

# Research & Collections Newsletter



Spring 2016

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

## Collection News

### History

The Seaver Center lent two artifacts to USC for a special exhibition in Doheny Library on *True Crime: Detective Fiction and the Film Noir Myth of Los Angeles*. The 3-month exhibit covers historical crime fighting and detective work as well as fictional depictions from Sherlock Holmes to Sam Spade and Joe Friday. The Seaver Center contributed to the Pinkerton Detective Agency case on the kidnapping of a 6-year old in Los Angeles in 1874.

*Collections Manager John Cahoon facilitated the loan to USC and is shown in the exhibit area where the two items from NHM are displayed.*

### Marine Biodiversity Center

Every 5 years the Southern California Coastal Water Research Project performs regional biomonitoring in the Southern California Bight. The NHM serves as the repository for the fully identified, highly valuable voucher specimens collected from this monitoring program. The MBC has received the specimens from the most recent survey (2013), as well as additional material from previous surveys, which has added an additional 2,200 lots of this valuable material, which serves as a priceless catalog of local marine biodiversity. These specimens add greatly to the museum's already vast holdings of local California marine invertebrates.



## Polychaetes and Marine Biodiversity Center

January 11th and February 18th Polychaetes and the Marine Biodiversity Center hosted the monthly Southern California Association of Marine Taxonomists (SCAMIT) meeting in the Collaboratory. These meetings were organized by Leslie Harris (Polychaetes, and Vice-President of SCAMIT) on behalf of the MBC to utilize the expertise of these experienced taxonomists in identifying mystery “blobs” from MBC collections for which there is no in-house expertise, greatly increasing the value of the material to the museum and for future research.

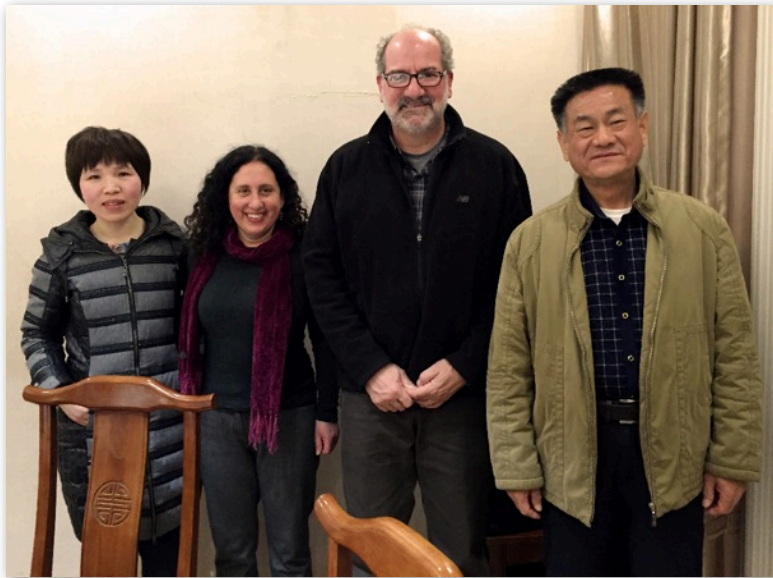


# Field Work

## Crustacea

On March 15th 2016, Adam Wall and Regina Wetzer joined Jim Asmus of Marine Corps Installations West Environmental Security and Lee Ripma of Rocks Biological Consulting in a survey of a system of vernal pools on Camp Pendleton looking for endangered Fairy Shrimp (*Anostraca*). This collecting trip has been 3 years in the making, waiting for the strong El Niño rains to fill the vernal pools. It was quite a successful expedition: high quality molecular specimens of the endangered crustaceans were collected and put into the NHM collection for use in an impending molecular project.

## Dinosaur Institute



Left to Right; Mr. Zheng's assistant, Jessica Portner, Luis Chiappe and Mr. Zheng Xiaoting, Director of the Tianyu.

From February 18 to March 5, Luis Chiappe (VP of R&C) and Maureen Walsh (DI Collection Manager) traveled to China for research and collaborative meetings. In Shanghai, they visited the new Shanghai Natural History Museum to take in the new exhibits and discuss possible future exchanges. Dr. Chiappe hopes to arrange an exchange between invertebrate departments for fossils of the Cambrian Chengjiang fauna from Yunnan Province — these are fossils similar to those from the Burgess Shale.

During the trip, the team was joined by Jessica Portner, Editorial Manager of the *Naturalist*, who wrote of their research visit to Pingyi and the Tianyu Natural Museum. Look for the new *Naturalist* and YouTube for their *China Travel Diary*.

