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Newsletter

Friends of the Florissant Fossil Beds eNewsletter

Every Fossil Needs a Friend

#42—July 2019

Geoheritage

By Robyn Proper

Do you know what goes on behind the scenes at your closest National Park? The Florissant Fossil Beds National Monument celebrates its 50th anniversary this August. Our monument supports a permanent paleontologist, a part-time museum technician, and as many as nine geology/paleontology interns each year. Since 1997, the monument has helped to launch the careers of over 60 young scientists.

How did this success story begin? In the 1870's, our government sponsored a scientific survey of our area. A local homesteader named Charlotte Hill shared her amazing fossil collection and set off work done by more than 150 scientists during the century that followed. Way to go, Charlotte!!

In 1969, legislation was enacted to protect our fossil rich area. Today, scientists at Florissant work to inventory and monitor the extensive fossil collection. There are more than 70 different fossil sites in the park, and changes can occur due to everything from freezing and thawing cycles to man-made causes. About 1,800 species have been identified over time, which makes our fossil collection one of the richest in the world!

The monument's paleontology activities are led by our park paleobotanist, Dr. Herb Meyer. Projects involve conservation efforts, resource management, scientific research, and education/interpretation opportunities. Students of all ages visit our monument to learn about our evidence of a 34 million year old environment that cannot be duplicated on our planet today. Collections of Florissant fossils exist in at least 17 different museums.

One of the main purposes of our monument is scientific exploration. Qualified scientists can submit research proposals to the National Park Service to acquire research permits. Examples of recent studies include expanding our knowledge of fossil mammals, fossil leaf studies to reveal paleoclimate, remote sensing to locate buried stumps, comparisons with other fossil sites to understand how ecosystems evolve over time, as well as many other topics. All the while, the staff members at the monument work to provide meaningful learning experiences, foster stewardship, and connect visitors with the geologic heritage of our area. Who knows what the future may teach us!

Close to 80,000 people each year visit the Florissant Fossil Beds National Monu-

ment. On August 20, 2019 we celebrate 50 years of science and history. Our summer celebrations include an evening fundraiser hosted by the Friends of the Florissant Fossil Beds, a hiking contest, a science open house day, a history day, and a huge celebration on August 17th involving guest speakers, panel discussions, and, of course, cake. Some of the original people who fought for the monument in 1969 will be returning to celebrate. Please go to the park website, www.nps.gov/flfo, to learn more. Come celebrate our geoheritage and the fabulous science and history of our area!



Weather station monitoring conditions next to one of the petrified stumps

The 50th Celebration is Almost Here!

Robyn Proper, President of the Friends of the Fossil Beds wrote the above article for the Pikes Peak Historical Society's quarterly newsletter. The PPHS is one of the Friends many partners. In it, she referred to the 50th Anniversary of the Florissant Fossil Beds NM August 17, 2019. This is a reminder to all our Friends members that this celebration is now right around the corner and we hope that many of you will be joining us on August 17th for a whole day of "science and history" ending with the banquet at The Nature Place in Florissant, CO that starts with a social hour at 4:30 – 5:30PM. Hors d'oeuvres compliments of The Nature Place and drinks compliments of the Friends. All are invited to join us then, even if you aren't attending the banquet. The banquet and speakers will be from 5:30 to 7:30PM.

Also, from 4:30 – 5:30PM, there will be a Silent Auction which will continue throughout the banquet until 7:30. If you have anything that you would consider donating to the Silent Auction, please contact me by e-mail at sammckind@aol.com, with a description, so that we can make a bid card for the item. You can then bring the item to either the Monument or bring it to the social hour/banquet. We would appreciate any donations.

LAST CALL for banquet reservations. If you wish to make reservations for the banquet, you can do so in one of two ways. You can send a check for \$40.00 for each person in your group made out to Friends of the Fossil Beds and mail to PO Box 851, Florissant, CO 80816 or go to the Friends website at www.fossilbeds.org and pay through Pay Pal. Also please indicate your choice of entrée, either roast prime rib or vegetarian.

We look forward to having many of you joining the Florissant Fossil Beds Staff and the Friends for this very special day for the Monument. Many surprise speakers will be joining us throughout the day's events and for the banquet. The Florissant Fossil Beds NM has an amazing story from the very beginning. Come and enjoy hearing the story.



