



VOLUNTEERS' ASSOCIATION NEWSLETTER



NEW MEXICO MUSEUM OF NATURAL HISTORY & SCIENCE

February - March 2012

DINOSAUR CENTURY

100 YEARS OF DISCOVERY IN NEW MEXICO



A new exhibit opening January 21, 2012, is supported in part by your Volunteers Association. It will be added to monthly throughout the year, and will be coordinated with your Continuing Education program.

New Mexico is world famous as a place where important dinosaur discoveries are made. The first dinosaurs from New Mexico known to science were collected in the 1880s. Since then, Triassic, Jurassic and Cretaceous dinosaur fossils from New Mexico have pushed forward the frontiers of dinosaur science, changing scientific understanding of everything from dinosaur origins to their ultimate extinction.

New Mexico has been a magnet to some of the world's legendary dinosaur hunters, including Barnum Brown and Charles Sternberg. Fossils of New Mexico dinosaurs are in the collections of (or on display at) the nation's largest natural history museums, including the Smithsonian, American Museum and the Field Museum.

Since the 1980s, the New Mexico Museum of Natural History and Science has taken the lead in digging up, studying and interpreting New Mexico's dinosaurs. The Museum now has three exhibit halls that present a comprehensive understanding of the age of dinosaurs in New Mexico.

Truly, the century of New Mexico statehood has been 100 years of great dinosaur discoveries in New Mexico.

Dinosaur Century Begins!!

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Jan. 21 2012: The discoveries begin

DINOSAUR CENTURY

100 YEARS OF DISCOVERY IN NEW MEXICO

NEW MEXICO MUSEUM OF NATURAL HISTORY AND SCIENCE

JAN

21 **Dinosaur Century Begins!**

For more than 100 years, important dinosaur discoveries have been made in New Mexico. This exhibit presents the history of these discoveries and the people who made them. Each month of 2012 the Museum will showcase prominent finds in paleontology in a special Centennial exhibit.

FEB 18 **NM's Jurassic Park**

New Mexico's great Jurassic dinosaur bonebed is the Peterson Quarry west of Albuquerque, discovered by Museum volunteer Rod Peterson and worked on for decades by Museum volunteers.

MAR 10 **Spike**

Pentaceratops is one of the largest horned dinosaurs, discovered in New Mexico in the 1920s. A life-size sculpture of this iconic New Mexican dinosaur, nicknamed "Spike," greets visitors to the Museum.

APR 21 **NM's Super Giant Dinosaurs**

Giant dinosaurs, including Seismosaurus, possibly the world's longest dinosaur, have been found in the rocks near San Ysidro.

MAY 10 **The Bisti Beast**

Discover the terrifying meat-eaters that once roamed our state, including T. rex and the uniquely New Mexican "Bisti Beast."

JUN 16 **Giant Duckbills**

70 million years ago, herds of duckbilled dinosaurs browsed along New Mexico's Seacoast. See the bones and tracks they left behind.

JUL 21 **New Mexico's State Fossil**

1981, the New Mexico State Legislature designated the meat-eating dinosaur Coelophysis as New Mexico's Official State Fossil. A 205-million-year-old bonebed at Ghost Ranch has yielded hundreds of skeletons of this little Triassic Dinosaur.

AUG 11 **The Last Brontosaur**

The last super giant dinosaur in North America, Alamosaurus, was discovered in New Mexico during the 1920s.

SEP 15 **Dinosaur Pretenders**

Not all of the animals that people think are dinosaurs are actually dinosaurs--even paleontologists are mistaken about this sometimes.

OCT 20 **Knobs, Spikes, and Horns**

See how New Mexico's plant-eating dinosaurs defended themselves with a variety of knobs, spikes, horns, and head shields.

NOV 17 **Dinosaur Crests**

Many duckbilled dinosaurs had bizarre bumps and crests on the tops of their skulls. New Mexico's strange duckbills are on display in November.

DEC 15 **Just Out of the Ground!**

The discoveries continue! Every year, field expeditions from the New Mexico Museum of Natural History and Science and other museums unearth important dinosaur fossils in New Mexico.

VOLUNTEERS!!!