## Herpetology

Greg Pauly has been continuing his studies of urban lizards. On February 12th, after spending the day at the Scripps Institute of Oceanography examining sea snake specimens, he headed to a site in Santa Ana to collect nonnative lizards. This is a site Greg has visited numerous times to study a number of nonnative species now es-

established in the area. Greg collected three different species of nonnative geckos, Brown Anoles, and to his surprise even found a baby Nile Monitor Lizard. Nile Monitors are native to central and southern Africa and can grow to over 6 feet long. Due to escapees and the illegal abandonment of unwanted pets, Nile Monitors are now established in Florida, where they are having significant impacts on native species.

*A baby Nile Monitor Lizard found in Orange County*



On February 22nd, Greg Pauly and Stevie Kennedy-Gold traveled to Orange to another urban field site where they collected nonnative geckos and Brown Anoles with Saddleback College professor Tony Huntley. This fieldwork is part of their ongoing study into the reproductive biology of these nonnative lizards.

## Marine Biodiversity Center



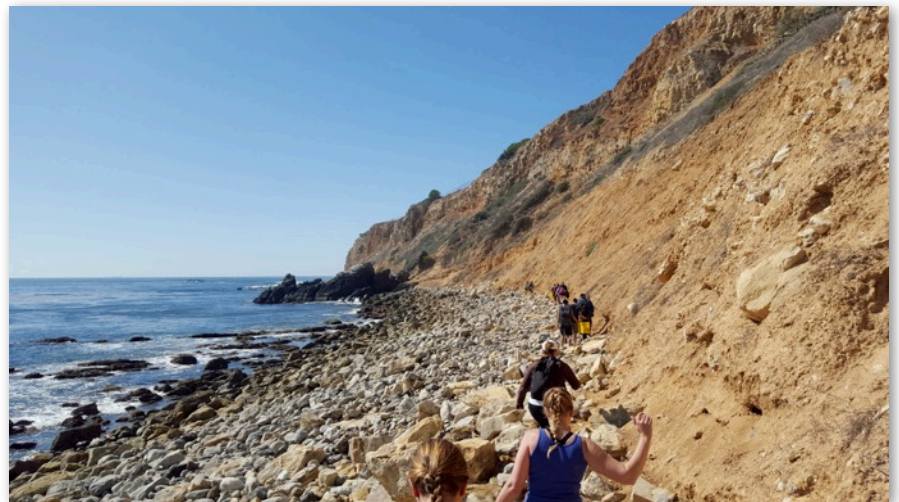
On February 7–9, Marine Biodiversity Center staff and visiting researcher Dr. Niel Bruce from the Museum of Tropical Queensland took a field trip to coastal Monterey County, CA to scout access to historical collecting sites as well as new collecting sites as part of an effort to strengthen our collections in key areas, and to generate fresh molecular grade samples to use in several impending research projects.

*Niel Bruce and Regina Wetzer in Carmel (note their matching purple Crocs)*

## Peninsula Shorewatch — 40 Years

The Marine Biodiversity Center has joined with Julie Passarelli (Cabrillo Marine Aquarium) and Bengt Allen (CSU Long Beach) in the Peninsula Shorewatch intertidal survey program. The survey was founded 40 years ago by Susanne Lawrenz-Miller and Alan Miller (of CMA and CSULB, respectively) to monitor human impacts on the shoreline of southern Los Angeles.

Since that time, multiple surveys per year at three different sites around the Palos Verdes Peninsula have measured macroinvertebrate populations in the intertidal (including sea stars, urchins, abalone, and other animals likely to be human-impacted). The 40 year duration of this survey makes it exceptionally valuable. The photograph shows some of this year's volunteer participants hiking the shoreline to reach the Point Vicente sampling location on February 21.



### *Inner Cabrillo Beach Survey — 10 years*

On March 3 and 4, MBC staff and associates (Kathy Omura, Jenessa Wall, and Dean Pentcheff) joined up with Cabrillo Marine Aquarium for their long-running Inner Cabrillo Beach survey — this is its tenth year. At three sites within the breakwater in Los Angeles Harbor, seine nets are used to sample fish and invertebrates along preset swaths of shoreline. On these days, the sampling was assisted by classes of students from Dana Middle School, as well as college classes from CSU Long Beach.



After each deployment of the net, students, staff, and MBC participants pick all visible fish and invertebrates from the net, which can be challenging when substantial amounts of algae get caught. The Marine Biodiversity Center, by invitation from the Cabrillo Marine Aquarium, is using these sampling sessions as an opportunity to collect fresh specimens of local marine invertebrates directly into 95% ethanol, helping to expand our collection of molecular-grade invertebrate specimens.

