

# Research & Collections Newsletter



May 2012

**re•search** (rī-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

### Anthropology

This tall vessel from NHM's Archaeology collections will be on display at LACMA until July 1st in an exhibit entitled *Children of the Plumed Serpent: The Legacy of Quetzalcoatl in Ancient Mexico*. The exhibit is a survey of the art made by the ancient kingdoms of Southern Mexico who allied to resist subjugation by both the Spanish and the Aztec Empire in the centuries before Mexico was finally conquered by the Spanish in 1521. These independent kingdoms existed in the areas known today as Oaxaca, Puebla, and Tlaxcala and over time developed an elaborate pictorial language, enabling communication to foster vast trade networks and other forms of social cooperation. This vessel was selected because it is a very good example of the unique imagery developed by the Mixtec culture of pre-Columbian Oaxaca and Puebla. According to Dr. John Pohl, co-curator of the exhibit and an authority of Mixtec visual culture, this vessel's depictions of severed heads and hearts imply esoteric and religious meanings; appropriate as it was used for pulque drinking. Pulque is made from the fermented sap of the maguey plant, and prior to the Spanish Conquest, it was considered sacred and strictly limited to certain people and ceremonial occasions.



## Ichthyology

Andrew Gross from the Biology Department at USC visited the Fish Collection on the 25th of April to look at some specimens for the Torrey Webb Room display in the Allan Hancock Foundation Building. He was especially interested in our deep-sea fishes, including a Humpback Anglerfish *Melanocetus johnsonii* from the Mid-Atlantic Ridge (at right).



## Mineral Sciences

In April, Mineral Sciences received 16 jeweled butterfly brooches on loan. The butterflies are made from rare and unusual gemstones including titanite, spessartine and stibiotantalite. They will be on display in the Gem and Mineral Hall until May 1st, 2013.

## History

The History Department recently acquired a child's saddle that was manufactured in downtown Los Angeles by the Brydon Brothers saddlery for the silent film star William S. Hart. The saddle was custom made for Hart in 1921 and was sent to Virginia as a gift to three year old Gordon Grayson, son of Admiral Cary T. Grayson, the personal physician of President Woodrow Wilson. Young Gordon Grayson and President Wilson regularly watched movies in the White House, and they were both fans of William S. Hart. At right: The back of the saddle bears the tooled inscription *From Bill Hart to Master Gordon Grayson*.



## Research Library

The NHM Research Library held an opening day on April 11, 2012 after being closed since October 2008. Pictured are Dr. Jane Pisano and some Museum staff examining an 1810 hand colored map of Mexico that is part of an extensive map collection housed in the library. The map is being described by chief librarian Richard Hulser.

The library is now open for use by Museum staff weekdays from 10:00 am to 4:00 pm and has WiFi available. It is also available to outside researchers by appointment only. There is an online library catalog available through a link on the Research Library page on the NHM intranet. The external website page for the Research Library will be launched shortly as well.

## Polychaetes

In March, Leslie Harris assisted the Marine Biodiversity Center and the Outreach Department with their marine science training (see also below under *Outreach*). Fresh samples of seaweed and marine invertebrates were collected from boat slips in King Harbor, Redondo Beach, for instructors and students to examine. Recognizing a good opportunity to obtain fresh material, once the classes were over Leslie carefully removed sea worms for preparation as museum specimens. As a result 70 lots (each lot containing from 1 to 15 worms) suitable for both morphological and DNA studies have been added to our collection.

## Herpetology

Over the past two months, approximately 600 specimens have been gifted to the Section of Herpetology. The most significant new addition was a collection gifted by Mickey Long, the former director of the Eaton Canyon Nature Center. The approximately 200 specimens date from the late 1960s to the early 1980s with most coming from southern California. These specimens add to our understanding of the changing biodiversity of the Los Angeles area, and help us build the comparative historical data that will be compared to contemporary records from the museum's citizen science project the *Lost Lizards of Los Angeles* (LLOLA).

## Vertebrate Paleontology

Lisa and Sean Tohill, accompanied by Lisa's mother on 27 March (at right), visited the Department and met with Lawrence Barnes. Lisa and Sean also visited us on several other occasions during March and April, and made another generous donation to the Museum of fossils from the middle Miocene Sharktooth Hill Bonebed near Bakersfield, California. Included in their most recent donation are significant specimens of pinnipeds, cetaceans, and sea cows, including new species and new distribution records.



# Field Work

## Rancho La Brea

On April 28th Gary Takeuchi lead a paleontology field training day for employees of Cogstone Resource Management company at Red Rock Canyon State Park in Kern County. Cogstone is a cultural resources consulting firm that monitors for fossils on various construction projects primarily in southern California. The day was spent prospecting for fossils in a classic sedimentary environment and observing the geology of the area.

## Vertebrate Paleontology

Lawrence Barnes and Museum Research Associate Dr. Daryl Domning of Howard University, Washington, D.C., led a field trip from 10 to 26 March to the central part of the Baja California Peninsula to investigate fossil-bearing marine deposits, some of which have not been visited in about half a century. A particular goal was to collect in the early Miocene Ysidro Formation at the type localities of important early fossil sea cows, and the work was supported by a National Science Foundation grant to Domning and Barnes. They were accompanied by Howard University Ph.D. Candidate Jorge Velez-Juarbe, Ph. D. student Fernando Salinas from the Universidad Autonoma de Baja California at Ensenada, Dr. Gerardo Gonzalez-Barba of the Universidad Autonoma de Baja California Sur in La Paz, his undergraduate student, Ehecatl Hernandez, and two graduate students from the Centro Interdisciplinario de Ciencias Marinas in La Paz: Pricilla Morales and Diego Vera.



Above: The field party collecting a sea cow skeleton on 15 March in a bonebed at San Juanico near the type locality of *Dusisiren reinharti*, an extinct relative of the Steller sea cow.



Left: Near La Purisima, the holotype specimen of *Dioplotherium allisoni*, an extinct relative of the living *Dugong* of Australasian waters, was collected in the 1950s from a dense bonebed that lies just beneath the overhanging ledge arching across the lower third of the cliff. More fossils were collected from this same bonebed on 17 March.

# Meetings, Workshops, and Presentations

## History

Seaver Center Collections Manager Betty Uyeda participated in an Archives Workshop roundtable discussion on April 7th at the 6th Annual Critical Studies Graduate Conference through the USC School of Cinematic Arts. Other representatives were from the Academy Film Archive, the Huntington Library and USC's Hugh Hefner Moving Image Archive. Each discussed their collections and the nature of archival work.

