

# Friends Board

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Newsletter

# Friends of the Florissant Fossil Beds eNewsletter

Every Fossil Needs a Friend

#53—December 2022

# New Friends' Exemplary Service Award -The Wolin Award September 17, 2022

Approximately two years ago, when COVID was taking a toll on people around the globe, the Friends board was meeting to decide where do we go from that point on. So, while the "pause button" had been hit we decided we might as well work on our organizational structure, set new goals and get more creative with the resources we had available. We looked for what was working and what was not. When deliberating on what was working, we looked at who inspired us. In the course of our deliberations we recognized that even when everything was in a muddle, Ranger Jeff Wolin kept inspiring us. He carried on the mission of the National Park Service that he had embraced and embodied so well. With more thought and more discussion we decided to create a new format for recognition of someone the Board knew always went above and beyond the scope of their duties. It could be a staff person, a volunteer, a donor or a researcher. It would only be given occasionally to someone who offered exemplary gifts. With all that in mind, it was only natural to make the first designee Ranger Jeff Wolin and going forward it would be called the Wolin award.

The award would be defined by his work ethic, dedication and heart for service. We have all experienced and have been privileged to benefit from these qualities of Jeff's at Florissant Fossil Beds National Monument.

In gathering comments from Board members and volunteers on their personal anecdotes and observations of Jeff's gifts to the Monument these were some of the common themes:

- His positive energy and enthusiasm in his verbal and non-verbal communication
- Being truly excited not only when doing his job but in his attitude about the Monument and the National Park Service



- His willingness to share his knowledge and expertise
- His willingness to find answers or solutions no matter what the dilemma or new project
- His ability to share an in-depth knowledge of all aspects of the Park Service and the Monument and where to find more information
- He is consistently present with a kind word or a helping hand for his fellow employees, volunteers or visitors
- He exhibits a professionalism and respect no matter what the circumstances
- He's a creative solution developer-let's not forget the smiles that the Jr. Ranger music CD's brought to all of us and others
- He's always there with a Thank You and is a thoughtful listener
- And last but not least being "The Rock" who held things together through different superintendents, local and national events and difficult crises that impacted everyone at the Monument

If "Every Fossil Needs a Friend" Jeff has been one of the best of friends of Florissant Fossil Beds- to the staff throughout his long tenure here and to the Friends of Florissant. But most importantly, he has been the best of friends to the visitors and kids where the rubber meets the trail. They have benefitted the most from his devoted efforts. Our thanks will never measure up to all he has given selflessly to us.



#### **GREAT BACKYARD BIRD COUNT - SATURDAY, 2/18/23**

We have started planning our annual participation in the Great Backyard Bird Count, an International Citizen Science event held every year for 4 days in February. The Friends have done this event for 8 years as a part of this bird count that occurs in over 130 countries in the same time period.

Our event will be held from 9 AM to 1 PM on Saturday, February 18th, 2023. We will have bird walks available for those who wish to participate. We will be offering activities for families and children to become in-

volved in such as scavenger hunts, making bird feeders, and a variety of other fun activities about birds.

If you plan on coming, please bring binoculars and be prepared for whatever weather we may be having. Water will be available.



## Astronomy 101- Florissant Fossil Beds Night Sky

By Mark Harter, FLFO Volunteer Ranger, Astronomy Lead

We are so fortunate to have a certified International Dark Sky Park right in our own backyard – the Florissant Fossil Beds National Monument (FLFO). Not only does FLFO boast fantastic shale fossil deposits (insects and plants) and petrified Redwood tree stumps, it also has some of the darkest night skies in the country to view the beauty of the universe. Visitors can experience "Stumps to Stars" throughout the year, and "Half the Park is after Dark" definitely rings true as night sky gazers come from all over the country to FLFO's dark night skies.

So what kind of astronomy can one expect to experience at one of FLFO's Night Sky programs? Let's use the October 2022 Night Sky program as an example, in which 258 visitors came to FLFO with lawn chairs, hot chocolate, and binoculars to join a dozen astronomers and telescopes from the Colorado Springs Astronomical Society (CSASTRO). Shortly after sunset, the fun begins with the appearance of our own solar system planets including Mercury, Venus, Jupiter (with four Galilean moons visible), and Saturn with its impressive rings. These neighborhood planets, seen through reflector or refractor telescopes, generate awe and amazement for all first-time viewers.