### *Multi-Agency Rocky Intertidal Network*

When an oil spill hits a piece of the California coast, surely “they” can tell how it affects life on the shore? Well... how? And who are “they”? The way we can determine the effects of any change (be it oil spill, climate change, or anything else) is by having good data on what’s present before the event, then comparing that with what’s after the event. We have those data for over 100 sites on the California coast. The Multi-Agency Rocky Intertidal Network (MARINE) are the “they” who have led the monitoring.



The MBC is now partnering with the MARINE group to add to the survey results and to gain access to potential specimen sampling locations. Our first involvement was with MARINE’s biodiversity survey at Point Fermin (San Pedro) on March 8 and 9.

Standardized “core surveys” revisit arrays of fixed plots at each location. Using standardized protocols, coverage, counts, and measurements are recorded for a variety of invertebrates and algae. The precision of the data and the repeated measurement at fixed plots means that this process can detect quite small changes over time. Additional



“biodiversity surveys” lay out transect grids for less frequent but more comprehensive photographic quadrat surveys. Shown above is part of the survey grid laid out on the shore in the marine preserve at Point Fermin. Also shown is Steve Lee (UCLA), leader of this survey, happy at the end of the second day of tiring (but productive) surveying.

## UNRC

On December 5, Emily Hartop and Lila Higgins traveled to Altadena where one of NHM's Super Citizen Scientist's (Charlotte, Age 8) found a Pink Glowworm. The hunt, although unsuccessful that day, made for a great story: <http://www.nhm.org/nature/blog/super-citizen-scientist-charlotte-and-hunt-elusive-california-pink-glowworm>

Jann Vendetti also traveled to Altadena, but she was looking for *Helminthoglypta tudiculata* with Citizen Scientist Ann Mitchell and her family in early January. Jann also did a *Xerotricha conspurcata* survey at the home of Greg and Emily Han on February 1 and led a slugs and snail survey at CSULA on February 13.

*Jann and Citizen Scientist Ann Mitchell.*



*Lisa installing the Malaise trap on the roof of Angel City Brewery downtown.*

Also in early March, Jann re-visited a site she had previously been to with *Helminthoglypta tudiculata* in Eaton Canyon. She found a mutant specimen without typical brown coloration or shoulder band!

*Mutant Helminthoglypta tudiculata specimen!*



# Meetings, Workshops, and Presentations

## Dinosaur Institute

Between January 31st and February 2nd, Luis Chiappe visited the University of Wisconsin Parkside and the Kenosha Public Museum (WI). He delivered talks on the origin and early evolution of birds.



*Hollanda luceria, a Late Cretaceous bird from Mongolia.*

Dinosaur Institute Postdoctoral researcher Dr. Rachel Racicot participated in an Ediacaran workshop at Vanderbilt University in Nashville, Tennessee. With scientists from England, Canada and the USA, Drs. Simon Darroch, Marc Laflamme, and Rachel Racicot used the CT scanner to create 3-D models of 560-million-year-old fossils which will be used to learn more about how such ancient organisms lived and fed.

These fossils are some of the strangest ever described. They come from the “Ediacara biota”, which is approximately 542 to 600 million years old. These include the first large organisms on Earth, some of which might be early animals, but placing these fossils in their correct place in the tree of life is extremely controversial. In fact, despite extensive study by palaeontologists for many years, we know very little about what these organisms were like when they were alive.



In order to better understand these enigmatic fossils, the team used Dr. Darroch’s CT scanner to study them. The scanner works by using X-rays to create cross-sectional images through the specimen, which can be then used to digitally reconstruct it in 3D. They scanned a range of different fossils and were able to describe their morphology in exceptional detail, as shown in the image at left.

*Dr. Darroch places an Ediacaran fossil into the CT scanner.*

## Herpetology

Greg Pauly and Research Associate Corinne Laverty attended the *Island Rediscovery* workshop January 28–29 at the Santa Barbara Natural History Museum. The workshop was organized by The Nature Conservancy and the National Park Service and was attended by researchers from around the country who are working on the Channel Islands and also by land managers for the islands. Greg presented an invited talk on best practices in scientific collecting.

The Aquarium of the Pacific is growing their citizen science programs and recently organized the *Southern California California Citizen Science Symposium* on February 20th. Greg Pauly and Lila Higgins attended this symposium to represent citizen science at NHM.

Greg Pauly and Stevie Kennedy-Gold also attended the annual NPS Stream Team workshop at Pepperdine University in Malibu. This workshop is attended by land managers, agency biologists, and researchers interested in reptile and amphibian conservation in Southern California. Greg gave a talk on the rapid increase in nonnative reptiles and amphibians being documented through citizen science in Southern California.