On Saturday, April 14th, Collections Manager Beth Werling gave a talk to the William S. Hart Museum docents about the History Department's pre-cinema and early cinema collections. Several key pieces from these collections are currently on display at the Hart Museum through early June. Beth spoke about the pieces themselves and how this era of film history was depicted in two recent movies, *Hugo* and *The Artist*.

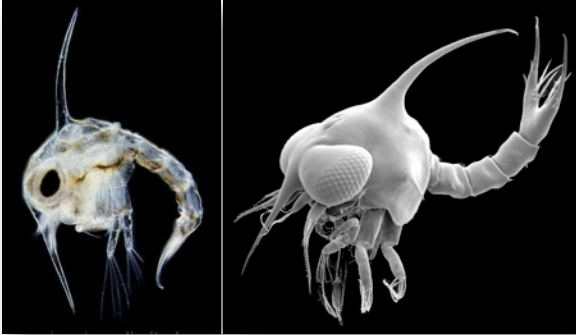
John Cahoon and Brent Riggs from the Seaver Center attended the annual general meeting of the Society of California Archivists in Ventura April 26–28.

## Crustacea

Dr. Jody Martin (Curator of Crustacea and Chief of the Division of Invertebrate Studies) visited the Zoologisk Museum at the University of Copenhagen (Denmark) to work on the book *Atlas of Crustacean Larvae* with

co-editors Jørgen Olesen and Jens T. Høeg. The book has now been submitted to Johns Hopkins University Press and is scheduled to be published in late 2013 or early 2014.

Shown at left are a color photograph (left) and scanning electron micrograph (right) of the larval stages of a crab, both images from the upcoming book.



## Rancho La Brea

Over the weekend of April 20th to 23rd, Carrie Howard (Lead Preparator) and Chris Shaw (Research Associate) from the Page Museum attended the Desert Symposium at the California State University's Desert Studies Center in Zzyzx, CA. The symposium solicits presentations on current research in archaeology, history, paleontology, geology, ecology, biological sciences, and environmental issues in or related to the California deserts and surrounding provinces. Carrie and Chris presented their poster, *A near-complete skull of Castor canadensis from the badlands of El Golfo de Santa Clara, Sonora, Mexico*. Carrie made the discovery on a field trip in 2011. It is considered to be the most complete beaver skull of that species found in North America from the Irvingtonian Land Age. The El Golfo Project is part of a resource inventory for the Upper Gulf of California and Colorado River Delta Biosphere Reserve that has recovered over 6,000 fossils through joint efforts by Arizona Western College, the George C. Page Museum, and the Biosphere Reserve.



Carrie Howard and Chris Shaw presenting their poster at the Desert Symposium in Zzyzx.

Collections Manager Aisling Farrell was invited to participate in an iDigBio workshop in Gainesville Florida from April 26th to 29th. iDigBio (Integrated Digitized Biocollections) is the National Resource for Advancing Digitization of Biological Collections (ADBC) funded by the National Science Foundation. The workshop was held at the Paramount Plaza Hotel in conjunction with the Florida Museum of Natural History. Almost 50 participants from around the US attended the 2 and half day workshop with presentations and breakout discussions. More information is available at their website: <https://www.idigbio.org/content/about-idigbio>.

## Anthropology

Dr. Margaret Hardin (Division Chief, Anthropology and History) participated in two professional meetings. On April 15th, she traveled to the Pueblo of Zuni in western New Mexico as an invited participant in a workshop entitled *Creating Collaborative Catalogs* held by the A:shiwi A:wana Museum and Heritage Center. From April 28th to May 1st, she attended the annual meeting of the American Association of Museums (AAM). Together with

Simon Adlam (Director of Exhibits) and Amanda Kranz (Randi Korn & Associates, Ltd.) she co-presented a poster session entitled *Integrating Evaluation into the Development of Becoming Los Angeles, an Exhibition of the Natural History Museum of Los Angeles County*. At right: Rendering from the perspective of the visitor about to enter the “Mexican Period.”

## Research Library

Chief librarian Richard Hulser participated in the *Computers in Libraries* conference held in Washington, D.C., in March 2012. During the conference he taught a well-attended workshop on technology strategy planning for information professionals, gave a paper on the NHM Research Library migration to a “cloud-based” online library catalog, and moderated a track of sessions on content management tools and techniques.



Rich Lane, Program Officer of Sedimentary Geology and Paleobiology at NSF, addresses the audience. Dr. Lane was a strong supporter of this forum, and has supported six of such workshops since 2005.

## Vertebrate Paleontology

In recognition of emerging opportunities and the fast growth of Chinese paleontology in recent years, a workshop, co-funded by the US National Science Foundation and the Chinese National Natural Science Foundation, was held at the Museum from 9 to 11 March. Titled *Critical Transitions Across the Phanerozoic: A Round Table Workshop on Sino-US Collaborative Research on Major Events in the History of Life during the Past 600 Million Years*, the workshop was led by Xiaoming Wang and John Long, with the help of Salena Small, Vanessa Rhue, Samuel McLeod, Maria

Ponce, Aisling Farrell, Gary Takeuchi, and Shelley Cox (to name just a few). More than 80 paleontologists and geologists from China, Sweden, and the US participated, including many from local universities (UCLA, USC, CalTech) (see photograph under *Outreach*, below). In addition to exchanging ideas about timely topics of paleobiology and earth history events, much emphasis was placed on encouraging collaboration among US and Chinese scientists, and on submitting new proposals to funding agencies.

# Public Outreach

## Ornithology

Ornithology Collections Manager Kimball Garrett led an NHM members’ field trip to the Sepulveda Basin in the San Fernando Valley on 10 March, observing and discussing the biology of a variety of riparian woodland and freshwater bird species. Among the 70 species we encountered was the Great-tailed Grackle (*Quiscalus mexicanus*) (right), a species that expanded its range into urban Los Angeles from Mexico in the 1970s and 1980s. This male selected a typical urban perch upon which to perform his aggressive “head-up” display. (Photo by KG).



## History

Dr. William Estrada and Cathy McNassor were on hand during the Festival of the Books held April 21st–22nd on the USC campus. They each met with readers at NHM’s booth and signed copies of their respective books, *The Los Angeles Plaza, Sacred and Contested Space* (University of Texas Press, 2008) and *Los Angeles’s La Brea Tar Pits and Hancock Park* (Arcadia Publications, 2011).

## Ichthyology

Dr. Javier Gago brought his biology class from Glendale Community College to visit the Fish Collection on the 19th of April.

Dr. David Huckaby brought his vertebrate zoology class from Cal State Long Beach to the Fish Collection as part of a larger tour of vertebrates on the 27th of April (right).