As the sky gets darker and stars begin to appear, a CSASTRO astronomer provides a guided Laser "Walk through the Constellations" tour that highlights astronomical objects with ancient mythology. Question: How many recognized astronomical constellations are there? Answer: 88! However, we can only see about half of these constellations from the northern hemisphere, and they change visibility as the season's progress through the year. So we see different stars and constellations in each season: Spring, Summer, Fall, and Winter. This is why it's fun to come out to Night Sky programs throughout the year because there's always something new to see. Our own Milky Way Galaxy (estimated 200 Billion Stars) is especially awesome to see at FLFO and can be clearly viewed in late Spring through early Fall (May-Oct).

Next come the really cool deep space objects like mysterious nebulas, bright star clusters, and distant galaxies. This stuff is Light Years away and amazing to see through a quality telescope; it really shows how huge our universe is. How far is a Light Year (LY), you may ask? Well, the speed of light is 186,000 miles per second. Think about how fast that is! The sun is 93,000,000 miles from the earth, and it takes the sun's light 8.3 minutes to reach the earth. Now, a Light Year is the distance that light travels in one full year, which is 5.88 Trillion miles. The nearest star to earth (other than our own sun) is in the Alpha Centauri complex, about

4.35 LY away. The brightest star in our night sky is Sirius (the nose of the dog in the Canis Major constellation, next to Orion the mighty hunter) is 8.6 LY away and seen in the fall and winter. The famed Orion constellation contains a variety of nebulas (interstellar gas and star nurseries) including the Orion Nebula (1,344 LY from earth), the Horsehead Nebula, and the Running Man Nebula. Perhaps the most profound object we routinely view at FLFO is the Andromeda Galaxy, a spiral galaxy like our own Milky Way Galaxy, which is 2.5 Million LY away, and has an estimated 500 Billion stars!



Finally, we also see some interesting moving objects during our Night Sky programs. The U.S. Space Force tracks about 40,000 man-made satellites orbiting the earth, and some of these show up with crowd-pleasers being the International Space Station, Chinese Space Station, Hubble Telescope, and Starlink satellites. FLFO is also a great place to see meteors (shooting stars), especially during the major meteor showers including the Perseids (August), Orionids (October), Leonids (November), and Geminids (December). And the occasional Comet (like Neowise, 2020).

So that's a quick summary of Astronomy 101 at the Florissant Fossil Beds National Monument. Please plan to join us for one (or all) of the upcoming dark-sky astronomy events in 2023!

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Mark Harter is a Florissant resident, and as an FLFO Volunteer Ranger leads the FLFO astronomy events. He is a retired military Veteran (Air Force) and works at the United States Space Force at Peterson Space Force Base, CO.

#### **Seminars**

The Friends ended 2022 with two very unique in-person events. A tour of Corral Bluffs, a nature preserve in El Paso County was our first in-person event in a long time. Corral Bluffs was set up to preserve the paleontological discovery that made national news several years ago when Colorado scientists from the Denver Museum of Nature and Science published the discovery of a treasure trove of fossils. The 4-hour hike was thoroughly enjoyed by all of the participants. For more information about this site, go to the Corral Bluffs Alliance website: https://www.corralbluffs.org/

The second seminar was "Forest Bathing' led by Jane Scanlon, a Certified Nature and Forest Therapy Guide, in late October. Through the practice of Forest Bathing (rooted in Japan as Shinrin yuku), participants follow a simple sequence that helps us slow our busy minds, open our senses and reconnect with ourselves in a joyful and healing way. Shinrin yuku or nature therapy invites us to engage in nature in a small area.

The seminar committee of the Friends is busy beginning to plan our seminar offerings for 2023. The first seminar will be a virtual seminar in late January done by a former intern, Addie Rich, who will present a seminar on a research project that she did at the Florissant Fossil Beds. Be watching for information to be sent out at the end of December or early January as to the

time and date and how to register.

We are also going to offer three other virtual seminars and two in person seminars during the year. In addition to these offerings, we will be scheduling occasional bird walks and Forest Bathing opportunities.

