

Volunteer Association Newsletter



NMMNSH

February-March 2013

CONTINUING EDUCATION SEMINAR

Albuquerque-area Geology and the Rio Grande Rift & Aquatic life in the Rio Grande

February 19, 2013 MPR 10:30 am

INTRODUCTION: John Throne
Education Staff

1ST SPEAKER: To be announced.

2ND SPEAKER: Ayesha Burdett
Museum Bioscience Curator

Aquatic life in the Rio Grande

MAIN SPEAKER: Jayne Aubele
Museum Adult Educator / Geologist
*Albuquerque-area Geology and
the Rio Grande Rift*

SUMMARY: "For New Mexico, the rift is the iconic geological event of the Cenozoic Era. The topography and geology, as well as settlement and resource patterns, of our state are related to the rift. The landscape we see around us in Albuquerque is related to the active and dynamic geology that is again related to the rift."

The seminar will be held on February 19, 2013, in the MPR, beginning at 10:30 am and ending at or about 12:45. There will be a short break after the first speaker, and refreshments are provided after the last speaker.

Any comments or suggestions are welcome.

*John Throne, Home phone: 345-6762
MVA Continuing Education Committee*



News of Books

In this column, I will present information about how our library is organized. The basic organization is by the Library of Congress (LC) classification system, which is different from what the local public libraries use.

To help you find books, here is an explanation of how the Library of Congress system works. It starts with letters. A single letter, such as Q, shelves before two letters, such as QA. The second line of the call number is a whole number which means that 862 is read as eight hundred sixty-two. Usually the third line represents the author, so the books shelf in alphabetical order. The trick to this line is that the number after the letter needs to be read as if it has a decimal point. For example, in a group of authors whose last names begin with L, L456 shelves between L4 and L5. The L456 is read as L4.56, not as four hundred fifty-six.

L456 There is a list of the major letters in the LC system and what subjects they stand for posted on the back of the shelf with the catalog drawers. One heavily used section of our collection concerns dinosaurs. This section has a third line in the classification, for example, QE 862 D5 stands for dinosaurs in general. Then, it is the fourth line that stands for the author. To break down this call number, the QE is the classification for geology then paleontology. The 862 number is further subdivided alphabetically, so, in addition to D5 = dinosaurs, you have P7 = pterosauria and S3 = saurischia. As you can see, knowing how the classification system works, lets you browse the shelves by subject.



There will be a test.
Watch email for examination schedule.

Besides the basic grouping of books by call number, there is a small oversize section of books too large for the regular height shelving at the bottom of the second shelving unit. On the top of the shorter units, the few reference books are shelved separately.

In my next column, I want to discuss this section. I'll take a look at what we have and what we might want to have. If you have thoughts or suggestions, let me know.

When I came back from vacation, I noticed several areas of books out of order. Also people put books at the beginning of sections where they didn't belong. PLEASE **DO NOT RESHELVE** BOOKS. When you are finished looking at a book, place it on the bottom shelf with the returned books and I will shelve it. People often think they know right where they took the book from, but sometimes, the book is put back in the wrong spot which means it can't be easily found. Thanks for your cooperation.

Your librarian
Mina Jane Grothey
mgrothey@unm.edu



NEXT FOP MEETING

The next meeting of the Friends of Paleontology will be held in the MVR on the following date and time:

Monday, 18 February, 2013 • 7:00 pm
Speaker: John McDonnell
Subject: *Fusulinids*

Dick Yeck
VP Programs, FOP

FOP EXCAVATION AT KINNEY BRICK QUARRY

A caravan of Friends of Paleontology (FOP) fossil enthusiasts from the NMMNHS took a scenic drive on October 20, 2012, to the famous Kinney Brick Quarry in the Manzanita Mountains, south of Tijeras, New Mexico. The privately owned quarry provides raw materials for the production of bricks, and the owners graciously allowed access for collecting fossils. A short walk led to the excavation site, where the floor of the quarry would have to be cleared of debris with shovels and brooms before layers of clay stone could be split apart in the search for fossils.

