



# Friends of the Florissant Fossil Beds Newsletter

Volume 2004, Issue 3

Newsletter Date: September, 2004

## Inside this issue:

The Florissant Lineament 2

Annual Meeting of the Friends 2

Cripple Creek's Rocks 3

Lake George Gem and Mineral Club 3

35th Anniversary Celebration 3

## BRANDS in the "Flowering Valley"

By Beth Simmons

Livestock owners had to have some method to keep track of their cattle, sheep, and horses. Many times herds mingled on the open range of the mountains and then were sorted out during roundup. Branding day was fraught with strong men, stubborn livestock, and the beginnings of rodeo.

On July 10, 1877 the "Princeton boys" witnessed the summer's "round-up" near Hartsel.

*We next went over to Hartsell's, where we at last found what we wanted [water], after having come for it nine-*



*Cattle Roundup and Branding near Lake George circa 1895. Courtesy Ute Pass Historical Society*

*teen miles over a very hot road. But there was another difficulty; a "round-up" was in progress, and all available quarters were occupied, so we had to urge our way on again. A round-up is the technical term out here for a gathering of all the cattle on the park, for the purpose of branding the calves and*

*counting the herds. This is held every year. Large numbers of cattle were already there, and many more were to come. This was the favorite spot for this purpose, as water and grass are very plenty.*

Brands identified beasts. For over one hundred and fifty years, brands have served as fences across the American frontier. A family's name and property were known by their brand, a bold mark designed to reflect their personal style and taste. They adorned gateposts to let visitors know they were calling on the right spread. Brands have become a unique American 'coat of arms' (Dray, 2004)

*(Continued on page 4)*

## Superintendent's Message

**Jeff Mow, Superintendent**

As the monument approaches its 35th anniversary, it is a time to both appreciate past achievements and to look forward into the future. As I mentioned at the last Friends' Board meeting, the 35th anniversary isn't so much about the National Park Service as

much as it is about the people who worked so hard for over 50 years to establish the monument. Florissant is one of a handful of national monuments carved out of privately-owned lands and whose authorization required an Act of Congress. Unlike a sitting President, Congress

generally works at a much slower and more deliberate pace. The reason Florissant became a National Monument was due to the tireless persistence of individuals and groups that understood the significance of the fossil resources. We as a nation

*(Continued on Page 11)*

## The Florissant Lineament

by **Andy Weinzapfel, Geologist**

Have you ever wondered why the fossil-rich Florissant formation is where it is? Could there be something in the underlying geology of Pikes Peak backcountry that has generated a “string of pearls” in nearly a straight line: Tarryall topaz, Crystal Peak amazonite, Florissant fossils, and Cripple Creek gold? In order to consider these questions, let’s look first at the geologic big picture.

The geology of the Pikes Peak region is dominated by the 1.08 billion-year-old Pikes Peak batholith, a large body of once-molten igneous rock that was likely derived from the earth’s deep mantle and injected upward to a depth of 3 miles or less below the ancient surface. The Pikes Peak granite, extending over an area of 1200 square miles, is exposed at the surface today only because the rocks that once covered it have gradually eroded away. This granite outcrops on the west side of Manitou Springs, and extends westward beyond the Florissant valley (see map). In the deep subsurface, it has been penetrated by petroleum exploration wells in the Denver basin, east of Colorado Springs.

It is unusual to find significant layered sedimentary rocks within the outcrop area of a very large igneous intrusion like the Pikes Peak batholith. A drive westward from

Colorado Springs along US 24 crosses two noteworthy anomalous narrow “islands” of bedded sedimentary rocks in a “sea” of Pikes Peak granite: Woodland Park and the Florissant valley. Narrow sedimentary rock remnants within large granite bodies most typically occur in down-dropped fault blocks, known as grabens, where they are somewhat protected from erosion.

The broad, linear valley extending from Woodland Park northward is known as the Manitou Park graben. Within it are Paleozoic sedimentary rocks approximately 300-550 million years old. The west side of the valley is the site of an old rupture, the Ute Pass fault. This fault follows US 24 down Ute Pass, wrapping around the east side of Cheyenne Mountain. Much lesser faults occur on the east side of the graben at Woodland Park. Along US 24, these can be readily recognized as offsets within the Fountain formation behind Casa Grande restaurant.

The fossil-rich Florissant formation is centered on Florissant, but extends as far west as Lake George and south to Evergreen Station along Teller CR #1. This unit, composed of a series of lakes, was deposited in an ancient valley 34 million years ago. The lakes were fed by south-flowing streams, naturally dammed by volcanic mud

*(Continued on Page 10)*

---

## NOTICE OF ANNUAL MEETING - Friends of the Florissant Fossil Beds

**Saturday, September 25, 2004**

**Florissant Fossil Beds National Monument**

**12:00 PM. at the “A” Frame**

A potluck picnic will begin at 12:00 PM. Please bring a dish to share, and your own plates and tableware (drinks will be provided). Steven Veatch will present the detailed story of Florissant’s mammoth after the meeting. During the last Ice Age the mighty mammoth, creatures no longer of this earth, roamed the hills and valleys of Florissant, Colorado. Eleven thousand years ago they vanished from the face of the earth. This discovery represents a relatively high elevation for mammoths and is the first documented mammoth in Teller County. Throughout the western United States, mammoths are generally associated with other animals indicative of open habitats that are quite different from the high elevation forests of today. The Florissant fossil beds are world renowned for the fossil plants and insects from the paper-thin shales of the Eocene Florissant Formation. Fossils from the overlying Quaternary sediments are rare.