Your satisfaction with communications from New Mexico Museum of Natural History and Science is important to us. If you would like to review or change your email preferences with us, please visit our email preferences page by clicking this link:

<http://www.volgistics.com/ex/syst.dll?ACT=30&KEY=31131&PW=5334382&PN=798569>

If you have questions about volunteer email communication from New Mexico Museum of Natural History and Science, please contact chris.sanchez@state.nm.us.

PEGGY MINICH RESIGNS AS MEMBERSHIP CHAIR



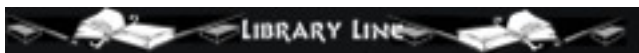
Peggy Minich will be resigning as Membership Chair for the Volunteer Association very soon and we need a replacement.

This volunteer position involves:

- obtaining lists of volunteers from both the Volunteer and Foundation offices every other month
- cross checking those lists to determine if dues are current and the required number of hours are being worked
- contacting individual volunteers about any inconsistencies or deficiencies
- clarifying and updating the listings for both offices

Peggy will be happy to talk with anyone interested in this position. She will also train and eventually hand off these membership responsibilities. You may reach Peggy at: 505-899-8590.

*Peggy Minich, Membership Chair
Volunteer Association*



LIBRARY LINE: LIFE AND TIMES ON THE RIO GRANDE

Reining in the Rio Grande: People, Land, and Water, by Fred M. Phillips, G. Emlen Hall, and Mary E. Black, 2011, 252 p. Call number GF504.S685P47.

To some the river was governed by its own laws; to others it was intricately and extensively governed by the laws of man. Some felt the river had a religious integrity best left alone; others felt it invited the best and most profound technological improvements for the benefit of man. Some considered the river to be the foundation of local community welfare and sustenance that could not be separated or divided; to others, the river was the subject of individual property rights entitled to the highest and most assiduous protection. In short, to some the Rio Grande always has been the

dominion of nature and to others, the dominion of man.

From the Prologue to *Reining in the Rio Grande* Here is a fascinating study of the interplay between natural history and human history, and of the unintended consequences of human "improvements" in natural systems. The authors, a hydrologist, a lawyer, and a librarian, know their subject and focus on a factual history, not an environmental polemic.

The book reviews the interaction of humans and the river from the time of the first Americans to the present. A short digression provides a brief geologic history of the river and the rift (an unfortunate time-scale designates the entire Precambrian as "Proterozoic," totally omitting the Archeozoic--an error not essential to the message). We learn about the various ways that early Americans coped with desert conditions while growing their crops, and then the introduction of communal acequias and irrigation by the Spanish.

These practices had little impact on the river itself, but major change began when New Mexico became part of the United States, and new settlers brought in railroads, lumbering, and large-scale grazing, irrigation, and dams. The railroads alone had a huge impact, with demand for wood for ties, trestles, fuel, and resultant population growth. "Wood consumption grew to a peak of 675,000 cords in 1918." Deforestation had a profound impact on the landscape by greatly increasing erosion.

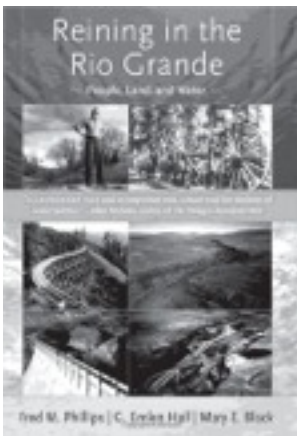
One might expect that large-scale agriculture would have been approached with caution in such an arid land, but new settlers were so optimistic that they convinced themselves that "rain follows the plow," or in other words, "as the population increases, the amount of moisture will increase." We all know how that turned out!

In fact, around the turn of the last century, Albuquerque farmers began to notice that the river often dried up completely early in the summer. What could be wrong? It turned out that up north, in southern Colorado, developers had moved in and built huge new irrigation ditches ninety feet wide, which consumed two-thirds of the flow of the river as it entered the San Luis Valley. No laws protected either downstream farmers or the ecosystem.

