

Ridge Report



Just after leaving his handprint in place at the CU Denver Dinosaur Tracks Museum, the famous naturalist **Sir David Attenborough**, who wrote dozens of award winning BBC books, poses on the FODR tracksite.

Volume 18, Number 2
2006 Summer Issue

Knight on the Rocks

By Martin Lockley

How many knights of the British realm have worked at Red Rocks? The answer is at least two. The first was then Beatle Paul McCartney – now the 64 year old Sir Paul, who coincidentally played Red Rocks in '64, long before he was knighted. The second is Sir David Attenborough, world famous popularizer of Natural History films, and brother of the equally famous Oscar-winning film director Sir, (also Lord) Richard Attenborough.

Sir D. A. and his film crew from the BBC Natural History unit in Bristol, UK, visited on June 17-20th to film sequences for his new five part series *In Cold Blood* that will include shots of Red Rocks and Dinosaur Ridge, where some of America's most famous dinosaurs were first discovered. The series explores the perennial debate about whether or not dinosaurs and other prehistoric creatures were warm blooded like modern mammals and birds.

Attenborough, who is now 80 years old, has worked for the BBC for more than 50 years, mostly as a senior executive: but he is deeply immersed in hands on science and natural history and is a prolific author of many very popular books. Having traveled to many of the world's more exotic locations, he is no stranger to Colorado. In the 1980s he filmed parts of his *Lost Worlds Vanished Lives* series at the famous dinosaur track site along the Purgatoire River south of La Junta. At that time Paleontologist Martin Lockley, from the CU Denver Dinosaur Tracks Museum, acted as his tracking guide. On this trip he filmed the tracks at Dinosaur Ridge, again using Lockley and Dinosaur Ridge Executive Director Joe Tempel as consultants.

Attenborough is famous for many series, including *Life of Earth*. Possibly the most enduring Attenborough image from this series is his touching close encounter with a mountain gorilla from Rwanda, as they reached out to touch fingertips. The British public, which loves Sir David, and his extremely popular natural history series, voted this man-meets-ape episode into second place. Their favorite was an Australian Lyrebird scene from the *Life of Birds*, easily found online as a video clip. This extraordinary bird not only imitates a dozen other species, but can also do perfect renditions of a chain saw, car alarms, and camera shutters- all cleverly captured on film and audio tape.

In the realm of natural history, however, Attenborough counts paleontology as one of his special loves. "As a patriotic Englishman" he said, tongue-in-cheek "I am proud to say that it was in England that the first dinosaurs were found and given their name, but there can be no doubt that it is here in the wild west that the most spectacular finds have been made, and it is a great thrill to visit again and examine the evidence first hand."

As proof of his dedication to paleontology Sir David visited the Dinosaur Tracks Museum at the CU Denver Downtown Campus and left Colorado with an impression of his hand to add to the collection of dinosaur tracks and other fossil footprints. Lockley, told Attenborough that had he been a famous runner he would have asked for a footprint, but as he is a famous author a handprint was more appropriate. Lockley, whose naturalist father worked with Attenborough on BBC projects, remembers going to his first Attenborough lecture some 50 year ago. He said he was pleased to finally bag the track of such a rare bird.



Martin Lockley and Sir David Attenborough

**Friends of Dinosaur Ridge
16831 West Alameda Parkway
Morrison, Colorado 80465**

**Tel: 303-697-DINO (3466)
www.dinoridge.org**

**Editor: Ed Warren
Design and Production: Ed Warren**

The Friends of Dinosaur Ridge (FODR), a 501 C3 non-profit tax exempt organization, was established to protect the natural resources on Dinosaur Ridge and Triceratops Trail, and to educate visitors about the area's geologic, prehistoric and natural features.