---

## Board Members Needed

The Friends of the Florissant Fossil Beds would like to increase the active members who serve on the Board of Directors. If you would be interested in serving on the board please send a letter or email to:

Steven Veatch  
P.O Box 5938  
Woodland Park, CO 80866  
sgeoveatch@att.net

## Cripple Creek's Rocks

**Steven Veatch Presents: *Cripple Creek's First Rock Collection at the Western Museum of Mining and Industry, October 13, 2004, 7 p.m.***

Cripple Creek was a brawling mining camp when two U.S.G.S. geologists arrived to survey the mining district in 1894. The samples they collected served as the basis for a U.S.G.S. report that brought increased interest in what would become the "World's Greatest Gold



Camp." Join Steven Veatch for an evening of minerals, mines, rare photographs, and a look at one of the most important rock collections in Colorado! This program will be at the Western Museum of Mining and Industry. Regular admission applies. Reservations required: 719-488-0880.

## Lake George Gem and Mineral Club Seeks New Members

Pikes Peak backcountry is one of the United States' premier mineral collecting localities. The Lake George Gem and Mineral Club is a nonprofit organization for those interested in rocks and minerals, fossils, history of the Pikes Peak region, Indian artifacts, and the great outdoors. The club's informational programs and field trips provide an opportunity to learn about earth sciences, rocks and minerals, lapidary and jewelry making, and to share experiences with other members.



*Amazonite*

The club is geared primarily to amateur collectors and artisans, with programs of interest to both beginners and serious amateurs. The club meets the second Saturday of each month at the Lake George Community Center. From April to September, we meet at 9:00AM; in the winter, at



*Crystal Peak*

## 35th Anniversary Celebration

**You Are Cordially Invited**

**by**

**The Florissant Fossil Beds National Monument  
and**

**The Board of the Friends of the Florissant Fossil  
Beds**

**To Join In The**

**35<sup>th</sup> Anniversary Celebration of the Monument  
SATURDAY, August 28, 2004 and SUNDAY, August 29,  
2004. Please call the Florissant Fossil Beds National  
Monument for details.**

## Brands (Continued)

The first law for the administration of brands for the state of Colorado was enacted in 1869, and the first official brand book was published in 1885. There were 12,000 brands recorded in 1885, by 1906 there were 23,250, and the number declined in 1940 to 15,087 (Wolfenstine, p. 273). By 1940 the number declined in 1940 to 15,087 and in 1943, the state dismissed many outdated brands and re-registered any the ranchers needed.

Some ranchers and their families have used their brands for over 100 years. Like copyrights, brands are personal property designations that can be bought or sold, assigned, transferred, mortgaged, or willed. There is usually an annual renewal fee to keep the brand registered.

In modern-day Colorado, any change of livestock ownership requires a brand inspection (now usually consisting of showing legal registration papers for a horse, complete with identification markings). Any movement of cattle over a distance exceeding 75 miles and any out-of-state shipments requires a brand inspection (Wolfenstine, p. 177) Tracing livestock is paramount to preventing the spread of disease as was illustrated by the recent Mad Cow Disease episode in the State of Washington.

Every ranch owner and often times both husbands and wives had his or her brand registered with the Colorado State Brand Inspector. Sometimes these were simple logos with just a letter and a symbol or double letters. Other times, the brands took on an artistic flair.

Often the ranchers altered the ears or other body parts of the cattle. An earmark was a design cut into one or both ears of an animal. Sometimes a portion of the ear might be removed. A semicircular nick was an "underbit" or "overbit." A square cut of roughly half of the ear was a "crop." Cutting the ear close to the head was called a "grub." A V-shaped cut in the tip of the ear was a "swallow-fork." The same mark on both ears became known as a "flickerbob." A "double over-bit" was the mark made by cutting two triangular pieces in the upper part of the animal's ear (Dray, 2004).

The registered brands were published annually in a "Colorado Brand Book" with the complete title (on a small handbook)- "Colorado Brand Book and Stockgrowers and Breeders Ready Reference with Index of Brands and Index of Owners, containing all Stock Brands on Record in the Office of the Secretary of State of Colorado. Published by S.H. Sandart in Denver, every stock grower carried his leather bound, snapped "Brand Book" to identify livestock on site. The little book listed each owner and brand by county with a complete abbreviated description following the brand as to placement of the brand, or other symbols or

designations claimed as their own by the livestock owner.

