

# Florissant Fossil Beds Field Seminars 2017

It is the goal of the Friends of the Florissant Fossil Beds, Inc. and the staff at the Monument to provide high quality, educational programs for the general public and educators. These programs endeavor to further the public's understanding of the geology, history, paleontology, and ecology of the Monument and the Pike's Peak Region.

Pre-registration is required for all seminars.

## Contents:

Friends of the Florissant Fossil Beds, Inc. ....	1
Seminar Descriptions.....	2-3
Instructor biographies.....	4-5
Registration Information.....	6
Fees, refund, and cancellation information.....	7
Things you should know.....	8
Mail-in Friends Membership.....	9
Seminar Registration Form.....	10
Adams State University.....	11

## Friends of the Florissant Fossil Beds, Inc.

The Friends of the Florissant Fossil Beds are dedicated to assisting the National Park System in preserving, protecting and advancing knowledge about the natural and cultural resources of the Florissant Fossil Beds National Monument. As a 501(3)(c) nonprofit organization, the Friends mission is to raise funds and promote programs and activities to advance the Monument's educational, interpretive and scientific objectives. A vital aspect of the partnership between the Monument and the Friends organization is that of promoting educational opportunities through field-based, experiential seminars. These seminars feature outstanding instructors who are recognized experts in their fields. We invite you to join us and take part in a lifelong process of learning and discovery.

The opinions and views represented in the seminar series are not necessarily that of the National Park Service or the Friends of the Florissant Fossil Beds, Inc.

# Seminar Descriptions 2017

Fun and Facts: Primitive Skills , Monday, July 10, 2017, 9AM- 5: PM, Robin Blankenship

This seminar will explore major concepts of the Stone Age: survival and sustainability. No electricity! No cars! No groceries! Just how did the people who lived in the Stone Age do it? Join us to see how they actually lived. Rub two sticks together and make fire! Spin bark into rope and string. Identify wild plants that are good for food and making survival items. Learn to make a stone knife and other stone tools. Learn how to throw an Atlatl, the ancient Mammoth spear of our ancestors. You will learn all of the basic skills required to live off the land without modern conveniences. You will review the many resources, including children's books that are available for language arts lessons on the Stone Age. Teachers will learn many ways of using the information and skills with their students which will satisfy the Colorado Academic Standards.

Natural History of the Florissant Fossil Beds: The Ecology of the Montane Zone, Thursday, July 13, 9:00 AM – 4:30 PM (working lunch), Dr. Boyce Drummond

The Florissant Fossil Beds is nestled in the Montane Life Zone, the middle of a layer cake of environments that stretches from the lowland grasslands of the eastern Plains to the wind-swept Alpine tundra above tree line. The Montane hosts an array of habitats that support hillside forests of Ponderosa Pine and Douglas Fir, flower strewn meadows fringed with Aspen, and streams and wetlands that punctuate this dryland habitat with oases of water loving plants and animals. This mid-summer seminar seeks to identify the patterns of nature among the rolling hills of Florissant by exploring the biological adaptations that make possible the rich diversity of the area's flora and fauna. The participants will spend a good bit of the seminar in the field with a short introduction with some lecture and sharing of resource materials written by the presentor.

Forests, Fires and Faucets: How Forest Health and Wildfires Impact Water Supplies and Citizens, Wednesday, July 19, 2017, 9:00 AM – 4:30 PM (working lunch), Coalition for the Upper South Platte and the US Forest Service

This seminar will explore the linkages between our forests and the water we depend upon for municipal supplies, agriculture and recreation in the arid West. The Coalition for the Upper South Platte, a nationally recognized watershed non-profit will examine these relationships with the participants and explain the science behind the forest to faucet connection. Participants will learn about Western watersheds and how the results of the Watershed Assessment for River Stability and Sediment Supply (WARSSS) was used in the Upper South Platte Watershed to implement remarkable recovery and restoration projects. A field trip during the seminar will include a tour of both pre-fire green-forest restoration sites and post fire restoration sites near Deckers, CO including Trail Creek, Chessman Reservoir and Horse Creek. CUSP (Coalition for the Upper South Platte) staff, as well as hydrologists and scientists from the U.S. Forest Service will lead the seminar.

