Research & Collections News

The Occasional Newsletter of the Research and Collections Staff
Natural History Museum of Los Angeles County

re•search (r -sûrch , r 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.

May, 2005

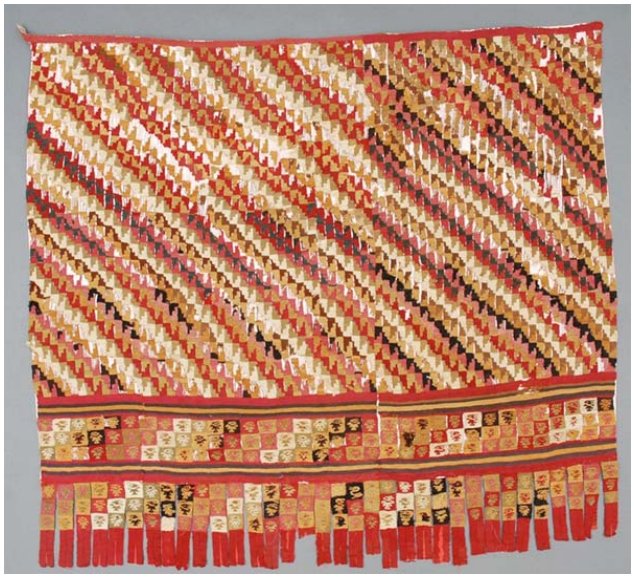
(covering the months of March and April, 2005)

Collection News

Anthropology

Krystal Vuong (Collections Intern, Anthropology) is finalizing a comprehensive inventory of the Museum's collection of ancient Peruvian textiles. The project was funded by the department's second grant from the Museum Loan Network (MLN), which was awarded to Scott Van Keuren (Assistant Curator, Anthropology) in the amount of $15,942. The collection totals nearly 520 whole or fragmented textiles as well as a sewing kit and a *quipu* (an ancient record-keeping device made of string and knots).

Above: Sewing kit, Chancay culture, dating A.D. 1300-1400.



At right: Wool shawl, Nazca culture, dating before ca. A.D. 750.

The textiles are a prominent but poorly known part of the Museum's Latin American archaeological collections and have considerable exhibit potential. The grant has allowed us to prepare the collection for future loans, enhance its accessibility to external institutions and the public, and improve storage conditions. In addition to Krystal

Vuong's hard work, the project was made possible with the help of Karen Wise (Associate Curator, Anthropology), Chris Coleman (Collections Manager, Anthropology), Daniel Watson (Photographer), and Tania Collas (Museum Conservator).

Invertebrate Paleontology
Mary Stecheson and her team have added 25,161 specimens, comprising 1,344 lots, to the LACMIP database, bringing the total amount of cataloged material to 599,374 specimens in 27,951 lots. The searchable LACMIP database is available to the public at: http://ip.nhm.org/ipdatabase/index

Birds
The Ivory-billed Woodpecker lives on….! You've all read of the recent rediscovery of the Ivory-billed Woodpecker (*Campephilus principalis*) in the extensive floodplain forests of east-central Arkansas. What you may not know is that one may be found closer to home – a taxidermy mount in the Hall of Birds (mezzanine area above the California Condors). Our collections include three additional study skins of Ivory-billed Woodpeckers, as well as three of the closely related, larger, and probably "even more extinct" Imperial Woodpecker (*C. imperialis*) of north-central Mexico. Contact Ornithology Collections Manager Kimball Garrett if you would like to see these specimens.

Field Work

Entomology
Brian Brown spent two weeks in Costa Rica recently, both in the field and the laboratory. His field work was in the northern Guanacaste province, on the Nicoya Peninsula, at a private forest reserve (photo at right). There, he and his Costa Rican colleagues successfully collected bee-killing flies as part of his NSF-funded revision of this group. Later, he worked on the collection at the Costa Rican Instituto Nacional de Biodiversidad, where he is a collaborator in the national biodiversity inventory program.

Polychaetes
Leslie Harris (Collection Manager) had a two week working vacation in Panama when she assisted Dr. Peter Glynn (Univ. Miami, Rosenstiel Marine Center) in his yearly coral reef assessment. Glynn was the first to document coral bleaching and has been studying effects and recovery at Isla Uva since 1985, the longest running monitoring program in

the world. Leslie and Dr. Ingo Wehrtmann (University of Costa Rica) spent most of the their time on the Smithsonian-owned Isla Coibita (at right) adjacent to the study site collecting and identifying their own samples plus the live material collected by Glynn's team. Impressed by her work, Wehrtmann has invited Leslie to collaborate on his current project, a digital field guide to the marine invertebrate fauna of Costa Rica.