In 1887, two years after the initial state brand book was issued, what is now Teller County was still part of El Paso County. Florissant was a bustling supply center for both miners and ranchers. The Cripple Creek gold lode had not yet been discovered and the trains had not yet come up Ute Pass.

Ranch owners listed in the 1887 Brand Book include Mrs. A. Hornbeck, Adeline Hornbeck, the first true homesteader on the Fossil Beds property. Rev. David Long and his family were the first to settle in the valley in 1871, but left for Salt Lake City about 1874. Mrs. Long's brother sold the property to Adam Hill and his wife, but they didn't file for homestead until 1881. Adeline had filed in 1878. James Castello and his wife owned the townsite of Florissant and their son, Frank, appears in the Brand Book. Other ranchers listed from Florissant were Barnwell & Starbuck along with Reg. H. Barnwell, David Copeland, W.H. Derbyshire, Chas. M. Drury, S.P. Faulkner, G.W. Frost, Thos. and W.H. Grose, Geo. H. Harker (Adeline Hornbek's second son), and E.C. Hensley. Chas. W. Kittridge, Charles Padgett, S.C. Pettegrew, L.O. Pourtales, Mrs. Julia S. Riggs, and M. Riggs, J.N. Tomlinson, Richard and Wm. H. Tremayne, Edwin Van Meter, H.A. Watson, L.B. Wilson and John Wilson complete the listing for Florissant.

Notable Florissant residents missing from the Brand Book include Adam and Charlotte Hill and Attie and Silas Thompson. Silas Thompson hadn't come to town yet and Attie was hiring out as a cook and house girl for local ranchers. The Hills had sold their place to Coplen and the Colorado Museum Association in 1883. Frank Burnham, the original settler of the Twin Creek Ranch in 1875 is also among the missing. He probably hadn't established a sizeable herd in the two years between his arrival and the printing of the brand book. W.P. Allen, major merchant of Florissant, didn't apply for homestead until July 31, 1888, with S.M. Allen applying on October 27, 1890.

Commonly, ranch owners lived 'downtown' in Colorado Springs and operated the ranch from there. The exact locations of many of the ranches is not known, but could be traced through county property records at El Paso and Teller County offices. Many of the ranchers used their brand as the name of their ranch – the R Bar J, for example **(R-J)**

The following short descriptions show the brand(s) of each livestock owner listed from Florissant as copied on a scanner or created using computer script files.

*(Continued on next page)*

## Brands (Continued)

The descriptions attempt to interpret the abbreviations used in the citation shown on the page number in parentheses. The maps at the end of the report show the locations of some of the ranches in 1875 and 1884.

**ASA** The Castello family was the founding family of Florissant. Judge Castello had died in 1878, and the oldest son, Frank F. Castello, took over the running of their supply store until 1882. He then turned the managing over to Adeline Hornbeck and turned to farming and ranching. He used a simple, triple lettered **ASA** on the left shoulder. (p. 64; Wolfenstine, p. 320) Eventually he invested in mines at Cripple Creek.

**REX** **REX** Barnwell & Starbuck and Reg. H. Barnwell were apparently a cattle company operating out of Florissant. Their brand was another triple lettered brand, **REX**, plain or underlined (called 'barred'), **REX** (p. 68; Wolfenstine, p. 319)

**CO** David Copeland, whose ranch was west of Divide, east of Hensley's on the Ute Pass Road, used a simple barred **CO** (p. 69; Given and Stark, 2000).

**DZS** W.H. Derbyshire used a triple lettered **DZS** symbol. Oftentimes, if the owner didn't designate where the brand would be located on the animal, the brand could be placed anywhere. Some brands could be readily 'blotted' by the addition of a line or other symbol. Then the original owner would have no recourse to prove ownership if the cattle were rustled (p. 69; Wolfenstine, Plate 11)

**J** Chas. M. Drury used a slanted combination of C and J for his brand with the top line of the J extended over a small c (p. 70).

**F** S. P. Faulkner's brand was a connected P and F on the left shoulder or the dewlap (the roll of skin between a cow's front legs). His horses carried the brand on their left shoulder (p. 65)

**GWF** The next entry from Florissant is for George W. Frost, an ex-Bostonian who sold his box factory in the east and purchased Toll Witcher's ranch south of Florissant around 1886. Frost lost most of his cattle in the blizzard of 1886-87 (Kaelin and Kimmitt, p. 201), but his brands were still valid. One was a strange stick figure, a forked half-T. Frost's regular brand was simply a triple-lettered **GWF** (p. 70; Wolfenstine, Plate 20). Frost hadn't yet developed the lake and townsite now named for him, Lake George.

**TG** **HG** **7X** Thomas Grose and W.H. Grose, ranch owners along Four-Mile Creek, had a simple double-lettered **TG** or **HG** or a **7X** on their livestock. Their ear markings were over hack on the right ear, and under hack



on the left ear (p. 70). The hack is a small slit in a cow's ear (Wolfenstine, Plate 50) still used by ranchers to indicate types of inoculations that a cow has received (Atkins, 2004). Both of these brands also appear on record in list of notable brands in the Guffey History book by Rosie White.

