PICK&PACK
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SNOWIN ON RATON

BY DR. MIKE NELSON, CSMS

In my monthly ASK column (this issue) I mentioned that the Great Plains Physiographic Province (GPPP) in Colorado (Fig. 1) was divided into smaller sections or provinces: the High Plains, the Colorado Piedmont, and the Raton Province. The first two sections were defined in the column; however, I left the Raton Province for discussion in this paper. In my opinion, this area has a magnificent array of scenery that remains undiscovered by most travelers.

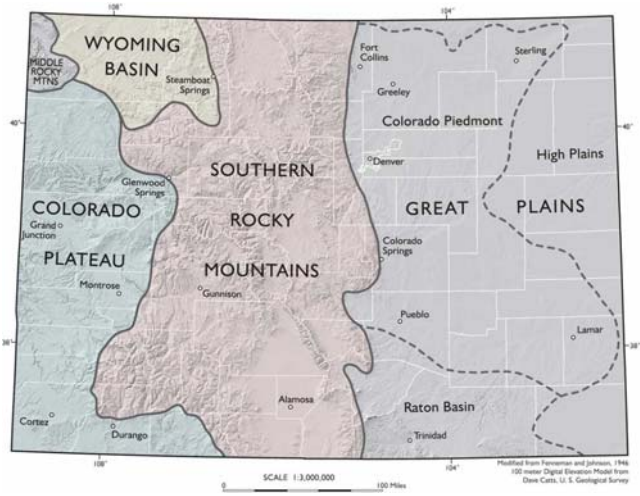

Fig. 1. Physiographic regions of Colorado. Map courtesy of Colorado Geological Survey

I have traveled through the Province on numerous field trips and journeys and always have occasion to wonder in amazement at the geology and topography, something new (at least in my mind) is always popping up to observe. In addition, my mind becomes fixated on an old song by Townes Van Zandt: *When the wind don't blow in Amarillo, And the moon along the Gunnison don't rise,...It's snowin on Raton, Come morning I'll be through them hills and gone.* Except, I don't want to be gone!

The Raton Province lies east of the front range (Sangre de Cristo Mountains) in the southern part of the Colorado, but extends into northern New Mexico, hence the name "Raton" (see Fig. 2, ASK column). The southern boundary is the impressive Canadian Escarpment leading down to the drainages of the Canadian River in northern New Mexico (Fig. 2). The eastern and northern boundaries are indistinct but are usually established at the limits of the extrusive or intrusive volcanic outcrops.

The Province has a spectacular array of mesas capped with volcanic flows, and dikes, sills, and various other igneous intrusions. The bedrock is often of late Cretaceous age although some Tertiary sedimentary rocks are present. In fact, the Cretaceous-Tertiary boundary (K-T), with a clay layer containing high concentrations of iridium, may be located, and seen, near Trinidad and again across the border at Sugarlite State Park. These rocks many times contain thick coal beds and at one time Trinidad and Walsenburg, CO and

Cont. on Page 2

Fig. 2. The Cretaceous Dakota Sandstone holds up the cliff as the Canadian Escarpment breaks down into tributaries of the Canadian River east of Las Vegas, NM. This escarpment marks the southern end of the Raton Province. Photo courtesy of Richard Denny and The Historical Marker Database.

CSMS is an incorporated nonprofit organization with these goals:

- To promote and disseminate knowledge of the earth sciences, especially as they relate to mineralogy, lapidary, and fossils.
- To encourage study, collection, and fashioning of minerals.
- To accomplish the same through social meetings, lectures, programs, displays, shows, and field trips.
- The Pick & Pack is published 10 times each year to assist and promote the above.

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Colorado Federation of Gem & Mineral Societies (CFGMS)

Colorado Springs Mineralogical Society
Founded in 1936
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Raton, NM were major coal mining centers. The western part of the Raton Province is also a structural basin with beds dipping toward the center (a large syncline) but still is a topographic high! This has, at times, lead to confusion in names between the structural basin (Raton Basin) and the physiographic province (Raton Province). The Colorado Geological Survey uses the term Raton Basin for both features (Fig. 1). For a geological map of the structural basin please see a map from Johnson and Finn (2001).

Fig. 3. Raton Mesa viewed from Trinidad Lake State Park. Photo courtesy of Sangres.com.

Perhaps the best known mesa in the Province is Raton Mesa near Trinidad (Fig. 3) and continuing eastward along the Colorado-New Mexico state line where thick (~800 feet) late Tertiary basalt flows (~9-3.5 MYA) cap the Poison Canyon Formation (Tertiary: Paleocene) and hold up the topography. The area, including Barella Mesa and Johnson Mesa, is often referred to as the Raton-Clayton Volcanic Field since the basalt extends as far east as Clayton, New Mexico The Raton Mesa, including Fishers Peak (9626 feet), is the highest point in the United States east of I-25; therefore, it is also the highest point east of the Rocky Mountains surpassing Harney Peak in the Black Hills! Visitors traveling south on I-25 are treated to some great scenery as they pass through Trinidad and begin the trek up Raton Pass (7834 feet and the passageway for the Santa Fe Trail into New Mexico).

Immediately south of the Colorado-New Mexico state line lies Capulin Peak or Capulin Mountain, a cinder cone volcano (~8,182 feet), with associated lava flows (Fig.4). The latest eruption was only about 62k years ago (U. S. National Park Service, 2005).

Fig. 4. Capulin volcano. Photo courtesy of U. S. National Park Service.

East of Trinidad, "near" Tobe, and Walt's Corner, is an isolated mesa termed Mesa de Maya where 400-500 feet of basalt cover the Ogallala Formation at an elevation of around 6500 feet. The Mesa continues south and eastward as Black Mesa and actually extends into the Oklahoma Panhandle where at 4973 feet is the highest point in Oklahoma (Fig.5). Smaller, but associated mesas, include Fowler and Tecolete. The rocks at Mesa de Maya have produced an important fauna of vertebrate animals.

Fig. 5. Black Mesa, Oklahoma, the highest point in the state and an extension of Mesa De Maya in Colorado. Photo courtesy of Summitpost.org.

The north end of the Raton Province is bounded by a broad structural uplift, an anticline, termed the Apishipa Uplift. To the north of this uplift is the structural downwarping (syncline) termed the Denver Basin. These large structural features are related to the forces that created the front ranges to the west (Laramide Orogeny). The Denver Basin is a subsurface occurrence while the surface topography is part of the Colorado Piedmont and the High Plains physiographic provinces.