## Malacology/Invertebrate Paleontology

NHMLAC was once again well represented at the 20th meeting of the Southern California Unified Malacologists (SCUM), which again met at the Laguna Hills Community Center, Laguna Hills, CA on Saturday, January 30th. Staff members Lindsey Groves, and Jan Vendetti (Malacology) and Austin Hendy (IP) and associates Ángel Valdés, Phil Liff-Grieff, Shawn Wiedrick, George Kennedy, Carol Stadum, John Alderson, and Bob Stanton, attended the one day meeting to discuss recent research and catch up on malacological news in southern California.

## Marine Biodiversity Center

On February 1, the NHM's MBC was an invited participant in an iDigBio-sponsored workshop to develop a framework for funding and collaborative efforts in museums across the Southwest U.S. The goal is to find areas where multiple institutions could benefit by joining together to exploit commonalities in collections and collection needs. The hope is that these interests can be developed into one or more NSF (or other agency) grants, perhaps including a Thematic Collections Network (TCN) or a Research Coordination Network (RCN). This planning is particularly important in light of NSF's suspension of the long-standing Collections in Support of Biological Research (CSBR) program.

## UNRC

Jann Vendetti gave two talks in January, one at NHM on January 10 for the Pacific Conchological club about SLIME citizen science and recent discoveries and another for Southern California Unified Malacologists in Laguna Hills on January 30. Emily Hartop was invited to be the speaker at the annual Friends of the Entomology Research Museum (FERM) talk at UCR on February 6. Emily gave a talk about BioSCAN and managed to work in her love for tiny flies as well. Brian Brown, Greg Pauly and Jann Vendetti gave a talk to the museum staff and volunteers on February 11 to introduce the new Urban Nature Research Center, the SuperProject, and some of the findings already coming out of the center. Lisa Gonzalez and Miguel Ordeñana attended the L.A. Biodiversity Meeting organized by Andy Shrader (of Paul Koretz's office) at the L.A. Zoo on March 11.

## Vertebrate Paleontology

In late January to early March, Xiaoming Wang spent three days in the annual Tucson Mineral and Fossil Shows, along with curator of paleontology Dr. Chun-Hsiang Chang, plus three other colleagues from the National Museum of Natural Science. After the show, he took the Taiwanese colleagues to visit the Red Rock Canyon State Park in Mojave Desert.

# Public Outreach

## Anthropology

### *Ethnology*

At the March 4th *First Fridays* event, KT Hajean led 3 tours in the Ethnology Storeroom. Each tour was packed, so Anthropology Curator Margaret Hardin and volunteers Carolyn Weiss and Omar Soto were there to rein in the crowd. The presentation focused on two Oceanic collections to go along with the ocean theme of the event. The first donation was collected in the 1890's by William Preston Harrison while traveling as a reporter in the Solomon Islands region. Due to the mystery of the region, his reports were the stuff of pure adventure to the readers back home and one report published in a Chicago newspaper in 1896 included hand-drawings of several items in the collection.



The other collection was made by Commander Harold Grieve while on duty with the U.S. Navy from 1945 to 1946. As a Naval Commander he and his men prepared the inhabitants of the Bikini Atoll for evacuation before the U.S. started using the area for atom bomb tests. They moved the natives to the Rongerik Atoll and assisted in the building of a new village. The Navy promised them they'd be able to return to the Bikini Atoll but after the tests, it was unfit for human habitation. This collection therefore represents a small piece of a culture that no longer exists.

Each collection came with photos that were taken while the collection was being made and KT used these in combination with the items collected to tell the cinematic stories behind each donation.

## Herpetology



On Saturday January 30th, Neftali Camacho led two tours of the herpetology collection to students from John Adams Middle School (JAMS). The students were at the Museum to participate in an iNaturalist training.

Neftali again represented Herpetology on Saturday February 20th in *Junior Scientist: Survival of the Scaliest*. Neftali led four tours of the herpetology collection to guests and their children. The tours focused on thermoregulation in reptiles, specifically those in desert environments.

*Neftali with Junior Scientists during the behind-the-scenes tour of the Herpetology Collection.*



## History

In February the Director of USC's Historic Preservation Program in the School of Architecture, Trudi Sandmeier, brought her graduate class to the Seaver Center to introduce her students to the original resource materials available in the Center. They were particularly interested in the Fire Insurance and Real Estate Atlases and in the surveys of Historic Sites in Los Angeles County.



On January 9th the Seaver Center hosted the Southern California chapter of the American Society of Picture Professionals. The Center's photograph collections document the entire spectrum of photographic processes including daguerreotypes, ambrotypes, tintypes, stereo views, lantern slides and glass plate negatives. Here the group is looking at the 1894 book of Pierce-McConnell albumen prints advertising Los Angeles businesses.

