



VOLUNTEERS' ASSOCIATION NEWSLETTER

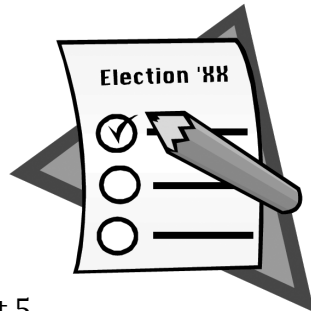


NEW MEXICO MUSEUM OF NATURAL HISTORY & SCIENCE

August - September 2011

ATTENTION ALL VOLUNTEERS

It is time once again to get ready for our annual meeting. It appears that it will be held on Tuesday, September 27, 2011 at 5 PM in the Sandia Room. It will be a Pot Luck supper.



The slate of candidates for the Volunteers' Association executive committee for 2011 - 2012, is as follows:

PRESIDENT	Jim Peavler
PRESIDENT ELECT	Dwight Jennison
TREASURER	Joan Saberhagen
SECRETARY	Mina Jane Frothy

Nominations from the floor will also be accepted. The person/s nominated must have given their assent to serve.

Submitted for publication, according to the bylaws of the New Mexico Museum of Natural History & Science Volunteers' Association, by the Nominating committee.

Thanks to the nominating committee: Barry Granoff, Mayo Pacheco, Betty Temple, Dick Traeger, and Linda Walton.

ACTIVE VOLUNTEER STATUS

There are **two requirements** to maintain active volunteer status. First, you need to **pay/renew your membership dues every**

12 months. The dues are \$16 per volunteer over the age of 18. You may pay your dues at the membership desk at the museum entrance; just be sure to tell them you're a volunteer, and request a receipt. You can purchase any level/category of membership you'd prefer, but again please indicate the name/s of active volunteer/s included in the membership.

Second, you need to **work a minimum of 30 hours every calendar year.** FOP members are not bound by this second requirement, but they pay dues at a higher rate. If you're unable to work volunteer hours, please let Chris Sanchez know the circumstances. And don't forget to record your hours.

If you have any questions, call Peggy Minich at 505-899-8590.

*Peggy Minich
Membership Chair*

CONTINUING EDUCATION

The next continuing education meeting for docents, volunteers, and tour guides will be held in the multipurpose room between 10:30 and 12:30 AM on Tuesday, August 23. The speakers will be John McDonnell - **STALKING THE WILD URANIUM** - a discussion of the steps involved in the exploration, development, and mining of uranium and Mike Sanchez - **EMERGENCE EXHIBIT UPDATE.** Mike will provide important information regarding this new remarkable exhibit. Bring along a sandwich to complement drinks and desert which will be provided.

*Bud Hodgkin, Coordinator,
Continuing Education Committee*



EXPLORING WEATHER AND CLIMATE

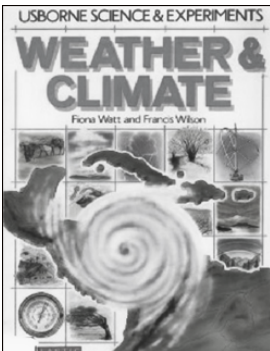
"Weather is what you get, and climate is what you're supposed to get."

Young girl in WeatherExtremes in the West

With our new exhibit, **Degrees of Change: New Mexico's Climate Forecast**, weather and climate are a current focal point. Here are five books that can help you learn more: two that introduce the topic; two that look at long-term changes in climate; and one that documents both sides of the global warming controversy. All of these books, and others like them, are found in the QC section of the library, in the middle of the tall bookcase to the left of the card catalog.

Weather and Climate

Author: Fiona Watt and Francis Wilson, 1992.



This slim book is written for older kids and adults, and is a great introduction to both weather and climate. With one topic on each two-page spread, it is easy to read and profusely illustrated. In addition to weather and climate basics, it covers

projects such as monitoring the weather and setting up your own weather station. It also includes introductory material on climate change past and present.