The Volcanoes of South Park, Tuesday, July 25, 8:00 AM - 5:00 PM (working lunch and travel included)  
Dr. Emmett Evanoff and Dr. Herb Meyer

The Friends of the Florissant Fossil Beds, Inc. would like to arrange graduate level credit for the seminar "The Volcanoes of South Park." This field-based seminar will focus content on South Park, CO including the Florissant area which was covered by volcanic materials derived from volcanoes in the Guffy area and from the Mount Princeton center of the Sawatch Range. The Guffy area was the center of a large stratovolcano that blocked the drainages of South Park. Huge ash clouds composed of extremely hot solids, liquids and gases flowed down the valleys flanking the Sawatch Range and covered much of South park several times in the Geologic past. This one day seminar will be field based except for an introduction to the geology and paleontology of the area with a powerpoint presentation that will include the Thirty-nine Mile volcanic field and the batholith of Mount Princeton.

Introduction to Global Climate Change, Thursday, August 3, 9:00 AM - 5:00 PM, Dr. Miro Kummel

The Friends of the Florissant Fossil Beds NM would like to arrange graduate level credit for the seminar, "Introduction to Global Climate Change." This seminar includes 5 segments: (1) recent changes in the Earth's climate including temperature and precipitation, using examples from the Rocky Mountain West as well as measures like ice sea extent and the rate of melting in Greenland and Antarctica; (2) the Earth Climate System including the energy balance of the planet and heat transport across the planet with hands-on exercises that can easily be brought into the K-12 classroom; (3) the concepts of radiative forcing and climate sensitivity to explore the ways in which humans are altering the energy balances of the planet; (4) the role of natural ecosystems in regulating the concentration of greenhouse gasses with an emphasis on feedback; (5) how the climate varied in geologic past: the time the Earth froze into a solid ball of ice, the time when tropical rain forests graced Colorado during the Cretaceous, and our time, the time of ice ages. We will put the recent rapid climate change into the rich climate history of the planet.

# Instructor Biographies 2017

## Robin Blankenship:

Robin has done seminars for the Friends before but not recently. She will be presenting "Fun and Facts: Primitive Skills on July 10, 2017. Robin is the founder, owner and instructor for the Earth Knack School in Moffat, CO. Robin received her BS in Education and MA in English Literature from CU Boulder. She is on the adjunct faculty at Prescott College in Arizona, Antioch College in NH, Alfred University in NY, Sterling College in VT and Evergreen State in WA. She has taught ancestral skills in programs all over the country since 1992. She has authored two books: "Earth Knack: Stone Age Skills for the 21st Century," and "How to Play in the Woods."

## Boyce Drummond:

Dr. Drummond is an associate professor of organismal biology and ecology at Colorado College since 2007 and also a faculty affiliate in bio agricultural sciences and pest management at Colorado State University since 2002. He has over 38 years of experience teaching science. Including high school summer workshops, undergraduate college courses to both science and non-science majors, graduate level classes, Road Scholar groups, museum and park docents and the general public. He is an accomplished research scientist with diverse field experience on 4 continents and with over 50 publications including books, journal articles and book reviews. He holds an MS in Zoology from the University of Texas and a PhD from the University of Florida in Zoology. He will be doing the seminar, "Natural History of the Florissant Fossil Beds NM: The Ecology of the Montane Life Zone" on July 13, 2017.

## CUSP Staff with the US Forest Service:

CUSP – Coalition of the Upper South Platte – This seminar will be presented by a variety of people who work for CUSP plus people from the US Forest Service and other agencies who are environmental scientists and hydrologists. This seminar will be held on July 19, 2017.

## Emmett Evanoff:

Dr. Evanoff is an Associate Professor at UNC in Greeley in the Department of Earth and Atmospheric Science and in the College of Natural and Health Science. He received his BS from the University of Wyoming in Geology, his MS from UC Boulder in Geology and his PhD from UC Boulder in Geology. He is a researcher, an instructor and a consulting geologist. He has authored and co-authored many research papers including some with Dr. Herb Meyer, paleontologist at the Florissant Fossil Beds NM. He will co-teach "The Volcanoes of South Park" on July 25, 2017 with Dr. Meyer.

## Herb Meyer:

Dr. Meyer has been the Paleontologist for the Florissant Fossil Beds National Monument since 1994. He is the author of "The Fossils of Florissant." He co-authored, "Saved in Time: The Fight to Establish Florissant Fossil Beds National Monument with Estella Leopold. He received his undergraduate degree, his MS degree and PhD from the University of California at Berkeley in Paleontology. He is on the Adjunct Faculty at UC Boulder, a Research Associate at the Denver Museum of Nature and Science, and the Instructor of Record at Adams State for the seminars sponsored by the Friends of the Florissant Fossil Beds, Inc. He will co-teach the seminar "The Volcanoes of South Park" with Dr. Evanoff on July 25, 2017.

