

# Research & Collections Newsletter



November 2009

**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.

## Research & Collections Welcomes Dr. John A. Long



In September, R & C staff welcomed Dr. John A. Long as the new Vice President of Research & Collections. Dr. Long, a world renowned paleontologist who specializes in ancient vertebrates, comes to us from the Museum Victoria in Melbourne, Australia, where he served as Head of Sciences for the past five years. Winner of the Eureka Prize for the Public Promotion of Science, the Riversleigh Society Medal for promoting understanding of Australia's prehistoric past, and the Australasian Science Prize for outstanding scientific research, Dr. Long is the author of more than 200 scientific papers and popular articles and some 28 books, including several aimed at conveying the excitement of scientific discovery to children.

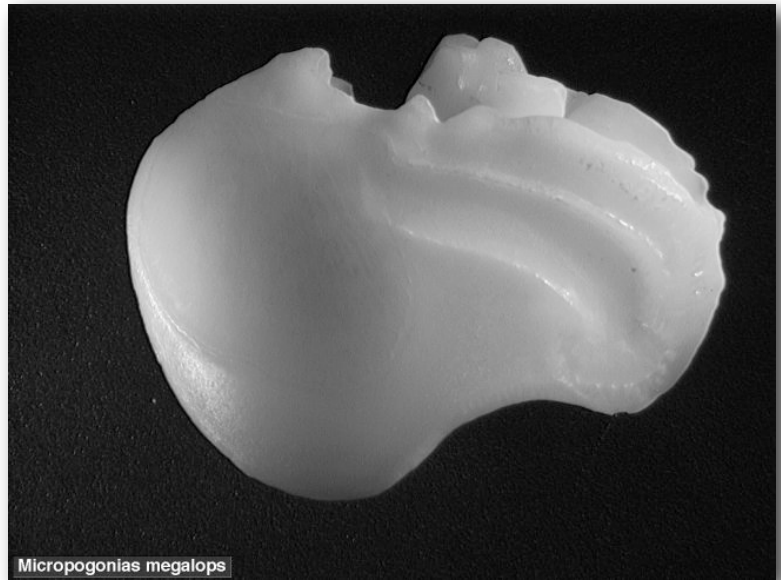
Dr. Long's area of research specialty is the early evolutionary history of vertebrates, and he is internationally recognized as an authority on ancient fishes and their bearing on trends in vertebrate evolution. With collecting experience in Antarctica, Africa, Asia, North America, and Europe, he is a strong advocate for field work and the role that collections, and collecting, continue to play in natural history museums.

John brings with him a vast experience, a well-deserved international reputation, and a commitment to restoring the role of world-class science as the Natural History Museum's primary objective. All of us are optimistic about the museum's shifting focus back toward the internationally acclaimed collections and research programs on which the Museum's reputation has always been based.

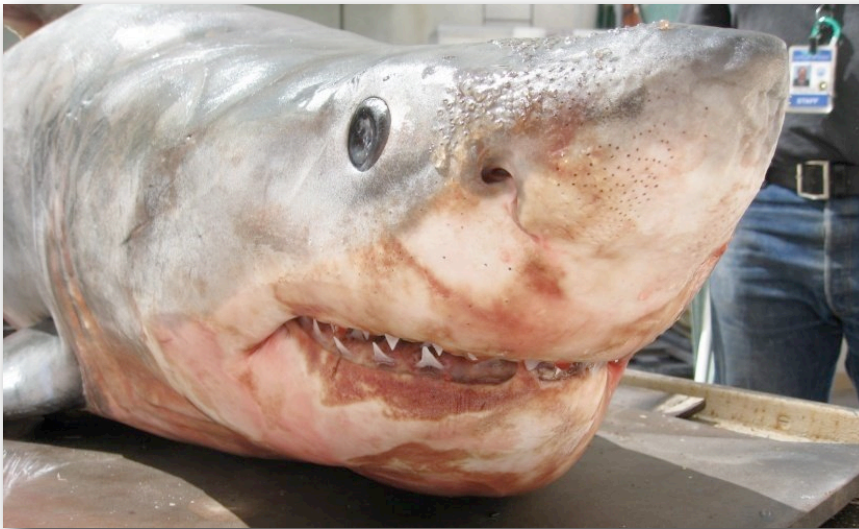
# Collection News

## Fishes

Mark Lowry, from the Southwest Fisheries Science Center in La Jolla, visited Ichthyology in September for three days to use our John Fitch Otolith Collection to identify fish remains in the stomach contents of marine mammals. Dr. Dirk Nolf, from the Department of Paleontology at the Royal Institute of Natural Sciences of Belgium, also visited and used the otolith collection for a week in October. He gave us 101 lots of otoliths from the southwestern Pacific as part of an open exchange for 152 lots of selected duplicates.



Croaker fish otolith (ear stone) LACM 45555-3 from the Gulf of California, Mexico.

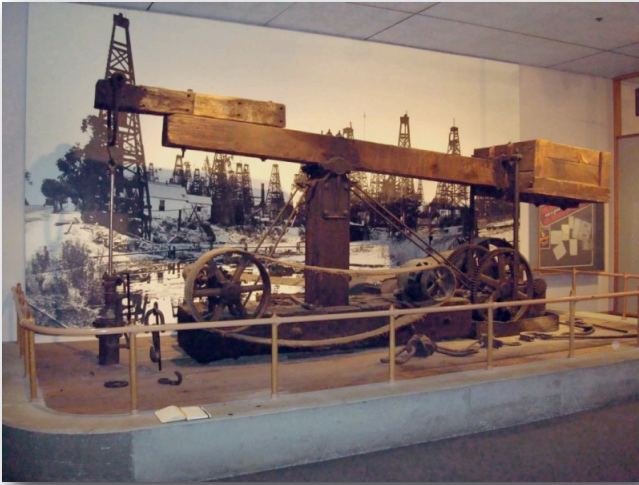


White shark (*Carcharodon carcharias*, LACM 56960-1).

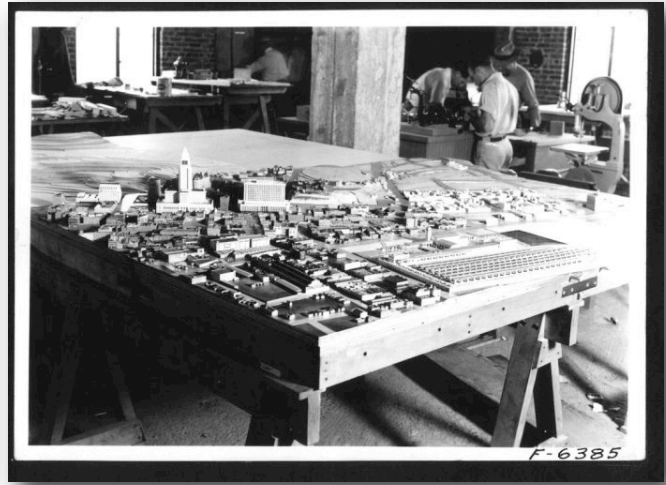
In September, Ichthyology staff defrosted and dissected a seven foot white shark caught in a commercial gill net off Oceanside in June. Measurements were made and added to our extensive shark database. Tissues were taken for our frozen tissue collection and to test for toxins. A vertebra was removed to age the shark (by counting growth rings). A flipper from a juvenile harbor seal and several seabass skeletons were found in its stomach.