Volunteers, Amanda Cantrell and Tom Suazo, gave a brief description of the site and explained what to look for. Besides Tom and Amanda, the Museum head preparator, Larry Rinehart, provided expertise in fossil identification and extraction. In the past, this quarry has yielded a wide variety of fossils, including marine invertebrates such as cephalopods, brachiopods, bivalves and crustaceans--and vertebrates, such as fishes and larval amphibians. There are also terrestrial fossils such as arthropods and plants. The 35 volunteers were eager to discover fossils that might not be new to science, but certainly to themselves.

Fossils were found immediately. The first excited shout of "I found a shell" was followed with an authoritative, "That's a Dunbarella". Another thrilled remark of "I have a cluster of shells!" brought the response "Those are all Dunbarellas". And it continued, Dunbarella, Dunbarella, Dunbarella, Dunbarella, and so on.

As excavation efforts became more focused, some remarkable fossils and trace fossils began to emerge from the 300 million-year-old Pennsylvanian sub-period deposits. Many plants were found: some coniferous, some fern-shaped and others sort of weird looking. Fossils of several fish, coprolites and a larval amphibian were collected. Our leaders, Larry, Tom and Amanda evaluated all of the finds to determine which specimens should be collected for the Museum and which could be kept by the volunteer excavators. Everyone went home with a trophy from the day's efforts but most of the Dunbarellas were left in the quarry.

Mary Moore

Photos on Page 3

KINNEY BRICK QUARRY FIELD TRIP



Kinney Brick Quarry Site



Tom Suazo and Amanda Cantrell



Dave Taliferro Setting Up



Plant Fossils



Dunbarella! Dunbarella!



Machelle Dawn with fish



Folks at Work



More Folks Hard at It



Fish Fossil (top center)

PALEOCLIMATES: END PERMIAN TO END EOCENE

Dwight Jennison, guest speaker for an interesting, 2012, FOP meeting, provided a comprehensive overview of how the earth's climate has changed over the past millennia and how those changes relate to the major extinctions of the Permian, Triassic, Cretaceous and Paleocene periods and the Paleocene-Eocene Thermal Maximum (PETM).

The key points start with defining weather and climate. Weather is what is happening now, which is chaotic, while climate is defined as happening over time and is not chaotic. Heat is a very important element of climate. It is produced within the earth, by the ocean, which covers two-thirds of the earth's surface and has three thousand times as much heat capacity as does the atmosphere; by external solar influx; by rotation of the earth's axis; and by the dominant winds. With these factors in mind, it is evident that stable climates foster evolutionary stagnation, while major climate changes can cause major extinctions.

Green house gases were the major player in all extinctions. The Permian extinction was caused by about 700k years of volcanic activity that created the Siberian Traps flood basalts in Russia that extinguished about 90% of sea life and 70% of terrestrial life due to global warming, low oxygen and a CO₂/SO₂ glut. The Triassic experienced a similar carbon/sulfur effect.

A recent atmosphere-ocean paleoclimate model of the Late Cretaceous was reported, simulated with the correct positions of the land geography and oceans. The model derived the ocean current flows and global climate for that time, which were very warm, even in polar regions. The same model reproduced the present climate quite well. They found that atmospheric CO₂ was roughly five times higher than the present, there was greater salinity due to increased evaporation, and very deep ocean currents differed compared with the present.

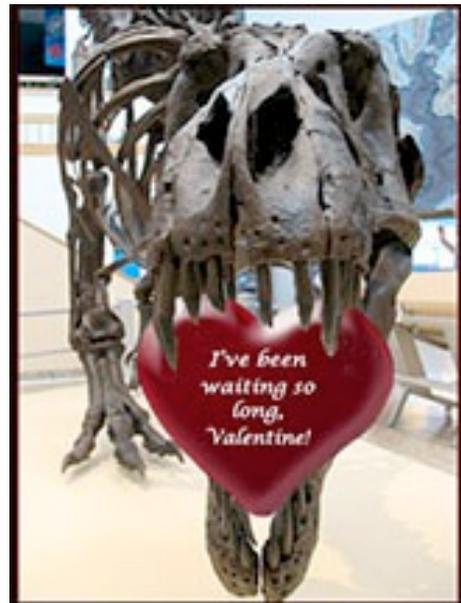
There is also mounting evidence that the Deccan Traps volcanic eruptions in India, smaller in size and shorter in duration than the Siberian Traps, contributed to atmospheric conditions about the same time as the asteroid impact on the Yucatan peninsula.