The Purgatorie River has cut through the Apishapa Uplift and created magnificent canyons. Vogel Canyon and Picture Canyon contain prehistoric Native American rock art and village sites while Picketwire Canyon has the largest known accumulation of dinosaur tracks in the U. S.

Perhaps the most spectacular part of the Raton Province is the Spanish Peaks, two large igneous bodies that have intruded the sedimentary rock section. The igneous rocks exposed at the peaks, and their accompanying dikes, were intruded in the neighborhood of 20-25 MYA. East and West Spanish Peaks reach elevations of 12,708 feet and 13,623 feet respectively, rising about 7000 feet above the surrounding plains. They are easily seen from Colorado Springs on a clear day!

So, although many travelers are familiar with Raton Mesa and Spanish Peaks and they traverse I-25, I am suggesting some travel off the interstate. Gas up the car, hit the Picketwire tracks, Mesa de Maya, and Capulin and top it off with cruise down the Canadian Escarpment. *Nothing's better than the wind to your back, the sun in front of you, and your friends beside you* (Aaron Trimble).

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A Day of Fossil Discoveries at FFBNM

By Steven W. Veatch, CSMS

A group of young members from the Colorado Springs Mineralogical Society, the Lake George Gem and Mineral Club, the Flat Irons Mineral Club, and the Western Interior Paleontological Society spent Saturday, June 19th exploring the Florissant Fossil Beds National Monument. More than 53 parents and young "paleontologists" arrived at the fossil beds filled with excitement about the day's prospects. First, the group attended a

presentation by a park ranger and then took an educational hike through the fossil beds where they learned about fossils, how they formed, and how scientists collect them. After lunch at the picnic tables in the Ponderosa forest, the young paleontologists underwent training on how to identify different kinds of fossils.

Following their experience in the park, the group took off to the Florissant Fossil Quarry where they could experience fossil collecting and keep all of the fossils they discovered. Everyone found at least one fossil. This was a day to remember!

This is a short article about a field trip I took the pups on. What is notable about this trip is that the CSMS hosted pups from the Lake George Club, the Littleon Club, and a bunch of kids form the Western Interior Paleontological Society (Denver). This was the best trip I have ever been associated with!

Elizabeth Waite Thanks You

Attached is a thank you letter written to the Friends of the Florissant Fossil Beds from Elizabeth Waite. She was the paleontology intern that our organization supported financially this summer (money for the Intern to live on while she is given laboratory work, field excavation work, and other assignments to put on her resume—not a scholarship for tuition or books). Your contribution was pooled with money from the gold mine and other sources so that we had enough money to support her for the entire summer. Elizabeth was aware of each organization's contribution, and appreciated the funding.

The important thing to know is that through our contributions we could provide valuable work experience in paleontology. Without the Colorado Springs Mineralogical Society, the Lake George Gem and Mineral Club, the Cripple Creek and Victor Gold Mine; the Friends of the Florissant Fossil Beds couldn't continue this very valuable program.

I also THANK the above organizations too. Steven W. Veatch-

Friends of the Florissant Fossil Beds,

I would like to thank you for your support of the paleontology internship program at the Florissant Fossil Beds National Monument. Because of your generous support, I have been afforded a truly irreplaceable internship experience full of personal and intellectual growth.

I am currently an undergraduate Geosciences student at the University of Texas at Dallas. Paleontology has always been an academic interest of mine, and this internship has allowed me to participate in projects that are very unique to the Florissant, Colorado area.

As an intern at the Fossil Beds this summer, my work focused on creating application documents for a proposed local Geopark. I was given the opportunity to learn about the remarkable history and geology of not only the Florissant Fossil Beds but of the entire south-central Colorado region from Florissant to Cañon City. My project allowed me to gain valuable experience collaborating with others, communicating about geologic resources, and developing a proficiency with the map creation program, ArcMap. In addition to my Geopark work, I was able to assist on other paleontology projects going on this summer, including excavations and Inventory and Monitoring projects.

My time at Florissant has been challenging and beneficial. I appreciate the contributions you made that allowed me to come to Florissant and be a part of the exciting projects taking place at the Monument.

Best regards, Elizabeth Waite

Fossil Pollen Reveals Florissant's Ice Age Environment

By Steven Wade Veatch

New pollen evidence from the mammoth site at the Florissant Fossil Beds National Monument, Colorado reveals environmental conditions during one of the warm, interglacial periods of Teller County's Ice Age.

I have been working on this project for about 2 years. I submitted an abstract for presentation at the Geological Society of America's Annual Meeting this fall in Denver, and the GSA accepted the abstract.

One of the co-authors Estella Leopold, is the daughter of famed conservationist and writer Aldo Leopold (A Sand County Almanac), Estella is known for her pioneering work as a conservationist and scientist. As a conservationist, was one of the three women who were instrumental in saving the Florissant fossil beds from development and helped establish the fossil beds as a National Monument in 1969.

David Jarzen is a palynologist at the University of Florida. Hebert Meyer is paleobotanist who works for the Florissant Fossil Beds National Monument.

Figure 1. Image of a hickory (*Carya*) pollen grain. Pollen grains are incredibly resistant and are difficult to destroy by physical or chemical processes. The plentiful and hardy nature of pollen makes it a rich source of data about past climates in specific places. Photo by D. Jarzen.

Out of the mists of prehistory—through fossil pollen and spores—comes an unprecedented glimpse into Florissant's past. Experts used cutting-edge science to examine pollen and spores buried with a fossil mammoth to better understand the Ice Age world of Florissant.

The Florissant mammoth lived and died more than 50,000 years ago, during the last Ice Age. Its bones were fossilized safely in the ground until a student intern found it in 1994. During careful excavation of the mammoth, all of the fossil material was collected and bagged—including soil, gravel, and sediment samples.

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analyzed a sample from the sediment layer just below the mammoth. The lab determined that the sedimentary layer is a limestone containing fine sandy and silty quartz grains.