## Conservation

As you may have noticed, a section of Lando Hall was recently partitioned off to create a new visible conservation workspace. Conservators will use this space to work on some of the larger objects scheduled for inclusion in the new Under the Sun exhibit, opening in 2012. Because these objects are too large or too difficult to move to the normal conservation labs, the conservators will examine and treat them in situ. Windows in the partition will allow visitors to see the conservators at work and interpretive signs will be used to explain what is happening. Objects that will be examined and treated in this space include the Los Angeles City Model, the



The conservation treatment of the oil pump will continue in the newly created workspace in Lando Hall.



The Los Angeles City Model on display in Lando Hall was created as a WPA project, shown here during fabrication, ca. 1939.



Disney animation table, and the oil pump. Other large Under the Sun objects in need of condition assessment and treatment will also be moved into the space in the near future.

Liz Homberger recently completed a detailed condition assessment of the *Velociraptor* model from the 1993 film *Jurassic Park*. This larger-than-life-size model is slated to appear in the new exhibit *Dinosaur Mysteries*. In collaboration with scientists from the Getty Conservation Institute, Liz will be carrying out technical analyses to identify the specific polymers from which the model was made; this research will inform the treatment she will perform on the model to prepare it for exhibit.

In addition to ongoing work on other Museum Project exhibits, Tania Collas and Liz Homberger have been coordinating with Vertebrate Paleontology staff to plan the condition assessment of specimens for the *Age of Mammals* exhibit.

## Mineral Sciences

### *California Jade Boulder*

California nephrite jade is not particularly fine as gem materials go, but it can be quite beautiful in its natural state. Large water-worn boulders from Jade Cove along Big Sur are particularly well-known and sought-after. The Museum has had one on display almost continuously since 1969, but it has only been on loan. In September, the family of the late Henrik Vonk donated a spectacular 500-pound boulder from a lesser



known California locality. It is one of several recovered by Henrik and his family from the Eel River near Willits in Trinity County. The specimen was placed immediately on display in the Hall of Gems and Minerals where its natural polish is getting better all the time thanks to the caress of hundreds of tiny hands.

### Cat's-Eye Tourmalines

You'll see a dozen beautiful new cat's-eyes staring back at you in the Hall of Gems and Minerals. They're in the case immediately to your right as you enter the Gem Vault. The gems are elbaite tourmaline (named for the Isle of Elba) and this small collection boasts quite a nice array of colors, including blue, green, red and orange. All of the stones come from Brazil. The collection was donated to the Museum in October by Michael Kazanjian of Kazanjian Brothers jewelers in Beverly Hills. This is the company that owns the red diamond that we have had (and still have) on display, also in the Gem Vault.



### The Los Angeles Meteorite

About thirty years ago, Bob Verish picked up two "peculiar volcanic rocks" somewhere in the Mojave Desert. He then threw them into his box of rocks "to be identified later." In 1999, while cleaning out his collection in his backyard in Sunland, he "rediscovered" the two rocks and suspected they were meteorites. His suspicions were confirmed by scientists at UCLA's Institute of Geophysics & Planetary Physics who classified them as shergottite, a very rare meteorite type of Martian origin. The two pieces, named Los Angeles 001 and 002, have now been sliced up and sold to scientists and collectors around the world, but prior to being sliced up, the smaller of the two

pieces (002), weighing 234 grams, was displayed for several years in the Hall of Gems and Minerals courtesy of Mr. Verish. In fact, a replica of this meteorite is still an important highlight of our meteorite display. In October, with funding provided by the Museum's Gem & Mineral Council, the finest slice of Los Angeles 002 was purchased from Mr. Verish. It will soon go on display in the gallery next to the replica of the entire mass.



*Allodesmus gracilis* (fossil pinniped) newly-mounted skeleton.

*Aulophyseter morricei* (extinct sperm whale) newly-mounted skeleton.



Adult fossil sea cow, *Dusisiren jordani*, newly-mounted skeleton.



Juvenile sea cow, *Dusisiren jordani*, newly-mounted skeleton.

## Vertebrate Paleontology

During September, Research Casting International (RCI), of Toronto, delivered and assembled our new marine mammal skeletal mounts for the upcoming Age of Mammals Exhibit Hall. These include an adult and juvenile of the sea cow, *Dusisiren jordani*, from De Laveaga Park in Santa Cruz County, and a pinniped, *Allodesmus gracilis*, and sperm whale, *Aulophyseter morricei*, both from the middle Miocene Sharktooth Hill Bonebed in Kern County. RCI also delivered our custom-mounted skeleton of the very early fresh water-dwelling “walking whale” from Pakistan, *Pakicetus attocki*, for the same hall.

Daniel Gabai, Debora Lee, and Vanessa Rhue have been making photographs of all specimens that are being used in this hall. Dan has also been making

images that will be used in the video programs that will accompany the various exhibits. Jackie Windus has been extensively involved in workshops with curatorial staff and our new consultants for the hall planning. Kathy Gonzalez has been finessing our previously-mounted mammal skeletons. Gary Takeuchi, Michael Williams, Talin Nazarian, and Debora Lee have been busy making molds and casts to be used in the hall.

During October, Randy Cooper and associates have been custom-designing wire mesh artwork that will partly enclose skeletons, and this is a method of indicating possible body shapes of these extinct marine mammals in our hall. Gary Takeuchi, Vanessa Rhue, and Howell Thomas have been assembling, adjusting, and re-adjusting our skeletons for this purpose.

## Invertebrate Paleontology

Three large slabs of fossiliferous rock were transported by Matt Construction from the old patio area outside the Discovery Center and café to the Spider Pavilion grounds. The slabs were quarried in the late 1960's during the excavation of the foundation of the ARCO Towers at 6th and Flower streets in downtown Los Angeles. They are from the Fernando

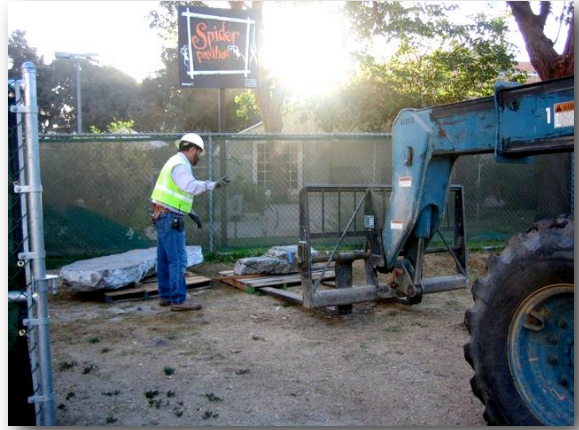


The largest boulder on its specially constructed base near the entrance to the Spider Pavilion.

Formation, which contains fossils of shallow marine mollusks and other animals of late Pliocene age (about 5 million

years old). About 500 tons of this quarried rock were sent to Italy to be cut into table tops, book ends, paper weights, etc., that were sold in the Museum's gift shop in the early 1970's. The fossil locality is inaccessible now, so the rock slabs represent irreplaceable evidence of the geologic history of Los Angeles.