At the same time, areas like the North Valley

developed problems with poor drainage and standing water, which, when it evaporated, left thick deposits of salts ("alkali"). "Alkali covered the land on Rio Grande Boulevard from Pueblo Road clear to Chavez Road. You see it was white like snow." Farms became worthless. The cause was excess sediment in the river, resulting from deforestation and overgrazing. The sediment was too much to transport, so the river began to build up its bed, raising the water table and trapping water coming down from the mountain arroyos. These problems were not solved until the Middle Rio Grande Conservancy District was organized in the 1920s--but other problems were created. Flooding by the rising river became intense.

In 1938 a pact between Colorado, New Mexico, and Texas was created, attempting to divide up the river water fairly. The pact was based on



measurements of the river's flow, using techniques developed at the first river-gauging station in the U.S., still to be seen at Embudo Station south of Taos. Knowing the flow of the river made it possible to divide up the resource--yet by the 1940s and 1950s, New Mexico was falling further and further behind in the water it was pledged to deliver downstream.

What had happened? The post-war population boom had led to people drilling more and more water wells--and they didn't realize that water pumped out of the aquifer eventually comes out of the river. Adjustments were made, but it is a problem to this day.

My space is too short to describe the many complexities in our relationship to the river, but this book is an entertaining and informative introduction to the issue. If you enjoy visiting the bosque, kayaking in the river, or having running water in your home, you should read this book to have a better understanding of how fragile these benefits can be.

*This is my last book review as your librarian. After ten years, Jack and I are moving on to other volunteer venues, so **Mina Jane Grothey** is taking over the job of Volunteer Librarian. She recently retired from the UNM library system, and I know she will do a great job. Thanks for the opportunity to work with this interesting library!*

Laurel Babcock, Librarian

BOOK NOTE :

The *Albuquerque Journal* has written about this book twice in the last six months. To read these articles, you can use the links below:

<http://www.abqjournal.com/main/2011/08/28/entertainment/books/despite-mans-best-efforts-to-subdue-it-river-keeps-its-soul.html>

<http://www.abqjournal.com/main/2012/01/10/news/science/book-puts-rio-grande-water-use-in-a-new-light.html>

Also, Volunteer Dwight Harris recommends this book highly!

CONTINUING EDUCATIONAL SEMINAR

Please mark your calendar for March 8, 2012, as a reminder to attend our next educational seminar. The meeting, held in the multipurpose room from 10:30 AM to 12:30 PM, features Jayne Aubele, the museum's Senior Educator/Geologist, who will discuss RADIOMETRIC DATING. This is an important subject for all of us and all volunteers, docents, and tour guides are invited to attend.

To quote Jane: "How do we really know how old that rock is or put a date on a geologic period? What is the connection between uranium, lead, potassium, argon, zircons, cosmic particles, and earth's magnetic field? They are all used in techniques of dating rocks. Geologists called geochronologists do this work at specialized labs. But not all rocks can be dated! And not all dates are accurate. And some dates, such as the beginning and end of geologic periods, may change."

All of these questions will be answered and there will be plenty of time for Jane to answer any additional questions you may have.

Also, on the program will be Dwight Jennison and Bud Hodgin. Dwight will provide us with an overview of what exactly radioisotopes are, why some are radioactive, and why they decay--all critical informational components of radiometric dating.

Bud Hodgin will discuss "zircons," those amazing tiny crystals that 1) can provide geologists with rock dating as old as four billion years, and 2) also provide information regarding early earth temperatures and oxygen content. At the conclusion of the program a light lunch will be served.

As usual there will be a "what's new " discussion with Barry and Dwight J.

Bud Hodgin, Continuing Educational Committee

CHANGE IS COMING TO THE VAN

The world, our Museum and technology systems move on, and the VAN is poised to move with on too. This will be the last VAN to be mailed to all volunteers.

The VAN is always put on line on time on the Museum's website www.NMnaturalhistory.org. When you get to our website, choose **Volunteer** near the top of the page and, after getting there, choose **Van Archive** (under **Volunteer Programs** on the left side). On the **VAN Archive**, click on the issue you wish to open. You will be given the opportunity at the top of the screen to **Download** to your own computer, **open the PDF** of the newsletter or **read online**. If you prefer to hold the VAN's pages in your hands, hit **Print**, and take those sheets to the kitchen and read them over with a good cup of coffee.