The PETM, which lasted approximately 150 – 170k years, was caused by biogenic release and suspected

deep sea “methane ice.” This caused deep ocean circulation changes resulting in a significant increase in green house conditions in less than one thousand years--which took about 100k years to reverse. Water was also warm, partly due to no ice in Antarctica and a closed Australia-Antarctica strait. The Eocene to the Holocene periods were the last ice ages, starting about 3mya when the Panama bridge emerged and changed the weather flow to the north, a condition which lasted to about 10k years ago.

Hence, paleoclimates explain paleontology. Much of this data is made possible by the new and more powerful computing technology available today. A conclusion to be made from this data is that the earth is due for another ice age. Or the positive (fast) and negative (slow) climate feedback loops can be interpreted to indicate that another solar maximum is in store. And there are new weather studies of modern climate activity such as El Nino and La Nina that affect New Mexico. But the general consensus of most climatologists is that the earth is warming and that CO₂ has increased in the last 300 years.

*Dick Yeck
VP Programs, FOP*



MUSEUM ADULT AND FAMILY EDUCATIONAL PROGRAMS

FEBRUARY - MARCH, 2013

LECTURES – COFFEES – CLASSES –
SPECIAL EVENTS

Programs at-a-glance

FEBRUARY

February (Every Monday) • Tour
Docent-led Exhibit Tour

February 2 • For Teachers
PLT – Risk Assessment

February 3 • First Sunday
FREE Day at the Museum

February 3 • Tour
Geoscience Collections

February 8 • Special Event
Valentine Adult Night

February 10 • Event
Solar Sunday

February 15 • Registration Begins
Young Explorers Summer Day Camp

February 16 • Adult Class
Biomimicry

February 18 • Lecture
Slow vs Fast Earthquakes

February 21 • Dino Symposium
Triassic Dinosaurs

MARCH

March 11-15 • Young Explorers Spring Science Program
Animal Art Camp

March (Every Monday) • tour
Docent-led Exhibit Tour

March 2 • Exhibit Opens
Science on a Sphere

March 3 • First Sunday
FREE Day at the Museum & SMNHC

March 3 • Tour
Bioscience Collections Public Tour

March 7 • Curator's Coffee
Our Sun, Our Star

March 7 • Lecture
NM's National Forests

March 10 • Event
Solar Sunday

March 14 • For Teachers
Bosque Education Workshop

March 21 • Dino Symposium
Cretaceous Age Dinosaurs

March 30 • Special Event
Earth Hour

VOICES IN SCIENCE LECTURES

The NMMNHS is proud to host the IRIS/SSA Distinguished Lectureship

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

The Tortoise and the Hare: *Slow vs Fast Earthquakes*

Gregory Beroza, Ph.D.

Wayne Loel Professor and Department Chair,
Department of Geophysics, Stanford University,
School of Earth Sciences, Stanford, California

Monday, February 18, 2013
7 pm – 8:30 pm

In the past decade, using sensitive monitoring networks, earthquake scientists have discovered some very unusual earthquakes. Like ordinary earthquakes, they occur as slip on the same faults, but they take a long time to unfold, such that they can be described as "slow." Unlike ordinary earthquakes, which grow explosively in size with increasing duration, slow earthquakes, whether large or small, grow at a constant rate and have the potential to trigger large earthquakes. Their recent discovery implies that there is much still to learn about earthquakes.

Gregory Beroza received his B.S. in Geophysics from the University of California at Santa Cruz and his Ph.D. in Geophysics from MIT. He is currently Wayne Loel Professor and Department Chair in the Department of Geophysics, Stanford University, as well as Deputy Director, Southern California Earthquake Center (SCEC) and Chair of the Incorporated Research Institutions for Seismology (IRIS) Planning Committee. His research is primarily concerned with the development and application of techniques for analyzing seismograms--recordings of seismic waves--in order to understand how earthquakes work and the hazard they pose. He is a Fellow of the American Geophysical Union.