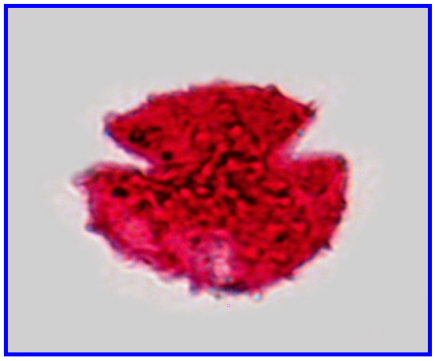

Figure 2. Image of an aster pollen grain. Because most plant species have distinctive pollen shapes, botanists can identify from which plant the pollen came, allowing scientists to determine the plants found in a certain place at a given time. Photo by D. Jarzen.

The lab first prepared the limestone for processing to recover pollen and spore grains. Solutions of corrosive chemicals such as potassium hydroxide, hydrochloric acid, and hydrogen fluoride removed the organic and mineral particles in the sample. The pollen, because it is composed of some of the most chemically resistant organic compounds in nature, survived this harsh chemical processing.

Next, lab workers made microscope slides from the residual pollen and carefully examined them. When viewed with a microscope, pollen grains from different plants have distinctive appearances that can identify the plant species they came from. The pollen and spores were identified and counted.

The lab work identified an amazing assemblage of Ice Age vegetation at Florissant, making it possible to reconstruct much of the local environment based on these tiny fossils. A major surprise was finding hickory *(Carya)* and oak *(Quercus)*—both hardwoods—in the Rocky Mountains from a lab sample that was at least 50,000 years old. From microscopic examination of the hardwood pollen it appears that they grew locally during the Ice Age. There is no reason to think they are reworked from sediments redeposited from earlier times.

The pollen and spore assemblage is a tiny time capsule from Florissant's Ice Age and reveals that Florissant had a dry climate during this interglacial period—indicated by the abundance of pine pollen and rock moss *(Selaginella)*. The landscape was relatively open and covered with vegetation. Scattered stands of pine, along with some hardwoods growing near streams, dotted the landscape. Groundcover included asters, daisies, sunflowers *(Compositae)*, and sagebrush. Most important was the rock moss, which grows on rocks and thrives on direct sunlight. Rock moss is a key indicator of a dry climate.

Florissant's fossil mammoth and associated material continues to yield scientific information. The current pollen study is important because in the continental United States there is little information on interglacial floras. The Florissant pollen adds significantly to our understanding of North American interglacial floras.

The Florissant mammoth and its associated pollen has not only unlocked some of the secrets of Florissant's Ice Age, but has earned an enduring place in the paleontological record.

Note: Steven Veatch is the principal investigator working on the Florissant pollen project. His team includes David Jarzen of the University of Florida, Estella Leopold of the University of Washington, and Herbert Meyer of Florissant Fossil Beds National Monument.

50th Wedding Anniversary reception for Bob & Heidi King of Cheyenne, WY. Bob has been a member of CSMS since 1967, an active 43-year member. He was Vice President in 1970 when I joined the club and taught my wife how to paste-up the Pick & Pack!

Submitted by Ray Berry

Pebble Pup and Junior Program

Colorado Springs Mineralogical Society: September 16, 2010

Journey back to the Ice Age and work with some of Earth's largest mammals. You'll discover the difference between mammoths—beasts weighing as much as eight tons, with tusks up to 16 feet long—and mastodons, their shorter, stockier cousins. Mammoths—giants of the Ice Age—survived for millions of years, living in climates ranging from temperate woodlands of North America to the cold, wind-swept steppes of Asia. We will look at the role that human hunting, climate change, and other factors may have played in the extinction of these giants.

The class will learn about a 42,000-year-old baby mammoth named Lyuba (pronounced Lee-OO-bah) who was discovered in 2007 by a Siberian reindeer herder. Lyuba is the best-preserved mammoth specimen ever discovered.

Also presented are spear points, cave paintings, and carvings from tusks that show how humans interacted with mammoths. There will be hands-on, interactive activities that include touchable mammoth teeth, prehistoric mammoth hair, a life-sized skull of a short-faced bear, microscopes to study ancient pollen, and a mammoth 3-D anatomy model.

Each month there will be a list of cool projects to earn a merit badge. Now, take a look at our website for pebble pups and juniors: http://pebblepups.blogspot.com/ This is the web portal to adventure, learning, and fun. This month's merit badge is on rocks and minerals. There are six activities for this merit badge—you choose three to complete the merit badge. In addition to this, there is an extra lesson each month on the website. Merit badge work is simply emailed back. For September, our topic is:

7 Steps to Close-up (Macro) Photography of Rocks, Gems, Minerals, and Fossils for Beginners

Our website is used by students throughout the US who do not have access to rock clubs or who want a deeper dive into Earth science. Several of our distance students have received regional and national awards and have had their papers published in international magazines. Lessons from our live sessions are mailed to distance students.

There will be opportunities for pebble pups and juniors to conduct original research projects, write articles, prepare photographs for contests, complete artwork, make rock and mineral collections, participate in Science Olympiads, science fairs, and other opportunities.

Pebble pups are third grade to 6th grade. **Juniors** are from 7th grade to high school.

MEETING TIMES (third Thursday of the month—academic school year. No meetings in January)

Juniors 5:30 to 6:15

Pebble Pups 6:30 to 7:15

Location: Colorado Springs Senior Center on North Hancock, Colorado Springs

MINERAL SALE

October 23rd & 24th

Saturday & Sunday

9 AM - 4 PM

In our barn at

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A Colorado Adventure in Peridot

Steven W. Veatch & The CSMS Pebble Pups

On May 8, 2010, a group of 23 eager Pebble Pups and Junior members from the Colorado Springs Mineralogical Society and the Lake George Gem and Mineral Club headed to the San Isabel National Forest on a joint field trip to collect gem-grade peridot (olivine). The young rock hounds, trip leaders, and their parents followed a rough and bumpy dirt road that climbed to

The peridot collection site is in a scenic mountain location with pine trees and small stands of aspen. Pockets of grasslands and meadows dot the landscape.

higher ground (elevation 9,580 feet) where an ancient volcano left peridot-bearing basalt. Although the peridot area is on public land and open to collecting, there are some active mining claims; one of them belongs to the Colorado Springs Mineralogical Society.