## UNRC

Brian Brown did an interview on KPCC's show *Take Two* about Monarch butterflies (<http://www.scpr.org/programs/take-two/2016/03/03/46901/how-monarch-butterflies-are-getting-their-groove-b/>) and Miguel Ordeñana was interviewed for an episode of *SoCal Connected* about P-22 and P-32 (<https://www.kcet.org/shows/socal-connected/a-tale-of-two-mountain-lions>).

Events for the UNRC have been nonstop this winter!

The El Niño SnailBlitz has been a huge success — starting with the kickoff event on January 16 in Eaton Canyon, and following through to the latest event, a Griffith park SnailBlitz on February 20. Contributions toward the 1000-observation goal are being accepted through mid-April, so if you see slugs and snails out snap a picture and contribute! Some of the media coverage for the SnailBlitz is below.

*LA Weekly*: <http://www.laweekly.com/arts/the-nhm-wants-you-to-instagram-your-el-ni-o-snails-6476200>

*LA Times*: <http://www.latimes.com/science/la-sci-snail-hunt-20160130-story.html>

*Scientific American Symbiartic*: <http://blogs.scientificamerican.com/symbiartic/find-all-the-snails/>

*Mental Floss*: <http://mentalfloss.com/us/go/74003>

*SoCalWild*: <http://www.socalwild.com/2016/01/gastropods-among-us/1658/>

*KCET*: <http://www.kcet.org/news/redefine/rewild/invertebrates/goin-on-a-slug-hunt.html>

In additional snail news, Jann did a program on local endemic and introduced land snails (live and shells) at the *NHM Homeschool Day* on January 29 and did a similar program for Disney, Sony, and other potential donors at a lunch on February 18. Jann was also a distinguished speaker at CSU Dominguez Hills with her talk *Research Col-*

lections and Citizen Science: using specimens, person-power, and social media to catalogue the diversity of life on February 25, and did a SLIME talk at Eaton Canyon Nature Center: *Diversity at our feet: the under-appreciated molluscan fauna of Southern California* on March 2. It's been a very busy winter for snails and slugs (and their researchers)!

On the insect front, Lisa Gonzalez led the *First Friday* tours on February 5, talking about insects in Hollywood, and also led *Scavenger Safari* on March 5.

Miguel Ordeñana and Lisa Gonzalez each gave two presentations for the *Nature Lab* volunteer and docent training on February 25th and 27th.

*Luis Chiappe's son, Luca, at the Griffith Park SnailBlitz event.*



## Vertebrate Paleontology

Vertebrate Paleontology Assistant Collections Manager Vanessa R. Rhue was invited to give a presentation at 2nd Street Elementary School in East Los Angeles on 23 February 2016. Over 60 3rd graders gathered in the assembly room to hear about Paleontology. The students learned how fossils are formed, where they can be found, and the different types of organisms that can be preserved in the fossil record. The second part of the presentation ad-



ressed the importance and purpose of museum collections to collect, preserve, exhibit, and study these materials. On 9 March 2016, 20 students from the school were able to travel to the Museum on a field trip. Not only were they able to see the exhibits for the very first time, but they also got a behind-the-scenes peek at our vast vertebrate paleontology collections. The students were able to recall what they learned from the lecture and witness first hand the laboratory and collections work that goes into preparing, documenting, and organizing these specimens held in public trust.

*Mrs. Macaulay's 3rd grade class puts their smiles on while saying Smilodon when touring the vertebrate paleontology collections and laboratory.*

# External Funding

## UNRC

Western Exterminator has upped its annual giving to the museum by a significant amount to help sponsor the Nature Lab Demo table. Some smaller donations have come in as well. All funds are budget relieving.

# Student Mentoring and Research

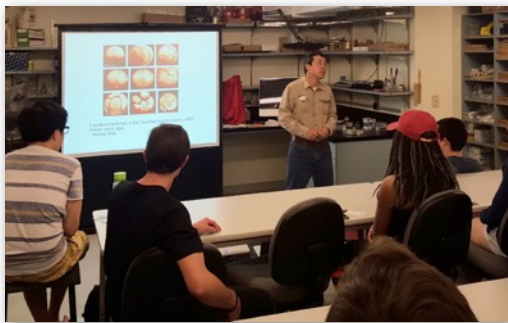
## Dinosaur Institute

In December 2015, Alyssa Bell and Luis Chiappe visited the collection of Kansas University's Natural History Museum in Lawrence. The trip had the purpose of consulting material of Cretaceous hesperornithiforms, a group of Cretaceous diving birds abundant in rocks from the Western Interior Seaway. In relation to these studies, KU NHM Collection Manager David Burnham visited L.A. between March 7–10, when the team CT scanned a specimen from the KU collection.