**JH** The next entry is from E.C. Hensley. Judging from the bar under the brand, this was probably a son or a relative of Captain J.H. Hensley. Hensley had homesteaded a ranch about a mile southeast of Florissant just across the wagon road from the Florissant cemetery, with patent applied for on Oct 13, 1886. The Hensley's boarded many travelers on their ranch along the Ute Pass Wagon Road, and Atlanta Long cooked for them in 1890. Silas Thompson and his sister and her husband, Becca and Dan Nevitt, boarded there. In 1891, Hensley's ranch was supposedly the site of a 'very rich strike of gold' on February 12, 1891 (Kaelin and Kimmitt, p. 210), fondly recalled in Florissant history books as "Hensley's Potato Patch" (Kaelin and Kimmitt, p. 227)

The designation 'potato patch' illustrates the beginnings of the now famous Teller County potato industry. For his brand, Hensley barred a connected J and H (p. 71) Like George Harker's brand the under-bar could have represented descendancy from the initial connected **JH** brand.

**H** Adeline Hornbek's second son, George H. Harker, used his mother's brand, under barred (p. 65). Such an addition to the parent's brand is called "cadency," showing descendancy from the original owner of the brand. (Wolfenstine, Plate 6) This brand now hangs over the ranch gate just south of Evergreen Junction along Teller County 1 which was George Harker's ranch (Tremayne in



(Continued on next page)

## Brands (Continued)

Cahill, 1995, p. 16) Harker also used **75** for a brand later, according to Rosie White in the Guffey History, p. B-2. Later George also apparently had a distinctive dewlap brand, described by both John Tremayne and Rosie White in the Guffey History Book.

“At the bottom of McGuire Hill was the George Harker Ranch. He was quite wealthy with many cattle that bore the dew drop mark on their lower neck.” (p. 15; sketch from page B-2)

**HV** By modern convention, “Mrs. A. Hornbeck’s” name was misspelled in the Brand Book. The brand inspector’s list often contained misspellings and even wrong locations. Adeline Hornbeck’s brand was a capital H with a ‘forward’ slash, (called “H slash”) positioned on the left hind of the cow. After the diagram of the brand in the book are the abbreviations “l.h., e.m.u.b. & s.f.l-e., u.b. same l.sh.” These tell the brand inspector that the ‘H slash’ brand should appear on the left hind (on a cow). On a horse, her “H slash” could appear on the left shoulder (l.sh.) (p. 66).

On a cow, the brand may appear as earmarks (e.m.), under the bit (u.b.), the bit being the dividing line of a cow’s ear. Sometimes portions of the ear were slit or removed from either the upper or lower edge. (Wolfenstine, p. 137)

Another identification mark Indians used was to slit horses’ ears. Adeline’s livestock had a swallow fork on their left ear on the upper ‘bit’ (edge)(Wolfenstine, Plate 44, Fig. 600)



Full over half swallow fork

With all of these various markings, Adeline was protecting her possessions against theft by Indians who traveled through the valley regularly or from horse thieves. Between 1876 and 1918, two bands of horse thieves had centered their operations just south and east of Florissant in “Horse Thief Gulch” and “Cabin Creek” near what is now Mueller State Park. The White Brothers stole livestock from ranchers as far away as Pueblo and Canon City, and then blotted the brands and sold the animals in Denver. (Kaelin and Kimmet, p. 158, 159)

**14 SU** Charles W. Kittridge used an under-barred double letter **SU** or a combination of a 1 and an open-topped 4 (p. 72) His ranch was in the region where Four-Mile Church is located southwest of Evergreen Station in the wide ancient paleovalley. Eventually this combination of letters, without the bar was owned by Frank Rowe, then Dean Johnson of the Skyline Ranch, and then Ron Sondrup (Campbell, in Cahill, 1995, p. B-4)

**X<sup>+</sup>** Charles Padgett’s brand was an X with a ‘superscripted’ plus sign. The abbreviations tell that the ‘X plus’ should appear on the left hind. The ear markings Padgett used were “over half crop,” on both ears. To crop an ear meant to cut it half off. Sometimes the ears were simply ‘tipped.’ If they were almost completely cut off, the brand was called a ‘Grub.” Padgett’s horse brand was the same ‘X plus’ on the left thigh. (Wolfenstine, Plate 41, Fig. 516)



Over half crop

**APX** S.S. Pettegrew used a triple letter combination of **APX** on all of his cattle and sheep’s right ears (p. 73). He was probably a relative of ‘A.C. Petigrew’ who homesteaded a plot just west of the main portion of the National Monument on February 3, 1885. The Pettegrew name appears on another map of homesteads of the Florissant Fossil Beds National Monument, also.



L.O. Pourtales, the Prussian ‘count of Florissant,’ home-

steaded just north of Florissant in 1876 (Kaelin and Kimmet, p. 139). Louis Otto Pourtales’ brands, apparently combinations or configurations of Greek letters or triangles (straight or tumbling) with an I (p. 73) or an over-bar and script *h* identified the pure-bred cattle in his extensive, well-built corrals (Kaelin and Kimmet, p. 144).



