



The VAN is brought to you today by the number 15. See Page 2 for details!

VOLUNTEER ASSOCIATION CANDIDATES FOR OFFICE 2014 - 2015

Election of 2014-2015 Officers will be carried out at the Annual Members Meeting on Wednesday, September 10 at 1:00 pm in the Education Classroom at the Museum.

PRESIDENT: Pat Robinson

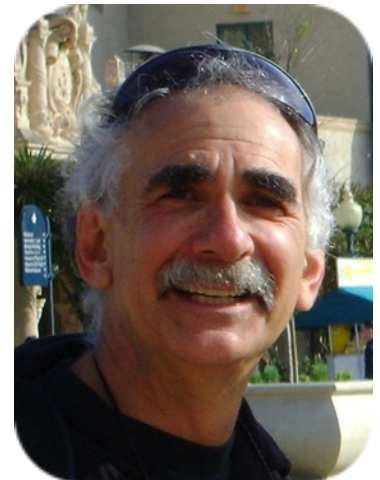
Pat is a native of Denver, Colorado, and a graduate of the University of Colorado Business School. The nomad's life of an Air Force family filled thirty-three years for Pat and her husband Pete with many assignments in the US and twelve years



spent in Europe and Japan. Along the way they were joined by a son, Eric (now a librarian in NYC) and a daughter, Kristen (an internist in Sacramento). In their travels, New Mexico became a favorite spot and now a permanent home. As a life-long volunteer, Pat found a natural home for many interests and a love of learning at the NMMNHS some 20 years ago. Pat previously served on the volunteer board while heading up the field trip committee for three years. She also volunteered as a docent at the Maxwell Museum of Anthropology for ten years. Some of her interests outside the Museum include travel, hiking, gardening, and reading.

PRESIDENT-ELECT: Malcolm Siegel

Malcolm Siegel, PhD, MPH has been a docent at the Natural History Museum since 2012 and serves as a member of the Volunteers Continuing Education Committee. He is currently an adjunct faculty member in the School of Medicine at the University of New



Mexico and Vice President of LJS, Consulting, Inc, in Albuquerque, NM. During a 30-year career at Sandia National Laboratories (1981-2011), Malcolm led research teams involved in studies of environmental geochemistry, groundwater remediation, and drinking water treatment. He received a Ph.D. in Geological Sciences/ Geochemistry from Harvard University and a Masters in Public Health/Epidemiology from the University of New Mexico. He is the author of over 60 scientific reports, book chapters and peer-reviewed articles.

SECRETARY: Holly Baer


Holly Baer was born in NYC and moved to California when she was about 6. She lived for a couple of years on the beach and then moved to the cattle ranch where she grew up. With no TV and no town, Holly was always outside and developed a love for the animals and plants and the privacy of open space. She received a BA in Comparative Literature, married, and followed her husband to Germany where he was stationed in the Army. There, she taught soldiers preparing them for GED certification. Later they moved to Zurich, Switzerland. They returned home in 1965 with a baby and a toddler, a VW Bug and little idea of what they were going to make of our lives, so, they came west as far as Albuquerque, moved to Corrales, and live in a house they designed and built (with lots of help) that is passively solar heated and cooled. Holly was in the charter class of docents and worked at the Museum on opening night.


**TREASURER: Dwight Harris**


Dwight Harris has been an enthusiastic volunteer at the NMMNH&S since the summer of 2009. He served as Treasurer of the Volunteer Association last year. He received a BA in History from the University of Washington in Seattle in 1966 and a Masters in Technology in Education from Lesley University in 1990. During the Vietnam War he was drafted, went to OCS, went to Vietnam and reentered civilian life three years later. In 1975 Dwight started teaching in Seattle Public Schools. Throughout his teaching career one of his guiding commitments was promoting lifelong learning among his students. In the early 1980s he began to use the power of technology. He believes that as a volunteer he has an obligation to ensure that visitors have a positive learning experience at the museum. He is passionate about contributing to lifelong learning in our community.

**FIFTEEN FIFTEEN FIFTEEN FIFTEEN**

The VAN is brought to you this month by the number **15!**

 is the atomic number of phosphorus.

 is the natural number that follows 14 and precedes 16.

th is the day of every other month when submissions for the VAN are due!





See the Elephant Butte Stegamastadon in FossilWorks as Lannois Neely works on him (her?).