## Marine Biodiversity Center

### *Xiaoming Wang on development*



On February 11, the MBC hosted the faculty and students of USC's course *BISC480: Developmental Biology*. Xiaoming Wang addressed the class with a presentation detailing some of the ways that fossil evidence can (and cannot) add to our knowledge of evolutionary developmental biology. The talk ranged from the rare but valuable insights to be gained from exceptional fossils (the photo shows fossilized embryos only a few cells in size) to the understanding we now have of how ears develop and evolved, thanks to fossil, morphological, molecular, and functional examinations.



USC students cracking open their crabs to study the internal anatomy

On March 10th the Marine Biodiversity Center had the pleasure of hosting a cancrid crab dissection exercise in the Collaboratory for the USC Developmental Biology course. Pairs of students were given crabs fresh from the market to first dissect and study their anatomy, then the claws and legs were thrown in the cooker for a post-class crab boil. Much learning happened and fun was had by all — save the crabs.



USC students and MBC staff working hard for their lunch

## UNRC

In Entomology, Lisa Gonzalez is working on a lizard diet study with Juliana Camargo, a undergrad from Pitzer College. In cooperation with Greg Pauly and Assistant Professor of Biology Kris Kaiser, Lisa and Juliana are identifying the insects and other arthropods found within the gut contents of both historic and recently collected Western fence lizards, *Sceloporus occidentalis*. In Malacology, a Glendale Community College student intern, Ole Willadsen, is working on a protocol to extract DNA out of snail slime non-lethally.



*Juliana Camargo, an organismal biology major from Pitzer College, identifying lizard gut contents.*

# Volunteers and Research Associates

## Dinosaur Institute

Research Associate Dr. Mike Habib gave a biomechanics seminar at the museum for the performers/puppeteers of the NHM Exhibits and Education Departments. He also hosted the opening of the AMNH's traveling exhibit *Pterosaurs: Flight in the Age of Dinosaurs* in Pittsburgh, PA. Dr. Habib was instrumental in the development of the AMNH's coming exhibition.

*Brian Meredith operates a new puppet pterosaur during demonstrations on Fossil Day. Puppeteers work long hours to develop skills to recreate the movements of ancient animals.*



## Vertebrate Paleontology



The Vertebrate Paleontology staff thank Jed Docherty for his service to our department these past six months. Jed began volunteering in our department last October, when he set out to devise a protocol for scanning archives in our Vertebrate Paleontology collections. Jed's background in forecasting has brought a detailed approach to outlining the framework for future volunteers to join in this initiative. The first project has been to digitally scan hand written field notes. This has been a most useful project, which not only increases access to the information and a digital record of the data, but also helps us prioritize unprepared specimens for future study. We also thank Vertebrate Paleontology volunteers Anna Johnson and Sarah Knowlton for their significant contributions to this project.

*Vertebrate Paleontology Volunteer, Jed Docherty, scans field notes written by local paleontology collector, David N. Stevens.*

# Distinguished Visitors

## Anthropology

### Archaeology

On February 19th Chris Coleman hosted Dr. Jenn Perry from CSU Channel Islands and seven of her students for a research visit regarding our Channel Islands collections from Santa Barbara Island. The Anthropology Department houses archaeological collections from the Channel Islands made during 1926–1975 that are often used by researchers. She and her students spent the day photographing and recording information regarding the various categories of lithic material represented in the tool assemblages from our collections. Dr. Perry's data from these collections as well as others will provide a comparative base for upcoming fieldwork she plans to conduct later this year.



*Dr. Jenn Perry with her students examining Santa Barbara Island archaeology collections.*

## Dinosaur Institute



*Team from Zhejiang Museum and Drs. Luis and Xiaoming Wang. Vice Director Xingsheng (center left) and Director Yan (center right).*

In late January, the Dinosaur Institute welcomed officials from the Zhenjiang Museum of Natural History, China. Director Hongming Yan and Vice Director Dr. Jin Xingsheng were accompanied by eight colleagues who discussed potential projects involving early birds and dinosaurs from the Cretaceous of China. Drs. Luis Chiappe and Xiaoming Wang represented the NHM.

## Malacology

Malacology Research Associate and Calif. St. Univ., Fullerton grad student Shawn Wiedrick visited the collection to examine micro-turrid specimens for research purposes. Ángel Valdés visited the collection three times to use the SEM and examine specimens of northeast Pacific opsithobranchs for a chapter in an upcoming book on shelled gastropods of the region. Peter Stalschmidt (University Koblenz-Landau, Germany) spent six days in the collection examining turrid gastropods for the same upcoming book on NE Pacific shells mentioned above. Allison Fitts-Penniman (UCLA) visited to obtain samples of various nudibranch specimens for sequencing. Priscilla Akin (SBMNH) visited to examine eastern Pacific pectinid bivalve specimens for research purposes. Craig Hoover (Cal. Poly. Pomona), who is researching nudibranchs of the genus *Felimare*, visited to obtain samples for sequencing purposes. Jessica Morales (Cal. St. Univ., Los Angeles, Anthropology) visited the landsnail collection in Carson to examine helminthoglyptid snails for her thesis work on modeling paleoclimates on San Nicolas Island.