Several episodes of basalt extrusion were reflected in the rocks at the field site. The uppermost flow is a red scoria (lava rock) full of cavities formed from escaping gas. When magma rises and is extruded, it encounters lower pressures that release dissolved gasses that form "vesicles" or cavities. As the lava begins to chill and solidify, the vesicles are trapped in the rock. Below the scoria is gray basalt with few gas cavities. It is this rock unit that contains the gem peridot. Since this peridot-bearing rock unit is below the scoria, it is an older volcanic flow. Underlying this basalt rock unit is a gray limestone, evidence of an ancient sea.

Once the caravan of cars came to a stop, the explorers scrambled out and came face-to-face with the calm of the Ponderosa pine (*Pinus ponderosa*) forest. Many of the kids were not quite sure what to do next. For most of them, this was their first field trip. It was now time to expand their experience with geology. After a few safety instructions, everyone spread out and began searching on their hands and knees for the lime-green gems that had weathered out of the basalt flows. Within minutes the once quiet forest was filled with excited shouts as gems were found. What could be more exciting than tracking down gemstones and imagining the fantastic volcanic eruptions that formed them?

It has been said the human eye is more sensitive to green than any other color. Once the students saw the distinctive green hue of a peridot sample, they knew what to look for. Suddenly, the gems were everywhere. The young gem hunters took their time searching the ground and the payoff was good: members of the field party found at least 30 specimens each, and some even found colorless quartz fragments—a spectacular cache to take home.

Field collecting includes a careful examination of the ground while searching for the gems. Some students noticed lichen growing on rocks, pine cones on the ground, and some large black ants making tunnels under an overturned rock.

Chunks of weathered red scoria turned out to be very collectible rocks. Once everyone knew the incredible story scoria revealed, these cavity-filled volcanic rocks became quite popular.

During the course of the day it was determined that the best places to search were the ravines and gullies where rain and running water had brought the peridot closer to the surface.

Several large peridot specimens were found at this location just a few years ago. The best specimens were faceted and are now in the collection of the Denver Museum of Nature and Science.

The most important find of the day for the students was their connection with nature, discovering the deep satisfaction that comes with that connection, and learning just how fun it is to be outdoors. One student remarked, "this was one of the best days I have ever had!"

Students carefully pick peridot from their hiding places and instantly recognized the gems as something special, as well as the day itself.

Note: The Lake George Gem and Mineral Club Pebble Pups meet at 6:00 pm on the second Tuesday of each month at the Lake George Charter School. The Colorado Springs Mineralogical Society has a junior group that meets at 5:30 pm and a Pebble Pup group that meets at 6:30 pm on the third Thursday of each month at the Colorado Springs Senior Center. The Colorado Springs Mineralogical Society also has an Internet program for young people who do not have an access to these kinds of programs or who want a deeper dive into the exciting world of rocks, minerals, and fossils.

Bibliography

Cameron Mountain 15' USGS topographic maps

Gribbles Park 7.5 USGS topographic maps

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These young rock hounds, while working in groups, found that the forest road was a good place to collect. Lively discussions on a wide variety of topics ensued.

Greetings,

Attached is the announcement of our annual meeting and pot luck. Please bring a dish and plan on having a really a good lunch, a fun time, excellent conversation, great fall weather, and meet interesting people. What could possibly be better than this? We want to see you.

Steven Veatch, President

Friends of the Florissant Fossil Beds Annual Meeting

The Friends of the Florissant Fossil Beds will enjoy their annual potluck at noon. A short meeting will follow that will include election of officers and announcements. Bring a dish to share.

September 26, 2010

at 12 P.M.

Meeting convenes at the Florissant Fossil Beds National Monument in the "Yurt"

CSMS PICNIC PHOTOS

BY FRANK ROSENBURG

Dave Olsen presenting check to WMMI representative.

Dave Olsen presenting check to Benton Line

2010-2011 Colorado Springs Mineralogical Society Youth Program

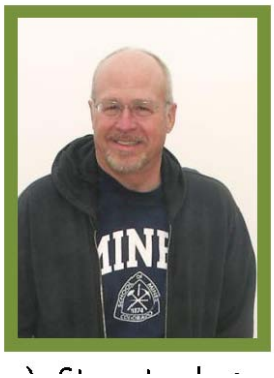
YOUNG MEMBERS of the Colorado Springs Mineralogical Society, generally under age 18, are invited to attend interesting workshops that teach about rocks, minerals, fossils, and related topics. These sessions run before the business portion of the club's meeting and the evening's program. The **Juniors** (age 12-18) meet from 5:15 pm to 6:15 pm; The **Pebble Pups** (age 8-11) meet from 6:30 to 7:15 pm.
Contact Steven Veatch at 719.748.5010 or via email at steven.veatch@gmail.com

Youth Program Assistants: Roger Pittman and Lorrie Hutchinson

Field trips for 2010-2011: Western Museum of Mining and Industry; Garden of the Gods; Red Rock Canyon Open Space; and Florissant Fossil Beds National

September	Giants of the Ice Age	Journey back to the Ice Age and work with some of Earth's largest mammals. The class will learn about a 42,000-year-old baby mammoth named Lyuba (pronounced Lee-OO-bah) who was discovered in 2007 by a Siberian reindeer herder. Lyuba is the best-preserved mammoth specimen ever discovered. Also presented are spear points, cave paintings, and carvings from tusks that show how humans interacted with mammoths.	Veatch
October	Your Planet Earth: Oil & Gas (Also, celebrate Earth Science Week)	Oil and Gas are natural resources of enormous economic importance. Together they provide about 60% of all the energy used by society today. They provide fuel for transport and are vital for heating, lighting, and cooking. In addition, they are used in the manufacture of synthetic fabrics, plastics, fertilizers, and detergent, as well as for many other purposes. In short, it is hard to imagine how our society could function without oil and gas.	Veatch
December	A Bad Day for Dinosaurs	Sixty-five million years ago, the Earth was ruled by dinosaurs. One day in June, 64.5 million years ago, an asteroid crashed into the Yucatan Peninsula. A few years later, they were all gone, setting the stage for the rise of mammals.	Veatch
January	NO MEETING		
February	Exploring Caves	How Caves are formed. Rocks and minerals found in caves will be discussed. Fossils and archaelogical artifacts found in caves will be featured. Mineral of the month: Calcite. Discussion on how to prepare a Pebble Pup collection for the show. There will be a Saturday field trip to the Cave of the Winds.	Veatch
March	Your Planet Earth: Geological Time	Planet Earth is more than 4.5 billion years old. Such a vast abyss of time is hard to comprehend. We will learn about geological time and how geologists first discovered the deep history of our planet.	Veatch
April	Your Planet Earth: The History of Life	Life is what makes out planet different. As far as we know, Earth is the only planet in the Solar System ever to have harbored life, although it is not impossible that it may have once existed on Mars in the distant past. We will look at the history of life from the earliest times to the present day.	Veatch
May	Your Planet Earth: Volcanoes	Rocks formed from volcanoes will be studied. A virtual field trip to El Capulin National Monument will explain a volcano. Volcanic rocks will be featured. Mineral of the month: Peridot	Veatch