Volunteer Program Fiscal 2014 Report

Below is a summary of the contribution of volunteers to the Museum’s Mission and Programs, as reported by the Volgistics system.

FY 2014 is the second year of the Shared Volunteer Coordinator position. While individual exhibitions and the ASTC convention added their weight to the numbers, so has the Albuquerque Gem and Mineral Club. Their Lapidary Studio at the Museum brought a whole new group of people on board, and the program is exceptionally well managed.

| | | |
|---------------------------------------|---------------------------------|---------------------------------|
| FY 2014 Active Volunteers: 518 | FY 2013 Actives: 425 | FY 2012 Actives: 327 |
| Hours (+Merit) 47,725.70 | Hours (+Merit) 44,575.00 | Hours (+Merit) 35,478.63 |
| FTE Equivalent 20.67 | FTE Equivalent 19.45 | FTE Equivalent 15.75 |
| Hours Value \$735,133.62 | Hours Value \$691,591.92 | Hours Value \$560,113.29 |

A quick overview:

| <u>Program</u> | <u>Volunteer Hours</u> | <u>Dollar Value</u> |
|-----------------|------------------------|---|
| Education | 28,033.63 | \$479,374.44 |
| Exhibits | 1,032.27 | \$ 17,651.72 |
| Science | 10,858.50 | \$185,680.93 (Includes Collections, Labs, Lapidary) |
| Volunteer Assoc | 1,086.75 | \$ 18,583.33 |

Kudos to all volunteers who gave with so much dedication and faith in the Museum’s mission. I want to extend special thanks to **Susan Brenneman** and **Penny Goldstine** for their strong support of the Volunteer Office and helping to keep accurate and current records.

-Doug Simon

Doug Simon
505.841.2877

Shared Resources Volunteer Coordinator

ANOTHER SUCCESSFUL FOP FOSSIL EXPEDITION NEAR SOCORRO

On May 24, twenty-three members of Friends of Paleontology (FOP) made a return visit to an area northeast of Socorro, New Mexico. The 2013 fall field trip to that same area yielded interesting fossils and trace fossils from the early Permian Abo Formation and late Pennsylvanian Bursum formation. Further exploration was warranted.

Tom Suazo, Chief Preparator, and Amanda Cantrell, Collections Manager, provided background information on geology of the area and described fossils and trace fossils which might be found. Those who had not participated last November were taken on an expedition to view 300 million year old reptile and amphibian footprints and marks from claws and tail dragging.



Sphenacodon partial jaw with teeth

Dave Jackson and the spine from an early shark's fin collected by David Sitzler.

FOP volunteers continue to improve their skills of finding specimens and recording accurate data, proving to be a valuable resource for the Museum.

-Mary Moore



Searching for fossils

The entire group prospected for fossils and recorded GPS coordinates of specimens which were then identified by Tom and Amanda. Finds that were particularly valuable to the Museum were the partial jaw with teeth of a reptile (a Pelycosaur specifically Sphenacodon) collected by

.....
NMMNHS volunteers may want to stay informed of paleontological activities by joining the **New Mexico Friends of Paleontology**. Monthly meetings are held on the third Monday of the month at 7:00 pm. A short business meeting is followed by fascinating presentations covering diverse areas of investigation in paleontology.

For program or membership information, call FOP President, Lannois Neely, 890-7881.
.....



August, September 2014

Museum Adult and Family Educational Programs

AUGUST

AUGUST 3 • First Sunday

AUGUST 3 • STARTUP

Soldering and Circuits

AUGUST 6 • STARTUP

Scratch Programming

AUGUST 14 • Curator's Coffee

Earth from Space

AUGUST 23 • Field Trip

Bat Cave

AUGUST 28 • Lecture

Rock Art

SEPTEMBER

**SEPTEMBER 4 • Prehistoric
Preschool**

Fall session 1 begins

SEPTEMBER 6 • Adult Class

Sketching the Museum's Animal
Collection

SEPTEMBER 7 • First Sunday

Footprints & Track Day

SEPTEMBER 17 • Special Event

Teacher Open House

**SEPTEMBER 23 • Curator's
Coffee**

Electronics in Exhibits

SEPTEMBER 23 • Lecture

Glacial Earthquakes

SEPTEMBER 27 • Special Event

All That Glitters



LECTURES

Taos to Socorro—Rock Art Along the Rio Grande
Carol Chamberland, Chair Rock Art Council, ASNM
Thursday, August 28 • 7:00 – 8:30 pm

Bisected by the Rio Grande, central New Mexico has attracted human groups for millennia. From archaic hunter-gatherers to sedentary farmers and European explorers, they often left their marks in carefully selected locations. Rock art sites abound along this stretch of river valley. This lecture will compare the themes, styles, and surroundings of sites located from Taos to Socorro that are available for public visits.

