

**NO PLACE LIKE HOME:
THE SCIENCE OF SOUTHERN CALIFORNIA**

***The Natural History Museum of Los Angeles County Announces 6th Season of
First Fridays***

**DISCUSSION AND LIVE MUSIC SERIES RETURNS WITH SO-CAL SCIENCE STARS
JANUARY 8 THROUGH JUNE 4, 2010**

LOS ANGELES—First Fridays has investigated everything from Darwin to mammalian brains, but this year, we're bringing it home. The Natural History Museum (NHM) hosts six top local scientists when the provocative series returns January 8, 2010. These thinkers' work may surprise you: from earthquakes to emotions, energy to ecosystems, and new evidence that suggests a massive black hole in our galaxy (not necessarily bad news, it turns out).

Each evening begins with a guided tour of the NHM's renowned collections. Following the tours, guests can take part in forums filled with our invited scientists, moderated by neuroscientist and Executive Vice Dean of USC's College of Letters, Arts & Sciences, **Michael W. Quick**, who has helped organize the series.

In addition to the world of science, First Fridays features taste-making live performances by musicians, bands and deejays. NHM has again partnered with Silver Lake's Spaceland Productions to curate the series' concerts. (At this time, only January's bands have been announced). New for the 2010 season is resident DJ **Them Jeans**, aka DJ **Jason Stewart**.



A DJ Spins in the African Mammal Hall during First Fridays 2009
Image © Ryan Miller / Capture Imaging

Advanced tickets for First Fridays will be sold via Ticketweb.com. Admission is free for NHM members. Tickets are \$9 for adults, \$6.50 for children. Curator-led tours, films, discussions and performances are available on a first-come, first-serve basis and early purchase is recommended. For more information, the public may visit the NHM's website at www.nhm.org/firstfridays or call (213) 763-DINO.

First Fridays 2010 Events

Friday, January 8, 2010 (extended Museum hours to 10:00 pm)

SPIDEY SENSE

Guided Tour (5:30 pm): “Meet the Silk Makers” Arachnid Tour with **Brent “The Buy Guy” Karner**, NHM’s Invertebrate Living Collections Manager

Discussion (6:30 pm): “Spiders: The Miracle Engineers” with **Dr. Cheryl Y. Hayashi**
Their medium is silk; their mission is to spin. Spiders are the unparalleled architects and engineers of the natural world, and in this talk, Cheryl Hayashi introduces the basic biology of spider silk, and shares recent research on its genetics and biomechanics. Despite their gossamer appearance, spider silks have incredible mechanical properties, ranking among the strongest and toughest materials on the planet. Hayashi is revealing key information about their miracle silk, from which biomaterials including biodegradable fishing lines, medical sutures, and protective armor cloth are currently being developed.

Biography: Born and raised in Hawaii, Cheryl Hayashi received a B.S. from Yale University and a Ph.D. in Biology through a joint program with Yale University and the American Museum of Natural History. She was a postdoctoral fellow at the University of Wyoming, and in 2001 joined the faculty at the University of California, Riverside, where she is now a professor of biology. In 2007, Hayashi was named a MacArthur Fellow.

Performances (8:00 pm): Co-headlining in the diorama halls are two bands with female force, **Warpaint** and the **Tune-Yards**. The quartet **Warpaint’s** hypnotic, layered, bass-driven music with ethereal vocals and hazy guitar — we’ll call it literate psychedelia.

The **Tune-Yards’** electronic folk nucleus is Merrill Garbus, who started as a one-woman show with ukulele, and a human beat box of a voice.

DJ (throughout the night): **Them Jeans (Jason Stewart)**

Friday, February 5, 2010 (extended Museum hours to 10:00 pm)

NEW ENERGY

Guided Tour (5:30 pm): To be announced.

Discussion (6:30 pm): “Where in the World Will Our Energy Come From?” with **Dr. Nathan S. Lewis**.
What would it take for the world to get away from fossil fuels and convert to renewable energy? The dirty secret is: more than a Prius in the garage and solar panels on the roof. If we want to use wind, solar thermal and electric, biomass, hydroelectric and geothermal energy, it will take planning and willingness on the part of governments and industry. It will take R&D investment, a favorable price per unit of energy to get anyone to produce alternative energy, and plenty of resources. Nathan Lewis will discuss these and other hurdles — technical, political, and economic — that must be overcome before the widespread adoption of renewable energy technologies.