All evening lectures are held at the New Mexico Museum of Natural History & Science.

1801 Mountain Rd. NW, Albuquerque, NM 87104

505-841-2800. Visit: www.nmnaturalhistory.org

\$6 (\$5 members, \$4 students) Volunteers are free. Please sign up on the sheet in the Volunteer Lounge.

Purchase in advance online to guarantee your seats, go to www.NMnaturalhistory.org or purchase tickets at the door before the talk. **Doors open at 6:15 p.m.**

Questions: August Wainwright
email: programs.NMMNHS@state.nm.us

call 505-841-2861

NEW MEXICO'S NATIONAL FORESTS

Jean Szymanski

Regional Education Coordinator,
U.S. Forest Service, Southwestern Region

Thursday, March 7, 2013 • 7 pm – 8:30 pm

Did you know that there are five National Forests in New Mexico? They were established at different times and for different reasons... and offer different experiences. As New Mexico's population grows and becomes more urban, our National Forests are facing new issues for the 21st Century. Join us for an evening "in" the woods – without ever leaving your seat. And learn some things you probably never knew... such as the story of SmokeyBear in space!



Jean Szymanski has worked for the Forest Service since 1980. She received her Bachelor of Science degree in Geography from the University of Wisconsin. She started as a cartographer with the Forest Service in Milwaukee, WI and transferred to Albuquerque in 1989 as a cartographic section head. A year later, she transferred to the Public Affairs staff as a visitor information assistant. She is currently the Regional Conservation Education Coordinator. She also serves as the state coordinator for New Mexico Project Learning Tree and was the director of New Mexico Forestry Camp for 20 years.

All evening lectures are held at the New Mexico Museum of Natural History & Science, 1801 Mountain Rd. NW, Albuquerque, NM 87104 • (505) 841-2800 Visit: www.nmnaturalhistory.org \$6 (\$5 members, \$4 students) Volunteers are **free**. Please sign up on the list in the Volunteer Lounge. Purchase in advance online to guarantee your seats. Go to www.NMnaturalhistory.org or purchase tickets at the door before the talk. **Doors open at 6:15 pm**
Questions: August Wainwright
email: programs.NMMNHS@state.nm.us
call 505-841-2861

SPECIAL PROGRAMS AND EVENTS

2013 DINOSAUR DISCOVERERS SYMPOSIUM

7:00 pm - 8:30 pm

In conjunction with the *Dinosaur Century* exhibit, this monthly symposium will feature the scientists who made many of New Mexico's most important dinosaur discoveries. Speakers will cover the entire range of dinosaur science, from the origin of

dinosaurs to their extinction. Lectures are hosted by Dr. Spencer Lucas and will be followed by his tour and commentary on the *Dinosaur Century* Exhibit.

February 21: Justin Spielmann – *New Mexico's Triassic Dinosaurs*

March 21: George Basabilvaso – *Cretaceous Age Dinosaur Remains from Southwest New Mexico*

Cost: \$8.00 each lecture for adults (\$4.00 for museum members and volunteers, \$4.00 children)

Entire Series (January through July) \$50.00 adults, \$25.00 members, volunteers and children

Questions: August Wainwright
email: programs.NMMNHS@state.nm.us
call: 505-841-2861

EARTH HOUR

March 30, 2013 • 6:00 pm – 8:00 pm

Bring your family and join us as we celebrate this worldwide event where millions of people switch off their lights for one hour to raise awareness about global climate change. Explore the Museum and see the NASA/NOAA special exhibit *Science On a Sphere*®. The observatory will be open and telescopes will be available.

Pre-registration suggested. To guarantee your place, register online, go to www.NMnaturalhistory.org Tickets will be on sale the evening of the event. **Doors open at 5:30 p.m.**

Cost: \$3 adults, \$1 children. Volunteers are **Free**
Questions: August Wainwright
email: programs.NMMNHS@state.nm.us
call: (505) 841-2861

VALENTINE ADULT NIGHT

February 8 • 7:00 pm - 10:00 pm

Make a night of it at the Museum's **Valentine Adult Night**. It's "Love Beneath the Stars." Special evening for adults only, 18 years and above. Cash bar for those 21 and older.