Carol Chamberland is an artist, a member of the Albuquerque Archeological Society, and current Chair of the Rock Art Council of the Archeological Society of New Mexico. For the past six years she has worked with the Bureau of Land Management (BLM) to record the petroglyphs and pictographs from remote sites on public lands. She earned a BFA in Painting from Arizona State University, and MA and MFA in Conceptual Design from San Francisco State University.

Held at the New Mexico Museum of Natural History & Science
1801 Mountain Rd. NW, Albuquerque, NM 87104

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

Purchase in advance online to guarantee your seats. Go to www.NMnaturalhistory.org (linked to BrownPaperTickets.com) or purchase tickets at the admissions desk the night of the event. Doors open at 6:15 pm. \$6 (\$5 members, \$4 students) Volunteers are **FREE**.

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

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

GLACIAL EARTHQUAKES: Using Seismic and GPS Observations to Map Changes in Glaciers and Ice Sheets Worldwide
Tuesday, September 23 • 7:00 – 8:30 pm

Dr. Meredith Nettles: Associate Professor of Earth and Environmental Sciences, Lamont-Doherty Earth Observatory, Columbia University, New York

The great ice sheets of Greenland and Antarctica are losing mass, transferring more than 500 billion tons of water to the ocean each year. Most of this ice enters the ocean from large outlet glaciers. Understanding the behavior of these glaciers is critical for accurate prediction of sea-level rise. The outlet glaciers are changing rapidly, with large variations in flow speed, thickness, and extent. In Greenland, many of the largest glaciers also produce seismic signals the size of those from magnitude 5 earthquakes—strong enough to be recorded around the globe. The number of glacial earthquakes is increasing, with six times as many earthquakes occurring in recent years. Combining earthquake data with GPS measurements from glaciers allows us to learn how the glaciers and ice sheets may be affected by changing environmental conditions. Ice, the tides, earthquakes, and meltwater combine in a fascinating and complex system with real implications for our lives, whether we live on the coast or in the middle of the continent.

Dr. Meredith Nettles is Associate Professor of Earth and Environmental Sciences at Lamont-Doherty Earth Observatory at Columbia University. She is also a member of the IRIS/UNAVCO Polar Networks Science Committee. Her research interests include: earthquake source studies, including glaciogenic seismicity and other unusual seismic sources; geodetic and seismic constraints on glacier dynamics; and development of GPS receiver hardware for high-risk environments.

She earned her M.S. in geoscience from the University of Arizona (2000) and Ph.D. in geophysics from Harvard University (2005).

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**
 Purchase in advance online to guarantee your seats; go to www.NMnaturalhistory.org or purchase tickets at the admissions desk the night of the event. Doors open at 6:15 pm.



CURATOR'S COFFEES

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.

Looking at Earth from Space with NASA
Thursday, August 14 • 9:30 - 11:00 am

Jeannette Allen: Sigma Space Corp. at NASA Goddard Space Flight Center and New Mexico Museum of Natural History and Science

NASA conducts comprehensive research on our planet with sophisticated satellites orbiting 700 km above the surface. The satellites observe and record our changing atmosphere, oceans, polar regions, forests, croplands, urban areas, natural disasters and more. Visualization specialists and others at NASA Goddard Space Flight Center have created stunning animations of the satellites' images and videos of scientists explaining their work. This presentation will feature some of the best of those visuals. Participants will be able to explore their areas of interest in Earth observations and receive handouts that guide them to additional resources.

Jeannette Allen is a remote sensing communications and public engagement specialist for Earth-observing satellite missions, working for Sigma Space Corp. at NASA Goddard Space Flight Center. She makes

NASA's research and data accessible for public and classroom use. She has a Master's degree in Biogeography (Goddard College).

\$8 (10% discount for members and volunteers)

Pre-registration required. To guarantee your place, register online, go to www.NMnaturalhistory.org (linked to BrownPaperTickets.com)

.....

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

Behind the Lights and the Curtains – a collision of arcade buttons and airbag controllers

Stan Cohen, Ph.D.