Meetings, Workshops, and Presentations

Anthropology

In April, Assistant Curator of Latin American Anthropology Bill Wood attended the Society for Applied Anthropology's Annual Meeting in Santa Fe, New Mexico, where he presented a research paper entitled "Picturing Pristine Coral Reefs and the Government of Eco-Friendly Tourism at Las Bahías de Huatulco Resort." Bill's presentation was part of a panel on tourism and heritage in Oaxaca, Mexico that he co-organized with Dr. Jayne Howell, Professor of Anthropology, California State University at Long Beach (photo courtesy of Dr. Art Murphy, Anthropology Dept., University of North Carolina at Greensboro).

Anthropology

Scott Van Keuren (Assistant Curator) presented two papers at the 70th Annual Meeting of the Society for American Archaeology in Salt Lake City (March 30 to April 3). *Order in a Time of Chaos: Cultural Boundaries in Northern Arizona Following the Eruption of Sunset Crater* reported on new work at archaeological sites near Flagstaff, Arizona. The paper discussed the impact of a famous eleventh century volcanic eruption on ancient village farming societies in the region. The second paper (*Social Integration of Puebloan Architecture in the Mogollon Rim Region: An Open Space Analysis*), co-authored with Jessica Munson (University of Arizona) and Charles R. Riggs (Ft. Lewis College), examined the processes by which large Ancestral Pueblo villages were built and eventually abandoned in the fourteenth century Southwest.

Vertebrate Paleontology

Lawrence Barnes, Curator of Vertebrate Paleontology, in late April attended the Desert Symposium sponsored by the California State University system. There he made a

presentation about an odd group of highly evolved walrus-like pinnipeds, called *Valenictus*, whose fossil limb bones, found in California's Imperial Desert, are very stout and very dense. Barnes theorizes that the heavy limb bones of these inhabitants of the Proto-Gulf of California enabled them to remain on the sea floor while they fed on bottom-dwelling invertebrates.

Earlier in April, Barnes made a presentation at the biennial conference of the Peninsular Geologic Society in Ensenada, Mexico, where he reported that in 3 to 4 million-year-old deposits on Baja California's Magdalena Plain, a similar species of *Valenictus* lived in association with an even more highly modified dense-boned walrus, as well as another extinct walrus that is very similar to the living walrus, and a large typical sea lion. These southerly walruses demonstrate not that Mexican seas were particularly cold at that time, but rather that in the geologic past, walruses were more diverse and more widespread than they now are.

At the same conference in Mexico, Barnes and one of his students, Gabriel Aguirre of the Universidad Autonoma de Baja California, La Paz, announced the identity of a new type of extinct species of dolphin that is intermediate between the living bottlenose dolphin and the false killer whale. The wonderful fossil skull of this animal (above) was discovered on Isla San Jose during the Museum's 2003 members' cruise of the Gulf of California. The existence of this intermediate form of dolphin suggests that modern dolphins diversified relatively recently, and also helps explain why in Hawaii's Sea Life Park, a captive false killer whale and a bottlenose dolphin mated and gave rise to a viable offspring, nicknamed a "wolphin." This is another example of the fossil record helping to explain phenomena among living species of animals.

Julian C. Dixon Institute for Cultural Studies
Dr. Raymond Codrington, Director of the Dixon Institute, presented a paper at the Society for Applied Anthropology entitled "Lost and Found in Translation: Cultural Anthropology and Natural History Museums" on April 8th in Santa Fe, New Mexico.

External Funding

Fishes
Chris Thacker, Jeff Seigel and Rick Feeney have received their NSF grant to treat the fungus infection in the Ichthyology skeleton collection. The grant is for $135,000 over

two years, and in addition the NHM has generously contributed $40,000 as matching cost. The grant will be used to hire a curatorial assistant, enlist a fungus remediation firm to clean the infected skeletons, and provide materials to rehouse the entire skeleton collections in both Ichthyology and Herpetology in plastic boxes. Our skeleton collections are considerable and include an estimated 6,000 fish skeletons representing many major groups, and 2,000 herp skeletons, including the important Jay Savage collection of Costa Rican frog and lizard skeletons.

The skeletons are used in exhibits and outreach as well as research on morphology, systematics, and archaeology - fish skeletons are often common in archaeological sites, and our collection has been used in many such projects.