Biography: Nathan Lewis has been on the faculty at the California Institute of Technology since 1988 and has served as a professor since 1991. He has also served as the Principal Investigator of the Beckman Institute Molecular Materials Resource Center at Caltech since 1992. From 1981 to 1988, he was on the faculty at Stanford, as an assistant professor from 1981 to 1985 and as a tenured associate professor from 1986 to 1988. Lewis received his Ph.D. in Chemistry from the Massachusetts Institute of Technology. He is currently the Editor-in-Chief of *Energy & Environmental Science*. He has published over 300 papers and has supervised approximately 60 graduate students and postdoctoral associates. His research interests include artificial photosynthesis and electronic noses.

Performances (8:00 pm): To be announced.

DJ (throughout the night): **Them Jeans (Jason Stewart)**

Friday, March 5, 2010 (extended Museum hours to 10:00 p.m.)

FLY WITH US

Guided Tour (5:30 pm): **“Flies: They’re Everything You Think They’re Not”** — Tour of the Entomology Collection with **Dr. Brian Brown**, Curator of Entomology.

Discussion (6:30 pm): **“Emotion Circuits in Model Organisms, or Do Flies Have Feelings?”** with **Dr. David J. Anderson**.

David Anderson is using molecular genetic techniques to map and probe neural circuits that underlie innate behaviors in fruit flies. Why the fly fascination? Because their behavioral responses, and associated internal states (such as arousal), form the evolutionary underpinnings of emotional behavior in higher organisms.

In recent years, he has turned his attention to deciphering the neural circuits that underlie fear, anxiety, pain, and other instinctive behaviors. Disruptions in neural circuits are known to underlie psychiatric disorders like anxiety and depression. As he puts it, "Elucidating these neural circuits is an important first step to understanding how genes, drugs, and experience act on and modify these circuits, in both normal behavior and in disorders such as anxiety and depression. Our hope is that this work will eventually improve the diagnosis of these conditions and lead to new, improved treatments."

Biography: David Anderson graduated from Harvard and received his Ph.D. at Rockefeller University, where he trained with Nobelist Günter Blobel. He also performed postdoctoral studies at Columbia with Nobelist Richard Axel.

Elected to the National Academy of Sciences in 2007, Anderson has received numerous awards, including a National Science Foundation Presidential Young Investigator Award and the Alfred P. Sloan Research Fellowship in Neuroscience. Named the Roger W. Sperry Professor of Biology at California Institute of Technology in 2004, he was named the Seymour Benzer Professor of Biology at Caltech in 2009. Anderson has been an advisor to the Allen Institute for Brain Science since its founding in 2002 and was instrumental in focusing the Institute's efforts on the Allen Brain Atlas.

Performances (8:00 pm): To be announced.

DJ (throughout the night): **Them Jeans (Jason Stewart)**

Friday, April 2, 2010 (extended Museum hours to 10:00 pm)

SHAKE IT UP

Guided Tour (5:30 pm): **“Coping With Earthquakes in California”** Interactive Presentations with **Lindsey T. Groves**, Collections Manager of Malacology and **Alyssa Morgan**, Collections Manager of Mineral Sciences.

Discussion (6:30 pm): **“Living in the Plate Boundary: Our Torn, Twisted (and Shaky) Landscapes”** with **Dr. Tanya Atwater**.
With photos, maps, and computer animations, Tanya Atwater will describe the peculiar patterns of Southern California’s mountains, valleys, and coastlines. Then she’ll show how these were formed — one earthquake at a time — by the grinding between the huge North American and Pacific plates.

Atwater's research in tectonics has taken her to the bottoms of the oceans and to mountains on many continents. She is especially well known for her works on the plate tectonic evolution of western North America and the San Andreas Fault system.

Biography: Tanya Atwater was educated at Massachusetts Institute of Technology, University of California, Berkeley, and Scripps Institute of Oceanography, earning her Ph.D. in 1972. She was a professor at M.I.T., then joined the faculty at the University of California, Santa Barbara in 1980, becoming Emeritus in 2007.

Elected to the prestigious National Academy of Sciences in 1997, Atwater’s other honors include a National Science Foundation Director’s Award for Distinguished Teaching Scholars, the Gold Medal of the Society of Woman Geographers, and the Leopold von Buch Medal for "outstanding career contributions in the geosciences".

Performances (8:00 pm): To be announced.