Major Contributors

- ❖ Gates Family Foundation
- ❖ Coors Foundation
- ❖ Great Outdoors Colorado
- ❖ Jeffco Conservation Trust Funds
- ❖ Scientific & Cultural Facilities District (SCFD)
- ❖ Jefferson County Open Space
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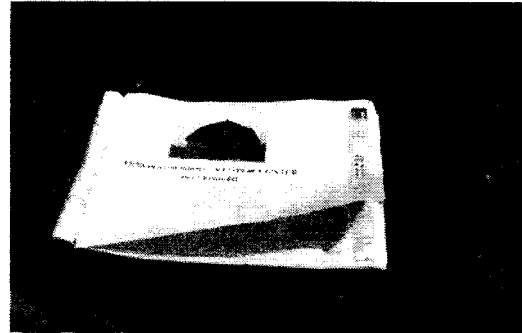
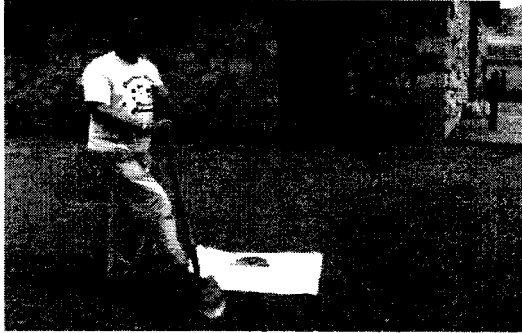
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Update on the Ancient Environmental Education Center

By Joe Tempel

Construction is about to get underway on the *Ancient Environmental Education Center*. We have received a building permit from Jefferson County and bids are coming in from contractors wishing to work on the barn renovation. Approximately \$260,000 has been raised for the barn and site improvements estimated to cost \$300,000. **Norb Cygan** was instrumental in obtaining a \$10,000 grant from **Chevron**, the company for which he worked most of his career. We are in the process of soliciting funds from other oil companies to complete the fundraising effort.



FODR Executive Director Joe Tempel breaking ground for the new Ancient Environmental Education Center on July 24, 2006

Palm Frond Shade Structure at Triceratops Trail

The **Golden Civic Foundation** recently awarded Dinosaur Ridge a \$15,000 challenge grant to build the palm frond shade structure at Fossil Trace. This brings our fundraising effort to \$16,000. We estimate the project to cost \$35,000 and we are seeking the remaining funds from the **Scientific and Cultural Facilities District** and the **Jefferson County Conservation Fund**.

Hot Pretzels at Dinosaur Ridge

The next time you come to Dinosaur Ridge you may notice we are selling hot pretzels, granola mix, and fruit bars. These items are being sold under one of our portable tents in front of the Visitor Center. **Holly Tempel** is organizing the effort and **Laura Marshall** is selling the merchandise. If you close your eyes and put mustard on the hot pretzel, you think you are eating a hot dog. Come on out and have a hot pretzel the next time you are at the Ridge.

Tracksite Preservation Team

By Sam Bartlett

Issue: The main tracksite on Dinosaur Ridge has been deteriorating since its initial exposure in 1937. The rate of deterioration is accelerating and if left untreated will continue to accelerate. Eventually, enough tracks will be lost that this tracksite will cease to become the centerpiece attraction and a major asset for the Friends of Dinosaur Ridge. We are on the frontier of preserving dinosaur tracks in place.

Tracksite Preservation Team: At the request of the Board of Directors of the Friends of Dinosaur Ridge, a Tracksite Preservation Team was formed to address the issues at the main tracksite on Dinosaur Ridge. *The Mission of the Tracksite Preservation Team is to work towards a permanent solution for preserving the deteriorating tracksite.* In accomplishing this mission, the Tracksite Preservation Committee will evaluate actions taken to date, current actions being taken, research to evaluate applicable preservation methods, formulate plans and schedules for permanent remediation measures, address funding to accomplish the accepted solutions and implement selected permanent preservation methods.

The Preservation Team met Wednesday evening July 19th at the tracksite before the Board Meeting for an initial discussion with **Susan Collins**, State Archaeologist/Colorado Historical Society and **Amy P. Ito**, Jefferson County Open Space Planning and Development Manager. Various track preservation options were presented and discussed. Future meetings will be held as additional research is gathered regarding preservation of the tracks

First Boy Scout Day at Dinosaur Ridge

Saturday, May 6, 2006

By Clare P. Marshall

The day began with mud and mist and too many cars. At 7 AM, people were coming to the Dinosaur Ridge Visitor Center ready to help organize and set up. Some were Boy Scouts, some FODR volunteers along with many other helpers for this very special day.