We look forward to beginning to offer these events again. We hope to see some of you at the events during 2023.



## **Ongoing Projects in Paleontology**

The Paleontology Division has been working on several projects since the summer. Our GIS intern Adelaide Rich completed the geologic map for the central part of the monument near the visitor center, and that project will continue next year. She gave a presentation at the annual meeting of the Geological Society of America in October (thanks to funding from the Friends for her travel!), and our Paleontologist Dr. Herb Meyer gave a talk at the conference about the long history of paleontological collecting at Florissant.

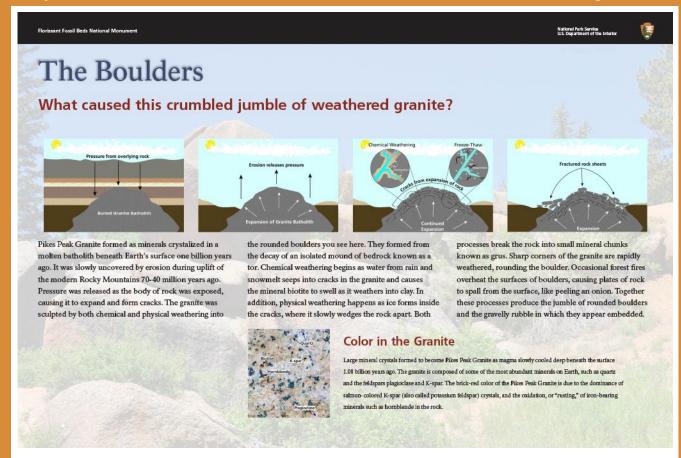
We have also been doing a lot of work to bring the Monument's fossil collections up to date using improved conservation storage techniques. Our Museum Technician Conni O'Connor and SCA Museum intern Hillary Cepress-McLean have been going through the specimen boxes in the entire collection to make Ethafoam nests around each fossil and carefully wrap the edges tightly in Tyvek. Hillary is using stacked-image photography to create new digital images for each fossil specimen, which is a time-consuming process that needs to be done inside the collection room where the temperature is kept around 60 degrees Fahrenheit to help control humidity. If you'd like to volunteer to assist in this project during weekdays, please contact Conni at conni\_o'connor@nps.gov. There are a lot of fossils to be rehoused and moved before construction begins on the collection area in early 2024.

GIS intern Tylor Birthisel has been working with Conni to completely revamp the Inventory and Monitoring project for all of the paleontological sites in the monument. This involves taking new photographs, installing new photo markers for all photo points, developing new site maps, and revising the evaluation procedure that is used to assess the changing conditions of the sites. This project resulted in discovering the theft of large pieces of petrified wood from two fossil stumps right behind the Admin Building!

Three of the huge efforts this fall by Herb and Conni have been to design a new trail exhibit, revise the site bulletins about paleontology, and update the webpages about the petrified forest in Peru. The new trail panel will explain the geologic processes that formed the big boulders at the end of the Boulder Creek Trail (see top of page 6). The twelve site bulletins are given out to the public at no charge that describes and illustrates in full color the monument's fossils, geology, and history, with a new one about geoheritage. The webpages about the Piedra Chamana Petrified Forest at Sexi, Peru have not been updated since 2011. We've accomplished a lot of work there and several papers about it were published during the past decade. The updated webpages will soon be available in both English and Spanish on the Friends' website at peru fossilbeds.org.

There are several research projects currently underway or soon to begin. The stump conservation project by UPENN is designing a small model prototype for environmental shelters around the stumps, which will be installed for testing sometime in 2023. Dr. Bob Anderson of the University of Colorado is continuing the project to explain some of the Ice Age landforms in the monument. Jay Leaver completed maps for his project last summer trying to locate buried fossil stumps using a magnetometer, which so far is proving to be about 50% successful. A new graduate student from the University of Colorado will be working with Dr. Jaelyn Eberle to collect and describe new fossil mammals from the Florissant Formation. Dr. Deborah Woodcock and Dr. Meyer have submitted a new proposal to the National Science Foundation requesting funding for their ongoing research at the fossil site in Sexi, Peru.

