

Research & Collections News

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

re•search (rī-sūrĉh', rē'sūrĉh) *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.

January, 2004

(covering the months of November and December, 2003)

Collection News

Mineral Sciences

The Mineral Sciences Department received several noteworthy mineral donations at the end of 2003:



From David Oreck: A large and exceptional specimen of rhodochrosite with quartz from the Sweet Home mine, Alma, Colorado.

From Mel Hindin: Several fine mineral specimens including a particularly remarkable specimen of spessartine garnet, schorl tourmaline and muscovite on microcline feldspar from Gilgit, Pakistan.



From Beverly Savinar: A crystal of morganite beryl from the Helikon and Rubikon mine, Karibib, Namibia, the finest known specimen of its kind from that country.

Anyone interested in seeing these minerals in person is welcome to stop by the Mineral Sciences Office.

Polychaete Worms

Leslie Harris (Collections Manager, Polychaetes) spent 2 weeks in December at the California Academy of Sciences, San Francisco. CAS has a medium-sized polychaete collection but no polychaete workers. As a result, the collection has many lots of unsorted worms, some incorrectly identified and some with outdated names. This was Leslie's fourth visit at the Academy's request (& expense) to work on the collection and to train curatorial assistants in polychaete identification. One bonus of these trips is that Leslie is able to take duplicate specimens from CAS lots for deposition into our own collection; this has increased our holdings of rare local species and tropical material.

Malacology

Databasing of the UCLA Recent mollusk collection, one of the goals of the Marine Biodiversity Processing Center grant from the National Science Foundation, has reached the one year mark with 8242 lots curated by Krista Zala (Curatorial Assistant, Marine Biodiversity Processing Center), and with identification and taxonomy verifications by Lindsey Groves (Collections Manager, Malacology).

Invertebrate Paleontology

The IP collections database is now online at the Invertebrate Paleontology web site (<http://ip.nhm.org>). Users can browse data from over 30,000 collecting localities and 20,000 specimen lots over the world-wide web. The locality data is mostly complete and includes thousands of digital maps and photographs of collecting sites. Most of the specimens in the catalog come from our type collection, but new data are added each day by Mary Stecheson and her team, including hundreds of digital images produced by research assistant Caitlin De La Cruz. The full site can be accessed from within the museum at <http://ip.nhm.org/ipdatabase/users>, and a public version of the system is available at <http://ip.nhm.org/ipdatabase/public>.

Two new work study students (Jenny Wiggins and Lindsey Moore) have joined the team and will be assisting Mary Stecheson with our Pleistocene cataloging project.

Fishes

The biggest issue in Ichthyology (fishes) over the past few months has been the *Aspergillus* fungus infestation on the skeleton collection in Ichthyology. Ichthyology staff have been working with operations and maintenance to adjust the climate control and airflow in the collections, and OSHA has conducted tests to gauge the degree of contamination of the air. The collections are currently closed to tours and visitors are carefully supervised to avoid exposure to the fungus. We are currently at work on an NSF collection improvement grant to clean and rehouse the infected skeletons.

Also in Fishes, volunteer Sabrina Mashburn continues her work digitally photographing our fish type specimens. University of Tennessee graduate student Rita Nayda visited the herpetology collection to study the axial musculature of snakes. Steve Goldberg continues his work in herpetology studying lizard reproduction. Collection managers Jeff Seigel and Rick Feeney conducted a series of X-ray images of juvenile oarfish and swamp eels for researcher Tyson Roberts.

Birds

Among the 440 salvaged bird specimens obtained by the Ornithology collection in 2003 were over 25 Northern Fulmars (*Fulmarus glacialis*) found beached in Los Angeles and Orange Counties in October, November and December. An unprecedented incursion of this far-northern tube-nosed seabird into southern California waters has been accompanied by the discovery of large numbers of dead or dying birds along our coast. Specimens prepared for the collection will help document the nature of this event, including the age and physical condition of the birds affected and, through increasingly sophisticated phylogeographic techniques now available, perhaps even their colonies of origin.

Vertebrate Paleontology

Howell Thomas, in the Vertebrate Paleontology Laboratory, has embarked on the preparation of an Early Miocene (about 23 million years old) toothed mysticete whale

from Orange County. Mysticetes are the group that includes the living baleen whales. Referring to a toothed mysticete may seem a contradiction in terms, but being mammals, baleen-bearing mysticetes must have had toothed ancestors, and their embryos do have teeth. Several geologically older fossil toothed mysticetes have been found and named previously, but the new specimen is a surprisingly late occurrence, having been contemporaneous with several species of more highly evolved baleen-bearing mysticetes. The study and interpretation of the specimen by Larry Barnes is being facilitated by CalTrans, one of whose projects unearthed the specimen, and the find was announced in the summer 2003 newsletter of CalTrans.