Weather Extremes in the West

Author: Tye W. Parzybok, 2004.

Here's a book more focused on our part of the country, i.e. that west of the 100th meridian. It includes a useful definition

of the difference between weather and climate: weather is the state of the

atmosphere at a specific time, whereas climate is a record of average weather over a long period of time. The west is divided into 13 regions on the basis of climate and topography, and weather topics are discussed for each region (New Mexico is divided in half north-south, not surprisingly). Lots of great maps and photos.

The Two-Mile Time Machine: Ice Cores, Abrupt Climate Change, and Our Future.

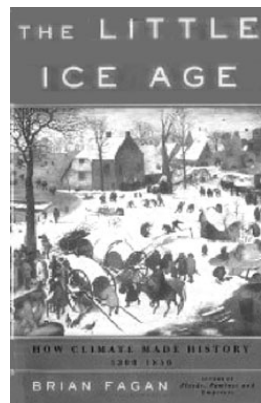
Author: Richard B. Alley, 2000.



This book looks at long-term climate change as revealed by a study of ice cores (two miles long) from Greenland —“a 110,000 year archive” of information on climate change. One of the strong messages of the book is how abruptly climate can change, over a few years or less, leading to “the wildly fluctuating climate that characterized most of prehistory.” Minimal photos and diagrams.

The Little Ice Age: How Climate Made History, 1300 to 1850

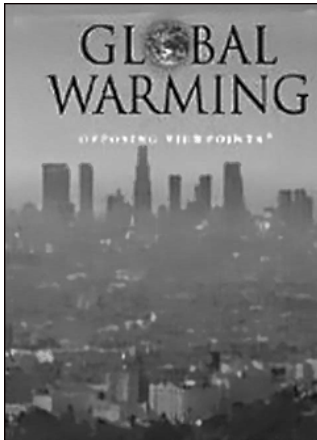
Author: Brian M. Fagan, 2000.



This is a well-written book that history buffs will enjoy; looking at how one particular fluctuation in climate influenced a familiar period of history. A prolonged cold spell over several hundred years, known as “the Little Ice Age,” made a lot of people miserable, and impacted such historical events as the Irish Potato Famine and the Great Fire of London. Many interesting stories and anecdotes.

Global Warming: Opposing Viewpoints

Author: James Haley, ed., 2002.



Here you can tackle head-on the intense controversy about climate change. The book is divided into four chapters:

- 1) Does climate change pose a serious threat?
- 2) What causes climate change?
- 3) What will be the effects of climate change?
- 4) Should measures be taken to combat climate change?

In each chapter, two to four issues are addressed with concise articles from each side of the argument, for example: *Global warming poses a serious threat* and *Global warming does not pose a serious threat*. This format is useful because the discussions are directly opposed, not talking past each other, as is often the case.

Regardless of your position on this topic, you will find someone here who agrees with you! You might even learn about a different point of view. No photos or diagrams.

Laurel Babcock, Librarian

GETTING TO KNOW A REMOTE PART OF NEW MEXICO

Otero Mesa: Preserving America's Wildest Grassland

Author: Gregory McNamee,
Photographs by Stephen Strom and Stephen Capra, 2008,
92 pages. Call number QH105.N6M36.

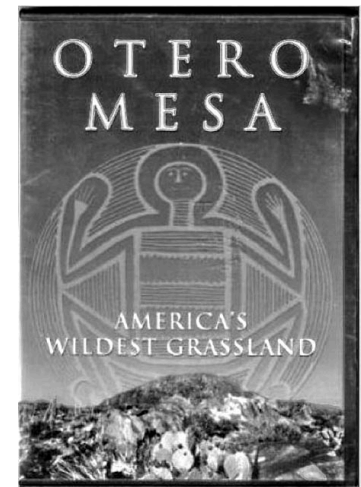
There, as with so much of the mesa country, the wind never stops blowing; as a storekeeper said to me on a typical blustery afternoon, "Days like this, there just isn't enough hairspray." ... That same wind comes whipping along into southern New Mexico, so hard, the locals

say, that if it ever stopped all the cows would fall over. [From page 79]

Here is a chance to get to know a part of our state that is literally off the beaten track--one that most of us will probably never visit!