By 9:00, a line of people streamed out into the field where cars were parked, north of the Visitor Center. This bit of confusion changed into a smooth, certain flow of visitors throughout the day. All the Ridge stops were manned with geologists and geophysicists, mostly from the **Rocky Mountain Association of Geologists**, who sponsored the event. Tables around the Visitor Center were also manned by **RMAG** helpers, as well as students from the Geology Clubs at the **Colorado School of Mines**.

The Friends sponsored a booth where younger scouts could paint plaster footprints and learn about the process of making molds of fossils. **Girl Scouts** sold hot dogs and drinks east of the gift shop. A high school group sold popcorn and cotton candy at the hairpin on the Ridge. The **Order of the Arrow Boy Scout** service organization supplied volunteers with lunches and much needed cold drinks. Everyone pitched in to help visitors enjoy the natural wonder of Dinosaur Ridge.

Scouts learned about rock types, geologic time, fossils and minerals at the Visitor Center. Rock and mineral identification trunks were loaned to us from the **Colorado School of Mines Geology Museum**.

Over 500 Cub and Webelo Scouts earned their belt loops, academic pins and Geology badges. On the Ridge, the **USGS** had a geologic map station, **RMAG** had a career station and a mining station for the **Boy Scout** level merit badge requirements. With the help of **Boy Scout Geology Merit Badge Counselors**, led by **Gary Robinson**, around 120 Boy Scouts earned their **Geology Merit Badges**.

The day ended with a double rainbow. It was a good investment of time and energy.

Guides Corner

By Sam Bartlett

In the last issue of the Ridge Report, we included a “test” that **Pete Modreski** created for the Dino Ridge Teacher’s workshop in the summer. Here are the long awaited answers to that “test.” The questions in the “test” lead to the essence of the presentation by the guides on the Ridge. Thus, with the answers in hand, you too are qualified to become a guide on Dinosaur Ridge. Even if you didn’t do too well on the “test,” we would love to have you join us as a tour guide and you can learn all of the answers and more “on the job.”

1. What kind of dinosaurs made the majority of the tracks at Dinosaur Ridge?
Iguanodon (or, “Iguanodontids”)
2. These tracks are in what kind of rock type?
Sandstone (or Dakota Sandstone)
3. The Mesozoic Era is divided into three time periods, of which the middle period is famous for the huge four-legged dinosaurs and for the Morrison Formation in which their bones are contained. What is the name of this time period?
Jurassic Period
4. What is the “official” name for this group of huge four-legged dinosaurs?
Sauropods
5. The dinosaurs became extinct (except for the birds, which most paleontologists accept as living, true relatives of the dinosaur) at the end of which geologic time period?
Cretaceous Period (or Mesozoic Era)
6. How long ago did this great extinction occur?
65 (or, 65.5) million years ago
7. Approximately how old (in years) are the dinosaur tracks in the Dakota Sandstone at Dinosaur Ridge?
About 100 million years ago
8. In what time period were the tracks on Dinosaur Ridge formed?
Cretaceous Period
9. A footprint or other impression left in rock by a long-dead living organism is called a **Trace fossil**.
10. Name any four major groups of dinosaurs (you may use either Latin or “common” names):
Sauropods (or, “Brontosaurus”)
Theropods (or Carnosaurs, or partly correct, “Carnivores”)
Ankylosaurs (or, “armored dinosaurs”)
Stegosaurus
Ceratopsians (or, “horned dinosaurs”)
Ornithopods (or, bipedal herbivores, or “duckbills”)
11. Name two other places in the rocky Mountain west where many dinosaur fossils have been found.
Garden Park (Canon City, Colorado) Como Bluff, Wyoming
Dinosaur National Monument, Utah Grand Junction, CO
and lots of other places
12. Circle or underline any of the following names or groups of animals that are NOT dinosaurs:

Plesiosaurs Mosasaurs Ankylosaurs Dimetrodon Archaeopteryx (?)

Ornithomimus Iguanodon Pterosaurs Velociraptor Lark Bunting (?)

(?) Note: Since most paleontologists accept birds as true, living relatives of the dinosaurs, Archaeopteryx and the Lark Bunting could be included in the dinosaur grouping.