Timeless Trees at Florissant, Colorado

By Steven Wade Veatch

The huge petrified *Sequoia* stumps near Florissant stretch the limits of my understanding. I'm left with only wonder, like a poem I can't explain. Under the dominion of a clear blue sky, the afternoon light ricochets off the stone, displaying the myriad beige and brown hues of the fossil stumps. Their stony surfaces contrast with tufts of grass that surround them. The nearby orange-red bark of ponderosa pine and the scent of the forest adds another layer of magic, while silent mats of pine green moss cluster in the shadows. Pale lichens cover some of the stone tree rings. The warm summer air buzzes with insects.

For me, the stone trees are a portal where the past joins with the present, and time seems to have stopped. I imagine how it all began 34 million years ago when a cluster of nearby volcanoes, once dormant, erupted. It started with a blast of ash and fiery molten rock shooting out from awakened vents. The air became heavy and dark, as plumes of grey ash hazed eastward towards what would become Florissant. Rainfall mixed with loose sediments on volcanic slopes, forming mud—the color of morning coffee—that rushed down the slopes of the volcanoes at speeds of up to 90 miles an hour. Ash rained out of the sky and mixed with the spreading mud. The mud popped and hissed, while it spilled over ledges, covered rocks, and stretched heedlessly into the Florissant valley.



**Figure 1. View of the Florissant Fossil Beds National Monument's iconic "Big Stump."
Photo by S.W. Veatch.**

A wreckage of plants and animals tumbled in the mud's advance as it invaded the forest of tall *Sequoias*. It turned the area into a surreal, harsh, hellish place, wiping out local populations of oreodonts, rhino-like bron-totheres, and small horses. Birds, struggling to dodge the devastation, flew skyward from the branches of trees that stood above the mud. Tendrils of steam rose out of the jumbled mess of mud that surrounded the bases of the trees. The weight of the mud pressurized and squeezed the wood. Over time, silica in the mud penetrated the wood, leaving behind the remnants of the ancient forest we encounter today.

I first saw the petrified trees when I was in grade school. I came back often with my family to look at them again. This relic stone forest changed me. I studied fossils and rocks because of them. And I learned from them. I now realize how mankind is a force of nature and how we can alter landscapes, just as the ancient mud and ash did so long ago at Florissant. Our addiction to fossil fuel has altered our planet's atmosphere and contributes to changing global climate. Florissant's *Sequoias* are extinct because of climate change, and these

trees encourage us to contemplate our annihilation as the planet experiences rates of extinction not experienced since a meteor wiped out the dinosaurs.

At the stone stumps, I take a few minutes to listen, where the sounds of the chirping birds, chattering squirrels, and the soft whispers of breezes exist with the noises of development—homes being built, cars moving and dogs yapping. I can also hear the petrified forest—it speaks of an Earth that is always in a state of change, but this protected ancient forest (a national monument now) also provides a place where change slows down, at least for me. As I look at the fossilized trees, I sense a calm as they release me from my ego and create an awareness of the wonderful things I can discover outside of myself.



Figure 2. Dynamite was used the early twentieth century to expose this stump. The use of explosives resulted in the shattered texture of the stump and required the use metal bands to hold it together.

Photo by S.W. Veatch.

Summer Seminars

Just a reminder that our summer seminars are starting, and we have spaces left for 3 of the July seminars. Please consider joining us for:

- Dr. Bud Wobus – The Big Flat – geology – 7/13/19. Power point to begin a full day field trip
- John Stanfield – Discovering, Observing and Telling Nature’s Stories for Children and Adults – 7/18/19 Full day with some short hikes.
- Dr. Bob Raynolds – From Our Origins to Today – A Geologists perspective of Our Changing Times – geologist – emphasis on water and climate – a full day

To register for any of these, please visit our website (www.fossilbeds.org) for a more complete description of the seminar and the presenter. You can pay through Pay Pal there or send a check to the address above.

Should you have questions about the 50th Anniversary banquet or seminars, please don’t hesitate to contact me as 719-510-5518 or by e-mail at sammckind@aol.com.