## Conservation

On March 3, 2012, Tania Collas, Liz Homberger, and Lalena Vellanoweth opened the lab for behind-the-scenes tours and shared their work preparing artifacts for the Los Angeles exhibit with enthusiastic Scavenger Safari participants (at left).

## Herpetology

Greg Pauly and Research Associate and CSU Northridge professor Bobby Espinoza (plus Nefty Camacho, Leslie Gordon, Lila Higgins, and Karen Ewald) led 25 excited partici-

pants on a lizard walk through Malibu Creek State Park on April 21. Everyone had a great time noosing lizards, photographing snakes, and enjoying the great spring weather. Highlights included three Southern Pacific Rattlesnakes clustered together in a meadow, two Gopher Snakes including one bulging with a large recently consumed meal, a Striped Racer, and dozens of basking lizards. Pictured at right is Greg showing off a predated Gopher Snake carcass.

There have been multiple recent tours of the Section. Neftali Camacho gave a tour to David Huckaby’s enthusiastic Vertebrate Zoology Class from California State University, Long Beach. The class was mainly focused on diversity, and showcased specimens included the Tuatara, Chinese Giant Salamander, King Cobra, basilisk (aka the Jesus Christ lizard), and the Gaboon Viper among others. Greg Pauly also gave a recent Sunday tour to a group from the California Herpetological Society that focused on local species as well as species experiencing major declines or believed to have recently gone extinct. Lastly, Greg and Nefty worked together to provide tours to Sharon Shinghai’s 4th Grade class.



## Marine Biodiversity Center: Life Under the Dock

In early March, the Marine Biodiversity Center and the Outreach Department collaborated and created an intensive week of marine science activities for local LAUSD middle school students. These students were from schools previously visited by the museum's Seamobile. As a follow-up to the lessons they taught on the mobile, Outreach planned to have marine oriented activities and asked the MBC for their insight. On March 12th, staff and students from the respective departments visited Redondo Beach's King Harbor to [scout, scrape, and collect](#) live



specimens from pier pilings. Outreach staff learned how to collect and preserve these live samples to bring back to the museum to investigate. This collecting expedition served as a foundation to plan the proceeding week's activities and lessons.



Over the course of three days, 126 students from Carnegie, El Sereno, and Carver Middle Schools visited the MBC Collaboratory to identify animals in dock piling samples collected by their instructors. Leslie Harris, Kathy Omura, Phyllis Sun, Adam Wall,

and Dean Pentcheff, with Outreach staff members Gina Hall, Nicole Duran, Lindsay Ash, Marisol Rojas and Joe Ranoia, helped the pre-teens to identify several species of crustaceans, echinoderms, and mollusks. Regina Wetzer, director of the MBC, presented the students with a brief lesson on sea stars with preserved specimens, a live sea star courtesy of Cabrillo Marine Aquarium, and video clips featuring their carnivorous meals. As well, Seamobile Lead Instructor Mike Williams and Gallery Interpreter Judy Pinheiro guided students on a Seamobile-themed tour and scavenger hunt through the museum.

The students, teachers, and chaperones were excited to have the opportunity to work firsthand with local live animals and museum scientists. This collaboration between MBC and Outreach allowed local urban youth the opportunity to learn and practice real-world science and positively set a standard for future cooperative relationships between R&C and Education.

## Malacology, Invertebrate Paleontology, Marine Biodiversity Center, Herpetology, Polychaetes, and Mineral Sciences

R&C participated in the 3rd annual *Science Festival* at the Paramount Ranch parcel of the Santa Monica Mountains National Recreation Area. Kathy Omura and Phyllis Sun (Marine Biodiversity Center) exhibited intertidal invertebrates and explained the various intertidal habitats commonly seen in southern California. Vertebrate and invertebrate fossils found on the NPS property and throughout the Santa Monica Mountains were exhibited by Mary Stecheson (Invertebrate Paleontology). Invasive and native terrestrial and freshwater mollusks were exhibited by

*Mary Stecheson (IP) and Alyssa Morgan (Mineralogy) in action.*





Lindsey Groves (Malacology) with an emphasis on the New Zealand Mudsnaail [*Potamopyrgus antipodarum* (Gray, 1853)] which has invaded the Malibu Creek watershed and is alive and well. Greg Pauly (Herpetology) exhibited reptiles and amphibians of the Santa Monica Mountains and led several tours. Kirk Fitzhugh (Polychaetes) displayed freshwater and terrestrial worms and Leslie Harris (Polychaetes) exhibited marine worm and associated invertebrates found locally. Alyssa Morgan (Mineralogy) exhibited mineral samples from the Conejo Volcanics, one of the most widespread formations in the Santa Monica Mountains and explained how the mountains were formed.



*Future Malacologists examining New Zealand Mud Snails.*



*R@C participants of the 3rd Annual Science Festival (l to r), Kirk Fitzhugh, Lindsey Groves, Leslie Harris, Mary Stecheson, Greg Pauly, Alyssa Morgan, Phyllis Sun, and Kathy Omura.*

## Rancho La Brea

Excavators Michelle Tabencki, Christina Lutz and Laura Tewksbury attended the career day event at McKinley Elementary school on March 9th, where they presented the thrill of being a paleontologist. Students both recognized the excavators from their presentations last year and had decorated their auditorium with posters of paleontologists. The excavators also visited 112th Street Elementary school on March 28th, where students were able to see casts of a mammoth femur and a saber-toothed cat skull. At both events, students were encouraged to study science and pursue volunteer opportunities in their future.

*Excavators (left to right) Michelle Tabencki, Christina Lutz and Laura Tewksbury with McKinley Elementary School's mascot.*



## Rancho La Brea

Curatorial Assistant Gary Takeuchi was interviewed on April 12th for the Tokyo Broadcasting System (TBS) travel show, *World Mystery Discovery* which had been on TV in Japan for over 15 years. The show will feature destinations in California, including Rancho La Brea.

Hiroshi Sugaya (Director) and Dr Koji Yamazaki (Chief Curator) of the Ibaraki Nature Museum, Ibaraki, Japan, visited the Page Museum on March 23rd. Dr. John Harris, Aisling Farrell, Gary Takeuchi and Shelley Cox gave them an extended tour of the museum, lab, collections and Project 23 excavations. The Ibaraki 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.