Charles Drost (US Geological Survey, Flagstaff, AZ) is also researching the landsnail fauna of San Nicolas Island and visited the Carson facility to compare specimens recently collected. Lance Gilbertson (Malacology Research Associate) visited the Carson facility with Calif. St. Univ., Fullerton grad student Jordan Abney to dissect some helminthoglyptid snail specimens for comparative purposes. Jaymes Aubrey (Calif. St. Univ., Los Angeles) visited to obtain sacoglossan gastropod samples for his research.

*US Geological Survey Biologist Charles Drost examining helminthoglyptid snails from San Nicolas Island, CA.*



*Jaymes Aubrey (Calif. St. Univ. Los Angeles) processing sacoglossan gastropod specimens for his research.*

## Vertebrate Paleontology

Dr. Sarah Rieboldt of LSA Associates, Inc. visited our collections 15 January 2016. She brought a donation of fossils to be integrated into our Vertebrate Paleontology collections from a local mitigation project and also toured our facilities during her visit.



*Dr. Sarah Rieboldt along with Vertebrate Paleontology Collections Manager, Dr. Samuel A. McLeod, examine a large mass mortality slab of fossil herrings undergoing housing in our laboratory.*

Dr. Bruce Lander of Paleo Environmental Associates visited our collections 21 January and 23 February. Dr. Lander is continuing to work on the fauna from Titus Canyon, Inyo County, California. He is working with colleagues to identify additional material from the deposit, which allows us to add to the known record from this area.

# Recent Publications

**Brown, B.V.** (2016) Two new bee-killing flies from Brazil (Insecta: Diptera: Phoridae: Melaloncha). Biodiversity Data Journal 4: e7715. DOI: 10.3897/BDJ.4.e7715

Brusca, R. C., and **J. W. Martin**. 2016. Chapter 21. Phylum Arthropoda, Crustacea: Crabs, Shrimps, and Their Kin. Pp. 761–841 In: R. Brusca, W. Moore, and S. M. Shuster (editors), *Invertebrates* (third edition). Sinauer Associates, Inc., Sunderland, Massachusetts. *This updated chapter, in the most popular college level invertebrate textbook in the country, is now the most up-to-date "general" account of crustaceans available.*



**Chiappe, L.** 2016. Evidence of early takeoff: The fossilized wing of a 125-million-year-old bird has the necessary structure for flight. *Natural History* (124) 2: 20-21.

Eiseman, C. S. & **Hartop, E.A.** (2015). A new species of *Megaselia* Rondani (Diptera: Phoridae) reared from a *Macrodidiplosis* Kieffer (Diptera: Cecidomyiidae) gall on black oak. *Proceedings of the Entomological Society of Washington* 117(4):463-466.

Grey, I.E., **Kampf, A.R.**, Price, J.R. and Macrae, C.M. (2015) Bettertonite,  $[Al_6(AsO_4)_3(OH)_9(H_2O)_5] \cdot 11H_2O$ , a new mineral from the Penberthy Croft mine, St. Hilary, Cornwall, UK, with a structure based on polyoxometalate clusters. *Mineralogical Magazine* 79, 1849-1858. DOI: 10.1180/minmag.2015.079.7.16

**Hartop, E.A. & Brown, B.V.** (2015). Natural blondes: New species of brilliantly yellow-colored and morphologically distinct *Megaselia* (Diptera: Phoridae) from Central America [Naturblondinen: Neue Arten von leuchtend-gelben und morphologisch eigenständigen *Megaselia* (Diptera: Phoridae) aus Mittelamerika]. *Studia dipterologica* 21(2) 2014: 257-265.

**Hartop, E.A. & Brown, B.V.** (2015). Seeing spots: Another distinct spotted wing species of *Megaselia* Rondani (Diptera: Phoridae) from Costa Rican cloud forests [Flecken sehen: Eine weitere markante, mit Flügelflecken versehene Art von *Megaselia* Rondani (Diptera: Phoridae) aus dem Nebelwald Costa Ricas]. *Studia dipterologica* 21 (2) 2014: 181–185

**Hartop, E.A., Wong, M.A.,** and Eiseman, C.S. 2016. A new species of *Megaselia* Rondani (Diptera: Phoridae) from the BioSCAN Project in Los Angeles, California, with clarification of confused type series for two other species. *Proceedings of the Entomological Society of Washington* 118(1):93-100.