Tuesday, September 23 • 9:30 - 11:00 am

Does the name "Arduino" conjure up visions of a café in Pisa or does "Raspberry Pi" get your mouth watering for a fruit-laden pastry? These are actually the names of small, very inexpensive computer controllers that use computer chips originally designed for smartphones, safety systems of cars and factory automation. Discover how this Museum has been taking advantage of this electronics revolution to create sophisticated interactive electro-mechanical exhibits on a tight or non-existent budget. Spend some time with Stan Cohen, the Museum's exhibit-electronics builder, and "pull back the curtain" on some of the exhibits that use this technology. This will be an hands-on session to let you get a close look at the wires behind the exhibit.

Dr. Stan Cohen is the founder of the Center for Art and Exhibit Electronics Design (CAEED), through which he works with universities and museums to teach electronic fabrication and the use of micro-controllers in exhibits and public art installations. He is currently a Visiting Professor at NM Highlands University and a volunteer in the Museum Exhibits Fabrication Department. Dr. Cohen spent 20 years at Los Alamos National Laboratory as a physicist, controls engineer, and team leader at the LANSCE 800 MeV proton accelerator. He serves as the chief technology officer at BiRa Systems, in Albuquerque. He earned a B.S. and M.S. in physics (University of Washington) and Ph.D. in experimental atomic physics (UNM).

\$8 (10% discount for members and volunteers)

Pre-registration required. Limit 15 participants. To guarantee your place: register online, go to www.NMnaturalhistory.org (linked to BrownPaperTickets.com) or register at the Admissions Desk the day of the event.

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



FIELD TRIP

Jornada Bat Cave Experience

Saturday • August 23, 2014

TRIP LEADERS:

Gary Morgan, Museum Curator of Paleontology,
Larry Crumpler, Ph.D. Museum Research Curator of Volcanology

Tom Waddell, Armendaris Ranch Manager

New Mexico's largest colony of Mexican freetail bats, and fourth largest in the country, is on the private Armendaris Ranch. In the warmer months, from 200,000 to several million bats emerge from collapsed lava tube caves in the Jornada del Muerto Volcanic Field. Sitting on a ledge above the cave opening, the sights and sounds are unforgettable.

Families are welcome. Participants will caravan from Albuquerque leaving at 9 am, with some stops along the way. Those with 4-wheel drive vehicles are encouraged to drive and carpool for ranch road access. The trip will end that evening at a motel in TorC. Participants can return at their leisure to Albuquerque the following day or that night, if they wish to do so.

Cost: \$175 (Includes lunch and dinner.) Motel expenses are not included. Proceeds benefit the Museum's Education programs.

Preregistration required. Go to:

www.NMnaturalhistory.org to register and receive more information. For information and questions, contact Tish Morris at tish.morris11@gmail.com

Lisa taught school students in Grenada, West Indies. In May, 2015, she is offering Botanical Art and Tours in Southern France.

Lisa earned her MA in Illustration at Syracuse University specializing in Marketing Botanical and Floral Art. She has licensed images for the Home and Gift Industry and her art is currently represented at Ernesto Mayans Gallery in Santa Fe and in South Carolina.

\$45 (10% member or volunteer discount)

Pre-registration required. Class size is limited to 12. For more information or to guarantee your place in this class, register online, go to www.NMnaturalhistory.org. Questions: August Wainwright at programs.nmmnhs@state.nm.us or (505) 841-2861

ADULT CLASS



Sketching the Museum's Animal Collection; Lisa Coddington (Artist) Sat, September 6, 2014 • 2:00 - 5:00 pm

The museum animal collections offer a unique opportunity to do observational drawing from life size animals and skeletons. Do you sometimes wonder how to start a drawing, or do you just need a group to draw with to restart your art time? With a few drawing materials you can explore drawing techniques from expressive gesture drawing, to tips on developing values to create a 3-dimensional drawing. This session is open to beginning and experienced artists—teens and adults.

Lisa Coddington has been teaching art for over 15 years. During the last four years she has been teaching studio art drawing classes and Botanical Drawing and Water color classes at Santa Fe Community College. Her botanical classes and animal drawing classes expanded to UNM, Santa Fe Botanical Gardens, and Pajarito Environmental Center over the past few years. This past Spring



SPECIAL EVENT

All That Glitters September 27 • 6:30 pm - 11:30 pm

The New Mexico Jewelers Association, in partnership with the Museum, presents the 2014 **All That Glitters Jewelry Design Competition** awards gala event at the Museum. See the entrants in the *All That Glitters Competition*, meet the artists and gemologists and have the opportunity to view the newly expanded Gem and Mineral Exhibit at the Museum.