Anthropology and Invertebrate Studies

Scott Van Keuren (PI; Archaeology) and Ángel Valdés (Co-PI; Malacology) were awarded a grant in the amount of $236,565 from the National Science Foundation's *Research Experiences for Undergraduates* (REU) program. The three-year program will allow curators and other staff in Research and Collections to offer eight summer internships to students primarily from colleges and universities in the southern California region. The program targets students from groups who are underrepresented in the sciences. In addition to stipends, interns will receive support for research equipment, travel to conferences, and housing. The grant proposal was a team effort that benefited from the contributions and advice of numerous curators and other Research and Collections staff.

Conservator

The Conservation Section and the History Department were awarded a Conservation Project Support grant in the amount of $67,657 from the Institute of Museum and Library Services (IMLS) to conduct a detailed condition survey of the *New Orleans*, one of the two surviving Douglas World Cruisers (shown at left in flight), the first airplanes to circumnavigate the globe. This historic aircraft is believed to still retain much of its original skin and components. It is one of the hidden treasures of the Natural History Museum.

Vertebrate Paleontology

Dr. Luis Chiappe was awarded a grant in the amount of $295,806 from the National Science Foundation for his project titled "Diversity and Evolution of Birds from the Earliest Tertiary of Denmark," a collaborative study involving scientists from LACM, University College Dublin (Ireland), and the Geological Museum (Copenhagen, Denmark).

The timing of the evolutionary radiation of living birds and their genealogical inter-relationships have long been subjects of scientific controversy. The incorporation of well-preserved, early fossils of modern birds into genealogical hypotheses of their living relatives provides great potential for substantially improving our understanding of these critical issues. This 3-year project plans to study a series of exceptionally well-preserved, 55-million-year-old fossil birds from northern Denmark. The fossils include complete specimens that are the best-preserved representatives of the primitive radiation of modern birds. The study of these ancient fossils will involve anatomical descriptions and analyses of their evolutionary relationships, which will be published in international journals.

This project will result in a comprehensive study of an important early phase of the evolutionary history of modern birds. It will provide training for a junior female postdoctoral researcher of Hispanic background and an important supplement to the professional development of a Danish PhD student. Furthermore, by bringing together an international team of researchers (US, Ireland and Denmark), the project will strengthen the ties between American and European institutions conducting research on evolutionary biology and paleontology of birds.

Public Outreach

Anthropology

In conjunction with the exhibit Conversations, Assistant Curator of Latin American Anthropology Bill Wood and Los Angeles based artist Kim Abeles are featured in two digital audio pieces available to download from the museum's web site <www.nhm.org/exhibitions/conversations/index.html>. In the 2 minute pieces, Bill and Kim discuss their work together on Kim's art installation and silk screen print for the exhibit.

Vertebrate Paleontology

This spring marks the official debut of a website for the Red Rock Canyon fieldtrips, one of our popular family weekend trips led by Xiaoming Wang and Gary Takeuchi of Vertebrate Paleontology and Lorelei Sells of Education. The website is designed to allow our participants to see what happened to the specimens after they were collected from the field and to provide general information about the geology and paleontology of the Mojave Desert. We will continue to update this site after each trip (thanks to Stefka Hristova for her generous support and encouragement). Check out our site at: http://www.nhm.org/redrock/

Invertebrate Paleontology
Invertebrate Paleontology hosted a visit from Dr. Richard Squires, Cal State Northridge, and ten students from his Introduction to Paleontology class. Students received an in-depth tour of the collections and were introduced to some of the basics of curation and museum procedures. They were particularly interested in our large collections of specimens from California, especially the oldest Cambrian and Precambrian fossils.

Julian C. Dixon Institute for Cultural Studies
Dr. Raymond Codrington was on AirTalk with Larry Mantle on KPCC 89.3 FM, May 3. Along with historian Paul Hutton (University of New Mexico), he discussed the fascination with outlaw culture and the parallels between the gangster of the old west and the image of the gangsta in contemporary hip hop culture. This was a continuation of a panel discussion in which he participated at the Autry Museum on Saturday April 30th, which was also moderated by Larry Mantle.

