



## JULY CONTINUING EDUCATION SEMINAR

Jonathan Dunnum, PhD

July 21, 2015 • 10:30 am to 12:30 pm • MPR

Dr. Dunnum is the Senior Collection Manager, Division of Mammals, at the Museum of Southwestern Biology. He will speak about the work of the



MSB. The MSB has provided a significant portion of the "Out of the Cabinet" exhibit at the NMMNHS.

For more information about Dr. Dunnum please follow this link:

<https://msb.unm.edu/divisions/mammals/people/jon-dunnum.html>

For more information about the Museum of Southwestern Biology please follow this link:

<https://msb.unm.edu/index.html>

-Dwight Harris

## VOLUNTEER ASSOCIATION SLATE OF CANDIDATES FOR 2015-2016 ELECTION

 A black and white clapperboard graphic. The top bar has diagonal stripes. Below it, the text is centered on a black background. The names are written in a light blue, handwritten-style font, with the titles in white, bold, sans-serif font.
 

President:  
**Malcolm Siegel**

Treasurer:  
**Miriam Zyskind**

Secretary:  
**TBA**

President -Elect:  
**Sheila Bednarski**

## VAN from Seattle

The VAN is coming to you this month from Seattle, where your editor is vacationing and has only a laptop. Things may look a bit different.

-Louise

## Annual Members Meeting

Join us for the Annual Members Meeting of the Volunteers Association - Wednesday, September 9, 2015. Election of the Association Officers for 2015-2016 will be held; a potluck lunch will be served.

-Malcolm Siegel PhD, MPH  
President-elect  
NMMNHS Volunteers Association

## Continuing Ed

Volunteers Continuing Education Seminar  
10:30 AM to 12:30 PM,  
Tuesday September 1, 2015  
Location: Multipurpose Room  
Topic: TBA

-Malcolm



## FOP Working Field Trip Española, New Mexico, May 30, 2015

Fossil prospecting was excellent on May 30, 2015 when 25 Friends of Paleontology (FOP) members assembled on Bureau of Land Management (BLM) lands to assist in a search for new fossil localities. The weather was perfect which enhanced the enjoyment of the experience.

Gary Morgan (NMMNHS curator) served as "tour guide" for the day. We searched "Second Wash" in the El Palacio area near Española, New Mexico where there were excellent exposures of the middle Miocene (about 14 million years old) Pojoaque Member of the Tesuque Formation.

The middle Miocene in New Mexico was a time of amazing faunal diversity. For example, the rock formation we scouted contains at least 6 genera of horses and 8 genera of camels.



Hoof & foot bone of *Meryceros*

The group met at the end of the exploration to share the specimens they had found, receive a preliminary identification from Gary, and turn in the fossils for cataloguing at the Museum. Numerous individual bones and sets of bones from 13 vertebrate genera were collected. [See panel at right.]

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### Fossils of large mammals and land tortoises gathered 5/30/15:

- Bone-crushing Dog (*Aelurodon*):**  
lower jaw, radius, toe bone
- Primitive Cat (*Pseudaelurus*):** 2  
toe bones (proximal phalanx)
- Horse (*Neohipparion*):** Upper molar, lower molar, middle toe (medial phalanx), splint bone (lateral metapodial)
- Rhino (*Peraceras*):** teeth
- Camel (*Michenia, Procamelus, Protolabis*):** teeth, arm bone (humerus), ankle bone (navicular)
- Small Pronghorn Antelope (*Meryceros*)** (numerous individuals and elements): 2 jaws, teeth, horn fragments, scapula, foot bones (astragalus-2, phalanges, hoof, podials, etc.)
- Larger Pronghorn Antelope (*Ramoceros*):** horn

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The El Palacio fossil prospecting trip was a grand success. There was an air of exhilaration among the participants as Gary named the finds and told their stories. Volunteers were thrilled to present their fossil discoveries and learn about extinct animals, many for which they had no previous knowledge.

Their excitement is now being shared with other volunteers and museum visitors as they relate their first-hand paleontology experiences.

- Jim and Mary Moore



The Most Prepared Fossil Prospector

### Giant Land Tortoise

(*Hesperotestudo*):

humerus, numerous shell fragments, 2 osteoderms

### Microvertebrate fossils:

**Mole** (*Gaillardia?*): humerus (2)

**Rodent** (*Copemys*): mouse jaw.  
numerous limb bones

**Rabbit** (*Hypolagus*): upper tooth, arm bone  
(humerus), vertebrae, etc.

**Bird** (*Aves*): partial humerus

**Toad** (*Bufo*): limb bones  
(humerus, tibio-fibula)  
and pelvic bone  
(urostyle)

## The VAN

The VAN is published bimonthly. There are six regular issues each year: *January-February*, *March-April*, *May-June*, *July-August*, *September-October*, and *November-December*. The deadline for submitting articles is always the fifteenth of the month prior to the publishing of the issue. The deadline for the *September-October* issue, for example, will be August 15, 2015.