Merit Badges: The CSMS offers a total of 15 merit badges through the American Federation of Mineralogical Societies. Each month there will be a short lesson and activities required to earn a merit badge on the class website at: http://pebblepups.blogspot.com/
The merit badge program consists of a Future Rockhounds of America Membership badge, 15 merit badges (Rocks & Minerals, Earth Resources, Fossils, Lapidary Arts, Collecting, Showmanship, Communication, Field Trips, Leadership, Earth Processes, Earth in Space, Gemstone Lore & Legend, Stone Age Tools & Art, Gold Panning & Prospecting, and Rocking on the Computer), and a "Rockhound Badge" for Pebble Pups who earn 6 of the 15 merit badges. There are about a half dozen activities per badge, with Pebble Pups required to complete only 3 activities to earn any particular badge.
Other activities: Pebble Pups and Juniors will work on individual rock, mineral, and fossil collections during each session for entry in the club's show in 2010. The group will also create related artwork and short articles for the club's newsletter. The scientific method will be covered, participation in science fairs is encouraged, laboratory methods will be demonstrated, and a variety of interesting topics will be covered. There will be at least 3 field trips scheduled during the year. The minimum age for the pebble pup program is 3rd grade. Pebble Pups and juniors must register with the youth program leader.



STEVEN VEATCH conducts educational geoscience programs and research throughout the Pikes Peak region. Steve is an adjunct professor of earth science at Emporia State University where he received an MS in earth science. Steve studied oceanography and meteorology while serving in the U.S. Navy. Steve has contributed chapters to 3 books: Field Trips in the Southern Rocky Mountains, USA, Field Guide 5, The Paleontology of the Upper Eocene Florissant Formation, Colorado, and The World's Greatest Gold Camp: An Introduction to the History of the Cripple Creek & Victor Mining District. Steve has also written numerous articles, essays, reviews, and monographs on climate change, paleoecology, dinosaurs, trace fossils, mammoths, and the Ice Age (Quaternary). Steve teaches graduate classes on geoscience courses for the Colorado School of Mines in the Special Programs and Continuing Education (SPACE) department. He is active in the Kansas Academy of Science, the Colorado Scientific Society, and the National Earth Science Teachers Association, and the Geological Society of America.

With Gratitude to the Flatirons Mineral Club's "Flatirons Facets" Newsletter, we present you with:

The Mineral Collection
By William H. Hutchinson (2010)

Young and old, self-taught or decreed
Crystals will call and some crazies will heed
This mysterious yearning to put rocks out to view
And challenge themselves to find something new.

Repeating patterns of symmetry shown
Time and pressure may change as the crystal is grown
Faces expand as impurities are captured
Once on the shelf, collectors enraptured.

If you know 2/m is monoclinic, prismatic,
Or Miller indices of faces, then you're a fanatic.
Rotational axis and slide planes and twinning,
A complicated structure will find you a-grinning.

Colors and textures from deep in the earth
Time and erosion will eventually birth
The fine detailed growth of chemical bonds
To this creation the rock hound responds.

Hike long and hard to find exposures with hope
Deep in the trenches or on a radical slope
A peg or a skarn, ubiquitous or rare
We only wish for an unanswered prayer.

To lift from the earth a fine quality rock
If we ever found, it will give us a shock
That we were first to set eyes on this crystal perfection
And add to our expanding mineral collection.

Things to do from CSMS member Pete Modreski

Sep. 17-18, Denver Gem and Mineral Show, Denver Merchandise Mart. For more info see http://www.denvermineralshow.com/ Combined with Colorado Fossil Expo. Dealers, many museum and club exhibits; admission charge; free parking. The theme of the 2010 show will be "The Creede Mining District".

Sep 15-19, Colorado Mineral and Fossil Show, Holiday Inn - Denver Central, 4849 Bannock St. Free parking and admission, many mineral dealers; see http://www.mzexpos.com/colorado_fall.htm

WMMI Happenings

225 Northgate Blvd. Colorado Springs, CO 80921

Main: 719.488.0880 Toll Free: 800.752.6558

Hours: 9 a.m.-5 p.m., Monday-Saturday (June-August) 9 a.m.-4 p.m., Monday-Saturday (September-May) Daily Guided tours at 10 a.m. and 1 p.m. (included in admission).**The Western Museum of Mining and Industry is a private, nonprofit museum founded in 1970. We educate over 8,000 school children a year on the importance of mining in the American West.**

Farmers' Market— Runs through October 27, every Monday & Wednesday through October: Farmers' Market featuring Colorado Grown Fresh Produce Fresh vegetables from local Pueblo farms, breads, meats and more—located in front of the Red Farmhouse. Guests visiting the museum get the opportunity to see operable steam engines, learn how to gold pan, see a recreated mine drift, play with hands-on exhibits, and catch a glimpse of the pioneer lifestyle. There are over 27 acres to explore at the Museum, with picnic grounds and two very adorable burros.

Margaret Whiting Exhibit – "Laws of the Land"-- Opening: Thursday, September 23; 5:00 p.m.–7:00 p.m.; September 24-December 30; 9:00a.m. - 4:00p.m.

Opening September 23, Laws of the Land will exhibit work by artist Margaret Whiting! Margaret Whiting explores contemporary issues related to land use and encourages thoughtful consideration of the laws that regulate our relationship to the land by highlighting phrases and words in the text of law books to build new statements. Related programming will explore the history and future of the Mining Law of 1872. Exhibit runs from September 23 – December 30. For more information call 719-488-0880.