The next entries from Florissant were the Riggs family. They were some of the earliest settlers in the Florissant area making their home in 1870 south of Florissant near where the Cripple Creek Mountain Estates are today just northwest of Rhyolite Mountain (Atkins, 2004; Kaelin and Kimmet, p. 104). Mrs. Julia S. Riggs’ brand was a connected J and H, and M. Riggs, her husband, had an under-barred scripted **R** (p. 73). The Bar R appears also registered with Julia S. Riggs in the notable brands list in the Guffey area (White in Cahill, 1995, p. B-3)

**JNT** J.N. Tomlinson used his triple letter initials for his brand. He cropped their left ears and cropped and put two slits in their right ears (p. 75)(Wolfenstine, Plate 51, Fig. 760).



Crop and split

**T** The Tremayne Ranch was along Four-Mile Creek just beyond the present Teller/Park County Line. Richard Tremayne’s brand was a simple T with a dot by the upper cross of the T on the left shoulder and hind.

(Continued on next page)

## Brands (Continued)

He also put a hole in his cattle's right ears. Tremayne's horse brand was the "T dot" on the left shoulder (p. 67; Tremayne, John in Cahill, 1995, p. 17).



Richard's relative, Wm. H. Tremayne, used a bar over an extended T for his brand (p. 75). This brand, a common one, could have been easily blotted (altered) by horse thieves simply by adding another bar across the top (Wolfenstine, Plate 11, Fig. 100)



Edwin Van Meter designed a combination of half circles and an H (p. 75).



H.A. Watson designed a unique stemmed **W**. He also cropped the right ear or cropped the left ear under the bit on his cattle. (p. 75).



Coming from Missouri in a covered wagon, John and Mary Wilson staked a homestead claim to the property along the present Teller/Park County Line in 1874. He applied for his homestead certificate on May 18, 1881. John Wilson used a combination of **7W** to identify his cattle that grazed along the meandering waters and grass-filled meadows along Twin Creek (p. 75; Kaelin and Kimmett, p. 145)

Brands and identification methods have changed over the last 125 years. Ear tags, freeze branding, and even tattooing take the place of ear alteration, hot branding, and other body alterations deemed inhumane.

The 1887 Brand Book that provided these historic logos is part of the immense collection of family artifacts held by Patricia Mosch in Idaho Springs, Colorado. Her grandmother, Cora Neville Bangerter, added notes to the names of her family members, friends, and other local ranchers in Larimer County. The Friends of the Florissant Fossil Beds are grateful for the addition of this ranching information that Patricia has preserved and passed on through copies, scans, and emails.

The book lengthens the commonly known list of property owners in the region and tells a little more about ranch life in 'the flowering valley.' It will undoubtedly prove helpful to family researchers and regional historians. If local residents find or have any of these historic branding irons in their possession, photograph them and contribute the photos to the historic collection at the Grange Hall in Florissant. For further information or questions or to contribute more information contact Beth Simmons at [cloverknoll@comcast.net](mailto:cloverknoll@comcast.net).

Homesteaders of the Florissant Valley that are listed in the 1887 Colorado Brand Book, Map from Kimmett, Leo, 1986, p. 118

## REFERENCES CITED

Atkins, David, 1/28/2004, Personal Communication

Cahill, Helen, 1995, Guffey, "One Hundred Years of Memories," Guffey Community Association

Colorado State Board of Agriculture, 1887, "Colorado Brand Book and Stockgrowers and Breeders Ready Reference with Index of Brands and Index of Owners, containing all Stock Brands on Record in the Office of the Secretary of State of Colorado," S.H. Sandart, Denver, Colorado

Dary, David, January 17, 2004, Cattle Brands, Handbook of Texas online, <http://www.tsha.utexas.edu/handbook/online/articles/view/CC/auc1.html>

Dary, David, January 17, 2004, Cattle Brands <http://www.cyberartdesign.com/reunion/about/branding.htm>

Given, Charlie and Stark, Walt, May 2000, "Land History of the Florissant Fossil Beds National Monument with Harker/Hornbek/Sticksell and Halhusen biographical sketches," Florissant Fossil Beds National Monument, unpublished list of property owners

Kaelin, Celinda and Kimmett, Leo, 1995, Pikes Peak Backcountry, The Historic Saga of the Peak's West Slope, Twin Creek Ranch, Florissant, CO (1st Edition)

Kimmett, Leo, 1986, "Florissant, Colorado," Rev. Edition, Master Printers, Canon City, CO 81212

Libbey, William Jr. and McDonald, W. W., July 10, 1877, Diary of the Trip, Princeton Scientific Expedition of 1877, Princeton University Archives

Wolfenstine, Manfred R., 1970, "The Manual of Brands and Marks," U. Oklahoma Press, Norman, OK