Catch a special show in the Planetarium, gaze at stars from our Observatory, explore Museum exhibits and make world-wide connections through ham radio! Get guided tours by a museum curator and dance the night away in our Atrium!

Cost: \$8 (\$4 members and volunteers) (Purchased only at the door the night of the event)

Questions: August Wainwright
email: programs.NMMNHS@state.nm.us
call: 505-841-2861

SPECIAL EXHIBITS

Science On a Sphere®

EXHIBIT FROM NOAA AND NASA

A SPECIAL EXHIBIT COURTESY OF NASA

March 2 - June, 2013

This exhibit, created by the National Oceanic and Atmospheric Administration (NOAA), is a mesmerizing visualization system that uses computers



and video projectors to display planetary data onto a six foot diameter globe suspended from the ceiling. NASA

researchers have produced visualizations of other planets, our sun, and Earth environmental processes in ways that are simultaneously intuitive and captivating.

Teachers can request a 15 minute guided exploration of *Science On a Sphere*®. Reserve through the school group coordinator when you schedule your visit. Tours are scheduled based on educator availability.

Registration: No registration required for the exhibit.

Cost: Exhibit is **Free** (with Museum Admission)

Questions: August Wainwright
email: programs.NMMNHS@state.nm.us
call: (505) 841-2861

CURATOR'S COFFEE

A Café Style Program

Join us for a casual discussion followed by a themed tour. Limited to 15 people and includes coffee, light refreshments, and Museum admission.



New Mexico Museum of Natural History and Science Observatory

Roger Kennedy Outreach Educator
The Albuquerque Astronomical Society

Thursday, March 7 • 9:30 am – 11:00 pm

Did you know that the Museum has a research-class public observatory? Visitors are introduced to the observation of solar features and the science

supporting the current understanding of solar phenomena.

This Curator's Coffee will introduce you to the modern astronomical field of heliophysics and include *Science On a Sphere*® and a tour of the Museum's Observatory which is equipped with a 16" LX200 Meade telescope, fitted with DayStar energy reduction and Hydrogen-alpha 656nm solar filters, and a new 80mm Lunt SolarSystems telescope. There is much to see and learn about during this Solar Cycle #24 solar maximum!

Roger Kennedy has been a professional science educator at the high school and college level for over 45 years, primarily in Philadelphia and New Mexico. He has been a volunteer outreach educator for the Museum and for The Albuquerque Astronomical Society since 1997, and currently coordinates the educational programming in the Museum Observatory. His graduate degrees and training are from New Mexico Tech., Temple University, Bowling Green State University and West Chester University.

\$8 (10% discount for members and volunteers)
Pre-registration required. Limited to only 15 participants.

To guarantee your place, register online, go to www.NMnaturalhistory.org

Questions: August Wainwright
email: programs.NMMNHS@state.nm.us
call: 505-841-2861

FIRST SUNDAYS

Sundays, February 3 and March 3

FREE Admission to the Museum for all New Mexico Residents

9:00 am – 5:00 pm

On the first Sunday of every month, the New Mexico Museum of Natural History and Science is **FREE** to all New Mexico residents. (*Bring NM ID or proof of residence.*) Regular admission fees for DynaTheater and Planetarium shows.

Information: www.NMnaturalhistory.org
Questions: August Wainwright
email: programs.NMMNHS@state.nm.us
call: (505) 841-2861

FREE Admission to the Sandia Mountain Natural History Center

March and April First Sundays (Closed in January and February)

Gates open for the public • 9:00 am – 4:00 pm

The Sandia Mountain Natural History Center (SMNHC), the Museum's offsite environmental

education facility, is located in the Sandia Mountains. On the first Sunday of September and October, attend a special natural history presentation, and experience geocaching, the bird blind, self-guided hikes, and picnicking.