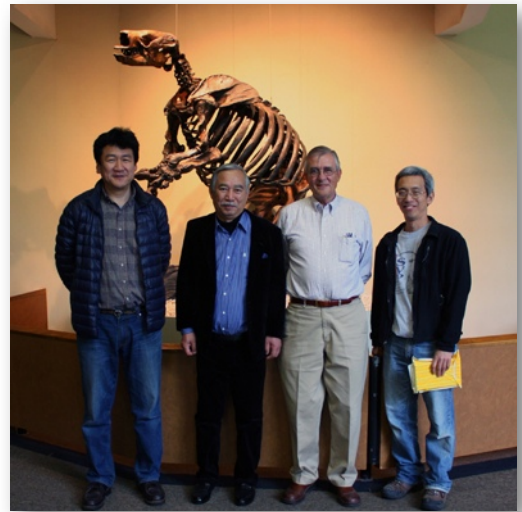
*Left to right: Dr. Koji Yamazaki (Chief Curator), Hiroshi Sugaya (Director Ibaraki) of the Ibaraki Museum, Dr. John Harris and Gary Takeuchi of the Page Museum.*

On 11th March 2012, forty scientists from the US and China visited the Page Museum for a behind-the-scenes tour. They were part of a three day National Science Foundation (NSF) workshop on *Critical Transitions in the History of Life* hosted at the Natural History Museum that brought together US and Chinese scientists in paleontology and related geosciences to exchange ideas and data, and to explore the potential for future collaborative studies on the major

transitions in history of life.

Shelley Cox gave

tours of the Fishbowl Lab and Aisling Farrell and Gary Takeuchi gave tours of the collections, Hancock Park, and the excavations.



*Group photograph of NSF workshop participants outside the Page Museum.*

## Mineral Sciences

In March, Mineral Sciences staff led the first ever field trip to Morocco. So many people signed up that it was split into two separate groups. The first group was led by Tony Kampf and the second by Eloïse Gaillou. Morocco is an amazing place for mineral and geology enthusiasts. The High Atlas, Mid Atlas and Anti Atlas mountains are thick sequences of Paleozoic ocean sediments and Precambrian volcanic rocks, folded and uplifted by



*Collecting vanadinite at Mibladen, with High Atlas Mountains in the background.*

continental collisions. Both groups visited two of the world's richest ore deposits: Imiter silver mine and Bou Azzar cobalt mine. Everyone found amazing fossils and many rare and beautiful mineral specimens.



*Looking out over the Draa River Valley.*

*Camels at sunset in the dunes of Merzouga. Group 2, at right, got hit by an unexpected sandstorm.*



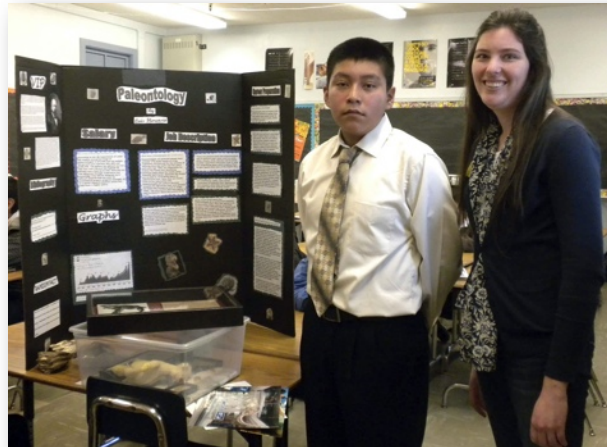
## **Polychaetes**

Sea worms were prominently featured at two events in recent months. The first was for *Wild Locals*, February 26th. Collection Manager Leslie Harris highlighted some of the collection's choicest invertebrate specimens along with a slide show of the worms and other animals that can be found in any southern California marine habitat. Walter Marti, an award-winning underwater videographer, generously contributed a video capturing the vibrant sea life under the Newport pier. In March, Curator Kirk Fitzhugh and Leslie combined forces for a *Curator's Cupboard* on Sea Worms on March 17th. Leslie set up in the foyer to capture the attention of patrons walking through with her images of live polychaetes. Many of these people then went on to attend one of Kirk's more detailed tours and lectures in the Polychaete Collection room. Nearly all of Kirk's 5 tours were fully

booked, as were his three Junior Scientist presentations, and they were thoroughly appreciated by all participants. In-house, Leslie presented two lectures on *Invert 101* to the NHMLAC Seamobile instructors as part of the joint MBC-Outreach Department Marine Science training sessions.

## Vertebrate Paleontology

Vanessa Rhue (right, at right) and Samuel McLeod were invited by middle school student Luis Floren시오 (on left) to assist with his presentation on paleontology as his chosen career during the Career Day Fair at Nimitz Middle School in Huntington Park. Luis desires to be a paleontologist when he grows up because he wants to dig up and examine fossils. Other participating students were able to handle fossil specimens of sharks, fishes, and mammals that we brought from the Museum's collections.



A budding paleontologist holds up the lower jaw of the late Miocene bird, *Osteodontornis orri*, for his classmates to see.

On 28 January, Vanessa Rhue gave tours of the Vertebrate Paleontology collections and laboratory to 47 middle school students from Jack H. Skirball Middle School in Watts. Karen Nakashima, an art teacher at the school, organized the field trip for her students who demonstrated academic excellence and participation in the [NHM Spider Survey](#). Significant vertebrate fossils that have been illustrated from our collections were on display for the class. Students put on field vests, chose fossils from the table that were of interest to them, then described them to their classmates. Vanessa Rhue fielded discussions about how we render popular artwork and scientific illustrations of fossils when the materials are often incomplete. The students were prompted to ask critical questions about how we use art and other media to communicate ideas to the general public about scientific concepts. Fossil specimens of the great white shark, *Carcharocles megalodon*, the early walking whale, *Pakicetus attockii*, and the curious looking walrus-like-whale, *Odobenocetops*, were just some of the species the students examined and compared to the artwork.

Samuel McLeod (right, at right) returned to Nimitz Middle School on 3 February 2012 to give a presentation to students involved in the Advancement Via Individual Determination (A.V.I.D.) program. Sam explained to the students how to become a paleontologist, and encouraged them to excel in their studies. He also brought fossils from the Vertebrate Paleontology collections for students to handle.



# Student Mentoring and Research

## History

The Seaver Center provided an internship to Katie Skull (right), a graduate student of the School of Information Studies at the University of Wisconsin-Milwaukee, from March 19th-23rd. The brief visit by Katie was arranged by her school's Archives Alternative Spring Break program.



## Vertebrate Paleontology



Jorge Velez-Juarbe (left), Ph.D. candidate at Howard University in Washington, D.C., visited the Museum for six days in March to study fossil sea cows.