*(Continued on next page)*







# Brands (Continued)

1. Catharine Castello 20 Sep 1886  
 2. Thomas Houghton 25 May 1889  
 3. F.W. Varnham 4 Aug 1890  
 4. J.H. Burham 28 Jan 1892  
 5. T.F. Burham 29 Jun 1880  
 6. John Wilson 18 May 1881  
 7. J.S. Gaag 1 Nov 1883  
 8. J. Sislea 18 Nov 1891  
 9. G.W. Willson 22 Oct 1902  
 10. D.M. Bates 26 Nov 1888  
 11. R.B. Maxwell 25 Apr 1889  
 12. J.B. Castello 8 Nov 1880  
 13. Anna Carpenter 10 Sep 1838  
 14. Earnestine Putman 7 Oct 1890  
 15. E.P. Gillpatric 16 Sep 1892  
 16. C.A. Bartlett 29 Aug 1889  
 17. T. Donnell 28 Mar 1887  
 18. S.S. Foster 12 Apr 1889  
 19. Walter Smith 29 Apr 1889  
 20. J.M. Hensley 13 Oct 1886  
 21. Adeline Hornbeck 2 Mar 1878  
 22. C.A. Bartlett 20 Apr 1888  
 23. Lucy P. Cook 23 May 1888  
 24. E.L. Pettit 16 Nov 1907  
 25. A.J. Kinmar 7 Oct 1890  
 26. William Bird 16 Jun 1880  
 27. C.W. Nullister 6 May 1896  
 28. A.G. Hill 1 Sep 1880  
 29. T.A. Draper 17 Mar 1889  
 30. E.L. Young 4 Sep 1889  
 31. A. Anthony 16 Jun 1880  
 32. A.C. Pettigrew 3 Feb 1885  
 33. G.T. Johnson 4 May 1903  
 34. E.T. Griswold 18 Jun 1889  
 35. J.A. Lynn 18 May 1882  
 36. H. Hatherson 2 Dec 1893  
 37. A. Anthony 24 Aug 1881  
 38. J. Brady 2 Jan 1880  
 39. Thomas McGrath 9 Jan 1880  
 40. J.C. Benson 9 Aug 1888  
 41. W.P. Allen 31 Jul 1888  
 42. J. Conch 24 Jun 1878  
 43. B. Wilcox 28 Oct 1888  
 44. D. Fosor 9 Nov 1907  
 45. S.M. Allen 27 Oct 1890  
 46. J. Skun 24 Jun 1878  
 47. A.N. Bell 19 Sep 1891

18. S.S. Foster 12 Apr 1889  
 19. Walter Smith 29 Apr 1889  
 20. J.M. Hensley 13 Oct 1886  
 21. Adeline Hornbeck 2 Mar 1878  
 22. C.A. Bartlett 20 Apr 1888  
 23. Lucy P. Cook 23 May 1888  
 24. E.L. Pettit 16 Nov 1907  
 25. A.J. Kinmar 7 Oct 1890  
 26. William Bird 16 Jun 1880  
 27. C.W. Nullister 6 May 1896  
 28. A.G. Hill 1 Sep 1880  
 29. T.A. Draper 17 Mar 1889  
 30. E.L. Young 4 Sep 1889  
 31. A. Anthony 16 Jun 1880  
 32. A.C. Pettigrew 3 Feb 1885  
 33. G.T. Johnson 4 May 1903  
 34. E.T. Griswold 18 Jun 1889  
 35. J.A. Lynn 18 May 1882  
 36. H. Hatherson 2 Dec 1893  
 37. A. Anthony 24 Aug 1881  
 38. J. Brady 2 Jan 1880  
 39. Thomas McGrath 9 Jan 1880  
 40. J.C. Benson 9 Aug 1888  
 41. W.P. Allen 31 Jul 1888  
 42. J. Conch 24 Jun 1878  
 43. B. Wilcox 28 Oct 1888  
 44. D. Fosor 9 Nov 1907  
 45. S.M. Allen 27 Oct 1890  
 46. J. Skun 24 Jun 1878  
 47. A.N. Bell 19 Sep 1891

Redrawn from original - courtesy Florissant Fossil Beds National Monument. 701 CC.

Present-day roads: - - -

Homesteaders of the Florissant Valley that are listed in the 1887 Colorado Brand Book, Map from Kimmitt, Leo, 1986, p. 118