On the online VAN, all the links are active and we'll be offering you more of them. Waiting for our commercial printers to get around to printing and folding our newsletter and for our hard-working volunteers to address them and get them into the mail becomes basically a non-issue. **And we'll have color!**

If you cannot cheerfully move online with us, it is imperative that you let Chris Sanchez know immediately. Call him, talk to him in the Volunteer Office or drop him a message (on paper or by email). Special arrangements can certainly be set up. See you in color and online.

Louise Harris, VAN Editor



CENTENNIAL LECTURE SERIES

The New Mexico Museum of Natural History and Science is proud to present: ***The Centennial Lecture Series—100 years of Advances and Significant Discoveries in Natural History and Science in New Mexico.*** New Mexico scientists highlight their science and how it has evolved the past century over.

LECTURE & BOOK SIGNING NEW MEXICO'S CENTURY OF LEADERSHIP IN SPACE EXPLORATION

Loretta Hall, author, **Thursday, February 23, 7:00– 8:30 PM**

Join author Loretta Hall as she describes crucial contributions to space travel made by scientists, engineers, and assorted adventurers in New Mexico. From Robert Goddard's arrival in Roswell in 1930 to more recent research on rocketry and planetary and human spaceflight, to New Mexico's leadership in the commercialization of spaceflight at Spaceport America—a fitting continuation of our historic record of supporting space exploration.

Ms. Hall's book will be available for purchase and signing during the evening lecture.

*Loretta Hall's fascination with manned spaceflight goes back to NASA's Mercury Program, and she became intrigued with New Mexico's space history when she moved to Albuquerque in 1977. Combining those interests with her career as a freelance writer, she wrote her 2011 book, *Out of this World: New Mexico's Contributions to Space Travel*. She is a member of SouthWest Writers, the New Mexico Book Co-op, and the Historical Society of New Mexico; and she is a Space Ambassador for the National Space Society. *Out of this World* was named "Best New Mexico Book" at the 2011 New Mexico Book Awards. Her website NMSpaceHistory.com offers historic insights and current news about this state's role in space exploration.*

Evening lectures are held at the New Mexico Museum of Natural History & Science 1801 Mountain Rd. NW \$6 (\$5 members, \$4 students) FREE for volunteers – **sign up on the sheet in volunteer lounge.**

ICONS OF NEW MEXICO: VOLCANOES AND THE NEW MEXICO CENTENNIAL STAMP

Larry S. Crumpler, Ph.D.,
Research Curator, NMMNHS
Thursday, March 29, 7:00—8:30 PM

Join Dr. Larry Crumpler as he discusses the volcanoes behind New Mexico's Centennial Stamp and the significant new ideas about volcanism that are being formulated through research on New Mexico's many volcanoes. Doug West's serigraph titled "Sanctuary," provides a truly fitting image to represent our state, also known as the "Land of Volcanoes," with a view of the Rio Puerco looking northeast towards the Cerro de Santa Clara and Cerro de Guadalupe volcanic necks.

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All audience members will receive the new NM Centennial Stamp.

*Larry Crumpler's research includes the study of young volcanic terrains in the southwest and the geology of Mars. He is a member of a team of volcanologists, with funding from the Smithsonian, who have been studying New Mexico's young lava flows. He has been an advocate of the importance of volcanoes in New Mexico through research papers and popular articles, including invited chapters in the books *Telling New Mexico: A New History and Untold New Mexico* and a discussion on *New Mexico: The Volcano State* in the book *Alluring New Mexico*. He received his Ph.D. in Planetary Science from the University of Arizona, M.S. in Geology from the University of New Mexico, and B.S. in Geology from North Carolina State. He worked as a research scientist at Brown University for 12 years prior to coming to the Museum. He supports his affiliation with the Museum through his own research grants.*

MUSEUM TOURS

Guided Tours of the Museum Public Exhibits

Every Monday 1:30–2:30 PM

Take a fact-filled, fun, guided tour of the Museum exhibits.

Limit 14 people ages 13 and up. **Free** (with Museum Admission). **No registration required.** Tours are 45 to an hour in length, and first-come, first served.