Smaller specimens from the Fernando Formation are safely housed in the Invertebrate Paleontology collections.



Transporting the slabs of the fossiliferous Fernando Formation using Matt Construction's fork lifts.

## Birds and Mammals

### Bird and Mammal Collections Welcome Beetle Battlers!



Jake Cannon, a work study student from USC, prepares bird skins for the freezing process.

The Sections of Mammalogy and Ornithology have stepped up the battle against the pesky drugstore beetle (*Stegobium paniceum*) in the skin collections with the help of two work-study students from USC. Jake Cannon, a senior majoring in International Relations, and Christina Minh, a Biology freshman, have been systematically freezing the skin collections using two existing conservation freezers (and soon a third freezer to be housed in the birds and mammal laboratory). We're confident that the tedium of carefully removing, sealing, freezing, and reinstalling the specimens is relieved by the privilege of hands-on work with the remarkably diverse

taxa contained in the collections, but you'd have to drop by the collections and get Jake and Christina's take on that matter. Collections Managers Jim Dines and Kimball Garrett appreciate the hard work of these students and the logistical support provided by Tania Collas and Liz Homberger and by Vertebrate Studies chief John Harris.



Christina Minh, also from USC, works with shrew skins as part of a program to treat an infestation of drugstore beetles in the collections.

## History

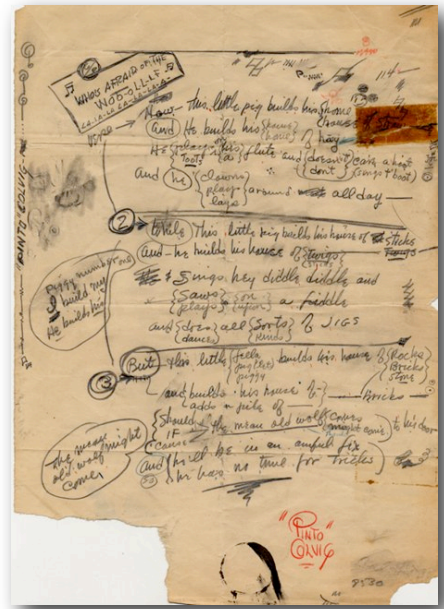
### History collections on the road

History Collections Manager John Cahoon attended a preview opening of The Walt Disney Family Museum in the San Francisco Presidio on Thursday Sept. 24th. The Seaver Center houses an original manuscript of the lyrics for "Who's Afraid of the Big Bad Wolf" from the 1933 Academy Award winning cartoon The Three Little Pigs, a copy of which is now on exhibit at The Disney Family Museum.



A daguerreotype of General Andrés Pico from the Seaver Center collection is on loan to the Smithsonian's National Portrait Gallery for display in their travelling exhibition *Faces of the Frontier: Photographic Portraits from the American West, 1845-1924*. The exhibition opened at the Portrait Gallery in Washington, D.C. on 9/20/09 and will be up through 1/24/2010. The exhibition will travel to the San Diego Historical Society and the Gilcrease Museum, Tulsa, Oklahoma.

General Andrés Pico, brother of Governor Pio Pico, signed the "Treaty of Cahuenga," which ended the U.S. war with Mexico in California.



Pinto Colvig's original notes for the "Three Little Pigs" lyrics.

### Seaver Center Glass-to-Access project



Pictured here from the Seaver Center collection are two views of an acetate "safety film" negative of the type developed to replace volatile nitrate films during the mid-20th century. Over time it became apparent that the acetate film base is not inert and is subject to shrinkage, as well as other damage from acetic acid released as the plastic deteriorates. When the film base shrinks the film emulsion remains stable and it wrinkles. One important aspect of the Seaver Center's ongoing Glass-to-Access project (currently funded by the Haynes



Foundation and administered by Project Database Manager Brent Riggs) is to assess the acetate negatives in our collections and to digitize important images before the historical records are lost.

# Field Work

## Fishes

Dr. Shannon DeVaney, post-doctoral fellow in Ichthyology, received a shipment of deep-water voucher specimens she collected on a field trip to the Mid-Atlantic Ridge area of the Central Atlantic Ocean for accession into the Fish Collection. The collection includes excellent examples of gulpers, halosaurs, snipe-eels, arrowtooth eels, lanternfish, viperfish, hatchetfish, snaggletooths, fangtooths and blackbelly dragonfish. Tissues were taken as part of her analysis of the phylogenetic relationships of stomiiform fishes.

*Fangtooth (Anoplogaster cornuta) from the Mid-Atlantic Ridge.*



## Dinosaur Institute



The Dinosaur Institute recently conducted a week long expedition to the Petrified Forest National Park in Arizona. The park contains outcrops of the upper Triassic Chinle Formation, and the fauna includes basal crocodile-like archosaurus such as *Phytosaurus* and *Aetosaurus*, and a group of early large amphibians called Metoposaurs. We were successful in collecting elements from all of these groups, and much of the material collected will be featured in the upcoming dinosaur galleries. We plan to continue work in coming years in the Petrified Forest, and the work we are conducting is helping to provide valuable data to the park paleontologists who are currently working to develop an accurate geology and biostratigraphy of the park.

# Meetings, Workshops and Presentations

## Vertebrate Paleontology

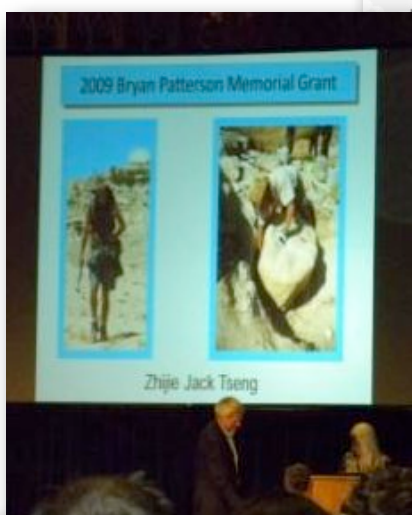
On 30 May 2009, Michael Williams, Curatorial Assistant with the Age of Mammals Hall Project, presented a talk at the Southern California Academy of Sciences Annual Meeting, held at Marymount College. The subject of his talk, derived to his Doctoral research, was "Neogene herpetofaunas from Louisiana, U.S.A., and their biogeographical and paleoenvironmental significance."



The Society of Vertebrate Paleontology Annual Meeting was held in Bristol, England, from 23 through 26 September. Samuel McLeod, Howell Thomas, and Vanessa Rhue attended, and Vertebrate Paleontology staff and student, Gary Takeuchi, Xiaoming Wang, Lawrence Barnes, Howell Thomas, and Jack Tseng, all were co-presentors. Howell's presentation was about the remarkable fossilized sperm whale brain cast from Los Olivos, California. Vanessa participated in seminars at the Natural History Museum in London, and at the Conservators and Preparator's Workshop about adhesives.