WMMI Heritage Lecture Series – William Perry Pendley, Mountain States Legal Foundation

Thursday, September 9, 7:00 p.m. – 8:30 p.m., Free and open to the public. William Perry Pendley, President and Chief Operating Officer of the Mountain States Legal Foundation, will be presenting on legal issues and cases surrounding land use in the West for the September Heritage Lecture held at the Western Museum of Mining & Industry. Mr. Pendley has argued cases before the Supreme Court of the United States as well as various federal court of appeals. He won what *Time* called a "legal earthquake" when the Supreme Court ruled in his favor in the historic equal protection case, Adarand Constructors Inc. v. Pena (1995). His monthly column, *Summary Judgment*, appears throughout the country. He is the author of three books: *It Takes A Hero* (1994); *War on the West* (1995); and *Warriors for the West* (2006). Mr. Pendley is admitted to practice law in Wyoming, Colorado, Washington, D.C., and Virginia. He possesses degrees in Economics and Political Science from George Washington University in Washington, D.C. and a J.D. from the University of Wyoming College of Law. Information on Mr. Pendley and the Mountain States Legal Foundation is available at http://www.mountainstateslegal.org/ . Make reservations by emailing us at RSVP@wmmi.org.

Keep What You Find Gold & Gemstone Panning--Saturday, September 18, 9:00 a.m. – 4:00 p.m. Take a tour of the museum to learn how to pan for real gold and gemstones just like the prospectors of the 1800's. Each visitor gets to keep whatever treasures they find! Daily tours begin at 10:00 a.m. and 1:00 p.m. No reservations required. Museum located just off I-25 at the Gleneagle Exit 156A. Visit our website at www.wmmi.org for more information.

Workshop: Mining Claim Saturday, September 25, 10:00 a.m. – 11:30 a.m. Join members of the Gold Prospectors of Colorado as they present on the history of mining claims and discuss and demonstrate how claims are stacked. Workshop admission is $10, includes museum entry.

Laws of Nature by Margaret Whiting

President's Corner

by Ron Yamiolkoski, CSMS

As usual, I am surprised by the fact that fall is already upon us. The kids are back in school, there have been a couple of cool nights and the leaves on the trees are beginning to look old. That does not mean that the collecting season is over. We still have a few Field Trips and for some places this is the best time of the year to do some looking. Check our website for Field Trips, because I am still trying to get a few more in before the snow flies.

While I am talking about field trips, I need to mention the Peridot Claim. This year I have led almost 100 people to the claim during the course of three field trips. Everyone enjoys the place and comes home with peridot crystals and other finds. I want you all to know that this has turned out to be a good club investment. Also, I need to ask for some help this fall in doing a bit of claim maintenance. It turns out that the elk like our posts for cleaning their antlers in the fall. Unfortunately their aggressive efforts have knocked down a few of our posts. We have also had some vandalism with people moving our posts. To correct these problems I will be leading a "working field trip" this fall to check and fix all of our posts. People who are willing to hike a bit and who have GPS units, a crack hammer, and a portable electric drill are urged to help out. We have 13 posts that need checking or resetting so a crew of club members is desirable. The more that come, the faster it goes and of course the more time to collect some specimens of peridot, agate and jasper.

I know it seems like a long time ago, but I want to thank everyone who helped at the Rock Fair one more time. I really think we had a great show and everyone who attended had a positive experience. Next year we will be hosting the RMFMS annual meeting so our Rock Fair will be the focus of a regional event. There are more things in the works to make this event an outstanding show.

I missed the picnic because I was out of town. I hope you had a chance to attend. I'm thinking we need to spice the picnic up a bit. Perhaps next year we can try a chili contest or maybe even a Dutch oven contest. Food for all and honors to the winners. Think about it.

With the end of the year moving closer, I have been thinking about a number of things. First there are the elections in November. If you have thought about helping the club be better, then you should think about being an officer. I'll be polling our current officers to see if they are interested in continuing on, but whether or not they are or are not should not stop you for throwing your hat in the ring.

The second thing that comes to mind is our annual holiday gathering in December. The Board would love to hear any fresh ideas that would make the gathering a bit more fun. I thought about the idea that "CSMS has talent", but that may not get a lot of support even though it could be fun. Let us know what you think.

The Board continues to work on the Annual Banquet and installation of officers in January. This is a fun event. We'll be getting back to all of you with details and a date in the near future.

Lastly, the Fossil Group will be starting up their meetings again on Tuesday, September 7th at 7:00 at the Senior Center. The first meeting is a great time to bring those unidentifiable finds. See you there.

Take care,

Yam

RMFMS President's Letter

By Bill Smith, RMFMS

I want to thank everyone for your support at the Wichita Show and Convention. We had thirty of the seventy-two clubs represented. I certainly want to thank Gene Maggard and the Wichita Gem and Mineral Society for a very successful show. Thie field trip on Monday to the Salt Plains was a resounding success! If you missed it, you do not have any of the beautiful single crystals up to fist-sized clusters. See the field trip report for specifics.

We still have several vacancies to be filled. If you see any on the next to the last page of the (RMFMS) newsletter that you might be interested in, let me know. We can use your support.

We do not have a show and convention site past 2011, so talk it up with your club and give me a call. There are many of us in the RMFMS that can give you a hand.

If you write an article for the newsletter, how about also sending in a picture of yourself, as it is always nice to put a face with the article.

Janet and I are planning a trip to South Dakota with two other families from the Wichita Gem and Mineral Society. I am looking forward to chasing those Fairburns, fishing, eating, drinking, and just shooting the bull. I hope you have a trip in your plans.

Until next time.

ASK A GEOLOGIST

BY MIKE NELSON, CSMS

Donald writes: *Mr. Rockguy, what is with "The Tower" out near Limon? Can you really see all those states? Why? My kids always want to stop for a view but I am reluctant to do so.*
Well, Donald, your question dredges up many memories from my childhood! Growing up in Kansas my parents always tried to take us to Colorado for a short road trip near the end of the summer. My brothers and I always pleaded with them to stop at the Tower so we could see the mountains (early on we always thought the mountains magically appeared at the state line). Well, out of necessity my father was a frugal man so we always passed up this opportunity at the Tower. He was more interested in free attractions such as "rattlesnakes in a box" with the appropriate sign on top—"Don't Tap on the Cage". Of course, that little bit of information always encourgaed him to tap! Other bits of frugality included making a U-turn at Seven Falls (they charged admission) and heading over to Helen Hunt Falls (free). I suppose I inherited some of those traits since my son once told me (as an adult) that he stopped at the Tower (and the "largest prairie dog in the world" at Oakley, KS) since I never wanted to stop and spend the money and therefore, he had suffered and missed out on seeing major attractions as a child!