Please send items for the VAN to Louise Harris, VAN Editor, <[louise@goingourway.net](mailto:louise@goingourway.net)>, with a copy to Doug Simon <[dougsimon@state.nm.us](mailto:dougsimon@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, and put the word VAN in your email title.***



## July-August 2015

### Museum Adult and Family Educational Programs

#### JULY

July 5 • First Sunday

July 6 - 10 • Girl Scouts Camp  
*3D printing*

July 14 • Space Science  
*Pluto Close Encounter*

July 16 • Lecture  
*The Grand Circle*

July 18 • Family Workshop  
*Drip, Drip, Drop*

July 25 • SMNHC  
*Public Open House*

July 27 • Space Science  
*Lunar Monday*

#### AUGUST

August 2 • First Sunday

August 5 • For Teachers  
*Bosque Ed Guide Workshop*

August 6 • Lecture  
*Birds Evolutionary Relationships*

August 19 • Adult Class  
*Create a Mobile*

August 24 • Space Science  
*Lunar Monday*

August 25 • Curator's Coffee  
*Molecular Chemistry and Solar Energy*

## LECTURES

### The Grand Circle: An Ultralight Trike Aerial Tour Around the Four Corners

Jeff Gilkey

Thursday July 16 • 7:00 pm - 8:30 pm

Jeff Gilkey returns with an ALL NEW presentation of photography and high-definition video of a BIG loop around the Four Corners, with views of Meteor Crater, Grand Canyon, Canyonlands, and the Rio Grande Gorge. Join us for another fantastic aerial tour from the unique perspective of his ultralight trike. The unrestricted open cockpit view projected on the five-story DynaTheater screen gives you a first-person, "bird's eye-view" unlike anything you have experienced before.

If you attended Jeff's previous talks, you know that it is always standing-room only. If this is your first experience... buy your ticket early and prepare for an exhilarating evening of fun.

**Jeff Gilkey** flew hanggliders for 10 years in the '80s and '90s and has been flying trikes since 2004. He has logged over 1400 hours in his Aerotrike Cobra on cross country adventures into nearly every corner of New Mexico with many extending into Colorado, Arizona, Utah and Texas. For more information, visit his website at <http://www.jeffsflightlog.com>

**\$6** (\$5 members, \$4 students) Museum Volunteers are FREE for the first 25 seats and any seats that are available after that...sign up in the Lounge and arrive early since this speaker usually has a full-house.

**Purchase in advance** online to guarantee your seats, go to [www.NMnaturalhistory.org](http://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](mailto:programs.NMMNHS@state.nm.us)  
call 505-841-2861

## ADULT CLASS

### Create a Mobile: Nature and Art

**Camille Argeanas**, artist  
**Jayne Aubele**, geologist

**Wednesday, August 19 • 9:00 am - noon**

Bring out your creative side by making a mobile inspired by Alexander Calder (American Sculptor, 1923-1976), known as the originator of the mobile. We will be incorporating shells, beads, and thin-sliced polished stones provided by the Gem and Mineral Lapidary Studio at the Museum (or anything else you might like to bring). With easy, step-by-step instruction you'll leave the class with a beautiful piece of art that you will want to show everyone, and you will also learn a few fun things about some of New Mexico's rocks and minerals.

This class is geared for adults and older children, ages 12 and above. No prior experience required.

**The class fee includes all materials.**

*Camille Argeanas, a native New Mexican, is a nationally known wire artist. She has taught regularly at the UNM's Division of Continuing Education for over twenty years.*

*Jayne Aubele is a Adult Programs Educator/Geologist at the Museum. Over the years, she has taught adult classes in all aspects of geology.*

**\$45** (10% member discount)

**Pre-registration required.** For more information or to guarantee your place in this class, register online, go to [www.NMnaturalhistory.org](http://www.NMnaturalhistory.org)

## SANDIA MOUNTAIN NATURAL HISTORY CENTER PUBLIC PROGRAMS

The Sandia Mountain Natural History Center is an offsite environmental education center located in Cedar Crest, managed by the New Mexico Museum of Natural History and Science.