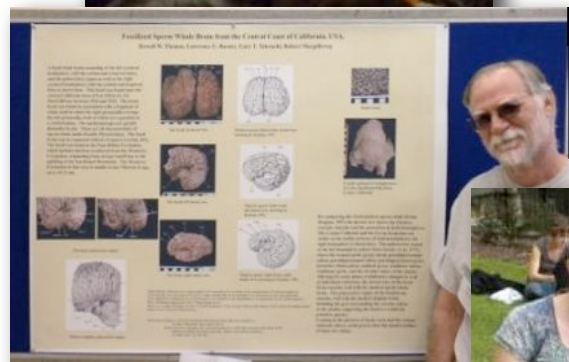
The first meeting of the Vertebrate Paleontology and Dinosaur Institute seminar series was 21 October. Howell Thomas made a presentation about the fossilized sperm whale brain cast, and fielded questions about this rare discovery. Page Johnson spoke about the Dinosaur Mysteries Hall design during this inaugural interdepartmental lecture series.

*Awards ceremony, with Howell Thomas accepting the Society's Patterson Memorial Grant on behalf of Jack Tseng.*



*Victoria Rooms where the Poster Sessions were held in Bristol.*

*Bristol University, site of the Society of Vertebrate Paleontology annual meeting.*



*Howell Thomas and fossil sperm whale brain poster presentation at the Society of Vertebrate Paleontology annual meeting.*



*Howell Thomas fielding questions on the fossilized sperm whale brain cast.*

*Vanessa Rhue and Sam McLeod at the Society of Vertebrate Paleontology annual meeting.*

## Rancho La Brea



Aisling Farrell and Chris Shaw (above) presented a poster at the Society of Vertebrate Paleontology 69th Annual meeting in Bristol England on “A preliminary description of an unusually complete specimen of *Mammuthus columbi* from Rancho La Brea” The poster was well received and generated a lot of interest in Project 23 to an international paleontological audience.

### Invertebrate Paleontology

Dr. Harry Filkorn, Collection Manager of IP, attended the Geological Society of America annual meeting in Portland, Oregon, October 18-21, and presented new research on Precambrian sedimentary rocks in northern Utah (see under publications).

### Crustacea

Dr. Regina Wetzer attended the NSF-sponsored “Future Directions in Biodiversity and Systematics Research” workshop in Long Beach. This was the third in a series of workshops bringing together broad-minded systematists from diverse disciplines representing universities and museums. About 25 attendees revisited the missions and goals outlined in *Systematics Agenda 2000* (SA2K) prepared in 1994. The workshop goals included assessing our successes, evaluating progress, and identifying goals to accomplish. Attendees addressed the challenges in species discovery, documentation, and biodiversity inventory remaining today. Some aspects of SA2K have progressed substantially (notably: phylogenetic theory, methods and

results now structure modern biology, and tree-based thinking has been incorporated into all respectable college biology texts). Interestingly, species discovery and documentation has been both wildly successful and is not as far along as we’d like. A series of 4-5 white papers are expected to appear within the year summarizing this group’s suggestions for possible future directions.

In October, Dr. Jody Martin, Curator of Crustacea, met with other Principal Investigators of the NSF-funded “Assembling the Tree of Life: Decapod Crustacea” program at Brigham Young University in beautiful Provo, Utah. The researchers assessed progress on the grant, planned their approach for the final year of the project, and outlined several of the products that will be coming to fruition as the grant winds down.

### History

Seaver Center Collections Manager Betty Uyeda attended a 4-day workshop (9/11 – 9/14) at the San Francisco Center for the Book on the topic of *Care and Identification of Photographs* that covered identification skills of photographic processes, the understanding of photograph conditions and deterioration, and basic techniques for their preservation. Photographic and photomechanical processes were examined and discussed in detail, including daguerreotype, albumen, collodion and gelatin

POP, matte collodion, gelatin silver, photogravure, offset litho, letterpress halftone, collotype, chromogenic color, inkjet, and dye sublimation processes.

Museum Archivist Cathy McNassor attended the annual meeting of the Society of Vertebrate Paleontology in Bristol, UK (9/23 – 9/26), where she met with colleagues regarding future research in the history of Paleontology in the Western United States and Mexico. While in London, she also spent several days photographing museum displays for reference for the upcoming history exhibit Under the Sun.

On October 15, Museum Archivist Cathy McNassor attended a workshop on “The Business of Audio Visual Preservation.” The workshop was sponsored by the Society of California Archivists and was held at the Autry National Center of the American West.

Curator Sojin Kim participated on grant review panels for the National Endowment for the Arts (9/30 and 10/1, Washington D.C.) and for the Alliance for California Traditional Arts (10/9 and 10/10, San Francisco).

Curator William Estrada participated on a grant review panel (10/26, Sacramento) for the National Historical Publications and Records Commission (NHPRC). This review panel is part of his duties as a member of the California Historical Records Advisory Board (CHRAB).

# External Funding

## **Vertebrate Paleontology**

Dr. John Long, Vice President R & C, and his research group have received a major research grant from the Australian Research Council (ARC) in the amount of \$370,000 to continue their studies of the origin of vertebrate jaws. The ARC is the equivalent of the U.S.’s National Science Foundation; these grants are extremely competitive. The new funding will allow the team to study spectacular new fossils from central Australia and southern China, the oldest known backboned animals with jaws and a hard skeleton, and will facilitate collaboration among Australian, Chinese, and American colleagues. Innovative 3D X-ray computer tomography, and the Australian synchrotron, will be used to investigate ancient cells and preserved soft tissue structures as well as to search for evidence that copulation and internal fertilization, as seen in modern mammals, might have originated when jaws first evolved. The grant will be administered from Australia but will provide John with research funds for projects while he is here.

# Public Outreach

## Haunted Museum!

As usual, R & C staff rocked the Haunted Museum on October 25th. Below are summaries of just a few of the activities in which we were involved.

### *Echinoderms: Stars of the Haunted Museum*



This year, the Echinoderm Crypt in the Haunted Museum featured sea stars that are remarkably unlike their familiar 5-armed relatives. A long display table was crowded with astounding multi-armed sun stars and basket stars from the Museum's collection, a microscope for viewing selected specimens, and a demonstration of how to skin a starfish and clean its skeleton. Dr. Gordon Hendler, who played the role of "Keeper of the Crypt," exhibited interesting examples of live-bearing 6-armed stars, fish-catching stars that have 50 arms, and basket stars with hundreds of branching arm tendrils. Apropos of Halloween, there was a side-show presenting seldom seen, abnormal specimens, and stars that can turn their stomach inside-out. Gordon was gratified that return visitors to the Crypt, young and old, have become conversant in the arcane language of echinoderms and speak easily of tube feet, brittle stars, and pedicellariae.



### *Rancho La Brea*

RLB staff came dressed as the "American Lion Tamers of La Brea" at the Spookiest Show on Earth where they showcased new Project 23 cat material and discussed different cat behaviors based on the RLB fossils.

### *Ichthyology and Herpetology*

Neftali Camacho from Herpetology presented a scientific display on freakish amphibians.