Field Work

Brian Brown, Associate Curator (Entomology), was in the field in late November through mid December, traveling in the Misiones Province in northern Argentina, where he was seeking bee-killing flies for his NSF-funded research. He was accompanied by two student assistants: Giar-Ann Kung, who has worked with Brown for many years, and former LACM Gallery Interpreter Lisa Gonzalez, who is now an Entomology student at UC Riverside. At both sites that they visited (Iguazu National Park; Reserva Urugua-í) they were successful collecting the rarely seen flies, and ended up with over one thousand specimens.

Todd Haney, Graduate Student-in-Residence and Research Assistant (Crustacea), spent most of the month of November aboard the oceanographic vessel *Atlantis* (out of Woods Hole) and the Deep Submersible Vehicle *Alvin*, on which he made two dives to depths of over 2,500 meters. Todd collected numerous deep sea crustaceans, several of which are new to science.

Christine Thacker (Assistant Curator, Fishes) completed her SCUBA collections of blackeye goby populations in the Channel Islands with dives at Santa Cruz Island, Catalina Island and San Nicholas Island. Samples from these islands will be analyzed in conjunction with those from the other Channel Islands and mainland populations to investigate the gene flow within populations.

Lindsey Groves (Collections Manager, Malacology) was co-leader of *Fossil hunting in Silverado Canyon* with Lorelei Sells and Beth Nordeen of Education and LouElla Saul of Invertebrate Palaeontology. The more than 30 participants collected Late Cretaceous invertebrate and vertebrate fossils from the Ladd Formation.

Kimball Garrett and Kathy Molina (Birds) spent nine days in mid-December documenting the distribution and habitat associations of the Gull-billed Tern (*Sterna nilotica vanrossemi*) in s. Sonora, Sinaloa and n. Nayarit, Mexico, as part of an ongoing study of this subspecies, which breeds only in southern California (mainly at the Salton Sea) and western Mexico and may have a total breeding population of as few as 500 pairs; they located 213 birds at 20 coastal sites. On this expedition, funded by the Faucett Family Foundation, they also continued to document movements of California-breeding Black Skimmers (*Rynchops niger*) by resighting 28 banded birds (including 15 individual or cohort-banded birds that originated from the Salton Sea) out of 830 birds encountered.

Meetings, Workshops, and Presentations

Anthropology

Bill Wood (Assistant Curator, Anthropology) attended the annual American Anthropological Association conference (Nov. 19-23) in Chicago where he presented a paper entitled "Indios and Mestizos" in the 'Land of Enchantment': Defining Authentic Indian Art and Mexican Fakes." A Spanish language version was published this fall in the journal *Cuadernos del Sur*, 9(19):19-33. His article examines legislative and social reaction to the "migration" of Zapotec textiles from Southern Mexico to the American Southwest and presents this research to a Spanish speaking, largely Latin American Social Science and Humanities scholarly community for the first time.

Margaret Ann Hardin (Curator, Anthropology) contributed a paper entitled "Talk about Pots: Language and the Production of Stylistic Boundaries in Tarascan Pottery Painting" to an invited symposium, "Breaking Down Boundaries: Anthropological Approaches to Cultural Transmission and Material Culture in Memory of Carol Kramer" at the annual meetings of the American Anthropological Association. Papers in the symposium discussed how the historical, cultural, social, economic, and linguistic contexts in which potters learn and practice their crafts are reflected in the vessels they produce. Archaeologists and ethnologists contributing to the symposium shared the common goal of studying variation in pottery to reconstruct and better understand the circumstances under which potters in ancient societies worked.

Crustacea

Graduate Student-in-Residence Sandra Trautwein (Crustacea) presented an invited talk on coral associated crabs ("Coral crabs: those crazy, colorful commensals of corals") to the Biology Department at Loyola Marymount University on December 6.

Regina Wetzer, Research Scientist in Crustacea and Director of the Marine Biodiversity Processing Center, represented the Museum at a workshop on the future of natural history collections in Florida in November.

Jody Martin, Curator of Crustacea, attended and spoke on behalf of R & C at a workshop at the Academy of Natural Sciences in Philadelphia entitled *The Census of Marine Life: Standards for Archiving Marine Specimens* (November) and again at a workshop at the New York Botanical Garden entitled *Development of a National Systematics Infrastructure: A Virtual Instrument for the 21st Century* (December).