Presentations @ SMNHC March 3 – To be Announced

No Registration Required. For directions to the center, go to www.NMnaturalhistory.org
Information: www.NMnaturalhistory.org
Questions: August Wainwright
email: programs.NMMNHS@state.nm.us
call: (505) 841-2861

SOLAR SUNDAY

**Sundays, February 10 and March 10
12:00 noon – 3:00 pm**

Telescopes, sun, and hands-on activities for the whole family
Planetarium Presentation at 11:00 am (Regular fee applies)

Special *Science On a Sphere*® activities for the entire family on March 10

Free (with Museum admission)
No registration required

Information: www.NMnaturalhistory.org
Questions: August Wainwright
email: programs.NMMNHS@state.nm.us
call: 505-841-2861

MUSEUM TOURS

MUSEUM OBSERVATORY OPEN

**Every Monday - Saturday • 10:00 am – 12:30 pm
Solar Sundays 12 noon – 3:00 pm**

Learn about our star; see the sun, sunspots, and solar flares.

GUIDED TOURS OF THE MUSEUM PUBLIC EXHIBITS

Every Monday 1:30 pm – 2:30 pm

Take a fact-filled, fun, guided tour of the Museum exhibits. Our docent-led museum exhibit tours for the public are scheduled for every Monday of the month at **1:30 pm** and last about one hour.

Limited to 14 participants ages 13 and up. **Free** (with Museum Admission) Registration welcome. Go to www.NMnaturalhistory.org or just come for the tour--first-come, first-served. Meet in the Atrium at the stadium seating.

Questions: August Wainwright
email: programs.NMMNHS@state.nm.us
call: 505-841-2861

BEHIND-THE-SCENES TOURS

GEOSCIENCE TOURS

Sunday, February 3 • 1:00 pm – 2:00 pm

See the largest collection of fossils in New Mexico and learn about important fossils collected from across the state. Tours allow participants to see fossils actively being prepared for exhibits and research.

Limit 20 people. Children under 13 must be accompanied by an adult. **Free** (with Museum Admission)

Questions: August Wainwright
email: programs.NMMNHS@state.nm.us
call: (505) 841-2861

No registration required. Tours are 45 minutes to an hour in length, and first-come, first served.

BIOSCIENCE TOUR

Sunday, March 14 • 8:30 am - 4:30 pm

Bioscience Collections Manager, Patricia Gegick, will conduct a tour of the Museum's biological collections, which includes plants, insects, mammals, mollusks, and birds. Learn the importance of museum collections, how they are used, and how they are preserved and maintained.

Bioscience Tour is **Free** (with Museum Admission)

Questions: August Wainwright
email: programs.NMMNHS@state.nm.us
call: (505) 841-2861 No registration required. Tours are 45 minutes to an hour in length; first-come, first served. Limit 12 people. No strollers or children under the age of 7. Children must be accompanied by an adult.

SPECIAL EVENTS FOR TEACHERS ONLY

BOSQUE EDUCATION GUIDE WORKSHOP



Thursday, March 14 • 8:30 am – 4:30 pm

**At the Rio Grande Nature
Center State Park**

Join other educators in getting to know this amazing, hands-on, Elementary -12th grade interdisciplinary curriculum about the Middle Rio Grande bosque ecosystem.

For more information, visit the Bosque Education Guide website:

<http://www.nmnaturalhistory.org/bosque-education-guide.html>

Pre-registration is required. To reserve a space call: 505-344-7240. Cost: Workshop is **free**. \$3 per vehicle day-use fee (exact change or check) for the RGNC. Curriculum and kit of materials included with full-day workshop. Rio Grande Nature Center State Park
2901 Candelaria NW
Albuquerque, NM 87107 505-344-7240

PROJECT LEARNING TREE EDUCATOR WORKSHOP

Exploring Environmental Issues:
Focus on Risk

Instructor: Malcolm Siegel, Ph.D., M.P.H.

**Saturday, February 2, 2013
10:00 am – 4:00 pm**

Risk is everywhere – we face it in the choices we make such as the foods we eat, how we generate our energy, where we build our homes, and which chemicals we use in our everyday activities. This workshop is designed to train grade 8-12 teachers to become PLT-Certified Environmental Educators. Through hands-on activities, your students can apply their knowledge to real-life risk issues using critical thinking, problem solving, and decision making.



For Teachers of Grades 8-12. Workshop fee includes lunch, a copy of the PLT Manual *Exploring Environmental Issues: Focus on Risk* and Museum admission to explore the exhibits to find materials related to historic and contemporary risks.