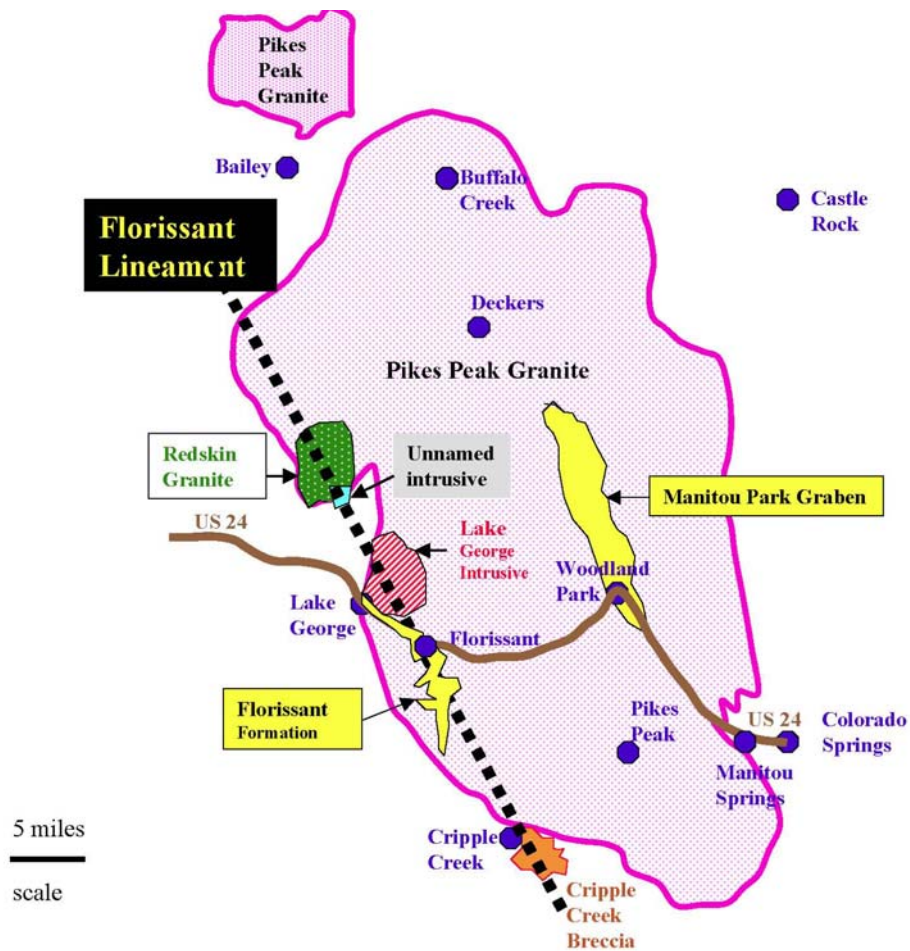
## The Florissant Lineament (Continued)

flows, or lahars, crossing the valley near Evergreen Station. While faults within the Florissant valley have not been recognized, probably due to minor cover by recent sediments, it is likely a graben system exists, a smaller scale twin of the Manitou Park graben at Woodland Park. This is strongly suggested by a newly recognized regional geologic element, henceforth named the **Florissant Lineament**. This “string of pearls” connects several interesting anomalous features in a straight line that have yielded major treasures of both mineralogical and paleontological interest: Redskin stock (Tarryall topaz), Lake George intrusive (amazonite crystals near Crystal Peak), Florissant valley (fossils), and Cripple Creek (gold). An old major fault, sporadically reactivated through geologic history, is the likely culprit. Once a fault, always a fault; that is, a rupture of the earth usually remains a zone of weakness for a very long time. The geologic events along this linear vary greatly in age, but become younger to the south.

Finally, the Florissant Lineament roughly parallels not only the Manitou Park graben/Ute Pass fault, but other recognized faults of the area: Pulver Gulch, Ilse, and Oil Creek. The orientation of these fault systems speaks to a similar regional tectonic stress field operating in Pikes Peak backcountry at the time the ruptures first developed, likely about 1 billion years ago.

### Selected References

- Foord, E.E. and Marlin, R.F., 1979. Amazonite from the Pikes Peak batholith. *Mineralogical Record* p373-384
- Hawley, C.C. and Wobus, R.A., 1977. General geology and petrology of the Precambrian crystalline rocks, Park and Jefferson Counties, Colorado. USGS PP 608-B
- Hawley, C.C., 1969. Geology and beryllium deposits of the Lake George beryllium area, Park and Jefferson Counties, Colorado. USGS PP 608-A
- Hawley, C.C. et al, 1966. Geological and geochemical



(Continued on Page 11)

## The Florissant Lineament (Continued)

features of the Redskin granite and associated rocks, Lake George beryllium area, Colorado. USGS PP 550C.

Hawley, C.C., 1963. Geology of the Pikes Peak granite and associated ore deposits, Lake George beryllium area, Park County, Colorado. USGS open file report 63-44 (692)

Meyer, H.W. 2003. The fossils of Florissant. Smithsonian books 258pp

Modreski, P.J. and Michalski, T.C., 1996. Colorado topaz. Rocks and Minerals v71 n5, p306-323

Odiorne, H.H., 1978. Colorado amazonstone, the treasure of Crystal Peak. Forum publishing 51 pp

Smith, A.E. and Raines, E., 1985. The cresson vug, Cripple Creek. Mineralogical Record v16 p231-238

Scarborough Jr, L.A., 2001. Geology and mineral resources of Park County, Colorado. Colorado Geological Survey. RS 40 89pp

Thompson, T.B., Trippel, A.D. and Dwelley, P.C., 1985. Mineralized veins and breccias of the Cripple Creek district, Colorado. Economic Geology. v80 p1669-1688

Wobus, R.A. and Anderson, R.S., 1978. Petrology of the Precambrian intrusive center at Lake George, southern front range, Colorado. USGS Journal of Research v 16 #1 p 81-94

Wobus, R.A. and Epis, R.C., 1978. Geologic map of the Florissant 15 minute quad, Park and Teller counties, Colorado. USGS map I-1044

## Superintendent (Continued)

really owe it to those dedicated persons who began the efforts to preserve the fossil beds almost 100 years ago.