### *Ornithology*

Ken Campbell and Kimball Garrett presented a table full of "Beaks and Freaks," including "Shoebill" the fish eater and "Spoonbill," who was constantly stirring. Also present were the freaky giant *Argentavis*, at 175 lbs the world's largest known flying bird, and the barely visible midget, the Calliope Hummingbird, at 0.1 of an ounce the smallest bird north of Mexico.

## History

History Division and Hart Museum staff John Cahoon, Beth Werling, Kristen Hayashi, Ayesha Saletore, and Kristyn Van Wy shared artifacts from their collections, including photographs of Bill Hart aviator friends Charles Lindbergh and Amelia Earhart, an American flag given to Hart as a gift from Amelia Earhart, Circus posters, and Charlie Chaplin photographs and Little Tramp costume.

*Beth Werling with a display of circus posters from the History collections.*



*An event guest (and Chaplin impersonator) communes with the Material Culture collection's Little Tramp costume.*



*Rodeo clowns Ayesha Saletore, Kristen Hayashi, and Kristyn Van Wy invite visitors to handle ranching objects, play the ever-so-popular Brand Mix Up game, and rope a cow.*



## Anthropology

Margaret Hardin, KT Hajeian, and Jennifer Saracino from the Anthropology department participated in the annual Haunted Museum with the help of volunteer Julie Seguin. When this year's theme was introduced, they realized that the missing cannonballer Billy Ballistic probably flew over South America and saw the Nazca lines while trying to find his way home. The Nazca lines are manmade desert geoglyphs in southern coastal Peru, constructed circa 200 – 800 A.D., whose creation and function are still a mystery to scientists and anthropologists today. Theories range from pathways for ritual processions to water source markers to alien aircraft landing strips. The anthropology team re-created one of the famous designs on the floor of the Visible Vault with glow-in-the-dark tape. The team also



exhibited two ceramic vessels from the Nazca culture demonstrating the frequent depiction of the Mythical Killer Whale and its correlation to one of the giant geoglyphs of the same design. They were also able to exhibit aerial photographs of many of the different lines courtesy of Dr. Katharina J. Schreiber, a close friend and colleague of Dr. Margaret Hardin's from UCSB. It was a great chance to teach the public about the similarities in iconography both large and small in Nazca culture as well as celebrate the Halloween spirit with the NHM family!

## Non-Haunted Outreach...

### *Malacology*

On Saturday October 3rd Lindsey Groves and Cathy Groves co-led *Living on the Fault Line: A Day Along the San Andreas* with 25 participants to see fault generated landforms along a stretch of the San Andreas Fault from Devore to Palmdale. This was a revival of a trip led by former Education staff member Deb Kure in 2004. Participants were treated to up close and personal observations of sag ponds, pressure ridges, fault scarps, shutter ponds, hogbacks, and an earthquake tree. At the Pallet Creek stop, near Valyermo, former sag pond sediments along the fault were observed to have had nearly eight inches of vertical offset that may have occurred during the 1857 Ft. Tejon earthquake. The final stop was at the Avenue S road cut in Palmdale where spectacularly folded and faulted beds of the Pliocene Anaverde Formation can be observed within an unnamed pressure ridge.

MANY thanks to Briana Burrows, Karen Ewald, and Kim Kessler (Education & Exhibits) for their logistical talents, driving prowess, and for making this trip such a rewarding event.



*Lindsey Groves pointing out former sag pond sediments and peat layers at Pallet Creek that were offset by movement along the San Andreas Fault, possibly during the 1857 Ft. Tejon earthquake (photo by David Ocker and courtesy of <http://mixedmeters.com>).*



Several participants of A day along the San Andreas photographing the fault marker sign near Pallet Creek (photo by Lindsey Groves).



Spectacularly folded and faulted lake bed sediments of the Pliocene Anaverde Formation exposed along Highway 14 near Avenue S in Palmdale (photo by Lindsey Groves).

### Malacology and Invertebrate Paleontology

On Saturday, October 17th Lindsey Groves and Mary Stecheson (IP) co-led *Fossil Hunting in Silverado Canyon* where 44 participants collected Turonian (Late Cretaceous) [~90 mya] fossils from the Baker Canyon and Holz Shale members of the Ladd Formation. Most specimens collected are mollusks but a few crustacean appendages were found and a nice specimen of *Cretolamna appendiculata*, a Cretaceous Mackerel Shark, was collected. Many thanks to Cathy Groves (Echinoderms), Briana Burrows, Christyann Evans, and Kim Kessler (Education & Exhibits) for their extensive on site assistance and logistics. Staff members who experienced Silverado Canyon for the first time included Leslie Harris (Polychaetes) [with David Ocker] and Kathy Omura (MBC) [with Tony Rivard].

Lindsey Groves speaking to participants at Silverado Canyon about regional geology and paleontology of the area (photo by Cathy Groves).

Future paleontologist Katelyn T. (age 9) proudly shows off a specimen of *Cretolamna appendiculata* Agassiz (Cretaceous Mackerel Shark) that she found... the only one found on this trip (photo by Lindsey Groves).



Hats off to another successful Silverado Canyon trip by NHMLAC staff. Left to right: Cathy Groves (Echinoderms), Kathy Omura (MBC), Kim Kessler and Christyan Evans (E&E), Mary Stecheson (IP), Leslie Harrus (Polychaetes), Lindsey Groves (Malacology), and Briana Burrows (E&E) (Photo by Tony Rivard).



## Vertebrate Paleontology

Vanessa Rhue was invited to participate in Career Day at Second St. Elementary School in Boyle Heights on 9 October. The students were able to touch real fossils from our Museum collections, listen to bone poems read aloud, and ask questions about how to become a paleontologist. The emphasis during Career Day was to encourage the students to read about what they want to be when they grow up.

## More Vertebrate Paleontology

The Museum's annual family program was held at Red Rock Canyon State Park in the Mojave Desert on the weekend of October 30 - November 1, and was mentored by Vertebrate Paleontology members Xiaoming Wang, Gary Takeuchi, Vanessa Rhue, and Jack Tseng, and retired Curator of Vertebrate Paleontology, David Whistler.

## Dinosaur Institute

With Thomas the *T. rex* gone, the DI preparators are enjoying their renovated workspace, the Dino Lab. The Dino Lab features a new interpretative wall and interactives, and preparation in the lab is now focused on the extensive and diverse array of fossils in the DI collection that will be displayed in the new dinosaur galleries. Major reconstruction work and fabrication of display models will also take place in the Dino Lab over the next two years, giving museum visitors a unique behind-the-scenes look at the work that goes into creating a major museum exhibit.

## Invertebrate Paleontology

Harry Filkorn, in collaboration with Erin Romo of the Museum's Membership department, presented the Scavenger Safari entitled "Amazing Ammonites" on Saturday, October 3. The participants were able to see a number of large ammonites as well as many other examples of invertebrate fossils from the surrounding region such as giant Miocene oysters and complete specimens of trilobites from the Cambrian of California. Everyone was thrilled to see so many real fossils up-close!

## History

On September 26th, the Advancement Department hosted a "Taste of History" dinner for nearly one hundred Museum Fellows at the new Gardena Facility for NHM's automotive collection, managed by the History Division. Collections Manager Beth Werling delivered a presentation on "Los Angeles' Impact on the Automobile." Guests were also toured through the magnificent collection by Curator William Estrada, Collection Managers John Cahoon, Betty Uyeda, and Brent Riggs, and Hart staff members Ayesha Saletore and Kristyn Van Wy.