### SMNHC Public Open House

**Saturday, July 25 • 9:00 am - 2:00 pm**

The 128 acre environmental education center will open its gates from 9:00 am to 2:00 pm to give outdoor enthusiasts a chance to explore this hidden New Mexico gem. Visitors will be able to hike over 5 miles of trails, search for numerous geocaches, learn from three interpretive trails, and spend some time in the exhibit rooms and birding areas. Guided hikes will begin at 10:00.

**No registration required.**

**Questions. Contact us at: (505) 281-5259**  
or [chris.modelski@state.nm.us](mailto:chris.modelski@state.nm.us)

*Info, Directions, and full schedule, go to [nmnaturalhistory.org/smnhc](http://nmnaturalhistory.org/smnhc)*

## SPACE SCIENCE SPECIAL EVENTS

### NEW Space Science EXHIBIT

[On exhibit from May to October]

### It Came from Mars! The Story of Mars Meteorites

Earth has been invaded by Mars. Rocks from Mars have crash landed on our planet. Here in Albuquerque, UNM's Institute of Meteoritics (IOM) is one of the few places on Earth that specializes in studying these unusual rocks.

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Partnering with the IOM, the Museum created this one-of-a-kind exhibit featuring Martian meteorites, some of the most valuable rocks found on Earth. The exhibit also leads you through the detective story of how these rocks were discovered, why we know they are from Mars, and how they got to Earth.

*Exhibit is included in general museum admission.*

## Lunar Mondays

**Monday, July 27, August 24**

**8:30 - 9:30 pm**

Join members of The Albuquerque Astronomical Society in studying the moon and other sky objects from the museum's observatory. Each month focuses on a different lunar feature.

Admission by Donation

*Canceled if the Sky is Cloudy*

## Pluto Close Encounter

**Tuesday, July 14 5:00 - 7:30 pm**

**(NOTE: NASA event times may change; check museum website for accurate time.)**

Ever since New Mexico astronomer Clyde Tombaugh discovered Pluto in 1930, relatively few details have been known about the dwarf planet. It is the only major object in the solar system that has not been visited by a robotic explorer, but that will change when New Horizon reaches Pluto.

Be the first to see the latest, close-up images of Pluto as they are received on the evening of July 14. NASA will provide commentary from their scientists and our own planetary geologists, Larry Crumpler and Jayne Aubele, will be here to help interpret the data.

*No registration required.*

*Admission by Donation*

## BIOSCIENCE SPECIAL EVENTS

### New Exhibit

## "Out of the Cabinet: Curious Specimens from our Collections"

**April through October, 2015**

Historically, "cabinets of curiosity" were used to display specimens and artifacts from world expeditions. We have gone on our own adventure, exploring collections from our Museum, the Rattlesnake Museum, and the Museum of Southwestern Biology at the University of New Mexico, to select beautiful and interesting animals, plants and fossils to create our own cabinet of curiosity.

*Free with Museum Admission.*

## NatureScapes Photo Salon

### *NatureScapes 2015: Colors of Nature in New Mexico*

This theme celebrates the many beautiful colors occurring naturally in the land, sky, minerals, flora and fauna of New Mexico. We encourage a diverse variety of subjects that capture the colors of our state - from the smallest insect to the grandest landscape. Photographs may include humans interacting with nature, but the focus must be on the Colors of Nature in New Mexico.

Photographers at all levels of experience are invited to submit their work. [There will be special prizes for student photographers. [ Photographers do not have to be residents of New Mexico, but the photographs must be taken in New Mexico.

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**NatureScapes** entries accepted between July 17 and September 4, 2015 only.

More information about the submission process:  
<http://www.nmnaturalhistory.org/2015-naturescapes-photo-salon.html>.

## 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 Thoughts on Molecular Electronics, Solar Energy Conversion, and Organic Lighting

Martin L. Kirk, Ph.D.

**Professor, Dept. of Chemistry and Chemical Biology, University of New Mexico**  
**Tuesday, August 25 • 9:30 am to 11 am**

Light and technological materials work together to produce alternative energy and lighting. Join Dr. Kirk as he discusses research on how the new field of molecular spintronics impacts solar energy, organic lighting, and understanding molecular electronic systems at the nanoscale.

*Dr. Martin Kirk is Professor of Chemistry at UNM. His research focuses on the fundamentals of electronic structure. He earned his Ph.D. in Chemistry at the University of North Carolina at Chapel Hill and was a National Science Foundation Postdoctoral Fellow at Stanford University.*

**\$8** (10% discount for members and volunteers)  
 This Curator's Coffee is co-sponsored by EPSCoR which is partnering with the NMMNHS to bring researchers and their work to the public.