# Instructor Biographies 2017

Miro Kummel:

Dr. Miro Kummel is an Associate professor at Colorado College and serves as Chairman of the Environmental Program. He has been at Colorado College since 2006. He was the Werner Professor of the Year at Colorado College in 2014. He received his A.B. from Princeton and his PhD from the University of Michigan in Biology in 2003. He has done much research on what is happening to the tree line on Pikes Peak which is related to climate change. He will be presenting his seminar, "Introduction to Global Climate Change: on August 3, 2017.

# Registration Information

## Pre-Registration is Required for All Seminars

The following list will guide you through the registration process:

1. The first step is to decide which course(s) you want to take, noting the fees for each seminar. See course descriptions for more information about each seminar.
2. You can receive discounts on seminars if you are a member of the Friends of the Florissant Fossil Beds, Inc. Are you a current member of the Friends group? Do you need to renew your membership? Would you like to join the Friends for the first time? If you are interested in getting immediate discounts, you can join the Friends with your registration.
3. Are you a teacher? Will you be taking this course for graduate and/or undergraduate credit through Adams State University and/or recertification credit through BOCES?
4. Once you have decided which course(s) you would like to take, what credits, if any, you would like to receive, and whether or not you want to join the Friends group, you are ready to register by one of the following methods:
  - a. (Mail In/ Call In) Fill out the registration form at the end of the brochure and mail it with your payment. You can pre-register by calling (719) 748-3253, ask for extension 109 and leave a message. Your phone reservation will be held for 10 days. Receipt of payment confirms your space in the seminar).
  - b. (On Line) Register on-line by going to [www.fossilbeds.org](http://www.fossilbeds.org) and selecting 'Seminars' from the main menu, following the registration and payment instructions there (through PayPal).

Please remember that for each seminar you want to take for graduate credit from Adams State University, you must fill out a separate graduate credit registration form that is at the end of this brochure.

Also note that you may not repeat a seminar for credit if you have previously taken and received credit for that seminar. Check titles and content carefully since one or two repeated classes may have a new title or description. Call us if you're in doubt. Adams State University tuition or BOCES recertification fee must be included with seminar registration and fees.

# Fees and Tuition

## Friends' Seminar Fees

\$25.00 fee for each 1 day seminar

\$15.00 discounted fee for current member of Friends, 1 day

## Adams State University Graduate Credit Tuition and Adams State University Undergraduate Credit Tuition

\$27.50 tuition for 1/2 credit per 1 day, 7.5 hour class

Please note that you must attend the entire 7.5 hour day to get credit.

## BOCES Recertification Tuition

\$15.00 recertification credit through the Pike's Peak BOCES of Colorado Springs

Call For Details (719) 748-3253 ext. 109

Please note that you must attend the entire 7.5 hour day to get credit.

## Refund and Cancellation

We reserve the right to cancel any seminar if minimum enrollment is not met. We will make every effort to place participants in another seminar of their choosing or will return the registration fee and ASU tuition/BOCES fee. If you cancel your enrollment for any reason, the following policy will apply: refunds will be given for cancellations received up to one week prior to the seminar, minus a \$5.00 processing fee. No refund is given for cancellation less than a week prior to the seminar.

## Disclaimer

•The seminars are educational in nature. In any educational environment, all sides of various issues need to be examined and some of these may prove to be controversial. Views expressed are not necessarily those of the National Park Service, the staff, or Friends of the Fossil Beds, Inc., nor are they responsible for their content.

•In most cases, books recommended will be available for purchase at the seminar, or the Rocky Mountain Nature Association bookstore at the Monument.

# Things You Need to Know Once You are Registered

How to get here:

- The Monument is reached from I-25 in Colorado Springs by taking State Highway 24 west approximately 35 miles to the town of Florissant. Turn south (left) on Teller County Road #1, proceeding about 2 miles to the entrance of Florissant Fossil Beds. Proceed to the visitor center area. The seminars will be held in the Yurt (30 foot circular tent) at the south end of the picnic area unless otherwise stated.
- All seminars begin at the Yurt at 9 am and end at 5 pm UNLESS OTHERWISE NOTED. PLEASE READ ALL INFORMATION CAREFULLY in the seminar description. Several seminars may begin at a different time or will meet elsewhere. You are responsible for your transportation in reaching the starting point.
- Allow approximately 1-hour drive from the west side of Colorado Springs, at least 2.5 hours from Denver. Seminars will begin on time. We ask that you arrange to arrive about 15 minutes before the start time to allow for check-in. Allow yourself plenty of time for a stress-free arrival.