DJ (throughout the night): **Them Jeans (Jason Stewart)**

Friday, May 7, 2010 (extended Museum hours to 10:00 pm)

DIVE IN

Guided Tour (5:30 pm): **“Marine Biology Collections as Touchstones for Ecosystems”** Tour with **Dr. Regina Wetzer**, Director of the Marine Biodiversity Center

Discussion (6:30 pm): **“Toxic Algal Blooms Along the Southern Californian Coast: Causes, Challenges and Solutions”** with **Dr. David A. Caron**.
Coastal waters have witnessed an increase in the frequency and severity of “red tides” — toxic and noxious algal blooms — as human populations have encroached on coastlines worldwide during the past century. California has been no exception to the trend: Outbreaks of toxic algae have threatened human health, killed thousands of marine animals, garnered public attention, and resulted in the loss of untold millions in revenue.

Because urbanized regions of the world have been particularly hard hit, Southern California has served as somewhat of a sentinel of change across the planet. The region also potentially holds the key to understanding the causes of harmful algal blooms, and potential solutions.

Biography: David Caron is a professor in the Marine Environmental Biology section of the Department of Biological Sciences at the University of Southern California. He has degrees in Microbiology (B.S.) and Oceanography (M.S.) from the University of Rhode Island, and in Biological Oceanography (Ph.D.) conferred jointly by Massachusetts Institute of Technology and Woods Hole Oceanographic Institution.

He has authored or co-authored approximately 160 scientific articles and book chapters, is Fellow of the American Academy of Microbiology, and a member of the American Society for Microbiology, the International Society of Protistologists, The Oceanography Society, the International Society of Microbial Ecology and the Estuarine Research Foundation.

Performances (8:00 pm): To be announced.

DJ (throughout the night): **Them Jeans (Jason Stewart)**

Friday, June 4, 2010 (extended Museum hours to 10:00 p.m.)

STARRY NIGHTS

Guided Tour (5:30 pm): **“A Brief Look at our Solar System”** tour with **Alyssa Morgan**, Collections Manager of Mineral Sciences.

Discussion (6:30 pm): **“Now Introducing: The Massive Black Hole at the Center of our Galaxy”** with **Dr. Andrea Ghez**.
More than a quarter century ago, it was suggested that galaxies such as our very own Milky Way may harbor massive, though possibly dormant, central black holes. Definitive proof, for or against, their existence lies in the assessment of the distribution of matter in the center of the Galaxy. Based on 10 years of high resolution imaging, Andrea Ghez's team has moved the case for a supermassive black hole from possibility to certainty. This not only provided us with the best evidence yet that these exotic objects really do exist — it also provides us with a wonderful opportunity to study what role this black hole has played on the formation and evolution of our Galaxy.

Biography: Andrea Ghez dates her initial interest in astronomy back to the first moon landings. Though she imagined herself pursuing a variety of careers when she was a girl (including that of a ballet dancer), she always enjoyed science, because it seemed like puzzle. "I liked the process of solving things," she explains. She earned her B.S. in Physics from MIT in 1987, and her Ph.D. from California Institute of Technology in 1992. She is the recipient of numerous honors and awards including the American Astronomical Society's Newton Lacy Pierce Prize, the American Physical Society's Maria Goeppert-Mayer Award, a Sloan Fellowship, the National Science Foundation's Young Investigator award, and teaching awards from Caltech and UCLA. Ghez, now a professor of physics and astronomy at UCLA, has been a member of the faculty since 1994. Elected to both the National Academy of Sciences and the American Academy of Arts & Sciences, she was selected as a MacArthur Fellow in 2008.

Performances (8:00 pm): To be announced

DJ (throughout the night): **Them Jeans (Jason Stewart)**

About the Natural History Museum

The Natural History Museum of Los Angeles County is located at 900 Exposition Blvd., Los Angeles. It is open weekdays, 9:30 am to 5 pm; and weekends and holidays from 10 am to 5 pm. The Museum was the first dedicated museum building in Los Angeles, opening its doors in 1913. It has amassed one of the world's most extensive and valuable collections of natural and cultural history — with more than 35 million objects, some as old as 4.5 billion years. The Natural History Family of Museums includes the NHM, the Page Museum at the La Brea Tar Pits (Hancock Park/Mid-Wilshire), and the William S. Hart Park and Museum (Newhall, California). The Family of Museums serves more than one million families and visitors annually, and is a national leader in research, exhibitions and education.

NHM Next

Last year's completed renovation of the Beaux-Arts 1913 Building, the original component of the NHM, has set the stage for the rollout of a series of new exhibits leading up to the Museum's centennial in 2013: *Age of Mammals* and the Haaga Family Rotunda galleries open in Summer 2010; *Dinosaur Mysteries* in Summer 2011, and *Under the Sun*, an exhibition focusing on the Southern California environmental history, in Spring 2012.

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