The whole purpose of the Florissant Fossil Beds National Monument, as mandated by the U.S. Congress, is Paleontology, and there is still a lot of work to do going forward!



#### Mile High Youth Club Project

Under the guidance of Monument Staff, the Mile High Youth Club went to work rebuilding the picnic area by the Barksdale parking lot this past summer and also added stairs, fencing, and signage. See the pictures of their hard work below.



# The Rocky Mountain Conservancy Bookstore at Florissant Fossil Beds

The Rocky Mountain Conservancy is a nonprofit organization that offers interpretive merchandise sales at locations throughout Colorado and Wyoming, including the Florissant Fossil Beds National Monument. The Conservancy returns a percentage of the revenue to the host bookstore site as direct financial aid.

The bookstore at the Fossil Beds has received spring merchandise late this summer this year but it is very well stocked for the winter and holiday season. The bookstore is now open 7 days a week excluding Thanksgiving, Christmas and New Year's Day during the Monument's operating hours that are posted on our website. We have received new items that include National Parks books, puzzles, children's games, and other miscellaneous items.

Dr. Herb Meyer's requested Paleo Books have arrived as well: The Language of Butterflies written by Wendy Williams, is "a deeply personal and lyrical book that explores the lives of one of the world's most resilient creatures - the butterfly - shedding light on the role that they play in our ecosystem and in our human lives" according to the author.

The second book is The Big Flat by Reinhard (Bud) Wobus offering "what's beneath, what's above, and what has changed from Colorado Springs to South Park across Colorado's subalpine erosion surface." "Mr. Wobus states that the book is not intended to be a "best seller" - just his story." The book does have a chapter featuring Dr. Meyer and the Florissant Fossil Beds.

The Rocky Mountain Conservancy Bookstore at the Fossil Beds Monument is still offering bird, wildflower, mammal, and scat and track field guides which are great books for identification on hikes in the Monuments. We have hundreds of items including books, toys and apparel including night sky tee shirts, sweatshirts, owl and bear tee shirts for women and Wild Tribute unisex stump and women's butterfly tee shirts. Wild Tribute is an organization that gives back 4% of their profits to the parks from each sale.

Please stop by our amazing bookstore at the Monument and check out our merchandise and see what we have to offer (see pictures of the store below).



## Bits and Pieces - History of the Friends

We thought it would be fun to revisit some of the wonderful memories over the years in each issue of the Friends newsletter, so here we go.

#### 20th ANNIVERSARY CELEBRATION FOR THE MONUMENT

In 1989, the Friends, cooperating with the staff of the Florissant Fossil Beds, planned the celebration for the 20<sup>th</sup> Anniversary of the establishment of the Florissant Fossil Beds National Monument. That celebration actually became the template for the Friends offering seminars the following year in 1990 and that we continue to the present.

Here is the flyer that announced this very impressive event:

#### 20th ANNIVERSARY

Anniversary ceremonies are scheduled for August 20, 1989. There will be addresses by such individuals as Dr. Estella Leopold, paleontologist and daughter of Aldo Leopold, the great conservationist, and Dr. F. Martin Brown, a noted paleontologist that has been associated with exploring the Florissant shales for more than 55 years.

In addition to the celebrations of August 20, there will be special seminars every weekend from July 2 through August 20 with topics ranging from paleontology to wildflower walks.

DATE	TOPIC	PRESENTER
Sunday, July 2	"Paleo Explorations"	Dr. Boyce Drummond
Sunday, July 9	"Montane Wildflowers"	Dr. Tess Kelso
Sunday, July 16	"Early History Fossil and Paleo Explorations"	F. Martin Brown
Sunday, July 23	"Florissant Geology"	Will Fowler
Friday -Sunday, July 28-30	"Hornbek Homestead Days"	N.P.S. Staff
Sunday, August 6	"Pikes Peak Life Zones"	Dr, Barb Winternitz
Sunday, August 13	"The Laramide Formation"	Kate Gregory
	"Anniversary Celebration	Dr. Estella Leopold
Sunday, August 20	Preservation of the Florissant Fossil	Dr. Vim Wright
	Beds National Monument"	Dr. Beatrice Willard

# **Upcoming Events**

#### **The Great Outdoor Bird Count:**

Saturday, February 18<sup>th</sup>, 2023 – 9AM to 1 PM at the Florissant Fossil Beds