What to bring and how to prepare:

- Most seminars will be outdoors for a large portion of the class and may require hiking. Be prepared for changeable mountain weather with layered clothing, rain gear, comfortable hiking shoes, hat, sunglasses and sunscreen. Insect repellent is a good idea. Meals are not provided, so bring a sack lunch, snacks, ample drinking water, and a plastic sack to carry away any refuse from your day. Bring a notebook and pen. You may wish to bring binoculars, camera, field lens, or any other items that would enhance your experience.

You will be called before the seminar to insure you are prepared for the seminar with directions, proper clothing, lunch, and to address any concerns or physical limitations. You will also be notified if carpooling is a part of the seminar you will be attending.





## Friends of the Florissant Fossil Beds, Inc.

Join the Friends of the Florissant Fossil Beds, Inc. and help support Florissant Fossil Beds National Monument. Receive an immediate discount on your seminar fees!

### Friends Membership Form

Student \$10.00

Individual (1 year) \$20.00

Individual (2 year) \$36.00

Family (1 year) \$30.00

Family (2 year) \$50.00

Paleovespa \$500.00

Brontothere \$1,000.00

Sequoia affinis \$5,000.00

Name\_\_\_\_\_

Street\_\_\_\_\_

City\_\_\_\_\_

State\_\_\_\_\_

ZIP\_\_\_\_\_

Email\_\_\_\_\_

Phone\_\_\_\_\_

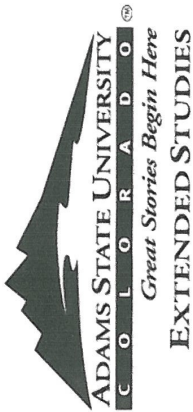
Contribution\_\_\_\_\_

Total \_\_\_\_\_

# Seminar Registration Form

Teacher graduate credits are \$27.50 for 1/2 credit (7.5 hours)					
Course Number	Seminar Title	Seminar Fee	Adams State Tuition \$27.50	BOCES \$15.00	Total amount this seminar
ED 589					
ED 589					
ED 589					
ED 589					
ED 589					
ED 589					
			Membership Dues		
			Subtotal		
			Total		

Mail completed forms with payment to:  
 Friends of the Florissant Fossil Beds  
 PO Box 185  
 Florissant, CO 80816



ADAMS STATE UNIVERSITY  
 208 Edgemont Blvd., Suite 3000 Alamosa, CO 81101  
 EXTENDED STUDIES REGISTRATION FORM  
 Toll Free: 1-800-548-6679 or (719) 587-7671 FAX: (719) 587-7974  
 Website: <http://lexstudies.adams.edu>

Date \_\_\_\_\_ Social Security Number \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ Birthdate \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ E-Mail Address \_\_\_\_\_

Full Name: \_\_\_\_\_ (Last) \_\_\_\_\_ (First) \_\_\_\_\_ (Middle) \_\_\_\_\_ Previous Name \_\_\_\_\_

Mailing Address: \_\_\_\_\_ (Street - P.O. Box) \_\_\_\_\_ (City) \_\_\_\_\_ (State) \_\_\_\_\_ (ZIP) + 4 \_\_\_\_\_ New Address?: Yes \_\_\_\_\_ No \_\_\_\_\_

Sex:  M  F Home Phone: \_\_\_\_\_ Work Phone: \_\_\_\_\_ School District: \_\_\_\_\_

Have you previously enrolled at Adams State University?  Yes  No  No (Non-Resident)

Classes 100-400 level are undergraduate. 500 level classes are graduate level. You must have at least a BA/BS to register for a course numbered 500 or above.

Course Prefix & Number:

Course Title:

Date:

Credit Hours/CEUs:

Instructor of record:

**\*\*I understand that if an incomplete grade is awarded, the incomplete grade will change to an "F" grade exactly one year from the registration date unless an earlier date is specified by my instructor.\*\***

I understand that if I have registered for hours in excess of 20 within this term, I must acquire Extended Studies approval prior to registration for this course. I understand that I must fulfill the residence requirement in effect for any special degree or certificate. I understand that if this class is to be used in a degree program, approval must be secured from the student's assigned academic advisor. I hereby request admission to Adams State University as an Extended Studies (non-certificate or non-degree bound) student. I understand that if I wish official admission to a degree program, I must submit a regular application. I certify that all information (including Selective Service) I have provided is true.

- Ethnicity: (Mark any that apply. Not required.)
- American Indian or Alaskan Native
  - Black, not of Hispanic origin
  - Hispanic
  - Asian or Pacific Islander
  - Caucasian/White, not of Hispanic Origin
  - Do not wish to provide this information

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

An Official Transcript will be sent to your mailing address at no additional cost when a final grade for this course(s) has been posted. To request additional transcripts, please visit <http://www.getmytranscript.com>.