Program Director's Report

By Tom Moglestad

Visitation and Attendance

	<u>2nd Qtr. '06</u>	<u>1st Half '06</u>	<u>Change from '05</u>
Visitors to Visitor Center	16,711	23,024	+13%
Tours (Attendance)	3,197	4,184	+25%
Other Educational Programs	137	237	+225%
DDD (Dinosaur Discovery Day)	1,910	1,910	+664%
Saturday Shuttle Bus (New Program)	231	231	-----

Dinosaur Discovery Days (DDD)

The first 3 DDD's of 2006 were well attended. On May 6 DDD attracted hundreds of scouts with 120 Boy Scouts earning the Geology Merit Badge. An estimated 450 Cub Scouts and Webelos earned awards related to Earth Science. Total visitation of 1500 set a modern record for DDD. About 60 volunteers from **RMAG** (Rocky Mountain Association of Geologists), Boy Scouts **Order of the Arrow**, and **Friends of Dinosaur Ridge** assisted scouts from the Metro Area, Colorado Springs, and Wyoming. It was reported that a Boy Scout with his dad flew in from Minnesota for the event. Thanks go to **Clare Marshall** for her excellent organization and all the volunteers for their efforts. A second Boy Scout Day is planned for May 5, 2007.

June 3 DDD and July 1 DDD each drew about 400 visitors. On the deck of the Visitor Center kids enjoyed several fun and educational activities including face painting, facilitated bone digging, and Stegosaurus branding. Thanks to the several volunteers who pitched in for these new activities:

Doris Meakins, Karin Bond, Beth Simmons, Doris Walker, Nancy Cocroft, Betty Rall, Larry Lange and Evan Booth. These two events helped generate excellent revenue in the gift shop and on the shuttle bus. A similar event is planned for September 2 DDD.



FODR Volunteer LeRoy Shaser addresses Boy Scouts on DDD (Boy Scout Day)

Upcoming DD Days

Saturday, August 5

Saturday, September 2

Saturday, October 7 This will be the 3rd annual Girl Scout Day.

Sponsors

Greater Denver Area Gem & Mineral Council

www.denvermineralshow.com AND

Geocaching -Colorado www.geocachingcolo.com

Andrews & Anderson Architects, PC

AWG (Association of Women Geoscientists)

On **August 5 DDD**, the group **Geocaching Colorado** will present "**GPS Treasure Hunt with Geocaching.**" Jokingly they say they "use a billion dollar satellite system to find dollar store boxes." **FODR** will have a booth for Letterboxing that will include dinosaur stamp making for kids along with what are now old standbys: facilitated bone digging and Stegosaurus branding. The **Greater Denver Area Gem & Mineral Council** will give away mineral specimens to kids as they remind people to attend the **Gem & Mineral Show September 15-17.**

Registration for October 7 DDD (**Girl Scout Day**) is being handled by the **Girl Scouts** as follows: **Linda Fuller**, Program & Training Executive, Girl Scouts - Mile High Council, Main: 303-778-8774

400 S. Broadway, P.O. Box 9407, Denver, CO 80209-0407 Direct: 303-607-4838

Saturday Shuttle Bus (New Program)

A free program similar to one at *Bryce Canyon National Park* began June 10 and will run through August 26. "*Vanasaurus*" has been operating on the Ridge from 10 AM to 2 PM on Saturdays. **Andrea Campos**, an RTD driver, has been hired to carry visitors from the Visitor Center to bus stops at the Bulges and the Mangrove Swamp and back. So far a donation box on the bus has collected a little more than half the cost of fuel and Andrea's wages with indications that the Gift Shop does better on those days. Because of a rainout and July DDD, the last run was June 24 when 161 visitors rode the shuttle.

Volunteers

As mentioned above volunteerism on the Ridge for DDD has been excellent, although some of our stalwarts have been working double shifts. Thanks to **Don Walker** and **Marge MacLachlan** who have resurfaced to help with the bus tent, which has been a very good source of revenue since we started providing shade for visitors while they wait for the shuttle.

Tours in June were up 33% from June '05, and the average size of tours was small so that many guides were needed. Consequently, of the 111 guide-hours for June, 63 were filled by staff and 48 were filled by volunteers. Covering the booked tours with volunteer guides continues to be one of the biggest challenges of the Programs Department.