Vertebrate Paleontology

Xiaoming Wang, Associate Curator of Vertebrate Paleontology, visited the American Museum of Natural History for about ten days in mid December. The main purpose of the trip was to study a newly discovered skull and lower jaw of a primitive bear (genus *Cephalogale*, family Ursidae) from the early Miocene (about 22-18 million years ago) of Orange County, California. This is the first time such an ursid has been found in California. Originating from Eurasia, this lineage of basal bears may represent the earliest immigration of the ancestral bear that crossed the Bering Land Bridge to arrive in North America.



In November, Curator Larry Barnes provided a series of lectures about marine

mammal evolution for a graduate class of the Centro Interdisciplinario de Ciencias Marinas and an undergraduate class of the Universidad Autonoma de Baja California Sur, both in La Paz, Baja California Sur. The classes also made a field trip to the Late Oligocene age (about 25 million years old) deposits at San Juan de La Costa, site of the oldest known fossil whales in Mexico.

Malacology

Ángel Valdés, Assistant Curator of Malacology, presented a talk at UCLA on December 10th entitled "Why did mollusks get naked? Evolutionary history and biogeography of opisthobranchs"

Jim McLean, Curator Emeritus of Malacology, hosted a workshop on marine micromollusks that drew graduate students from all over southern California on December 6th.

Polychaete Worms

In December, Associate Curator of Polychaetes Kirk Fitzhugh visited ECOSUR (in Chetumal, Mexico) for the thesis defense of graduate student Mariana Tovar-Hernandez (see below). She passed with highest honors and is now planning her doctoral research on the family Sabellidae, again with Kirk as one of her supervisors.

Invertebrate Paleontology

In November, Assistant Curator Ken Johnson, Collections Manager Harry Filkorn, and Research Associate Elena Perez attended the annual meeting of the Geological Society of America in Seattle. This is the largest national meeting for geoscientists in North America. Ken presented some of his recent research results in the paper 'Skeletal growth rates in Cenozoic Caribbean Corals'. Elena presented a study of deep sea life around cold seeps titled 'Benthic foraminifera from methane seeps in Monterey Bay: Ecology, stable isotopic composition and relation to biogeochemistry'.

External Funding

Malacology

In late December the Malacology section received a generous donation of \$60,000 from Twila Bratcher, a long-time Museum Associate in Malacology, who has already provided Malacology with a bequest of 1.1 million dollars, which will eventually enable Malacology to establish the Bratcher Chair for another research position in Malacology. Twila's current gift will be used primarily for the continued support of our part-time imaging specialist and biological illustrator Michelle Schwengel, who has been working to prepare the illustrations for Dr. Jim McLean's two books (northern and southern) on the Northeastern Pacific gastropods. The first two years of funding for this project has come from the Packard Foundation. We are now pleased to know that we will have enough funding to make the sumptuously illustrated books ready for publication.

Public Outreach

Mineralogy

The Mineral Sciences Department is happy to report that Tony, Dorothy and Jean all survived SoCal GemFest. We hope that everyone enjoyed the event and we thank all who helped make it a success.



Distinguished Visitors

Polychaete Worms

Dr. Sergio Salazar-Vallejo (ECOSUR, Mexico), an internationally known expert on polychaetes in general and the Caribbean fauna in particular, arrived in late November for an extended research visit (5 months). He has a one-year Fullbright scholarship to work on the systematics of the family Flabelligeridae, a poorly-known but ecologically significant group. Sergio has co-authored several papers with our polychaete staff. Additionally, Leslie Harris (Collections Manager, Polychaetes) and Kirk Fitzhugh (Associate Curator, Polychaetes) have worked at his lab in Chetumal, Mexico, while all of Sergio's students have visited the Museum. Kirk is also a committee member for Sergio's student Mariana Tovar-Hernandez. We anticipate collaborative field work in the Caribbean & Pacific Mexico this coming year. In recognition of his past & future contributions to our collection, Dr. Salazar has been given the status of visiting curator.

Crustacea

On December 9th, the Crustacea Section hosted the monthly meeting of the Southern California Association of Invertebrate Taxonomists (SCAMIT), an organization interested in furthering our knowledge of local marine invertebrates. The meeting addressed taxonomic problems with the crustacean class Ostracoda and was attended by ten SCAMIT members. Conclusions of the all-day workshop will be released early in 2004.

Recent Publications

Wang, X. 2003. New material of *Osbornodon* from the early Hemingfordian of Nebraska and Florida; pp. 163-176 in L. J. Flynn (ed.), *Vertebrate Fossils and Their Context: Contributions in Honor of Richard H. Tedford*. *Bulletin of the American Museum of Natural History* No. 279.