**Pre-registration required. Limit 15 participants.** To guarantee your place, register online, go to [www.NMnaturalhistory.org](http://www.NMnaturalhistory.org)

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

## New Insights into the Evolution of Modern Bird Lineages

Peter Houde, Ph.D.

**Professor of Avian Systematics, Biology Department, New Mexico State University**  
**Thursday Aug. 6 • 7:00 pm - 8:30 pm**

Join Dr. Houde for a fascinating evening about birds, as he discusses new genetic revelations of the surprising evolutionary relationships among living birds, as well as when and why they likely originated. The exhibit *Birds of Paradise*, developed by the National Geographic and Cornell Laboratory of Ornithology, will be open for audience members before and after the lecture.

*Dr Peter Houde is a Professor in the Biology Department at New Mexico State University and Curator-in-Charge of the Vertebrate Museum. His research includes:*

- 1) *Phylogeny reconstruction - the genealogical relationships of organisms*
- 2) *Biogeography - the correlation of patterns of species to geography*
- 3) *Macroevolution - morphological evolution within lineages. He uses fossil vertebrates, comparative anatomy, and DNA sequencing in his research. He earned his Ph.D. from Howard University, Washington D.C., and was a National Science Foundation Post-Doctoral Fellow at Princeton. He is a Fellow of the American Ornithologists Union.*

**\$6** (\$5 members, \$4 students) Museum volunteers are Free. Sign up on the sheet in the lounge. *I also need some volunteers to interpret the Birds of Paradise Exhibit prior to (and after) the lecture. Contact Jayne if you can do this.*

**Purchase in advance** online to guarantee your seats. Go to [www.NMnaturalhistory.org](http://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](mailto:programs.NMMNHS@state.nm.us)  
 call 505-841-2861

## FIRST SUNDAYS

Sunday, July 5, August 2

9:00 am - 5:00 pm

**FREE Admission to the Museum for all New Mexico Residents**

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.

### **Guided Tour of the Museum Public Exhibits Every First Sunday**

1:30 - 2:30 pm

Take a free, fact-filled, fun, guided tour of the Museum exhibits. Limited to 14 participants ages 13 and up

*Tours are first-come, first-served*

## MUSEUM TOURS

### **Museum Exhibit Tours**

**Mondays • 1:30 - 2:30 pm**

Take a docent-led, fact-filled, fun, guided tour of the Museum exhibits. Limited to 14 participants ages 13 and up. Meet in the Atrium at the stadium seating.

*Free (with Museum Admission)*

**No registration required.** *First-come, first-served.*

## PREHISTORIC PRESCHOOL FAMILY WORKSHOP

### **Drip Drip Drop Family Workshop**

**Saturday, July 18th • 10 am - Noon  
Ages 3 through 5 with adults**

Explore the properties of water as it flows and drops by pouring it in and out of various containers, as well as by making and manipulating drops of water on wax paper. Program will be filmed for evaluation.

**Registration required:** *email*

*cirrelda.snider@state.nm.us* (please include name, # of children, and phone number).

**Cost:** *Donations will benefit our scholarship fund.*

**LEAP into Science** Family Workshops are a partnership of The Franklin Institute Science Museum, the Free Library of Philadelphia, NMMNHS, and ABC Libraries.

## GIRL SCOUTS INNOVATE AND CREATE CAMP

### **3D Printing/Engineering**

**July 6 - 10 • 9 am - 4 pm**

For young women in grades 6-12.

Current Girl Scouts and non-Girl Scouts are both invited to attend.

Explore the intersections of art, design and technology!

*Workshops are held in the Highlands Classroom at the Museum*

**Instructor: Miles Tokunow, New Mexico Highlands University**

**Pre-registration required.**

For Registration, cost, questions: contact Amanda Lujan [alujan@gs-nmtrails.org](mailto:alujan@gs-nmtrails.org) or 505-923-2521



## **FOR TEACHERS ONLY**

### **Bosque Education Guide– Teacher Workshop**

**Wednesday, August 5, 2015 • 8:30 am to 4:30 pm**

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

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

*For more information, visit the Bosque Education Guide website: [nmnaturalhistory.org/bosque-education-guide.html](http://nmnaturalhistory.org/bosque-education-guide.html).*

Reservation required, call the Rio Grande Nature Center at (505) 344-7240

For directions or additional information for the Rio Grand Nature State Park visit the website: [www.emnrd.state.nm.us/prd/rgnc.htm](http://www.emnrd.state.nm.us/prd/rgnc.htm)

Cost: \$3 per vehicle day-use fee.

Sponsored by: New Mexico State Parks, NMMNHS, and the Albuquerque Urban Bird Treaty

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