Otero Mesa is an area that extends roughly from the highway connecting Alamogordo and El Paso on the west, to the Guadalupe Mountains on the east, along and north of the New Mexico-Texas state line. (One of the shortcomings of this book is that it lacks a map). A tangle of dirt roads extends across the area, but no paved highways provide access to it. In fact, a good chunk of the western end is occupied by Fort Bliss, which ironically affords considerable protection to the landscape--apart from the occasional bombing, that is.

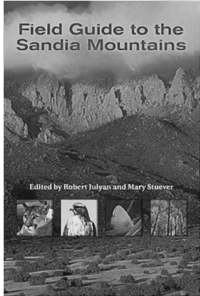
Scattered ranches dot the area, and the Cornudas Mountains, a series of igneous intrusions straddling the state line, provide dramatic topographic relief.



The Otero Mesa area, described as *a sea of grass* and *an ecological island* in the Chihuahuan Desert, receives runoff from the Sacramento Mountains to the north, and the Guadalupe Mountains to the east, and provides a sanctuary for a diverse collection of plants and animals, from pronghorns, elk, mountain lions and prairie dogs, to 200 species of birds. Visitors can also see numerous wild grasses, including blue grama, sideoats grama, sacaton, cane bluestem, and many others.

In places, petroglyphs dot the rocks. The aquifer under the mesa is described as "New Mexico's largest freshwater aquifer, almost certainly more than eighteen trillion gallons of water."
CONTINUED

FROM PAGE 3 Potential threats to this ecosystem are oil and gas development and mining for rare earth minerals in the Cornudas Mountains. The author clearly opposes further development, and depending on your viewpoint, you will either like or dislike his arguments.



The book is less a systematic description of the natural history of the area, such as in the book *Field Guide to the Sandia Mountains* [at left], which is also in our collection, and more an argument against further development (as suggested by the subtitle).

Consequently, the author digresses into such topics as the development of food grains from grasses, desertification, local Indian and Spanish history, pollution associated with oil development, and petropolitics.

Its accompanying photos are a tribute to the beauty and remoteness of the area and give a good introduction to a place that is seldom seen, even by New Mexico's residents.

Laurel Babcock, Librarian

FIELD TRIP NOTES

In August we will try to work in two informal car trips:

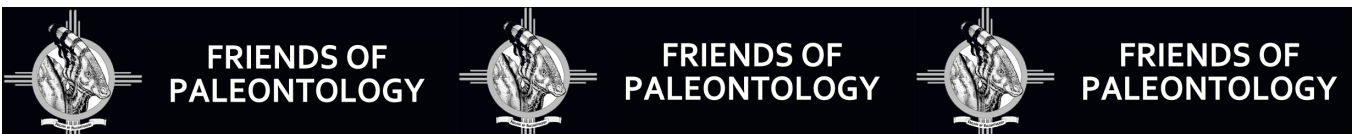
1. Sandia Mountain Crest Geology by Jim Deal. As soon as the mountain reopens we will join Jim for one of his Wednesday lectures at the Crest.

2. We will visit the Albuquerque Seismology Lab on Kirtland AFB later in the month.

In early September, we will visit the mineral and mining museum in Grants and possibly a uranium mine. This will be a follow up to a Continuing Ed program to be held in late August.

Please see the field trip book in the Volunteer Lounge or you may call me closer to the time.

For the dates of these programs, call Pat Robison 343 - 0526



MICRO TECHNOLOGY PROVIDES NEW LOOK AT PALEONTOLOGY

It's a small world that speaker Andy Heckert, Associate Professor of Geology at Appalachian State University in Boone, North Carolina, described in his talk at the Friends of Paleontology meeting on May 11, 2011. Andy, the previous curator of the Geoscience Collection here at the museum, brought a dozen or so students to NM in what is becoming a yearly field geology event.