Beth Werling (at far left) speaks with "Taste of History" event guests about the NHM auto collection.

The History Department will shortly be posting an announcement of an Open House at Gardena for NHM staff interested in seeing the automobile collection—so keep your eyes open!

History Curator William Estrada gave presentations on his book *The Los Angeles Plaza: Sacred and Contested Space* at the Rosemead Public Library (10/14) and at the Page Museum (10/17).



William Estrada (center) with Historian Leonard Pitt and El Pueblo Commissioner David Louie at the Page Museum docent presentation.



The Seaver Center was one of over 60 archival institution exhibitors at the 4th Annual Los Angeles Archives Bazaar on October 17th at the Davidson Conference Center at USC.



Twitter had at least 2 tweets on the Seaver Center's display, announcing, "Nice exhibit of early photography technology at NHM; daguerrotype, tintype, ambrotypes" and "Scary moments in aviation history from Natural History Museum of LA County." By Sunday morning the event warranted a short



Above and at left, Collections Managers Beth Werling, Betty Uyeda, and John Cahoon share information about Seaver Center resources at the Archives Bazaar.

article in the Los Angeles Times' California section: "L.A. area's history lives in these unique archives."

### William S. Hart Museum

The Hart Museum hosted a *Textile Conservation Workshop* with Cara Varnell for the Los Angeles Preservation Network. Coordinated by Material Culture Collections Manager Beth Werling, the event provided participants with information about textile conservation methods. During the workshop, participants also toured the Hart Museum with Hart's Education and Collections Coordinator, Kristyn Van Wy. Kristyn included information regarding Hart's collection of textiles including the display of Navajo rugs and Hart's costumes.

Every year, the Friends of Hart Park in conjunction with the William S. Hart Park and Museum host the annual Native American Powwow. The Museum's booth, which provided literature about the Hart Museum and materials from the Educational Outreach Program, was visited by over 500 people. The Ranch House had about 520 visitors and the main Museum had about 220 visitors!



Brent Karner at the Hart Museum Pumpkin Festival.

The second annual Pumpkin Festival held in Hart Park took place on October 24th. Just as it was last year, this festival was a true collaboration among different organizations. NHM's own Brent "the Bug Guy" Karner presented various spiders, a scorpion, and even... the fast moving cockroach. Children and adults alike enjoyed learning about the colorful display of bugs!

# Student Mentoring and Research

## **Vertebrate Paleontology**

Michael Williams, Curatorial Assistant with the Age of Mammals Hall Project, defended his Doctoral Thesis, about Neogene fossil herpetofaunas, at Louisiana State University on 29 October 2009. Congratulations soon-to-be Dr. Williams!

Jack Tseng, Vertebrate Paleontology graduate student in residence (and visiting graduate student at the Institute of Vertebrate Paleontology and Paleoanthropology in Beijing), received the Society of Vertebrate Paleontology's 2009 Bryan Patterson Memorial Grant. Congratulations Jack! The grant will fund the excavation of a new Miocene bone bed in the Baogeda Ula Formation of central Inner Mongolia. Through this field work Jack hopes to better understand the latest Miocene Hipparion fauna of central Mongolia, its preservational environments, and its relationship to other contemporaneous faunas of Eurasia. <http://www.vertpaleo.org/meetings/2009pattersongrantwinner.cfm>

Matthew Ventimeglia, graduate student at California State University Northridge, who is being supervised by Lawrence Barnes, progressed with his Masters

thesis project during the summer and fall, preparing much of the skull of a new species of fossil baleen whale from Orange County for his studies. This specimen came to us several years ago through environmental impact mitigation work in south Orange County. In his thesis Matt will describe the specimen as a new species.

## **Ichthyology and Herpetology**

Dr. Javier Gago, a Research Associate, gave his Biology Classes from Glendale Community College a tour of the Ichthyology Collection on September 17th.

Nate Bruns, a graduate student from California State University Northridge, visited Ichthyology several times during September and October to work on paralichthyid flatfishes he collected in Baja California. Nate took tissue for DNA analysis and is vouchering his specimens into our collection.

Michael Webber, a student from the University of Nevada in Las Vegas, visited in late October to continue her study of sidewinder rattlesnake feeding habits.

# Volunteers & Research Associates

## **Vertebrate Paleontology**

New Vertebrate Paleontology Laboratory Volunteer, Ted Sato, has become a dedicated worker in the department, helping with molding specimens for our new Age of Mammals Exhibit Hall, cleaning a fossil dolphin skull, and helping Matt Ventimeglia prepare

the fossil baleen whale skull that will be featured in his Masters Thesis.

Lawrence Barnes presented a lecture previewing the Age of Mammals Exhibit Hall to Museum docents who aspire to be tour guides for our new hall.

# Distinguished Visitors

## Polychaetes

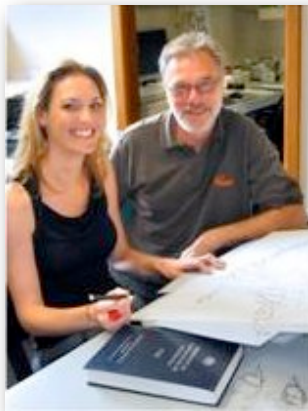
Polychaetes was invaded by visitors from July through early October! First was Andre Souza dos Santos (Universidade Federal da Paraiba, Brazil) who is revising the family Sabellariidae for his master's. Poor Andre nearly wept when he saw just how much material we had and considered that he had only 2 weeks to study it. Overlapping him, Dr. Joao de Matos Nogueira (Universidade da Sao Paulo, Brazil) was here for 3 months while he collaborated with Kirk Fitzhugh (Curator) and Leslie Harris (Collection Manager) on the Sabellidae & Terebellidae Leslie brought back from the 2006 Census of Marine Life cruise to the Northwest Hawaii Islands. Also during the same time period came Dr. Vasily Radashevsky (Zhirmunsky Institute of Marine Biology, Vladivostock, Russia) to examine our type collection of Spionidae worms. All three were overwhelmed by the size of our collection and spent an average of 12 hours a day to make the most of their visits.

## Crustacea

In October Dr. Niel Bruce, Senior Curator, Tropical Marine Biodiversity, Museum of Tropical Queensland, Townsville, Australia visited the Crustacea Lab and worked with Regina Wetzer to pull together manuscript drafts of their sphaeromatid isopod phylogeny. Many trees were evaluated and good progress on the writing was made.



Regina and Niel, USC Catalina Island Lab.



Dr. Lauren Hughes, Post Doctoral Fellow, Australian Museum, Sydney, visited the Crustacea Lab to identify and select 95% ethanol-preserved gammarid amphipods for her molecular studies, with help from Regina Wetzer, Kathy Omura, and Emma Freeman. Lauren was absolutely delighted with the gems she found in our unidentified collections from the Northwest Hawaiian Islands and Palau.

Lauren Hughes with her advisor Dr. Jim Lowry, infamous amphipodologist and Principal Research Scientist, Crustacea Section, Australian Museum.