The jewelry designs will be exhibited at the Museum from September 27 to November 17, 9:00 am to 5:00 pm.

Free with Museum admission OR

To attend the evening award reception (includes food and special talk): \$35 payable to New Mexico Jewelers Association (NMJA)

Questions: Contact Stephanie@bcjewelers.com



SOLAR SUNDAY

Sept 21, 2014 • 10:00 am - 2:00 pm

View the sun through solar scopes (weather permitting). Participate in hands-on activities. Offered in partnership with the Albuquerque Astronomical Society.

Free with museum admission.



FIRST SUNDAYS

Sunday, August 3 • 9:00 am - 5:00 pm

Sunday, September 7 • 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: first-come, first-served.



FIRST SUNDAY SPECIAL EVENT

Footprints And Tracks Day

Sunday, Sept 7 • 1:00 pm - 4:00 pm

Come and join us as we bring out fossilized footprints and tracks from our collections - talk to our curators and staff about their latest discoveries, and research!

FREE to New Mexico Residents



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.



FOR TEACHERS ONLY

Teacher Open House

Wed, September 27, 2014 • 5:30 - 8:00 pm

The Museums on Mountain Road (Natural History, Explora, and Albuquerque Museum) are open and free to all teachers of all grade levels; and approximately 40 outside providers of no-cost or low-cost curriculum and classroom materials will exhibit their materials. Enjoy exhibitor booths, museum exhibits, special attractions, and discounts at all museum stores. Free DynaTheater and Planetarium Shows. Register for a door prize by attending all 3 museums during Teacher Open House.

Free to all teachers (preK-12 pre-service, classroom, and homeschool). No registration required for teachers.

Questions from teachers: please contact Theresa Sedillo at The Albuquerque Museum, at 505-243-7255 or go to www.cabq.gov/museum. General questions: August Wainwright at programs.NMMNHS@state.nm.us or 505-841-2861

Sponsored by NM-PBS



∴ **STARTUP** ∴
 ∴ **Studio Workshops** ∴

For families, students, and adults

Workshops are held in the Highlands Classroom at the Museum.

INSTRUCTOR: Miles Tokunow, New Mexico Highlands University



Soldering and Creative Circuits

Sunday, August 3 • 1:00 - 4:00 pm

Explore non-traditional circuitry like conductive paint, copper tape, and conductive silly putty to make designs with LEDs. After, learn a skill fundamental to electronics—soldering LED badges.



Scratch Programming in the Physical World

Wednesday, August 6 • 1:00-4:00 pm

Combine the digital and physical using the Scratch programming language and Arduino microcontroller. Participants will make LEDs dance to music.



Miles Tokunow is an artist and graduate student in Media Arts at NM Highlands University.

\$15 (Members or volunteers, 10% discount) **for each class. Pre-registration required.** Go to www.NMnaturalhistory.org



PREHISTORIC PRESCHOOL

Prehistoric Preschool is a Museum program for 3- to 5-year-olds and their adult companions to explore natural history topics in a supportive and fun atmosphere. All 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.

All class participants must be accompanied by an adult. No more than two children per adult companion, and no more than two adult per child. Permission for attendance by siblings younger than three is made on a case-by-case basis with Early Childhood Educator. Maximum class size is 12 children and their adult companions.

PRESCHOOL FALL SESSION 1:
Family Nature Mapping
September 4 -October 18, 2014

New Mexico has wonderful territory where wild animals live. When we take hikes in nature, visiting wild animal homes, we may not see the wild ones who live there. Learn how to know the animals are there! Learn about what they leave behind: their tracks and sign! An optional Sunday Family Nature Mapping Field Trip to Sandia Mountain Natural History Center will be offered.

PRESCHOOL FALL SESSION 2:
Movin' in Prehistoric Time
November 6 - December 20, 2014

Move in different ways together with creatures from the past, from burrowing worms to flying pterosaurs. Discover creatures from different ages that shared the same kind of movement and see the similarities.

Choose either Thursday, Friday, or Saturday morning classes from 10 am to noon or Thursday or Saturday afternoon classes from 1 pm to 3 pm.

There are 4 classes in each session with classes meeting every other week.