At the conclusion of his visit, on 28 March, Jorge gave a Research & Collections noon seminar about *Community structure in sirenian faunas*.



Gabriel Santos (above center), a student volunteer at California State University at Fullerton's John Cooper Center for Paleontology and Archeology, visited the Department on 27 March to observe pivotal fossil marine mammals from Orange County.

Ph. D. student Fernando Salinas-Marquez (top right), of the Universidad Autonoma de Baja California, Ensenada, visited the Museum from 16 to 22 April to study kentriodontid dolphins for his dissertation, which will include a phylogenetic analysis of these stem delphinoids. Lawrence Barnes is co-director of his thesis project.

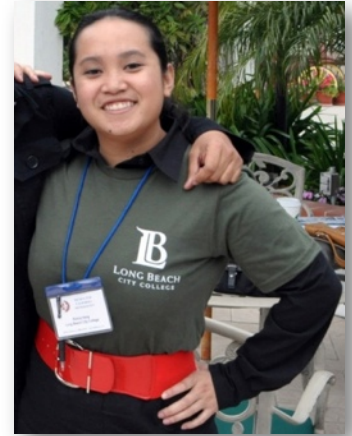
Masters student Iyari Espinosa-Rodriguez (right), of the Universidad Autonoma de Baja California, Ensenada, visited the Museum from 16 to 22 April to study mysticetes with Lawrence Barnes as part of her thesis work describing the taxonomy and taphonomy of a middle Miocene baleen whale bonebed from the Rosarito Beach Formation near La Mision, north of Ensenada, Baja California. The fossils were obtained with support from a National Geographic Society grant.



# Volunteers and Research Associates

## Anthropology

Please welcome Rosny (Rose) Hang, who joined the Anthropology department as a volunteer on April 19, 2012. Rose is a student at Long Beach City College where she majors in Anthropology with a focus in Archaeology. Next year, she expects to transfer to Cal State Dominguez Hills to complete a degree in Anthropology. Rose was recently elected ASB president for Long Beach City College after previously serving as secretary of the Student Senate and Student Senate Representative for the Archaeology Club. She also works with the Long Beach City College's Viking volunteer group. Our department is grateful that she still finds time to offer her assistance to several ongoing projects that improve the storage and access to our collections.



We are also proud to announce that Anthropology volunteer Hilo Sugita has been accepted into UCLA for a B.A. in Anthropology. She plans to continue volunteering for our department when she begins her studies at UCLA this fall.

Lastly, we are thrilled to announce that Jennifer Saracino, our former Curatorial Assistant for the Visible Vault project, will complete her M.A. in Art History this May and has been accepted into the joint Ph.D. program in Art History and Latin American Studies at Tulane University. The offer includes tuition and a living stipend for three years.



## Research Library

The Research Library was fortunate to have 15 professional librarians and graduate student members of the Special Libraries Association Southern California Chapter spend a "service day" on Saturday, April 7th to help organize hundreds of books. Some still have their blue protective gloves on after a highly productive day.

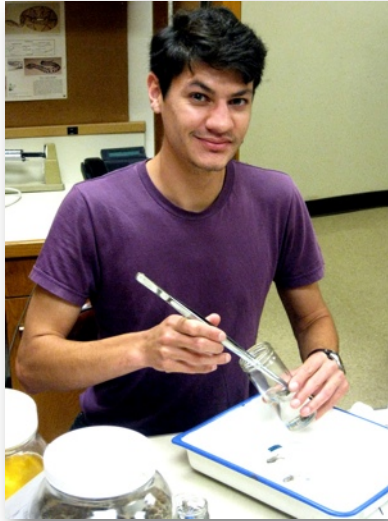


## Conservation

The Conservation Section welcomes volunteer intern Ayesha Fuentes (at right), a first year graduate student in the UCLA / Getty Conservation Training Program. Ayesha is working with Tania Collas on Los Angeles exhibit preparations and will be focusing on a set of marine invertebrate fossils from Dead Man's Island, which was dredged to create the Port of Los Angeles.

## Herpetology

The herpetology volunteer group continues to grow, which has been crucial for helping process the many new acquisitions (approximately 2,500 specimens since January 15). Some of the regulars include Pasadena Community College students Tanja Wolfmeyer (right) and Sam Scoma (now at UCLA) who originally came to the section to study morphological variation in the Western Fence lizard, *Sceloporus occidentalis*. Tanja has been especially active in the section, helping with the accessioning of the large, recently acquired UC Irvine collection and helping with outreach at a Curator's Cupboard and the Malibu Creek lizard walk.



Another active volunteer is Steven Jay Harris (right), who is currently attending Fullerton College. Steven began volunteering at the museum in the Fall of 2011 after attending RAAD. He has a wide range of interests in biology, which has led him to volunteer in multiple sections of the museum including Vertebrate Paleontology, Ichthyology, and now Herpetology. He has been helping with the accessioning of various newly acquired collections and updating entries in the Section database.

## Vertebrate Paleontology

The Vertebrate Paleontology staff greatly appreciates the assistance of Makena Crowe. Makena is a sophomore at USC, with a double major in Environmental Science and Archaeology. She began volunteering for us in January 2012, and has assisted each week with collection projects. Much of her work has been in helping us to process the return of a very large loan, consisting of over 5,000 vertebrate fossil specimens from the Maricopa Brea deposit in Kern County. Makena has cheerfully unpacked, checked in, organized, and arranged thousands of these specimens in museum cabinets.



*Makena Crowe shows off a skull of a dire wolf, *Canis dirus*, from the Maricopa Brea deposit.*

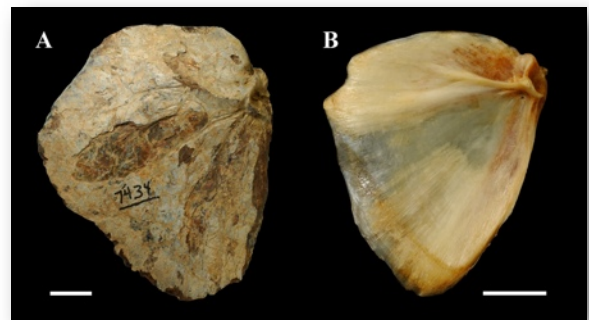
# Distinguished Visitors

## Ichthyology

Riley Buehler from the Department of Anthropology at San Diego State University visited Ichthyology in March to re-examine some skeletons.

Dr. John Lundberg from the Academy of Natural Sciences of Drexel University in Philadelphia visited Ichthyology to look at silurid catfish skeletons on March 13th.