**Kampf, A.R.,** Mills, S.J., Nash, B.P., Thorne, B. and Favreau, G. (2016) Alfredopetrovite, a new selenite mineral from the El Dragón mine, Bolivia. *European Journal of Mineralogy* 28, (Fast-track paper published online) DOI: 10.1127/ejm/2015/0027-2506.

**Pauly, G. B.** and D. B. Borthwick. 2015. Geographic Distribution: *Anolis carolinensis* (Green Anole). *Herpetological Review* 46 (4): 567.

*This note reports the first record of nonnative Green Anoles for Los Angeles County. Greg's co-author is the citizen scientist who helped document this new population.*

**Pauly, G. B.,** Yoshida, G. S. and R. Worrell. 2015. Geographic Distribution: *Hemidactylus garnotii* (Indo-Pacific House Gecko). *Herpetological Review* 46 (4): 569.

*This note reports the first record of the Indo-Pacific Gecko, a southeast Asian asexual gecko species, in the state of California. Citizen scientists and co-authors Glen Yoshida and Bob Worrell helped document the first Los Angeles and Orange County populations, respectively.*

Rogers, D. C., J. Olesen, and **J. W. Martin**. 2015. A new possibly parthenogenetic species of *Lynceus* from Canada (Crustacea: Branchiopoda: Laevicaudata), with a key to the Nearctic female Laevicaudata. University of Kansas, Scientific Papers of the Natural History Museum: 47: 1-9.

*Clam shrimp, small crustaceans that live only in fresh and ephemeral (temporary) waters, are sometimes found in populations composed only of females. This Canadian population of a new clam shrimp species contained a few males out of several hundred individuals that were collected, possibly indicating that it is becoming parthenogenetic.*

**Wang, X.**, H.-j. Wang, and Q.-g. Jiangzuo. 2016. New record of a haplocyonine amphicyonid in early Miocene of Nei Mongol fills a long-suspected geographic hiatus. *Vertebrata Palasiatica* 54(1):21-35.

## Staff Departures & New Staff

### Conservation

The Conservation Section welcomes new Assistant Conservator Marina Gibbons! Marina began work in January, arriving just in time to help deinstall the exhibit *Mummies: New Secrets from the Tombs*. She is treating artifacts to prepare them for outgoing exhibit loan and working on anything else that comes through the lab! A graduate of the dual Master's conservation program at University College London, Marina has previously worked in the conservation lab at the Royal Albert Memorial Museum at Exeter and at the Semitic Museum at Harvard University.

*Marina Gibbons, Assistant Conservator*



### Registrar's Office

The Registrar's Office has some new faces! Assistant Registrar Jessica Lui started at NHM in the beginning of January and is working with outgoing specimen research loans and other collections transactions. A graduate of the Museum Studies Master's program at New York University, she brings experience from the National Air and Space Museum and the National Museum of Natural History. Temporary Assistant Registrar

Shoshana Dudley joined us at the end of February and is covering exhibit loans, some specimen research loans, and other registrar responsibilities during Associate Registrar Molly Sjoberg's maternity leave. A graduate of Humboldt State University, she comes to us most recently from the Autry Museum and Dietl International Services, a fine art shipping company.



*Jessica Lui, Assistant Registrar*



*Shoshana Dudley, Temporary Assistant Registrar*



# Miscellaneous

## Dinosaur Institute

Dr. Rachel Racicot traveled to Washington, DC on January 28th with her fiancé Simon Darroch (an Assistant Professor at Vanderbilt University), his sister, Georgina, and Simon's parents, Sir Nigel Kim Darroch and Vanessa Darroch, as part of the Presentation of Credentials to Kim as the new UK Ambassador to the United States. Rachel had the opportunity to witness the ceremony and meet President Barack Obama.

*Left to Right: Drs. Simon Darroch and Rachel Racicot, President Obama, Sir Nigel Kim Darroch and Vanessa and Georgina Darroch.*



## Chiappe gets his bird...



Dr. Luis Chiappe holds the new species of bird named in his honor — *Chiappeavis magnapremaxillo*. *Chiappeavis* was described by Luis' former student, Dr. Jingmai O'Connor of the Institute of Paleontology and Paleoanthropology in Beijing, China. This specimen is housed at the Tianyu Natural Museum in Pingyi County, China. Dr. O'Connor believes *Chiappeavis* preserves evidence of a rectricial bulb which allows for strong aerodynamic tail fans that increase flight function and efficiency in extant birds. Congratulations Dr. Chiappe, nobody deserves it more than you!

<http://www.cell.com/current-biology/abstract/S0960-9822>

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