Preregistration is required. \$90 for first child, **\$81** for second child in the same family. **10% discount** for Museum members or Museum volunteers.

Scholarships available. **Pro-rated registration** available after classes have started. For more information or to Register for classes, go to <http://www.nmnaturalhistory.org/preschool.html>

Questions? August Wainwright at programs.nmmnhs@state.nm.us or (505) 841-2861

exploring nature, culture, and community with children. Participants will interact with the Wonder of Learning exhibit and create reflection and dialogue about teaching and learning as it relates to their own context.

GUEST SPEAKERS:

Jesus Oviedo, *Chicago Commons Studio*
Coordinator,

Jason Avery and Karyn Callaghan from *Artists at the Centre, Hamilton, Ontario, Canada.*

Register at Cost: \$129.12. Registration required.

Go to <http://newmexicowol.squarespace.com/>

Click on Professional Development for registration and scholarship application.



SUBMIT YOUR PHOTOGRAPH

***Naturescapes* Photo Salon**
Opens Fall 2014

Call for Entries • July 14 - August 15

In honor of the 50th Anniversary of the 1964 Wilderness Act, this year's theme is *New Mexico Wilderness*. **Photographers at all levels are invited to submit.**

Check www.nmnaturalhistory.org for details or contact Dr. Ayesha Burdett at ayasha.burdett@state.nm.us.

Scholarship Application: NMWOLC will be awarding scholarships to New Mexico educators who cannot otherwise afford this professional development opportunity. Please complete and submit the application.



FOR TEACHERS ONLY

WONDER OF LEARNING PROFESSIONAL DEVELOPMENT WORKSHOPS:

**Children as Citizens: Documenting Early
Learning in Nature, Culture
and Community**

September 12-13 • 8 am - 4 pm

This professional development experience will give educators the opportunity to gain a deeper understanding of the value of documentation while

PRESS RELEASE

Contact:

Randall Gann, Public Information Officer

505.252.6869 Email: randall.gann@state.nm.us

A NEW RECORD OF HISTORIC PROPORTIONS! NMMNHS Scientist an Integral Part of New Solar System Distance Record!

Last Sunday afternoon, the Mars Rover Opportunity set a new record for our Solar System! It went for a 48 meter drive along the rim of Endeavour crater on Mars. At the end of that drive, Opportunity had achieved something that no other rover on the Moon or Mars had ever done: It had driven more than 40 kilometers (over 25 miles!) on the surface of Mars. Throughout that record breaking effort, Dr. Larry Crumpler has maintained a running map of not only the location and traverse path, but of the geology of the planet. This is the first geologic map on another world assembled from the same type of data that we used to make maps here in New Mexico. A geologist walks out contacts between different rock types, looks at the rocks up-close using a hammer and hand lens, and even samples them for chemical analysis. Opportunity does exactly the same thing, except the samples are analyzed right on the spot, 150 million miles away!

The geologic mapping requires a good map of the position of the geologist or of the rover. So as a part of the mapping process, Crumpler keeps close tabs on the rover's location on the surface of Mars. He did this for Spirit over on the other side of Mars before that rover went incommunicado, and he does it for Opportunity at Endeavour crater.

In fact, Crumpler just submitted a manuscript about the geologic mapping at Endeavour crater to Journal of Geophysical Research. He has been on the Mars Exploration Rover science team since 2002 and is responsible for Long Term Planning at daily team telecons that help decide where the rover goes and what it does, so this distance record is particularly sweet for him. Crumpler said, "It's nice to be part of a record like this, but the really cool thing is that in those 25 record-breaking miles we have seen more of the Mars landscape than anyone had ever dreamed possible."

For more information on this record, please see the official press release at: <http://photojournal.jpl.nasa.gov/catalog/PIA18404>

The New Mexico Museum of Natural History and Science preserves and interprets the distinctive natural and scientific heritage of our state through extraordinary collections, research, exhibits, and programs designed to ignite a passion for lifelong learning.

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 and an occasional Special Issue. The deadline for submitting articles or photographs for the next regular issue is always the fifteenth of the month prior to the publishing date of the next issue. The deadline for the **October-November** issue, for example, will be **September 15**.

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> and Doug Simon DCA <doug.Simon@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.

Your articles pertaining to the museum are most welcome. Articles may be edited for clarity and space limitations.

Editor Request: Please put the word "VAN" in your email title.