Dr. Ning Wang, from the Institute of Vertebrate Paleontology and Paleoanthropology, Chinese Academy of Sciences, in Beijing, visited, along with Dr. Xiaoming Wang, to examine a variety of fish skeletons from the Eastern Pacific. He compared them to a fossil from California (right). *A* is the Pliocene fossil fish opercle unearthed from the Central Valley, California. *B* is from a recent *Lobotes pacificus* collected from the Pacific coastline in Costa Rica. (Scale bars equal 10 mm for both *A* and *B*).



At the end of March Vikram Baliga (left), a PhD Student in the Department of Ecology & Evolutionary Biology at the University of California, Santa Cruz, visited Ichthyology to examine (and borrow) a variety of ontogenetic series of labrid fishes for his dissertation. He is interested in the morphological diversity of cleaner fishes.

### Marine Biodiversity Center

Dave Elvin, co-author of *The Sponges of California: a guide and key to the marine sponges of California*, visited the MBC Collections during the first week of April. He examined and identified sponges from Oregon in preparation for an upcoming publication of a guide and key to Oregon marine sponges.

### Malacology

In early March Ángel Valdés, Jan Vandetti, and Dieta Hanson (Cal. Poly. Pomona) used the SEM facilities and examined nudibranchs in the Malacology collection. As part of his ongoing research on chitons, Mike Vendrasco (CSU Fullerton) visited the Malacology collection. PhD candidate Marina Güller (Universidad de Buenos Aires, Buenos Aires, Argentina) spent two days in the Malacology collection examining holdings of Magellanic bivalves and gastropods.

*Malacology visitor Marina Güller examining Siphonaria gastropods.*



Gene Coan and Paul Valentich-Scott (Santa Barbara Museum of Natural History) recently completed a major set of volumes on the bivalves of the Panamic Province, which includes figures of numerous Malacology specimens. Gene and Paul have also begun work on their next task, the bivalves of the Peruvian Province, and examined the Malacology holdings.

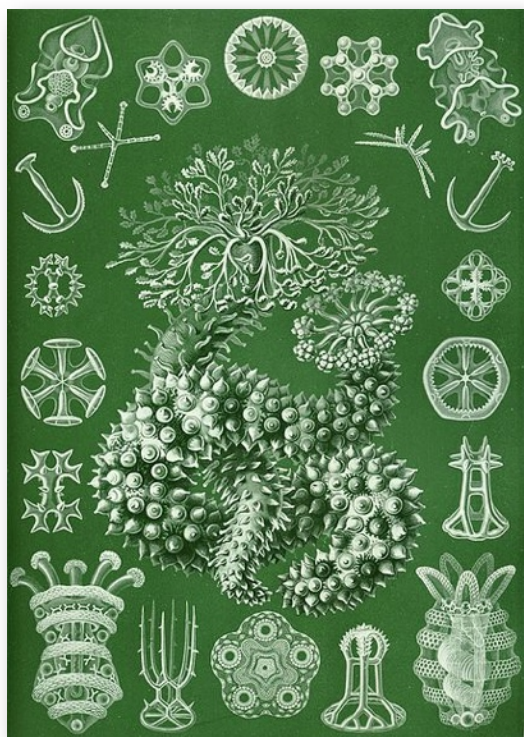
*Gene Coan and Paul Valentich-Scott examining Peruvian bivalves.*



Richard Squires (CSUN) visited Malacology to compare fossil specimens with Recent specimens and confer with Jim McLean on molluscan systematics. As part of their senior research, Salvador Recinos and Doniyal Dar (Pasadena City College, Geology) visited Malacology twice to measure specimens of the gastropods *Turritella cooperi* and *T. cingulata* for comparison to late Pleistocene specimens to determine whether global climate change has affected their growth. USC Geoscience Post-doc Marie-Laure Bagard and research supervisor Frank Corsetti borrowed various bivalve specimens for destructive analysis for lithium isotopic ratios as proxies for chemical weathering processes and whether marine carbonates preserve a complete record of these isotopic ratios.

## Echinoderms

Phil Lambert, Curator Emeritus at the Royal British Columbia Museum in Victoria, Canada, worked in the Museum's echinoderm collections in April 2012. Phil spent two weeks studying Holothuroidea (sea cucumbers are his specialty) that were collected during the 1970s oceanographic surveys on the Alaskan Outer Continental Shelf and in the Western Beaufort Sea. A major challenge in climate-related studies of the poorly sampled Arctic Region is establishing historical baselines against which science can assess biological responses to environmental change.



environmental change.

Through painstaking examination of more than 100 sam-

ples of small and damaged specimens, Phil identified species of tiny sea cukes such as *Myriotrochus rinkii*, a worm-shaped animal with tiny, remarkable bones that are shaped like spoked wheels. Oceanographers will use the new information that Phil provided to help gauge the diversity and density of bottom dwelling arctic animals prior to rampant global warming. This is the first installment of a two-part project that the museum is conducting in collaboration with Dr. Bodil Bluhm at the University of Alaska, with funding from the National Polar Research Board. This coming year, the museum's Curator of Echinoderms, Gordon Hendler, will tackle the identification of Ophiuroidea (brittle stars) from the same cruises.

*Images of adult and larval sea cucumbers, and their ossicles (microscopic bones) [from Haeckel, Ernst — Kunstformen der Natur (1899–1904)]. The wheel of Myriotrochus rinkii is at the top center.*



*Phil Lambert (seated) and Gordon Hendler seriously debating some fine points of sea cucumber identification.*

## Herpetology

William Farr from the Houston Zoo visited March 19–22 to examine all of our holdings from Tamaulipas, Mexico for his upcoming book on the reptiles and amphibians of the state. William uncovered multiple locality records and assisted us in correcting identifications and updating the taxonomy of several specimens.

## Rancho La Brea

Faculty from Northern Illinois University, Dr. Virginia Naples and Dr. Chris Hubbard, along with Master's student Lindsey Koper and undergraduate Kelly Ostrum, visited the Page Museum collections for one week in March. Dr. Naples is working on the limb anatomy of the two most common felids from RLB, *Smilodon fatalis* and *Panthera atrox*. During her visit she also gave two lectures and had a book signing for her co-authored book *The Other Saber-tooths: Scimitar-tooth cats of the western hemisphere*. Dr. Hubbard is working on a project to determine arboreal versus terrestrial pelvic shape differences in extant and fossil felids. He is using the collections of *Smilodon fatalis*, *Panthera atrox*, *Lynx rufus* and *Puma concolor* at the Page Museum as part of his research. Digitized coordinates are subjected to Generalized Procrustes Analysis (GPA) and principal component analysis (PCA) to determine shape differences. Ms. Koper was examining wolf material and writing up her Master's dissertation.