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

MUSEUM COLLECTIONS TOURS

Join us for behind-the-scenes tours of our Bioscience and Geoscience collection areas.

Geoscience Tour

Friday, February 3 3:00–4:00 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. **No registration required.** Tours are 45 to an hour in length, and first-come, first served. **Free** (with Museum Admission). **Free** for volunteers.

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

Bioscience Tour

Friday, February 17 3:00–4:00 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. Tours are 45-60 minutes in length. Limit 12 people. No strollers or children under the age of 7. Children must be accompanied by an adult.

No registration required. Tours are 45 to an hour in length, and first-come, first served. **Free** (with Museum Admission). **Free** for volunteers

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

SPECIAL EVENT

Celebrate New Mexico's 100 Years of Statehood with the New Mexico Museum of Natural History and Science

Dinosaur Century, a Centennial Exhibit

Important dinosaur discoveries have been made in New Mexico since the 1880s. Dinosaur fossils from New Mexico have pushed forward the frontiers of dinosaur science, changing scientific understanding of everything from dinosaur origins to their ultimate extinction.

This exhibit highlights 100 years of significant fossil finds in New Mexico that have previously only been seen by research scientists. New specimens will be added each month. [See Page 2]

Free (Centennial Exhibit is included with Museum Admission) **Free** for all volunteers. **No registration required for the Centennial Exhibit.** **Questions:** August Wainwright 505-841-2861
email: programs.NMMNHS@state.nm.us

COMMUNITY SCIENCE CONNECTIONS

Museums, Libraries, and Families: Working in partnership to bring fun-filled educational events to the community!

CSC is funded by a grant from the Institute of Museum and Library Services, and welcomes Rio Rancho Library as a new partner. Look for CSC

events at <http://libguides.cabq.gov/CSC> for an exciting 2011–2012 “season of science.”

CSC Programs are funded by the *Institute of Museum and Library Services (IMLS)* and managed by the New Mexico Museum of Natural History and Science

Solar Sundays

**Sundays, February 12 and March 11
12:00 Noon–3:00 PM**

Solar Sunday is the place to be! This great family event is becoming more popular every month. Don't miss out. Telescopes, sun, and bilingual hands-on activities for the whole family. Planetarium Presentation at 11:00 a.m. (regular fee applies.) **Free** (with Museum admission). **No registration required. Info:** August Wainwright: (505) 841-2861 email: programs.NMMNHS@state.nm.us

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

All 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. Permission for attendance by siblings younger than three is made on a case-by-case basis with Early Childhood Educator.

Maximum class size is 15 children and their adult companions. Choose to attend either Thursday, Friday, or Saturday morning classes from 10 AM–noon or Saturday afternoon classes from 1–3 PM.

SPRING SESSION 1:

New Mexico's Dynamic Dinosaurs

Have a favorite dinosaur? Find out all about the ones whose fossils were found here in our state, as we celebrate each kind of dinosaur with its own special class. From plant-eaters to predators, from fast to slow-moving, from big to small, get to know more about New Mexico's Dynamic Dinosaurs!

Horned Head Dinosaurs	1/26	1/27	1/28
Long Neck Dinosaurs	2/9	2/10	2/11
Sharp Tooth Dinosaurs	2/23	2/24	2/25
Coelophysis Spectacular	3/8	3/9	3/10

SPRING SESSION 2:

Family Nature-Mapping

New Mexico has wonderful territory where wild animals live. When we take hikes in nature, visiting wild animal homes, we may never see who lives there. Learn how to know the animals are there through what they leave behind: their tracks and sign! We will learn about these animal groups and the signs they leave.

Bear Claws and Squirrel Chewings: Mammal Sign 3/29 3/30 3/31

Tiny Dots and Squiggly Lines: Arthropod Markings 4/12 4/13 4/14

Roadrunner Toes and Turkey Scat: Bird Track and Sign 4/26 4/27 4/28

Herps Do the Tail-Drag: Marks Reptiles & Amphibians Make 5/10 5/11 5/12

\$90 for the first child, \$81 for the second child in the same family. *Museum members receive a 10% discount. Preregistration is required.* See detailed description of sessions and register for classes at www.NMnaturalhistory.org

Young Explorers Summer Science Camp 2012

Attention Young Explorers! Experience an adventure with the New Mexico Museum of Natural History and Science this summer! Discover the biology, geology, paleontology, and ecology of our State. Week-long, full-day or half-day camps for children entering Kindergarten through 6th grade. Sessions begin July 16, with 3 different camps each week for 3 weeks.