## Ichthyology and Herpetology

Dr. Norm Scott visited our Herpetology Collection on October 8th to examine our Paraguay holdings.

## Malacology

Mike Vendrasco (Calif. St. Univ., Fullerton) visited the Malacology collection to examine eastern Pacific and Panamic chitons. He and a colleague are studying the comparative mineralogy of various chiton genera and species. Cathy Marlett (SIL International) visited Malacology to examine mollusks of the Gulf of California especially those used by the Seri people of northern Sonora, Mexico. She also presented *Of Seas and Shells: Mollusks in the Seri World* for the Pacific Conchological Club which meets at NHMLAC.

## Invertebrate Paleontology



*Alan McLeron and Jennifer Paur from Cal State University Northridge and Curatorial Assistant Mary Stecheson (at right) examine fossil insects in the Invertebrate Paleontology collections. Photo by Matt Ventimiglia, CSUN.*

The Department of Invertebrate Paleontology hosted a tour for students from California State University Northridge early in October. Mary Stecheson showed the Museum's large collections of invertebrate fossils to Professor Squires and the students in his Cretaceous Paleontology course. In addition to the Department's extensive collection of Cretaceous fossils from California, students were interested in specimens from the Middle Cambrian Burgess Shale of Canada and the Statz collection of Oligocene insects from Germany.

## Vertebrate Paleontology

We did not include our summer visitors in the previous Newsletter, so here are some not-necessarily-recent visitors and their diverse and interesting research interests.



*Vivianne SantAnna, of the MCT-PUC-RS, in Brazil, visited on 5 June 2009, to study flying fish.*



*Jonathan Calede of the University of Oregon visited on 12 June 2009, to study our fossil rodents and carnivorans from Oregon. Also visiting at the same time from the University of Oregon, was Winifred Kehl, who is contemplating thesis research dealing with fossil marine mammals.*



*Local writer Susan Suntree and her photographer visited VP on 5 June 2009 to obtain images of some of our vertebrate fossils for her forthcoming book on the history of western North America.*



Robert Dundas and student Danny Tovar of California State University Fresno, visited on 12 June 2009, to study fossils of the saber cat, Homotherium.

Mike Newbrey and his colleagues from the Royal Tyrrell Museum, Alberta, Canada, visited for several days in June to study our fossils of the Cretaceous sharks, Cretolamna, from the mid-continent.



Dr. Judith Schiebout, of Louisiana State University, who is also Museum employee Mike Williams' faculty advisor (pictured here together), visited on 19 June 2009, to study some of our specimens of mastodonts and Paleogene mammals.



Jenny McGuire, a graduate student at the University of California at Berkeley, was working in the Department from 29 June to 2 July, studying fossil rodents.

Carolyn Rounds, of the University of Massachusetts, Amherst, visited from 19 to 21 August to work on her description of the skeletal morphology of the chalicothere Moropus, from the Flint Hill Formation in South Dakota. Chalicotheres are strange extinct mammals that are related to horses and rhinos, and have claws on their front feet.

Laura Vietti, a graduate student at the University of Minnesota, studied in the Department during the latter part of July. She is investigating the preservational conditions of fossil marine mammal bones in anticipation of pursuing a thesis dealing with marine vertebrate taphonomy.



Daniel Fortier, from the UFRGS in Fortaleza, Brazil, worked in the Department from 3 to 7 August, conducting research on fossil crocodilians.



Felix Marx, a graduate student at the University of Otago in Dunedin, New Zealand, visited from 4 to 7 August, to study our fossil baleen whales.



Dr. Erich Fitzgerald, of Museum Victoria, Australia, having just completed a one-year post-doctoral appointment and the Smithsonian Institution, visited the Department on 8 September to study primitive tooth-bearing mysticete whales with Lawrence Barnes.

Rob Eagle and Aradhra Tripati, of Cal Tech, Pasadena, visited on 17 September to sample some of our ground sloth teeth for isotopic analysis of their diets.

## Recent Publications

Butler, R. J., P. M. Galton, L. B. Porro, **L. M. Chiappe**, D. M. Henderson, and G. M. Erickson. 2009. Lower limits of ornithischian dinosaur body size inferred from a new Upper Jurassic heterodontosaurid from North America. *Proceedings of the Royal Society B*. 2009.

*This recently published article names and describes Fruitadens haagarorum, a new species of dinosaur from the NHM collection. Fruitadens is the smallest known dinosaur from North America and the first known North American occurrence of the Heterodontosaurid group. Fruitadens immediately captured national media attention, including features in the LA Times, the NY Times, and the San Francisco Chronicle, among others, and is now the topic of nearly 30,000 websites worldwide. The article appeared online on October 21st.*

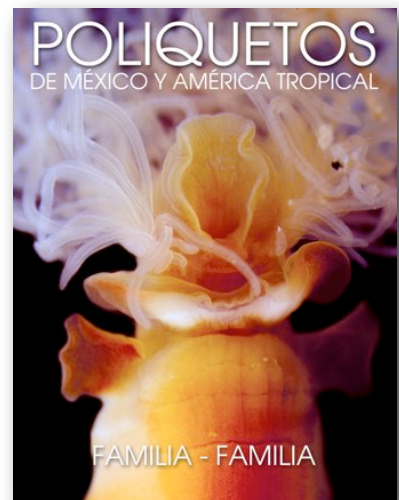


Christiansen, P. and **J. M. Harris**. 2009. Craniomandibular morphology and phylogenetic affinities of the great Pleistocene felid *Panthera atrox*. *Journal of Vertebrate Paleontology*, 29 (3) 934-945.

**Filkorn, H. F.** 2009. Evidence of benthic biological activity preserved in siliciclastic sedimentary structures, Neoproterozoic Uinta Mountain Group, High Uintas Wilderness, Utah. *Geological Society of America, Abstracts with Programs*, 41(7):269.

**Harris, L.H.**, De Leon-Gonzalez, J.A., Salazar-Vallejo, S.I. 2009. Morfologia, Metodos, Clave para Familias y Clasificacion. pp. 1-30. *In: Poliquetos (Annelida: Polychaeta) de México y América Tropical*. 2009. De León-González, JA, JR Bastida-Zavala, LF Carrera Parra, ME García-Garza, A Peña-Rivera, SI Salazar-Vallejo y V Solís-Weiss (Eds). Universidad Autónoma de Nuevo León, Monterrey, México.

*Leslie Harris (Collection Manager, Polychaetes) is the 1st author in the lead chapter for this first book ever published on Mexican polychaetes. In addition, one of her photos was chosen for the cover, and others are used throughout the book.*



**Kung, G.** 2009. Four distinctive new Neotropical species of *Coniceromyia* Borgmeier (Diptera: Phoridae) with patterned-wings. *Zootaxa* 2273: 49-58.

Right: photo of one of the new species, *Coniceromyia browni*, named in honor of Dr. Brian Brown, Curator of Entomology.



Mills, S. J., **Kampf, A. R.**, Raudsepp, M. and Christy, A. G. (2009) The crystal structure of Ga-rich plumbogummite from Tsumeb, Namibia. *Mineralogical Magazine* 73, 521-529.