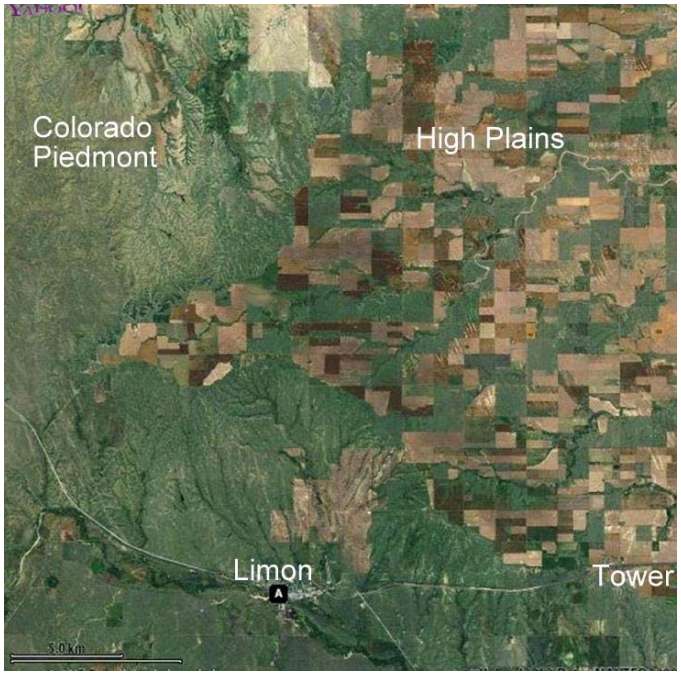


Fig. 1. Satellite image of an area near Limon, CO. The High Plains are well defined to the east by the presence of "squares" of farmed land. The Colorado Piedmont to the west is generally used for grazing. The High Plains Escarpment is the boundary between the two provinces. The "arrowhead" of High Plains projecting west is known as Cedar Point. Photo courtesy of Yahoo Maps.

OK, why can you see for long distances from the Tower, or actually just as well from the road. At that particular locality, at the hamlet of Genoa, you are crossing over the High Plains Escarpment to the dissected and eroded Colorado Piedmont (Fig.1). Both of these physiographic provinces are part of the much more extensive Great Plains Physiographic Province (GPPP), and that needs an explanation.

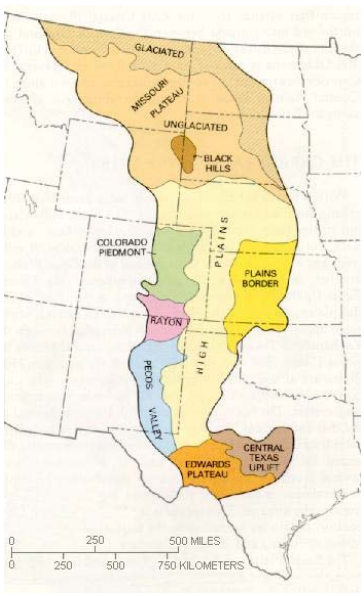


Fig. 2. Sketch map of the Great Plains Physiographic Province (U. S. portion) showing subdivisions. Map from Trimble, 1980.

The GPPP extends from southern Canada (Manitoba, Alberta, Sakatchwean) south to the Rio Grande River, an area about 500 miles wide by 2000 miles in length (Fig.2). The Great Plains are the major grasslands and prairies of North America but also include many other regions: the Black Hills of South Dakota and Wyoming, a Laramide (late Cretaceous and early Tertiary) dome/anticline with a core of Precambrian granite surrounded by successively younger Paleozoic and Mesozoic rocks; the Missouri Plateau (Coteau du Missouri)--glaciated--, a geomorphically complex region in eastern South Dakota, eastern and northern North Dakota, and northeastern Montana. It is an area that experienced several episodes of continental glaciation in the Pleistocene (Ice Age) and the topography is rolling and dotted by glacial lakes (kettles); the Missouri Plateau—unglaciated—in western South and North Dakota, northeastern Wyoming and southeastern Montana. The Missouri River flowing through these states is essentially an ice marginal river and separates the unglaciated from the glaciated region. In contrast to the rolling glaciated region, the unglaciated province has a variety of spectacular landforms and is one of my favorite areas. There are volcanic buttes such as Bear Butte (SD) and Devils Tower (WY), laccolithic mountains (intrusive igneous bodies with a mushroom shape) such as the Big Belt and Little Belt Mountains (MT), mountains floored by large igneous intrusions termed stocks such as the Big Snowy Mountains, Crazy Mountains, and Castle Mountains (MT), mountains formed by both volcanic flows and intrusions such as the Bearpaw Mountains (MT), eroded Tertiary sedimentary rocks forming "badlands" (ND and SD), and a plethra of large river valleys and isolated buttes; the Plains Border Section is a

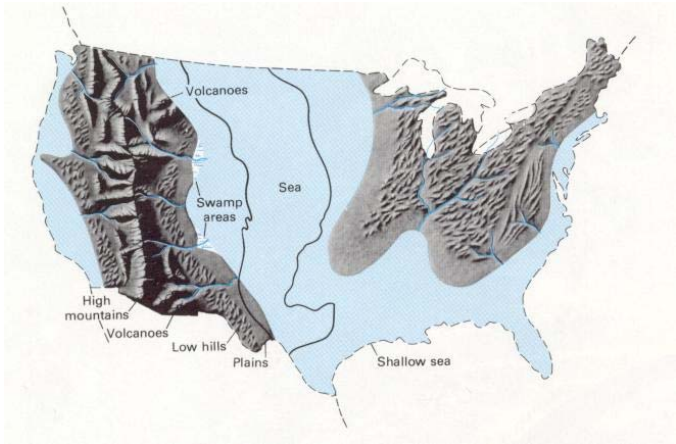


Fig. 3. Paleogeographic map of the late Cretaceous showing locations of the Western Interior Seaway and the future GPPP. Map from Trimble, 1980.