Preregistration is required. Registration begins February 15 online at www.NMnaturalhistory.org

After February 15: information at www.NMnaturalhistory.org Questions:

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

Spring Break Camp

Consider the New Mexico Museum of Natural History & Science Spring Break Camp!

Hey You, Paleontologist!

Imagine a time before the dinosaurs...what was it like? What were the plants and animals like?

What has science discovered and how?

Become a paleontologist. Join us as we explore fossils and trackways from the ancient world of the Permian period, a time when New Mexico had deep oceans, lazy rivers and giant reptiles. We will tour the amazing collection of fossils at the Museum, visit with Dr. Spencer Lucas, our chief scientist and learn about Permian plants and animals from the clues they left behind.

Grades 2 and 3. Tuesday, Wednesday & Thursday. March 13, 14, & 15 from 10:00 AM–12:30 PM. Maximum class size is 15 children.

FIRST SUNDAYS, NMMNSH

FREE Admission to the Museum for all New

**Mexico Residents February 5 and March 4:
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.) SMNHC at **(505) 281-5259**.

FIRST SUNDAYS; SMNHC

**FREE Admission at Sandia Mountain Natural History Center-First Sunday Every Month:
9:00 AM-4:00 PM**

Also open to all visitors, on First Sundays, is the **Sandia Mountain Natural History Center** (SMNHC), the Museum's off-site environmental education facility. After a successful 2011 the Sandia Mountain Natural History Center (SMNHC) will continue to be open to the public the First Sunday of every month. As always visitors will be able to hike the miles of trails, connect to the forest service trail system, geocache, picnic, and observe wildlife at the bird blind. Each month will feature an education session beginning at 10:00 AM to make every visit to the SMNHC unique.

**Dinosaurs of New Mexico
Origami Animals**

**February 5
March 4**

**Geology of the Sandias
Family Nature Mapping**

**April 1
May 6**

The SMNHC is normally only open to school groups, so be sure to take advantage of this great opportunity to visit one of New Mexico's hidden treasures. For more information please contact the SMNHC at **(505) 281-5259**.

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



THE BIZARRE WORLD OF MESOZOIC CROCODYLIANS

On January, 2012, Spencer Lucas, Curator of Geology and Paleontology and Chief Scientist for the museum, gave an interesting talk at the FOP meeting about the evolution of today's crocodiles, which he described as "Denizens of Swamps, Deserts and other Haunts." With about 30 years worth of Mesozoic fossils of these reptiles world wide, only now are paleontologists realizing that crocodiles were more important in the fossil record than previously thought.

The *protocrocodylians* evolved in the late Triassic period with the appearance of *sphenosuchians*. Small, about 1.5 meter in length, they were terrestrial quadrupeds with a pelvis and leg structure that enabled them to run fairly fast for short distances, and a skull that looks more like an early dinosaur than a reptile. The prototype is *Protosuchus* (first crocodile) recovered from a partial fossil bed in Arizona. They were scaly, upright, quadruped carnivores that weighed about 30 pounds and co-existed with their *pytosaur* relatives, but are not in the same lineage. The *pytosaur*s were larger and ruled the swamps and stream channels in the late Triassic. There is *Protosuchus* track evidence that is older than the bone record,

which indicates that the sphenosuchians were there but not abundant. They continued into the late Jurassic and came to a rather quick extinction, which is not well understood.

The *mesosuchians* filled the gap. They were a group of *crocodylomorph* reptiles that flourished throughout the Cretaceous and into the Cenozoic to become today's crocodile. Large, terrestrial, amphibious and aquatic, they dominated the landscape. The 35-foot *Deinosuchus*, which looks like a modern crocodile only larger, lived along the shores and swamps of the Cretaceous Sea that covered much of western US and Canada. However, it is represented by scarce bone and track fossils. This is thought to be due to a life in or near water that would have dispersed the bones and covered the tracks.

