



VOICES IN SCIENCE LECTURE SERIES

Darwin's Travel Companion: The Voyage of the Beetle

Saturday, February 9, 2008 2 p.m.

Anne H. Weaver, Ph.D., author, and George Lawrence, illustrator

The Voyage of the Beetle: A journey around the world with Charles Darwin and the Search for the Solution to the Mystery of Mysteries, as narrated by Rosie, an Articulate Beetle is a new young adult book published by UNM Press. Rosie, the rose chafer beetle, and Charles Darwin seek the answers for why there are so many different kinds of species living on Earth and why each is uniquely fitted for its environment. Celebrate Darwin Day and join us for this special family program. The author and illustrator will take us on a fun tour exploring rainforests, fossils, geology, and sea and land animals.

Author Anne H. Weaver has a Ph.D. in anthropology from UNM and has taught at Santa Fe Community College for many years. Illustrator George Lawrence worked in New York City as an architectural designer, but now lives in Santa Fe illustrating and designing exhibits for parks and nature centers throughout the country.

Free with Museum admission

Family activities and a book signing will follow the presentation.

Chaco Astronomy: An Ancient American Cosmology

Anna Sofaer

Tuesday, February 12, 2008 7 p.m.

High on a butte in New Mexico's Chaco Canyon at summer solstice in 1977, Anna Sofaer encountered an astonishing phenomenon--a single shaft of light bisecting a spiral petroglyph, crafted long ago by the ancestors of today's Pueblo people. Her recognition of its significance led to thirty years of research and recovery regarding astronomical expressions in the complex architecture and art of an ancient people. These efforts changed forever our perception of the meaning and purpose of Chaco. Ms. Sofaer will present information from her new book documenting thirty years of research regarding the "Sun Dagger" site, lunar and solar alignments of the major Chaco buildings, and implications of the true function of the Great North Road. A remarkable digital reconstruction of the original three-slab site on Fajada Butte will also be shown.

Anna Sofaer is Director of the non-profit Solstice Project, the organization she founded in 1978 that conducts research, preservation and education efforts on the astronomical expressions of the Chacoan Culture of the Southwest. She has worked with anthropologists, astronomers, geographers, and modern Pueblo people. She produced, directed, and co-wrote "The Mystery of Chaco Canyon" shown on PBS and National Geographic channels.

Co-sponsored by the Indian Pueblo Cultural Center and Bookworks

Cost: \$2 public/\$1 members, seniors, students

IRIS/SSA Distinguished Lecture

Deep Earthquakes and the Secrets of Seismology

Cliff Frohlich, Ph.D.

Tuesday, February 19, 2008 7 p.m.

About a quarter of all earthquakes originate at depths more than 60 km (40 miles) beneath the Earth's surface, and some at depths as great as 700 km (440 miles). These "deep" earthquakes have been an enigma because pressures and temperatures are too great at these depths for ordinary brittle fracture to occur. Dr. Frohlich's talk will address what is known and unknown about the mechanical origin of deep earthquakes and explain why they have been used in studies of the Earth's interior structure. His talk will involve raw and cooked eggs, baseballs, coffee pots, champagne bottles, diamonds, air hockey, and ultrasound! All who attend Frohlich's lecture, young and old, will learn a great deal about basic earthquake seismology, including much that all seismologists know but seldom tell.

Cliff Frohlich, Ph.D. is currently Associate Director and Senior Research Scientist at the University of Texas Institute for Geophysics where he has been for 30 years. His two most persistent research interests concern deep earthquakes and the statistical analysis of earthquake catalogs. However, his focus regularly wanders: earlier in his career he participated in field projects in Alaska and Vanuatu involving the deployment of ocean bottom seismographs; currently he is investigating moonquakes and tsunamis. He has published two books and about 100 research papers, most concerning earthquake seismology, but several on the physics of sports.

Cost: \$2 public/\$1 members, seniors, students

This talk is sponsored by the Incorporated Research Institutions for Seismology (IRIS) and the Seismological Society of America (SSA)

Ridge 2000 Distinguished Lecturer Series

Life at the Edge: Evolutionary Adaptation to Extreme Environments

Chuck Fisher, Ph.D.

Thursday, April 10, 2008 7 p.m.

The deep mid-ocean ridge system is home to some of most extreme animal habitats found on Earth: high pressure, lack of light, toxic chemicals, and low temperatures but extreme temperature fluctuations up to 350° C! Specially adapted animals not only tolerate these conditions, they often thrive under them. These include clams with special feet and blood used to "mine" sulfide from cracks in the mid-ocean ridge lavas, mussels and snails that have giant gills filled with special bacteria to provide them with food, and shrimp that have lost their normal eyes and use patches on their backs to "see" the faint light of active hydrothermal vents. Amazing images will introduce the audience to the mid-ocean ridge system, the deep-sea, and life in the changing environment of hydrothermal vents. Come explore this exotic environment!