Malcolm Siegel, Ph.D., M.P.H., received his Ph.D. in Geochemistry from Harvard University and Masters in Public Health from the University of New Mexico. He worked for 30 years at Sandia National Laboratories in the area of risk assessment and currently is on the adjunct faculty in the Division of Epidemiology, Biostatistics and Preventive Medicine, University of New Mexico School of Medicine. He is a member of the Executive Board of the Environmental Educators Association of New Mexico (EEANM).

Cost: \$20.00

Pre-registration required. Registration will be through EEANM. For more information or to guarantee your place in this class, register online.

Go to www.NMnaturalhistory.org to link to EEANM or go directly to the EEANM website at <http://www.eeanm.org/>

Questions: August Wainwright
email: programs@NMMNHS@state.nm.us
call 505-841-2861

CHILDREN'S CLASSES

YOUNG EXPLORERS SPRING SCIENCE PROGRAM: ANIMAL ART CAMP

March 11-15, 2013 (APS Spring Break)

Classes meet from 9:00 am – 4:00 pm

Bring your own lunch for 1:30 pm – 2:15 pm lunch break.

Learn about the science of your favorite animal by making art! Be inspired by the art in exhibits, sketch from specimens both indoors and out, talk with staff scientists who are artists and fill up your “Museum Sketchbook.” Experience art using bottle caps & clay, collage & printmaking, sculpt, sketch, watercolor and more.

All days are open to children from **kindergarten through 5th grade.**

TOPICS

3/11	Monday	Mammals
3/12	Tuesday	Reptiles and Amphibians
3/13	Wednesday	Arthropods
3/14	Thursday	Birds
3/15	Friday	Prehistoric Creatures

\$50/day, \$45 Members. 10% discount per day for Museum members.

Choose a one-day class or purchase 2 or 3 classes together! Come for all 5 and get a discount! Before Care (8 am - 9 am) and After Care (4 pm - 6 pm) available for additional fees.

Preregistration is required.

See detailed descriptions of sessions and register for classes at <http://www.nmnaturalhistory.org/young-explorers-spring-science-program.html> after January 15.

Questions: August Wainwright
email: programs.NMMNHS@state.nm.us
call: 505-841-2861



YOUNG EXPLORERS SUMMER SCIENCE DAY CAMP 2013

Online registration begins February 15

Camps begin in July.

For schedules and to register visit:
www.NMnaturalhistory.org

PREHISTORIC PRESCHOOL

Prehistoric Preschool for 3 to 5 year-olds and their adult companions. Activities are child-centered, hands-on, and age appropriate. Classes include two hours of crafts, songs, games, puppet shows, investigating specimens from the Museum's collections, Museum visits, and a fun and healthy snack.

Choose to attend either Thursday, Friday, or Saturday morning classes from 10 am to noon or Thursday (new!) or Saturday afternoon classes from 1pm to 3 pm. There are 4 classes in each session with classes meeting every other week.

SPRING SESSION 1: FLYING WITH NEW MEXICO REPTILES AND BIRDS

Explore what we know about birds. Learn about the bird/dinosaur connection and join us the Great Backyard Bird Count on Saturday, February 16 (optional).

- 1) (January)
- 2) Be a Bird Watcher! (FEB 7, 8 or 9)
- 3) Be a Bird! (FEB 21, 22 or 23)
- 4) Be a Flying Monster! (MAR 7, 8 or 9)

SPRING SESSION 2: DAY SKY/NIGHT SKY

Observe the day and night sky – clouds, the sun and moon, and, is that a star? Experience the new constellation exhibit and “Science on a Sphere” exhibit.

- 1) *What's the Weather Today: Hot, Cold, Wet, Dry?*
April 4, 5 or 6
- 2) *Moon, Planets, Stars: Night Sky Discoveries*
April 18, 19 or 20
- 3) *Seasons and the Sun: First Day of Spring*
May 2, 3 or 4
- 4) *Asteroids, Comets and Meteors: What's the Difference?*
May 16, 17 or 18

Class participants must be accompanied by an adult. No more than two children may be registered per adult companion and no more than two adult companions may accompany any one child. Maximum class size is 12 children and their adult companions.