Distinguished Visitors

Birds
On 19 March the museum hosted a fundraising lecture by Dr. Robert Ridgely of the American Bird Conservancy on "The Changing Face of Conservation of Neotropical Birds." Dr. Ridgely, author of several detailed field guides to the birds of South America and Panama, described his experience with the 1997 discovery of a distinctive new antpitta (*Grallaria ridgelyi*) in Ecuador and the conservation efforts he spearheaded to preserve the species' limited habitat. Proceeds from Dr. Ridgely's lecture benefited his "Jocotoco Foundation" and several participating Audubon Society chapters. Our ornithologists Ken Campbell and Kimball Garrett were on hand, and Garrett introduced speaker Ridgely. Dr. Ridgely and noted bird artist Guy Tudor also toured the Ornithology collections prior to the evening lecture.

Recent Publications

Bonaccorsi, E., Merlino, S., and **Kampf, A. R.** (2005) The crystal structure of tobermorite 14Å (plombierite), a C-S-H phase. Journal of the American Ceramic Society 88(3): 505-512.

This was the feature paper in the March 2005 issue of the Journal of the American Ceramic Society (www.ceramics.org/journal). The importance of this mineral is that it is related to one of the main products of the binding process in Portland cement.

Cerling, T. E., **J. M. Harris**, and M. G. Leakey. 2005. Environmentally driven dietary adaptations in African mammals. In: Ehleringer, J. R., M. D. Dearing and T. E. Cerling (eds) *History of Atmospheric CO2 and its Effects on Plants, Animals, and Ecosystems*, 258-272. New York, Springer-Verlag.

The diverse hominid-bearing vertebrate assemblages of the Lake Turkana Basin in northern Kenya document the timing of the adoption of a C4 grazing diet in late Miocene zebras, elephants and pigs, and late Pliocene short-necked giraffes.

Martin, J. W. 2005. Review of: *Larvae of anomuran and brachyuran crabs of North Carolina: A guide to the described larval stages of anomuran (families Porcellanidae, Albuneidae, and Hippidae) and brachyuran crabs of North Carolina, U.S.A*., by S. G. Bullard., Crustaceana Monographs, 1. Journal of Crustacean Biology 25(1): 175-177.

Martin, J. W., and T. M. Shank. 2005. A new species of *Chorocaris* (Decapoda, Caridea, Alvinocarididae) from hydrothermal vents in the eastern Pacific. Proceedings of the Biological Society of Washington 118(1): 183-198.

This unusual discovery discusses a new shrimp species in the eastern Pacific that has strong genetic and morphological ties to a closely related shrimp in the middle of the Atlantic Ocean.

Haney, T. A., and J. W. **Martin**. 2005. *Nebalia kensleyi*, a new species of leptostracan (Crustacea, Phyllocarida) from Tomales Bay, California. Proceedings of the Biological Society of Washington 118(1): 3-20.

Filkorn, H. F., J. Avendaño Gil, M. A. Coutiño José, and F. J. Vega Vera. 2005. Corals from the Upper Cretaceous (Maastrichtian) Ocozocoautla Formation, Chiapas, Mexico. Revista Mexicana de Ciencias Geológicas, 22(1):115-128.

Sitton, T. 2005. *Los Angeles Transformed: Fletcher Bowron's Urban Reform Revival, 1938-1953* (University of New Mexico Press, 2005).

A study of municipal social and political history from the Depression to the Cold War. Just out this month!

New Staff

Invertebrate Paleontology

The IP section welcomed a "new" volunteer in April, Kay Nakamura, who had volunteered in IP several years ago. Kay will be working on the donated collection of fossils from Cal State Northridge, preparing them to be integrated into the main collections.

Staff Departures

Marine Biodiversity Processing Center

April marked the last full month that Krista Zala, of the Marine Biodiversity Processing Center, was employed by the Museum. We will miss her and wish her well as she leaves to pursue a career in science journalism.

Miscellaneous

Vertebrate Paleontology

Jack Tseng, an undergraduate student from the University of California, Berkeley, has been admitted into the USC Integrative Evolutionary Biology (IEB) program as a graduate student with a full scholarship. The IEB is jointly run by the Natural History Museum and University of Southern California. Jack is interested in working on the functional morphology and vertebrate paleontology of bone-crushing carnivores, such as extinct borophagine dogs and hyenas, taking advantage of expertise in vertebrate paleontology at LACM and biomechanics at USC. Such a multidisciplinary research orientation is what the IEB is designed for—to achieve synergies that are otherwise unavailable in either institution. Jack will be supervised by Xiaoming Wang and Jill McNitt-Gray.

Rancho La Brea

In April, John Harris became an Editor of the Journal of Vertebrate Paleontology, one of the most prestigious journals in our field. Congratulations, John!

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