Dr. Naples and Ms. Koper discussing carnivore limb anatomy in the Page Museum collections.



David Ramey (left) and Eric Scott examining radiographs of horse jaws in the Page Museum collection.

Eric Scott from San Bernardino County Museum and equine veterinarian David Ramey visited the Page Museum's horse collections in April. During their visit they produced digital radiographs of maxillae and mandibles with teeth of adult and sub-adults, in order to determine the ontogenetic age structure of fully adult animals. By examining the radiographs of these specimens at a 1:1 ratio, they can assess the actual height of the adult molars in the alveoli, something that cannot be accomplished by visual examination alone. Combining these data with tooth heights taken directly from isolated molars in the collection, they can apply published tooth wear curves tracking ontogenetic ages in present-day horses.



In March, Dr. Jinyi Liu and Dr. Haowen Tong from the IVPP in Beijing (who were also part of the Critical Transitions in the History of Life workshop at the Museum) visited the collections at the Page Museum. Dr. Liu photographed and took notes on *Smilodon fatalis* skulls and Dr. Tong was interested in the mammoth collections.

Left: Visiting researcher Dr. Tong talking with lab supervisor Shelley Cox about mammoths.

Right: Visiting researcher Dr. Liu working with the *Smilodon* collection.



In late April, Dr. Francois Therrien from the Royal Tyrell Museum visited the Page Museum. His primary interest is in the feeding behavior of extinct carnivores. He examined the skulls and lower jaws of some of the Rancho La Brea carnivores (*Smilodon fatalis*, *Panthera atrox*, *Arctodus simus*, *Canis dirus*, *Canis lupus*, and *Canis latrans*). His initial measurements will be used to create biomechanical models to help answer some of these questions.

## Vertebrate Paleontology

On 2 January, Dr. Don Lofgren, of the Claremont Webb School visited to study early Tertiary mammals.

Bobby Boessenecker (rightmost at right), a Ph.D. student at the University of Otago, New Zealand, and Morgan Churchill (leftmost at right), a graduate student at the University of Wyoming, visited our collections from 4-6 January to study fossil pinnipeds with Lawrence Barnes.



Susumu Tomiya (left), a graduate student at the University of California at Berkeley, visited our Department from 9 to 13 January to study our collections of Early Eocene land mammals from southern California.

Dr. Bruce J. Welton visited on 17 January to study fossil sharks.

From 9 to 13 March several participants in the NSF workshop took the opportunity to examine collections at the Main Museum and at the Page Museum. Using the collections were Ning Wang, Haowen Tong, Jinyi Liu, Jing Lu, and Tuo Qiao from the Institute of Vertebrate Paleontology and Paleoanthropology, Chinese Academy of Sciences, and Lawrence Flynn from Harvard University.

Dr. Daryl Domning (at right, leftmost), Professor of Anatomy at Howard University in

Washington, D.C., spent several days at the Museum during March studying with Lawrence Barnes our fossil sea cows from Sharktooth Hill and desmostylians.

From 12 to 15 March, Dr. Oscar Carranza, from the Universidad Nacional Autonoma de Mexico, Mexico City, visited to study fossil Cenozoic mammals.



Meredith Rivin (left), Assistant Curator of Paleontology at California State University Fullerton's John Cooper Center for Paleontology and Archeology in Santa Ana, visited the Museum on 20 April to continue her research on archaic baleen whales. This work was begun for her Masters Thesis under Lawrence Barnes' supervision.



On 27 April, Dr. Lee Spencer (at right), Research Professor at the Southern Adventist University in Tennessee, visited to study early horses of Eocene age from Baja California and Wyoming.



# Recent Publications

- Deng, T., **Q. Li**, **Z.J. Tseng**, **G.T. Takeuchi**, Y. Wang, G. Xie, S. Wang, S. Hou, and **X. Wang**. 2012. Locomotive implication of a Pliocene three-toed horse skeleton from Tibet and its paleo-altimetry significance. *Proceedings of the National Academy of Sciences*. doi:10.1073/pnas.1201052109
- Garcia-Garza, M.E., **Harris, L.H.**, Leon-Gonzalez, J.A. 2012. Redescription of *Notomastus hemipodus* Hartman, 1945 and *N. tenuis* Moore, 1909 (Polychaeta: Capitellidae). *Proceedings of the Biological Society of Washington* 125(1): 1-11.  
*Polychaetes in the genus Notomastus are often numerically dominant in coastal soft sediments and ecologically important but species identification is difficult. These two species have been confused with each other for at least 50 years and resolving who was who was a necessary first step towards the description of an estimated 10 new species along this coast.*
- Garrett, K. L.** 2012. Review of Handbook of the Birds of the World, v. 19: Tanagers to New World Blackbirds by J. del Hoyo, A. Elliott and D. A. Christie, eds. *Science* 335:1304-1305.
- Groves, L.T.**, Filkorn, H.F., and Alderson, J.M. 2012. A new species of Late Cretaceous (Campanian) cypraeid gastropod, Santa Ana Mountains, southern California and new records of California Cretaceous cypraeids. *Bulletin of the Southern California Academy of Sciences* 110(3):177-183, figs, 1-4.  
*Bernaya (Protocypraea) louellasaulae is the first cypraeid gastropod described from the Williams Formation.*
- Kampf, A. R.**, Mills, S. J., Housley, R. M., Bottrill, R. S., and Kolitsch, U. (2012) Reynoldsite, a new mineral from the Blue Bell claims, California and the Red Lead mine, Tasmania. *Abstracts of Proceedings: the 2012 Desert Symposium*, California State University Desert Studies Consortium.
- Kampf, A. R.**, Mills, S. J., Simmons, W. B., Nizamoff, J. W., and Whitmore, R. W. (2012) Falsterite,  $\text{Ca}_2\text{MgMn}^{2+}_2\text{Fe}^{2+}_2\text{Fe}^{3+}_2\text{Zn}_4(\text{PO}_4)_8(\text{OH})_4(\text{H}_2\text{O})_{14}$ , a new secondary phosphate mineral from the Palermo No. 1 pegmatite, North Groton, New Hampshire. *American Mineralogist* 97, 496-502.
- Mills, S. J., Birch, W. D. and **Kampf, A. R.** (2012) The crystal structure of metanatroautunite,  $\text{Na}[(\text{UO}_2)(\text{PO}_4)](\text{H}_2\text{O})_3$ , from the Lake Boga Granite, Victoria, Australia. *American Mineralogist* 97, 735-738.
- Muhs, D.R., Simmons, K.R., Schumann, R.R., **Groves, L.T.**, Mitrovica, J.X., & Laurel, D. 2012. Sea-level history during the last interglacial complex on San Nicolas Island, California: Implications for glacial isostatic adjustment processes, paleozoogeography and tectonics. *Quaternary Science Reviews* 37:1-25, figs. 1-14.  
*Analysis of invertebrate fossils from three late Pleistocene terraces indicate water temperature differences during the late Quaternary.*
- Pauly, G. B.** 2012. New County Records for the Rolling Plains of North Texas. *Herpetological Review* 43:115.
- Radashevsky, V.I., Chapman, J.C., **Harris, L.H.**, Therriault, T. 2012. 2011 PICES Rapid Assessment Survey. *PICES Press* 20(1): 26-29.  
*A short account of a collaborative field survey in Vostok Bay, Russia. Researchers from the US, Russia, China, Japan, Canada, and Korea came together to estimate the number of invasive species and their potential for future impact on the local ecosystem. Many of the polychaete species found during the survey were new records for the area, and some native species turned out to be identical with unknown worms recently found for the first time in southern California harbors.*
- Wang, Y., T. Deng, L. Flynn, **X. Wang**, A. Yin, Y. Xu, W. Parker, E. Lochner, C. Zhang, and D. Biasatti. 2012. Late Neogene environmental changes in the central Himalaya related to tectonic uplift and orbital forcing. *Journal of Asian Earth Sciences* 44:62-67.