Cost: \$90 for the first child, \$81 for the second child in the same family. Museum members receive a 10% discount.
Scholarships available. Preregistration is required.

See detailed descriptions of sessions and register for classes at <http://www.nmnaturalhistory.org/preschool.html>

Note: *Classes already in progress may still have openings. If you join a class already in progress, the cost will be prorated.* **Information:** www.NMnaturalhistory.org
Questions: August Wainwright
email: programs.NMMNHS@state.nm.us
call: 505-841-2861

FAMILY FUN ON A RIVER RUN! RAFTING THE SAN JUAN RIVER

June 19-22, 2013

Join us for a family rafting adventure this summer! Float 26 miles between Bluff and Mexican Hat, Utah. Learn about the natural history of this river ecosystem, and the plants and animals of the area through games, stories and other fun activities.

For children 7 years and over with parent(s), grandparent(s), aunt(s) or uncle(s) - no experience necessary. Complete itinerary available.

Expert Guides: **Tish Morris**, naturalist, and **Kristin Gunckel, Ph.D.**, geologist.
Co-sponsored by Four Corners School of Outdoor Education.

Cost: \$715 adults, \$690 child under 12 (\$20 off for Museum members: \$695 adult/\$670 child)
Includes all food from dinner Day1 through Lunch Day 4, expert staff, river guides, group equipment and supplies. Families meet in Bluff, Utah, on the evening of June 19th. Camping equipment may be rented.

Preregistration is required, go to:

www.NMnaturalhistory.org

Register early. Limited Space.

Questions: Contact August Wainwright at programs.nmmnhs@state.nm.us or 505-841-2861

February 2013

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1 Teacher: Risk Assessment
3 First Sunday Geoscience Tour	4 Exhibit Tour	5	6	7 Prehistoric Preschool	8 Prehistoric Preschool Valentine Adult Night	9 Prehistoric Preschool
10 Solar Sunday	11 Exhibit Tour Lincoln's Birthday	12	13	14 Valentine's Day	15 Young Explorers Summer Science Day Camp Reg.	16 Biomimetry
17	18 Exhibit Tour Slow vs Fast Earthquakes FOP Presidents' Day	19 Continuing Ed. Seminar	20	21 Dino Symposium: MN's Triassic	22 Washington's Birthday	23
24	25 Exhibit Tour	26	27	28		

March 2013

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1 2 Exhibit: <i>Science on a Sphere</i> (March - June)
3 First Sunday Bioscience Collections Tour	4 Exhibit Tour	5	6	7 Prehistoric Preschool Curator's Coffee: <i>Our Sun, Our Star</i> <i>New Mexico's National Forests</i>	8 Prehistoric Preschool	9 Prehistoric Preschool
10 Solar Sunday	11Young..... Exhibit Tour	12Explorers.....	13Spring.....	14Science..... Teachers: Bosque Education Workshop	15Program..... Ides of March	16
17 Exhibit Tour	18 St. Patrick's Day	19	20 First Day of Spring!	21 Prehistoric Preschool Dino Symposium: <i>Cretaceous Age Dinos</i>	22 Prehistoric Preschool	23 Prehistoric Preschool
24 Exhibit Tour	25	26	27	28	29	30 Earth Hour
31						

The VAN

The VAN is published bimonthly. There are six regular issues each year: *February-March, April-May, June-July, August-September, October-November and December-January*. The deadline for submitting articles or photographs for the next issue is always the fifteenth of the month before. The deadline for the *April-May* issue, for example, will be March 15, 2012.

Please send items for the VAN to Louise Harris, VAN Editor, <louise@goingourway.net>, with a copy to Chris Sanchez DCA <chris.sanchez@state.nm.us>

The VAN mission is to inform, engage, and enhance the experience of NMMNHS Volunteers, by acting as a vehicle of *continuing education*, keeping volunteers informed about the Museum, and relaying news of volunteers and their activities.

We welcome your articles pertaining to the museum. We may edit for clarity and space limitations.

Submission Request: Please leave only one space between sentences. Thanks!