Mills, S. J., **Kampf, A. R.**, Poirier, G., and Raudsepp, M. (2009) New Fe-bearing members of the olivenite group from the Black Pine mine, Montana. *Geological Society of America Abstracts with Programs*, Vol. 42, No. 7, 100.

Newbrey, M., T. Cook, M. Wilson, A. Neuman, and **G. T. Takeuchi**. 2009. Growth characteristics of some Late Cretaceous lamniforms (Elasmobranchii) of North America. *Journal of Vertebrate Paleontology*, 29 (supplement to 3):155A.

Nyborg, T., F. J. Vega, and **H. F. Filkorn**. 2009. First described species of *Costacopluma* (Crustacea: Brachyura: Retroplumidae) from the Pacific slope, Paleocene of California, USA. *Boletín de la Sociedad Geológica Mexicana*, 61(2):203-209.

Salas, E. C., Berleson, W. M., Hammond, D. E., **Kampf, A. R.**, and Neelson, K. H. (2009) The influence of carbon source on the products of dissimilatory iron reduction. *Geomicrobiology Journal* 26, 451-462.

Tedford, R. H., **X. Wang**, and B.E. Taylor. 2009. Phylogenetic systematics of the North American fossil Caninae (Carnivora: Canidae). *Bulletin of the American Museum of Natural History*, 325:1-218.

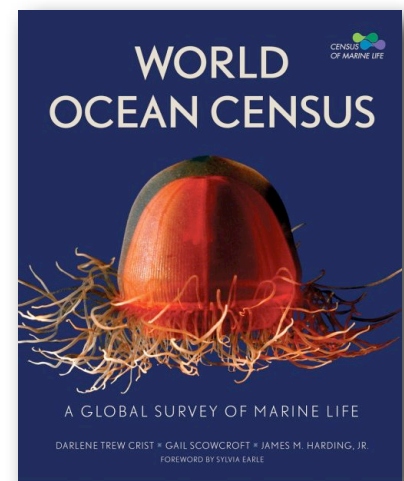
**Thomas, H.W.**, **L. G. Barnes**, **G. T. Takeuchi**, and R. MacGillivray. 2009. A fossil brain cast of a sperm whale (Cetacea, Physeteridae) from the Monterey Formation, Los Olivos, California. *Journal of Vertebrate Paleontology*, 29(supplement to 3):191A.

**Tseng, Z. J.**, **G. T. Takeuchi**, and **X. Wang**. 2009. The first upper dentition of the sabertoothed *Barbourofelis whitfordi* (Nimravidae, Carnivora). *Journal of Vertebrate Paleontology*, 29(supplement to 3):192A.

### Also of note:

Crist, D. T., G. Scowcroft, and J. M. Harding (eds.), 2009. World Ocean Census: A Global Survey of Marine Life (with a forward by Sylvia Earle).

This volume recounts the history of the Census of Marine Life and contains a multitude of images from the various projects, including many by Collection Manager **Leslie Harris** (polychaete worms). Leslie's images came from a Census of Marine Life 2006 cruise to the Northwest Hawaiian Islands in which she participated along with Dr. Jody Martin (Crustacea).



# Staff Departures and New Staff



## Ichthyology

Dawn Roje returned to Ichthyology to work in the Molecular Lab after receiving her Masters from the University of Washington. Dawn is working on the evolutionary relationships of flatfishes.

## Marine Biodiversity Center

The MBC is excited to welcome Curatorial Assistant Emma Freeman.

Emma has been working at the museum since August 2008 in the Dinosaur Institute and as an Intern in Public Programs, where she helped with First Fridays. She has a B.A. in Environmental Studies from USC, and loves Natural History and Biology. Emma has

conducted research at USC in Paleoclimatology through the Earth Sciences department, and on alcohol receptor mutations through the School of Pharmacy. She can be reached at [efreeman@nhm.org](mailto:efreeman@nhm.org).



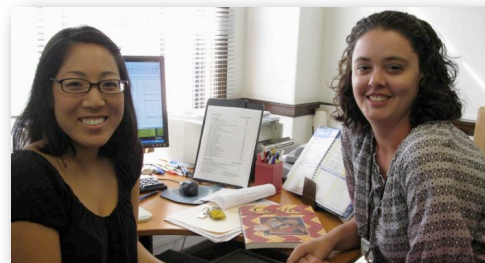
## Rancho La Brea

The RLB staff welcomes Carrie Howard as the newest member of the Project 23 excavation team! Carrie got her BA degree in Earth Science and Anthropology from UC Santa Cruz. She volunteered as a preparator in the Fishbowl lab and as an excavator three days a week since last spring. As well as her passion for paleontology and general natural history, she is also interested in photography. She and part-time excavator, Michelle Tabencki, have begun taking pictures to use in an annotated photographic notebook of RLB specimens for the field. Carrie can be contacted at [choward@tarpits.org](mailto:choward@tarpits.org).

## History

The History Division welcomes Kristen Hayashi to its staff as

the curatorial assistant for the Under the Sun exhibition. Kristen brings to this position a B.A. in American History and Politics from Occidental College (2004) as well as her experiences as Assistant Registrar (2007-2009) and Collections Technician (2006-2007) in the Office of the Registrar and the Anthropology Division at NHM.



*Kristen Hayashi (left) with Rachel Barnes, a volunteer in the Museum Archives from UCLA's Library & Information Science graduate program.*



# Miscellaneous

## Ornithology: Ken Campbell Receives AOU Honor

Dr. Ken Campbell has been named an Elective Member of the American Ornithologists' Union (AOU). The AOU's Elective Membership class is an honorary category in recognition of significant contributions to the field of Ornithology. Congratulations, Ken!

## Rancho La Brea: Chris Shaw wins Skinner Award

Congratulations to Collections Manager Chris Shaw who won the prestigious Morris F. Skinner award at the Society of Vertebrate Paleontology in Bristol England in September. The Skinner Award honors outstanding and sustained contributions to scientific knowledge through the making of important collections of fossil vertebrates, as well as honoring those persons who encourage, train or teach others toward the same pursuits. To read about Chris' contributions visit <http://www.vertpaleo.org/meetings/2009skinnerawardwinner.cfm>



Chris is presented with the Skinner award by the president of the Society of Vertebrate Paleontology, Dr. Blaire Van Valkenburgh.

## Rancho La Brea again! Andrea Thomer Awarded Scholarship

Congratulations also to Lead Excavator Andrea Thomer, who won a scholarship to the Museum Computer Network Conference in Portland, Oregon, in November. Andie was one of only eight people to receive the scholarship out of ninety applicants! The other winners come from throughout the US as well as Russia, Scotland and Canada. More information can be found at <http://www.mcn.edu>

## Still More Rancho La Brea...

The Ice Age 3 DVD was released on October 27th which contains interviews with Trevor Valle and Chris Shaw about Pleistocene animals and environments in North America.

## And finally....

*Happy Holidays!*

*Because this is the last R&C Newsletter for calendar year 2009, the R&C staff takes this opportunity to wish all of you a happy and safe holiday season and a bright and productive New Year.*

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, Crustacea.

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