#### **Night Sky Programs:**

The dates for January, February, and March had not been set by the time of publication. Watch the Fossil Beds website for dates and times: https://www.nps.gov/flfo/night-sky-programs.htm

#### **Volunteer Trail Crews News**

By John Schwabe, Trail Crew Volunteer

The trail crew comprised of Corky Capps, Ruth Gulliver, Ron Moore, Mark Silas and John Schwabe had a very busy work season. Beginning in May and finishing in November the crew performed general trail maintenance and brushing on most of the Park trails. The biggest project was protecting resources at the fossil demonstration Scudder pit. Work included improving drainage, upgrading and leveling the demonstration area as well as the trail to the pit. A big project was the reconstruction of the Hornbek Homestead root cellar roof and securing the root cellar from further wildlife damage. Our crew also dismantled an older wooden bench and installed a new low-maintenance bench on the "overlook" on the Geology Trail.

In general, it was a fun and busy trail season until the fall...

In October trail crew member Ron Moore suddenly passed away. He left the trail crew earlier in September saying "something had come up". No one knew of any illness. He was smiling as he left that day. No one knew we would not see him again. Ron had worked as a volunteer crew member for many seasons. He was quiet, kind, worked extremely hard, and always had a smile. Ron was our problem solver and always provided valuable criticism when our work product did not meet our standards. It was the engineer in him.

We will all deeply miss Ron as we walk past the projects he had worked on and see the large stones that he had carefully placed. Our crew and the Park staff were blessed to be in his presence.







#### **A** Tree through Time

By Steven Wade Veatch

Thirty-four million years ago on a dismal Eocene afternoon near present-day Florissant Fossil Beds National Monument in central Colorado, woodland creatures fled as the ground shook from a fiery power held deep within the Earth. This dark force manifested on the surface, where toxic gases, ash, and molten rock shot through open vents —filling the air. A red glow painted the sky as cinders rained down through the smoky, sulfurous air onto the landscape. Flows of searing lava, which can reach 2,000 degrees Fahrenheit, oozed from volcanic vents, burning everything in their path.

Following this concentrated chaos, hot ash and mud raced down the slopes of several volcanoes. Swirling mudflows pulled in surface materials, knocked down and carried small trees with their root wads, and then surrounded the bases of towering redwood trees. After frequent periods of active eruptions, the volcanic complex ultimately quieted down to dormancy and peaceable extinction. The mud that encased the bases of the redwoods enabled the slow petrification process to begin. The wayward mudflow also dammed a prehistoric stream and quickly formed a lake. Plants, insects, and other organisms were trapped in the lake sediments. As time passed, the lake sediments turned into shale containing fossils of these organisms.

Today, enormous redwoods grow at their ecological limit in a narrow zone along the California and Oregon coasts. Redwoods still exist at the Florissant Fossil Beds National Monument, but only as fossil leaves, cones,

or petrified stumps. It would be impossible for redwoods to grow today in Florissant's cool, temperate highland climate. Redwoods reached towering heights in Florissant's Eocene past, when the climate was warm and temperate.

There is a remarkable site at the monument where a singular fossil redwood stump endures despite the unavoidable and inexorable power of erosion and weathering. This petrified redwood base is unique among the others: It has a ponderosa pine tree *growing* from its stone center. I have always been spellbound by this juxtaposed image—the prehistoric stone stump with a living ponderosa tree growing out of it. I wanted to look at it again and make a deeper connection with this geological marvel.

As I walked on a trail to its location, Pikes Peak loomed in the distance. I passed a long, low, grass-covered meadow bounded by treed hills. A green swath of lichen-capped rocks fringed the trail. As I neared the scene I sensed a weight to the afternoon: windy weather brought a grey, clouded sky that rolled over the land. The warm, heavy smell of rain soon rose from the wet and glistening forest floor. Glittering drops of water rested on leaves. The wind began to whistle through the trees while flowers of skyblue flax nodded. As the rain clouds broke up, an elk wandered this high stretch of land while a coyote trotted by.



A living ponderosa pine tree grows from an ancient redwood that has turned to stone. Photo date 2013 by S. S. Veatch.