His topic *Trekking through the Triassic* was about micro vertebrate and Triassic fauna evolution. As in many sciences, the issues of

Who found what? and *How did it evolve?* are prevalent in the world of paleontology. Andy addressed this issue by employing the relatively new and powerful digital electron microscope to examine microfossils at a more refined level. The digital version has supplanted the Scanning Electron Microscope (SEM) and is smaller, faster and easier to use.

His research focused on specimens from the Newark Supergroup, a large Cenozoic - Mesozoic rift-like basin on the east coast of the US. It had been noted that various animals in the south were different from those in the north, but nobody knew why. Micro vertebrates seemed to be the key to solving

the mystery. The problem was how to deal with their microscopic size and prodigious numbers.

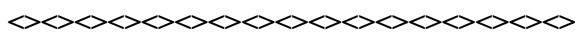
A graduate student at Appalachian State invented a way to use heavy, noxious liquids to separate screen-washed microfossils, which allowed the specimens to settle to the bottom due to their relative weight.

The number of fossils recovered increased from less than 1% to 20%. Teeth were selected to be analyzed because modern teeth can be studied and compared to the fossil lineage via the microscope with some success. Extensive examination and minute measurements of the microfossil teeth resulted in the discovery of things like venom delivery systems as well as new genera and some new species of fish, reptiles, amphibians, and dinosaurs.

The significance of this work has been four-fold:

- 1) new taxa were recognized,
- 2) previous errors were corrected,
- 3) biostratigraphy dating became more accurate,
- 4) evolution gaps were discovered.

*Dick Yeck
VP for Programs, FOP*



Emergence Online
a New View of Life's Origin



<http://www.nmnaturalhistory.org/emergence.html>

Check out the museum's new web page, **Emergence/Online** (a work still in progress). Here are some of the things you'll find there:

Introduction - *How and why did life on Earth emerge? Whoever answers this question will have solved one of science's greatest mysteries.*

Since groundbreaking experiments performed in the 1950s, researchers have felt they almost had the answer—but not quite. Are we getting close? New research taking place around the globe—including here in New Mexico—suggests we are.

Elements - *the six elements that form the basis of life*

Early Earth - *with a great graphic of the formation of Earth*

Timeline - *starting 4.6 billion years ago*

Tree of Life - *DNA*

Living Cell - *under construction*

Extremophiles - *New Mexico, a natural laboratory. Great video featuring Penelope Boston and Larry Crumpler.*

Theories - *Genes first: Was it Chance?*

Scientific Quest - *Could the answer lie in the flow of energy?*

Resources - *online educational resources*

Credits - *Museum staff working with scientists from the Santa Fe Institute (SFI) and media arts students from the Cultural Technology Program at New Mexico Highlands University in partnership with the New Mexico Department of Cultural Affairs.*

Louise Harris, VAN Editor

August 2011

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23 Continuing Education: <i>Stalking the Wild Uranium, Emergence Exhibit Update</i> MPR 10:30-12:30	24	25	26	27
28	29	30	31	Notes: Few events have been submitted for the months of August and September. I am including the essentially blank calendars here for your convenience as you learn about future activities by email.		

September 2011

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1 that	2 is	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27 Volunteer Association Annual Meeting/ Potluck 5 PM	28	29	30	Notes:



**NEW MEXICO MUSEUM OF
NATURAL HISTORY FOUNDATION**

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NMMNHS VAN

August - September, 2011

ADDRESS SERVICE REQUESTED

VAN Editor: Louise Harris Oct-Nov VAN Deadline is September 15, 2011.

Email articles to louise@goingourway.net with a copy to chris.sanchez@state.nm.us
Please limit each article to 800 words—less if you have an accompanying photo.

VAN MISSION STATEMENT

To inform, engage, and enhance the experience of NMMNHS Volunteers by:

- Acting as a vehicle of “continuing education”
- Keeping volunteers informed about the Museum
- Relaying news of volunteers and their activities.

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