweth worked as an Assistant Collections Manager with the History Department over the summer assisting in preparing the Loewy BMW for its appearance at Pebble Beach as well as overseeing the installation of the Ince exhibit at the William S. Hart Museum. Lalena has now returned to private practice as a contract Conservator, specializing in costume and textile materials.

Miscellaneous

Rancho La Brea

In May, Research & Collections staff from the Page Museum collaborated with neighboring institution LACMA, on a temporary exhibit called *The Presence of the Past: Peter Zumthor Reconsiders LACMA* (<https://www.lacma.org/art/exhibition/zumthor>). They worked with exhibit designers, mount makers and the registrar's office to loan the 50 foot mural depicting Rancho La Brea painted by Charles Knight in 1925, eleven original John L. Ridgeway drawings that appear in John C. Merriam and Chester Stock's 1932 *The Felidae of Rancho La Brea* and Chester Stock's 1925 *Cenozoic Gravigrade Edentates of Western North America*, numerous images from The Page Museum's archives and twelve fossil specimens from the Hancock Collection. Right: Assistant Collections Manager Gary Takeuchi discusses building an exhibit mount for a *Paramylodon* skull with LACMA mount maker Holly Rittenhouse.



Project 23

Early in May the Project 23 team chose a new box to open. Box 13 is close to the east side of the compound and is easily viewable by visiting guests. Although the box is relatively small compared to some of the others from this salvage, the deposit is packed with fossils in the classic Rancho La Brea "jumble of bones". After digging just over 25 centimeters from the top of the box over 1000 fossils have already been excavated! These include a saber-toothed cat posterior skull, vertebrae, and limb bones, *Teratorn* specimens along with numerous other birds, a large herbivore pelvis and femur yet to be identified, and wood, sloth, rabbit, rodent, weasel, coyote, dire wolf, horse, dwarf pronghorn, bison, and hundreds of yet to be identified specimens.



*If we knew what it was we were doing,
it would not be called research, would it?*

Albert Einstein

The *Research & Collections Newsletter* is issued five times per year, in January, March, May, September, and November, by the Research and Collections staff of the Natural History Museum of Los Angeles County.

Editor: Dr. Joel W. Martin, Curator of Crustacea and Chief of the Division of Invertebrate Studies.

Layout and Photo Editing:

Phyllis Sun and Jean Pongsai (Marine Biodiversity Center), and Dean Pentcheff, BioSCAN Project Coordinator.

All issues of the newsletter may be found at:
<http://research.nhm.org/newsletters>