Chuck Fisher is a Professor of Biology at The Pennsylvania State University. He was one of the first scientists to study and publish about life in the deep sea hydrothermal vents in the 1980s. He has participated in 57 research expeditions (including 27 as chief scientist), made 126 dives in manned research submarines, and spent over 4 months at sea working with Remotely Operated Vehicles (ROVs).

Sponsored by: The Ridge 2000 Program funded by The National Science Foundation, and University of New Mexico Biology and Earth and Planetary Sciences Departments

Cost: \$2 public/\$1 members, seniors, students

Strange Days on Planet Earth

Mark Shelley

April 15, 2008

Co-sponsored with KNME-TV, New Mexicans for Science and Reason and Coalition for Excellence in Science Education

“Strange Days on Planet Earth” is a unique production that integrates cutting-edge research, state of the art graphics and globe spanning investigations, all presented as a high-tech detective story. In partnership with National Geographic, the program raises public understanding about how individuals are interconnected to our planet’s life systems. The inaugural PBS series, hosted by Academy-award nominated actor Edward Norton, earned 14 major film festival honors. This April a new season will focus on global ocean and freshwater issues. Join the producer of this series for a special preview and behind-the-scenes stories about this special program.

Mark Shelley is Executive Director of Sea Studios Foundation. He has used film-making

to spotlight some of the most pressing issues of our times – from climate change to invasive species, from the loss of biological diversity to the loss of large predators and landscape fragmentation, and the vital role of our oceans in Earth's life support systems. He is internationally recognized for his underwater filmmaking skills. Mark is an expert diver, submersible pilot, and airplane pilot.

Mass Extinction

Spencer Lucas

A KNME Science Café

Saturday, April 26, 2008 10 a.m.

What caused the greatest mass extinction in the history of multi-cellular life? Way back before dinosaurs, 250 million years ago, nearly 90% of all life on Earth died. A Nova Science Now segment will show us a half-dozen plausible theories, then we'll have a discussion with Dr. Spencer Lucas, the curator of the Museum's newest exhibition. Attendees will be able to visit the Triassic exhibition following the talk. Refreshments will be served.

Spencer Lucas, Ph.D. is Chief of Geologic Science, Curator of Paleontology and Geology, and current Interim Director of the New Mexico Museum of Natural History and Science. His research has taken him to countries across the globe: northern Mexico, Costa Rica, Nicaragua, Jamaica, Kazakhstan, Georgia and China. He is the author of *Dinosaurs: The Textbook* as well as over 500 scientific articles and has co-edited 14 books.

Hosted by KNME-TV5 with support from Lockheed Martin/Sandia National Laboratory.

Free, but reservations are required. Call Chris Sanchez at 841-2872, chris.sanchez@state.nm.us

Jack Horner

Tuesday, May 13, 2008 7 p.m.

Noted paleontologist Dr. Jack Horner will be speaking at the Museum in May. He is Curator of Paleontology at the Museum of the Rockies, Regents Professor at Montana State University in Bozeman, Montana, and is Adjunct Curator at the National Museum of Natural History. Dr. Horner discovered the first dinosaur eggs in the Western Hemisphere, the first evidence of dinosaur colonial nesting, the first evidence of parental care among dinosaurs, and the first dinosaur

embryos. Dr. Horner's research covers a wide range of topics about dinosaurs, including their behavior, physiology, ecology, evolution, and growth rate. His recent work has been on soft tissue analysis from a very rare *Tyrannosaurus* find with actual dinosaur proteins preserved in the core of a leg bone. In 2007, he headed an expedition to the Gobi Desert collecting more than 80 skeletons of *Psittacosaurus*. He has named several dinosaurs and had two dinosaurs named for him. A recipient of the MacArthur Fellowship ("genius grant"), Dr. Horner has dyslexia and hopes to inspire young people with learning differences about what can be achieved with persistence and support. He was a technical advisor on all the Jurassic Park movies as well as being the real scientist on which the character Dr. Alan Grant was loosely based.

Tickets: \$12 public/ \$10 Members & Seniors/ \$5 students

Tickets available...???

All talks are at the New Mexico Museum of Natural History & Science
1801 Mountain Rd NW, Albuquerque, NM 87104
505-841-2800

Check our website at: www.NMnaturalhistory.org

Questions? Call Tish Morris at 505-841-2882.

You may reserve tickets by contacting Chris Sanchez at 841-2872,
chris.sanchez@state.nm.us