FLFO Activities & Events - July 2019



National Park Service
U.S. Department of the Interior

Florissant Fossil Beds National Monument
15807 Teller County Road 1
Florissant, CO 80816

Release date: Immediate
Contact: Jeff Wolin
Phone number: (719) 748 – 3253 ext. 202
Date 6/28/2019

Florissant Fossil Beds National Monument News Release

Activities Planned at Florissant Fossil Beds National Monument in
July 2019 (Hours of Operation 9:00 AM – 5:00 PM)

Special Event Programs:

Night Sky Program

Friday, July 26, Night Sky Program, 8:30 PM – 10:30 PM. Join park staff and members of the Colorado Springs Astronomical Society to gaze at the dark skies above Florissant Fossil Beds in search of planets, galaxies, nebulae, and more. Meet at the visitor center.

History and Culture Open House (regular entrance fees apply)

Saturday, July 27, 10:00 AM – 3:00 PM, Celebrate the history and cultures of the Florissant valley. Take a tour of the homestead, learn why someone once tried to saw apart a petrified stump, and learn about tribal connections with the area.

Daily Interpretive Program Schedule (program schedule subject to change, call ahead for updated daily schedule)

Ranger Guided Walk, Every Day 11:00 AM, 1 mile guided hike on the Petrified Forest Trail

Fossil Learning Lab, Every Day 1:30 PM – 3:30 PM, learn how scientists discover and research fossils in the Yurt

Hornbek Homestead, Saturdays and Sundays, 11:00 AM – 1:00 PM, take a tour of an 1878 homestead

Interpretive Talk, Saturdays and Sundays, 10:00 AM and 4:00 PM, 30 minute interpretive presentation in the amphitheater

FLFO Activities & Events - July 2019

Weekly Programs:

Yoga Hikes, Mondays, 9:00 AM – 10:30 PM. Join a certified yoga instructor and a Park Ranger for a 1 hour and 30 minutes, 1 mile yoga hike. This will be a hike interspersed with standing yoga poses. This program is geared for beginner to intermediate yoga enthusiasts. Meet at the visitor center.

Fossil Demonstration Excavation Site, Wednesdays, 10:00 AM – 12:00 PM. Meet geologist, Dr. Bob Carnein at the demonstration excavation site and see the fossil beds in situ and learn about how excavations are conducted. This site is located off the Petrified Forest Loop approximately 1 mile round trip from the visitor center.

Art in the Parks, Thursdays, 10:00 AM – 12:00 PM. Everyone is an artist! Drop in and join volunteer artists and other visitors to sketch and/or water color paint scenes of Florissant Fossil Beds. Stay as long or as short as you would like anytime between 10 AM – 12:00 PM. Ask at the visitor center desk for location. Limited art supplies and seating available. Interested artists may also bring their own supplies and portable chairs.

There are no additional fees for any park programs beyond the daily entrance fee of \$10.00 per adult (15 and younger are free). Florissant Fossil Beds National Monument offers 15 miles of beautiful, yet lesser known, hiking trails to explore, a free Junior Ranger Program, three short self-guided trails, a park video and museum exhibits, and bookstore. For additional information, please call (719) 748-3253 or visit our website: www.nps.gov/flfo or on Facebook or Twitter at /FlorissantNPS

About the National Park Service:

More than 20,000 National Park Service employees care for America's 419 national park units and work with communities across the nation to help preserve local history, protect natural and cultural resources, and create close-to-home recreational opportunities. Learn more at www.nps.gov

Support the Friends When You Shop Amazon

Do you shop on Amazon? Did you know you can support the Friends of the Florissant Fossil Beds with little effort and without any additional cost to you? Just click, or copy and paste, the following link:

https://smile.amazon.com/ref=smi_ext_ch_84?encoding=UTF8&ein=84-1114146&ref=smi_chpf_redirect&ref=smi_ext_ch_84-1114146_cl28

Alternatively, you can follow these simple steps:

- 1.) Got to smile.amazon.com
- 2.) Enter your standard Amazon username and login and then click the “Accounts & Lists” tab in the upper right-hand corner.
- 3.) After you click, a drop-down menu will appear. In this drop down menu, click “Your AmazonSmile” and then select your charity.
- 4.) To find us, simply type in “Friends of the Florissant Fossil Beds Inc” in the search bar and then click the “Select” button when the name appears in the results bar.
- 5.) Once you’ve selected Friends of the Florissant Fossil Beds, be sure to bookmark your link with “smile.amazon.com” at the beginning of the URL and shop from this link. If you do not shop from this bookmarked link, Amazon does not make a contribution to your selected organization.

Thank you for your support!