In response to those who saw the need for federal protection, in both 1932 and 1952, the National Park Service made site visits to the area and their subsequent reports were either neutral or recommended against national monument status. Yet the efforts of those pushing for federal protection persisted and finally in 1962 a report was filed which recommended that the monument be established as soon as possible. It took another seven years of persistence and the threat of development of the valley to finally persuade Congress to act on legislation establishing the Florissant Fossil Beds National Monument.

Today, I feel that it is the Friends of the Florissant Fossil Beds, Inc. that continues to work in the tradition of those who worked so hard for federal protection. Today the

Friends of Florissant works hand-in-hand with the National Park Service to ensure that the fossil resources are protected and visitors can enjoy them. Examples of the kind of support that the Friends provide to the monument include: establishment of the Summer Seminar series, research through the support of paleontology interns, and most recently funding furnishings for the new administration building. These successes at Florissant Fossil Beds National Monument demonstrate just how much a partnership between the American public and the National Park Service can achieve.

## Advertising Rates

Business Card Size:	\$6.00
¼ Page	\$12.00
½ Page	\$24.00
Full Page	\$48.00

You may submit advertisements to: Steven Veatch, P.O. Box 5938, Woodland Park, CO 80866 or via email: [sgeoveatch@att.net](mailto:sgeoveatch@att.net)

© 2004, Friends of the Florissant Fossil Beds, Inc. Newsletter published Quarterly: March, June, September, December. Articles may be reprinted with permission, except where noted or where the article originally appeared in another publication. For questions, contact the editor ([jeff@thebrandts.org](mailto:jeff@thebrandts.org)).

*Friends of the Florissant  
Fossil Beds*

P.O. Box 851  
Florissant, CO 80816

PHONE:  
(719) 748-5010  
(Steve Veatch)  
(719) 689-7666

E-MAIL:  
fossilbeds@yahoo.com

We're on the Web!  
*See us at:*  
[www.fossilbeds.org](http://www.fossilbeds.org)

## Email Addresses Wanted

Please send your current email address to fossilbeds@yahoo.com. This will allow us to send you reminders or events and important news items as they occur.

Please provide us with feedback on the newsletter or any topic you are interested in. We would also like to know who is interested in serving on various committees or on the Board. You can reach us at the address to the left or by email at fossilbeds@yahoo.com.

© 2004, Friends of the Florissant Fossil Beds, Inc. Newsletter published Quarterly: March, June, September, December. Articles may be reprinted with permission, except where noted or where the article originally appeared in another publication. For questions, contact the editor.

Staff:

Jeff Brandt, Managing editor (jeff@thebrandts.org)

Steven Veatch, Science editor

Don Miranda, Production manager

**Send contributions via email as a Word document or in rich text format to Steven Veatch at [sgeoveatch@att.net](mailto:sgeoveatch@att.net)**

## About Our Organization...

In 1987, the Friends of the Florissant Fossil Beds, Inc. was organized by a group of dedicated individuals interested in assisting the National Park Service in its mission to preserve and protect our national treasures. As a non-profit organization, the Friend's mission is to secure resources to help preserve the fossils and promote programs activities that enhance the Monument's educational, research, and scientific objectives.

Friends' groups help many of the National Park service areas in a variety of ways. Membership fees and donations to the Friends of Florissant Fossil Beds are used for:

- Environmental education programs
- Field seminars
- Year-round interpretive programs
- Jr. Ranger programs
- Paleontological and geological resources
- Natural history resources
- Publications

Past accomplishments and ongoing support by the Friends of Florissant Fossil Beds includes:

- Major funding of the yurt shelters
- Travel and research funding for the Monument's paleontologist
- Assistance in the purchase of an all-terrain wheelchair for handicapped visitors
- Financial support for the University of Denver's (fossil data) Digitization Project
- Purchase of furniture for the seasonal rangers and intern housing
- Funding for other special Monument related celebrations and special events (such as the dedication of the new stump exhibit area May 11, 2002)
- Planning, funding, and coordinating the Monument's 30th Anniversary Celebration (1999) and 35th Anniversary Celebration (2004)
- Funding for the Monument's newspapers each spring
- Funding and coordination of annual Summer Educational Seminars Program

**FRIENDS OF THE FLORISSANT  
FOSSIL BEDS**  
P.O. Box 851  
Florissant, CO 80816

**ADDRESSEE  
STREET ADDRESS  
CITY, STATE 00000**