When I reached the fossil redwood, I sat down on a bench to soak in the experience. As I looked at this remarkable remnant of a primeval redwood I noticed patches of soft, velvety, emerald-green moss gripping sections of the petrified stump. There are small forest sounds: a bird chirps in the distance while a chickadee croons a love song from a place deeper than daydreams. A jay scolds me from the safety of a high branch overhead. There are little rustlings in a tree behind me where a black, tufted-eared Abert's squirrel worries a pinecone. These sights, sounds, and smells make me content and mark this natural place as special.

Fossils are the letters that form words in a geologic story. Together, these words complete the pages of the area's paleontological record: messages from a distant time telling a story of plants and animals

A blue flax blossom at the Florissant Fossil Beds National Monument, Photo date 2003 by S. W. Veatch.

that once lived here and are now gone. The pages document the broader climate and the ecosystem it supported. Most importantly, these intimate histories—written in stone—yield a narrative of how an ecosystem responds to climate change. The Eocene marks the start of a gradual global cooling.

The secrets of deep time are exposed in fossils on pine-covered hills and grassy meadows of Florissant. At the Florissant Fossil Beds lie some of the world's richest fossil deposits, remnants of life ranging in size from a tiny grain of pollen to massive redwood trees. Time is no longer the trickster under Florissant's vast summer sky; instead, time is captured as a memory in each fossil and is brought forward to the present, where these vital fossils reveal a primeval Eocene ecosystem. I immersed myself in its story.



#### Friends Annual Meeting - Saturday, October 15, 2022

Each year, in the fall, we hold our Annual Meeting at the Monument and always hope that we can have the meeting outside. This year, the weather cooperated with us and we held the meeting in the amphitheater in the stump shelter. Before the meeting began, we offered bird walks for those who could join us at 9 AM. A thank you goes out to Mike Britten and Therese Johnson for their help with this.

The official meeting began at 10 AM with Addie Rich, an intern, and Penny Wagner, our new Superintendent as speakers.

Each year, we present the Visitor Service Award to a staff member, intern, or volunteer for outstanding service. What makes this a very unique award is that nominations come from staff members, interns, or volunteers. The Board takes all of the nominations and makes the decision as to who will receive it. Over the years, sometimes two people may receive it and several people have received it a second time. This year the Visitor Service Award went to Parker Severson, a member of the maintenance staff for his outstanding work to keep all facilities "squeaky clean" and for his valuable interaction with visitors answering questions and giving directions.

A brand new award was given this year. It was presented to Jeff Wolin as the first recipient. See the article in this newsletter about the award on page 1.

We closed the events with refreshments for all including a cake that welcomed and congratulated Jeff and Parker. A good time was had by all.

## Friends Annual Meeting - Saturday, October 15, 2022

The Friends Board has 15 members. We are always looking for more people to join us. We meet every month on the second Thursday of the month at 5:30 PM except for December and one of the summer months. We just decided at our last meeting to meet by ZOOM during the winter months and in person during the summer months when we can meet at the Monument outside. We are hoping that by doing this, there may be people willing to join the Board who find it hard to travel to Florissant. Please consider joining us.

As the Board heads into our Annual Retreat in January, we can report that we are very financially stable. Since it has been difficult to hold any in-person events over the last two years, we have had to rely on the donation box and the generosity of our members. We are so thankful for the many members who have given so many large donations. When we put out requests for specific needs, they have been right there. **Thank you, thank you!!** If you would like to get involved with the board, make a donation, or purchase a membership for someone as a gift, please click here to learn how.

Our Donor Recognition Committee has been working very hard over the last year, to determine ways to recognize those who donate. We have to follow rules and regulations for this as determined by the National Park Service.

We are also working on items for sale. We have a beautiful long sleeve shirt and socks that celebrate the Night Sky program. We are working on a way for you to purchase these items as at this point we are unable to sell these items in the bookstore. We will let our members know when and how they will become available.

The third item for sale that we are working on is greeting cards. They will be for sale in packages of 5 cards in two categories: summer flowers and paintings of the Monument. Again, we are working on how to make these items available to our membership.

The Friends Board sends greetings for the holiday season to everyone and may you all have a wonderful New Year!