Members The Friends of Dinosaur Ridge welcome the following new members:

Dana Samuelson, Fergus Falls, MN – Jr.	Judy Giggy, Lakewood - Individual
Amy Whitcombe-Huber, Fergus Falls – Jr.	Art & Nancy Lowell, Centennial – Fam.
James Dunion, Denver – Ornitho. Sponsor	Nathan Nieburg, Charlottesville, VA – Jr.
Jim & Sandra Bushnell, Colo. Spgs. – Fam.	Silver Wood Hotel, Colo. Spgs. – Sponsor
Wild Birds Unlimited, Lakewood – Sponsor	

A New Member Benefit

Recently the *Lakewood Heritage Center* at 801 S. Yarrow (Ohio & Wadsworth) in Lakewood at the Belmar Complex donated six 4'x6' display panels that have already been used at several events. In addition to carrying FODR's publications, their Gift Shop is offering FODR members a 10% discount on purchases. History buffs, especially, will enjoy browsing in their beautiful store.

Outreach (or herding Stegos)

For the inaugural running of the **Colfax Marathon**, the City of **Lakewood** gave FODR a grant to refurbish the Stegosaurus that currently graze on the grounds of the Visitor Center. These colorful sculptures were touched up with a multitude of colors of paint and then sealed with a clear overcoat. May 20, we loaded all six into a 24-foot rental truck and took them to Colfax and Dover to adorn one of the rest stops for the Marathon. Thanks to **Dan Green** for twice helping us load, unload and tie down the beasts. Even though they were on the corner less than 24 hours, a few of our visitors have reported seeing them there. Remarkably a mother who ran the marathon in the morning attended a birthday party in the afternoon at the **Visitor Center**.

Using newly gained herding experience and a rental truck, my wife Lorie and I took a mini herd of 3 Stegos to the **Pike's Peak Gem and Mineral Show** on June 16-18. Our kind hosts, the **Colorado Springs Mineralogical Society**, www.CSMS.us, featured FODR in the show and we were given a short interview on **KKCS-FM**. A special thanks is due president **Drew Malin** and treasurer **Jim Bushnell**. As a merit badge counselor, Jim's wife **Sandra** brought scouts to **DDD**.

In between the aforementioned events Joe and I were invited to take our unofficial mascot, **Star**, the Star Spangled Stegosaurus, to the Wild West Car Show in **Golden** on June 10. He/she looked great with new hat and flag standing in the middle of Washington Street next to the bronze sculpture of Buffalo Bill Cody.

Upcoming outreach events in the 3rd quarter that we will attend include the Jefferson County Fair on July 29, the Mountain Heritage Festival at the Hiwan Museum in Evergreen on August 5, the Mesa Music Festival in Golden on August 27, and the Denver Gem and Mineral Show September 15-17. We particularly need volunteers to man our booth at the Denver show. Even a two-hour shift would be appreciated. You will get free admission and we promise you will not have to wrangle Stegosaurus.

Trendsetting

After one of their people visited the Visitor Center, a nature center in Georgia called with questions about our Dig Pit – they plan to build a similar one. And we learned that a museum in Colorado (but not in the Metro Area) is advertising a program whereby Boy Scouts can earn their Geology Merit Badges. So we do not always follow – sometimes we lead. As staffer **Roger Bennett** likes to say, "Keep those ideas coming."

Cryolophosaurus "frozen crested lizard" (cry - o - low - foe - sore - us)

Cryolophosaurus got its name from the continent it was found on - Antarctica. This was the first meat-eating dinosaur (called theropods) found as well as named from the frozen land.

Cryolophosaurus was found in 1991 by paleontologist William Hammer, and it wasn't alone. A prosauropod (pre-long-neck) similar to Plateosaurus, a small pterodactyl, a primitive mammal, and another unknown theropod were found beside it, telling us that even though Antarctica was closer to the equator than it is now, the dinosaurs could live in cool temperatures and even survive snow.

Because of the unusual crest on the dinosaur's head, it was originally given the name 'Elvisaurus', with the crest reminding people of Elvis' pompadore hair style.

This animal lived in the Early Jurassic period, and may be the precursor to the Allosaur.