# Staff Departures and New Staff

## Rancho La Brea

The Rancho La Brea Department welcomes Anna Holden as our new curatorial assistant. Anna previously worked for the Page Education Department where she assisted with school and docent programming. Anna will be working part time for us on our fossil insect collection and particularly on the Project 23 insect material. She will also be working part time for the Entomology Department at the Natural History Museum.

*Curatorial Assistant Anna Holden is working on the fossil insects from Project 23.*



## Miscellaneous

### History: Being Contemporary Through the Past



The early film pioneers began with silent movies and here we are in 2012 with the Academy Award® for Best Picture (among several other Oscar Awards®) going to *The Artist*... a silent film! In addition, the contemporary movie *Hugo* whisked away several Oscars with its story about the early film pioneer, George Méliès. It is wonderful that film history is staying alive through movies... and the Museum! The William S. Hart Museum and History Department have collaborated to exhibit objects relevant to both films. This special exhibit will be held until June 3, 2012.

Visit the Hart Museum's Ranch House to see a variety of movie props used in *The Artist* courtesy of film prop house, History for Hire. Appropriately exhibited in the "Motion Pictures" Room, props include some used by 2012 Academy Best Actor Winner, Jean Dujardin, while portraying George Valentin. Of all the props seen on display, pay careful attention to the makeup table. Look close enough to the mirror and you will see the "Thank you" that "Peppy" wrote to "George" in the film.

Up the hill to the Hart Mansion is a display on early film-makers and pre-cinema devices some of which were referenced in *Hugo*. All items on display are from NHM collections, including the Lumière Cinématographe. Also on display are props and costume pieces associated with film stars who were highlighted in the film. Come see a jeweled dagger from *The Thief of Bagdad*, Buster Keaton's porkpie hat, and Harold Lloyd's glasses. Notably on display is a letter from George Méliès to a former NHM curator stating how he felt his talents had been ignored and forgotten. Well, Méliès, you have not been forgotten.

## Invertebrate Paleontology



After sustaining substantial damage from rains last fall, the South Grand Invertebrate Paleontology collections facility is back in action again. We have new walls, paint, carpet and ceilings, and plumbing and electrical repairs have been completed to update the facility. Fortunately the collections were never threatened.

## Rancho La Brea

On April 12th John Harris and Gary Takeuchi oversaw some ground-penetrating radar experiments undertaken by technicians from GeoVision in connection with the MTA Red Line Extension project. MTA plans to have a station located next to LACMA and anticipates that, as with LACMA's underground parking structure, at least some asphaltic fossils will be encountered during construction. Ground penetrating radar has been used elsewhere for finding archaeological and paleontological remains and it was hoped that this technology might be able to detect subsurface fossil deposits in the projected station site. Tests undertaken in Pit 91 and Project 23's Box 1 seem to suggest that GPR will detect subsurface asphalt deposits and may be useful for detecting fossils that are not associated with asphalt deposits.



*Staff from GeoVision using GPR in Pit 91.*

The BBC filmed behind-the-scenes at the Page Museum on four days during the end of March for an upcoming three part documentary called *The Ice Age*. Presenter Dr. Alice Roberts interviewed and interacted with staff and volunteers in the collections areas, the Fishbowl Lab, and at the Project 23 excavations. In the Fishbowl Lab, Shelley Cox discussed the ongoing preparation of the skull of our Columbian mammoth, Zed and Trevor Valle showed how Zed's left tusk is being prepared. Chief Curator John Harris was interviewed about the history of the Rancho La Brea and its collections. Former Collections Manager now research Associate, Christopher Shaw



was interviewed about saber-toothed cats and UCLA paleontologist Dr. Blaire Van Valkenburgh discussed the carnivores found at Rancho La Brea. Laura Tewksbury was interviewed in Box 1 of Project 23 about the challenges of excavating at the Tar Pits. With CGI animals, interesting conversations, and great footage this promises to be an exciting show. Watch out for its release in spring 2013!

*Dr. Alice Roberts interviews Shelley Cox in the Fishbowl Lab for an upcoming BBC documentary about the Ice Age.*

On March 20th the USC Dornsife Commons held an event at the Page Museum entitled *Oil and Fossils in Old (Very Old) Los Angeles: A Visit to the La Brea Tar Pits* for 28 members of the USC community and the Trojan Family. Aisling Farrell, Gary Takeuchi, and Shelley Cox led a behind-the-scenes tour of our Fishbowl Lab, collections and Project 23 excavations. As part of the event, Chief Curator Dr. John Harris gave a lecture on some of our recent discoveries from Project 23.

*Lab Supervisor Shelley Cox gave a tour to the USC Commons group of the Fishbowl Lab.*



## Mineral Sciences



The largest known California gold nugget, the 156 oz. Mojave Nugget, is now on display at the Bowers Museum in Santa Ana as part of the special exhibition called *California Gold*. This exhibition will run through September of 2012.

*Liz Homberger and Eloïse Gaillou supervise the installation of the Mojave Nugget at the Bowers Museum.*

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:* N. Dean Pentcheff, Research Associate.

*Photo Editing:* Phyllis Sun, Marine Biodiversity Center.

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