(This "festschrift" volume celebrates the career of Richard H. Tedford, a giant in the field of Cenozoic vertebrate paleontology and biostratigraphy who was born and grew up in LA and was a graduate of UCLA).

Harris, J. M., and M. G. Leakey (editors). 2003. *Geology and vertebrate paleontology of the early Pliocene site of Kanapoi, northern Kenya*. *Natural History Museum of Los Angeles County, Contributions in Science* 498: 1-132.

(This large volume, edited by John Harris and Meave Leakey, was published on Christmas Eve as issue 498 of the museum's *Contributions in Science* series. National Museums of Kenya expeditions undertook fieldwork at Kanapoi from 1993-1997 and discovered abundant remains of the early hominin *Australopithecus anamensis*. These 4.1 million year-old remains represent the oldest australopithecines yet known to science. *Contributions* 498 contains four articles that document and interpret the stratigraphy of the locality, the fauna associated with the hominin remains, and the paleoenvironmental setting in which these early human ancestors flourished.)

Groves, L. T., and S. N. Nielsen. 2003. A new late Miocene *Zonaria* (Gastropoda: Cypraeidae) from central Chile. *The Veliger* 46(4):351-354, figs. 1-3.

(*Zonaria frassinettii* is a noteworthy new species that represents the southernmost record for a cypraeid in the Western Hemisphere and only the second known fossil cowrie species from Chile).

Haney, T. A., and J. W. Martin. 2003. A new genus and species of leptostracan (Crustacea: Malacostraca: Phyllocarida) from Guana Island, British Virgin Islands, and a review of leptostracan genera. *Journal of Natural History* 2003: 1-23.

(This publication recognizes a new genus of “sea flea” and establishes Guana Island as the most diverse spot in the world for this group of crustaceans, a reflection not of the real diversity of this group but of our collection efforts there in recent years).

Fahey, S. J. and A. Valdés. 2003. A new species of *Platydoris* (Mollusca: Nudibranchia) from North-Western Australia. In: Wells, F. E., Walker, D. I. & Jones, D. S. (eds.) *The Marine Flora and Fauna of Dampier, Western Australia*, pp. 395-403. Western Australia Museum, Perth.

(A new species of “naked mollusk” from Australia, published as an invited chapter in a new book on the western Australian marine fauna)

Martin, J. W., Boyce, S. L., and Grygier, M. J. 2003. New Records of *Cyclestheria hislopi* (Baird, 1859) (Crustacea, Branchiopoda, Diplostraca, Cyclestherida) in Southeast Asia. *Raffles Bulletin of Zoology*. 51(2): 215-218

(The first record of a particularly interesting species of freshwater “clam shrimp” in southeast Asia).

Brown, B. V. 2003. A new fossil species of *Triphleba* (Diptera: Phoridae) with bifurcate antennae. *Studia Dipterologica*. 10: 195-197.

(This paper describes an extremely unusual new species from the museum's newly acquired, extensive collection of European Baltic amber fossil phorid flies).

Brown, B. V. 2003. In memory of Laurence W. Quate (1925-2002) [scientific obituary]. *Studia Dipterologica*. 10: 353-356.

(A review of the entomological career of Laurence Quate, who left his collection of 22,000 psychodid flies to the museum's Entomology Section).

Miscellaneous

Polychaete Worms

Drs. Milton Love (UCSB), David Clague (MBARI), and Charles Messing (NSU, Florida) all contacted Leslie Harris in December to donate seamount polychaetes to the Museum in return for their identification. Seamounts are unique habitats that support a diverse assemblage of animals, many of them endemic. The first specimens received turned out to be a new genus of scaleworm from an undescribed species of black coral. Another interesting specimen, also undescribed, is a polychaete that lives inside a bizarre predatory tunicate (or sea squirt) that looks like a cross between a sessile jellyfish & a Venus Flytrap. Because of the scarcity of samples from these undersea habitats, we expect the majority of the polychaetes to be either new species or new records.

National Science Foundation

One measure of the impact that an institution has on the field of natural history is the respect given to its staff. The National Science Foundation invites distinguished scientists to serve on its advisory panels in order to evaluate competing proposals for funding. Because only a handful of scientists are invited to any given review panel, it is unusual to find an institution represented by more than one person per review cycle. However, in the fall of 2003, the following R & C staff members all represented the Museum at the national level by serving on NSF advisory research panels in Washington, DC, and we thank and congratulate each of them: Brian Brown (Systematic Biology panel), Regina Wetzer (Systematic Biology), Jody Martin (Biodiversity Surveys and

Inventories), and Ángel Valdés (Biological Research Collections *and* Research Experiences for Undergraduates).

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