The paleontology record may have overlooked the role of the *protocrocodylians*. Track ways in Colorado, Oklahoma and New Mexico, however, are evidence of *crocodylians* living in areas of high density hadrosaur tracks. This was not recognized until late Cretaceous data indicated that due to the crocodile body form it was in fact the main carnivore in swampy terrains that would discourage the large carnivorous theropods from hunting there.

Among its brethren alligators, caimans and gavials (the species with the prominent protrusion at the end of the snout), the crocodile is the largest living aquatic reptile and the closest species to its ancient ancestors. It is also considered to be an endangered species in some parts of the world. Ongoing research on the tracks of captive crocodiles is helping the interpretation of fossil track ways of all reptiles, which is also indicating that crocodiles were more numerous and widely dispersed than initially believed.

Dick Yeck, VP Programs, FOP

FOP MEETINGS

The next two meetings of the Friends of Paleontology will be held in the Museum Multipurpose Room at the following dates and times:

DATE: **Monday, February 2, 2012**
 TIME: **7:00 PM MPR**
 SPEAKER: **Larry Rinehart.**
 SUBJECT: **TBD**

DATE: **Monday, March 19, 2012**
 TIME: **7:00 PM MPR**
 SPEAKER: **Dwight Jennison.**
 SUBJECT: **End Permian to End Eocene
 Paleo Climate Modeling.**

New Science Speakers Wanted

If you see something exciting and new related to Museum content and would like to give a short (15 minute-or-so) presentation in the What's New part of our regular, Continuing Education Seminars, please contact Barry Granoff barry@grannof.com or Dwight Jennison d.r.jennison@gmail.com who will cheerfully help you prepare the talk!

DEEP THINKING

Quote from a "dinosaur" website:

"Tyrannosaurus Rex is also one of the dinosaurs to live before they went extinct."

Question: Which of the dinosaurs went extinct before they lived? I can't think of one.

Louise Harris, VAN Editor



February 2012

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1	2	3	4
					TOUR Geoscience Collections	
5	6	7	8	9	10	11
EVENT First Sunday First Sunday At SMNH <i>Dinosaurs of</i> <i>New Mexico</i>	MONDAY TOUR Docent-led Exhibit Tour					
12	13	14	15	16	17	18
EVENT Solar Sunday	MONDAY TOUR Docent-led Exhibit Tour		REGISTRATION BEGINS Young Explorers Summer Camp		TOUR Bioscience Collections	FEBRUARY CENTENNIAL EXHIBIT <i>New Mexico's</i> <i>Jurassic Park</i>
19	20	21	22	23	24	25
	MONDAY TOUR Docent-led Exhibit Tour			CENTENNIAL LECTURES SERIES <i>New Mexico's</i> <i>Century of</i> <i>Space</i> <i>Exploration</i>		
26	27	28	29			
	MONDAY TOUR Docent-led Exhibit Tour					

March 2012



Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3
	4	5	6	7	8	9
EVENT First Sunday At SMNHS: Origami Animals	MONDAY TOUR Docent-led Exhibit Tour			CONTINUING EDUCATIONAL SEMINAR		
	11	12	13	14	15	16
EVENT Solar Sunday	MONDAY TOUR Docent-led Exhibit Tour					FEBRUARY CENTENNIAL EXHIBIT Spike
	18	19	20	21	22	23
	MONDAY TOUR Docent-led Exhibit Tour					
	25	26	27	28	29	30
	MONDAY TOUR Docent-led Exhibit Tour			CENTENNIAL LECTURES SERIES <i>Icons of NM: Volcanoes and the NM Centennial Stamp</i>	PREHISTORIC PRESCHOOL Spring Session 2	PREHISTORIC PRESCHOOL Spring Session 2
				PREHISTORIC PRESCHOOL 2		



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VAN Editor: Louise Harris **April-May VAN Deadline is March 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.

REMINDER: VAN deadlines are always on the 15th of the month before the next VAN is due.