Continued on Page 15

Continued from Page 14

badly dissected (streams) area in central Kansas and north-central Oklahoma that forms the eastern boundary of the GPPP; the volcanic-rich Raton Section (described in a separate article); the Pecos Valley in eastern New Mexico and southwestern Texas generally floored by Paleozoic rocks and displaying a karst topography (caves and sinkholes) with the most famous being Carlsbad Caverns; the dissected Colorado Piedmont (described below); the High Plains (described below); the Central Texas Uplift/Section, an area around the Llano Dome where Precambrian rocks are exposed; and the Edwards Plateau, an area primarily with outcrops of Cretaceous limestone and lying south of the Central Texas Uplift and east of the Pecos Valley.

In past years American Bison occurred by the millions on the prairies. Today, much of the production of hydrocarbons (oil and coal) in the U. S. comes from the Great Plains. Geologically speaking, a large portion of the GPPP coincides with the location of the Western Interior Seaway (WIS) and outcrops of Cretaceous age rocks are widespread, fossiliferous, and often spectacular (Fig. 3).

In Colorado, the GPPP is divided into the High Plains Section, Raton Basin/Section (described in a later paper—this issue), and the Colorado Piedmont. The GPPP extends from the edge of the mountains, the front ranges, eastward to the state line (and beyond) (Fig. 2).

The High Plains is essentially defined, in a geological manner, by outcrops of the Miocene-Pliocene Ogallala Formation (~8-5 MYA), clastic sediments (now sandstones, conglomerates,

Fig. 4. The Fort Hays Escarpment, western Kansas, where the traveler "drops off" the High Plains east to the Plains Border Section. Photo by author.

shales) deposited by a series of streams flowing eastward from the rising Rocky Mountains. This uplift was not the Laramide Orogeny (as defined in several previous Pick & Pack articles) that is of late Cretaceous and early Tertiary age, but an epierogenic uplift whereby the entire region was broadly uplifted. Geologists also see evidence of this uplift in other ways besides the debris shed to the east (the Ogallala Fm.) such as the accelerated canyon cutting in areas like the Royal Gorge and Black Canyon of the Gunnison. Originally, the Ogallala sediments extended from the mountains to perhaps the far eastern part of Kansas, a vast gently sloping plain, and from South Dakota to Texas. Today, only small isolated remants are left east of central Kansas as numerous modern river systems have completely destroyed and eroded away the eastern sections. The High

Fig. 5. The southern boundary of the High Plains is located at the Caprock Escarpment in Texas where the flat Llano Estacado (Staked Plains) transitions to the dissected Edwards Plateau. Photo courtesy of Wikipedia.

Plains is actually somewhat of a "flat" plateau commonly bounded by escarpments (cliffs). On the eastern edge in Kansas the Fort Hays Escarpment (composed of the Cretaceous Fort Hays Limestone Member of the Niobrara Formation) generally marks the limits of Ogallala outcrops (Fig.4). This boundary, in a general way, coincides with the 100th Meridian, the 20 inch rainfall line, and the 2000 foot contour line—the beginning of

Fig. 6. In contrast to the short grasses found at the eastern boundary of the High Plains in Kansas (see Fig. 4), the northern boundary, Pine Ridge Escarpment, is forested. Photo courtesy of Wikipedia.

The American West. The southern boundary is an escarpment breaking down from the southern High Plains (the Llano Estacado region) to the Edwards Plateau (an area of Cretaceous rocks) in Texas (Fig.5). The northern boundary in Nebraska and southern South Dakota is known as the Pine Ridge Escarpment and is a very prominent topographic feature (Fig. 6). Along the Rocky Mountain system the Ogallala Formation has been eroded away except for one small remnant near Cheyenne, Wyoming. In Colorado, the High Plains extends from near Limon eastward to the state border, and beyond, and occupy the eastern part of the state (Fig. 2). It is a rather flat area with little relief and a flora of short grasses and little rain fall. Wind blown clay (loess) and sand mantle much of the bedrock. The South

Continued on Page 16

Platte and Wray dune fields cover about 5000 sq. mi. in the northeastern part of the state. Travelers on I-70 notice little relief in the topography since major streams drain east and the roadway is constructed on the interflueves, areas between the streams (see May 2010 Pick & Pack). However, the High Plains is interesting for many reasons, not the least of which is the fact that the surface underneath the sand and loess has remained relatively unchanged for the last five million years or so

Fig. 7. High Plains Escarpment near Genoa, CO. The High Plains (right, east), with outcrops of the Ogallala Fm., and the lowlands of the dissected Colorado Piedmont (in distance). Photo by author.

(Trimble, 1980). That brings us to the western boundary of the High Plains, the Colorado Piedmont, and the Tower. As noted above, the Ogallala, at one time, extended westward to the mountain front. However, in the Colorado Piedmont the Ogallala has been eroded away and the landscape is one of rolling hills and valleys with exposures of Cretaceous rocks (Fig.1). The general elevation of the eastern part of the Piedmont is around 5000 feet and this explains the view from the Tower. The location of the Tower at Genoa marks the end of the High Plains, with an elevation at Genoa of 5604 feet. There is a noticeable drop off from the High Plains down to the Piedmont and this is quite evident when driving I-70 and reaching what is called the High plains Escarpment (Fig. 7). So, the view to the west is no different than standing on a high hill. Can you actually see six states that I presume to be Colorado, Kansas, Nebraska, Wyoming, New Mexico, and South Dakota! WOW.

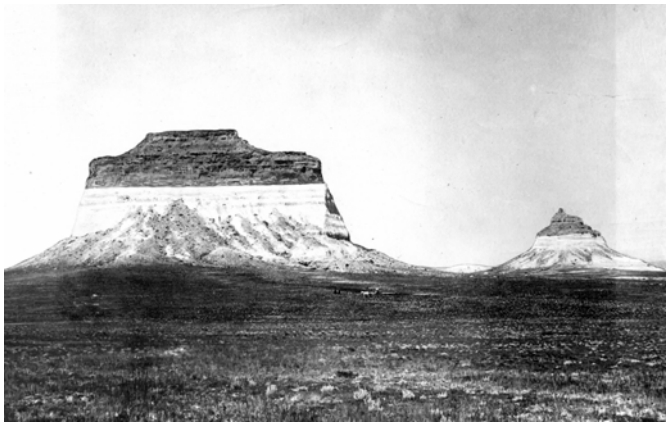


Fig. 8. Pawnee Buttes in northeastern Colorado are erosional remnants of the High Plains preserved on the Colorado Piedmont. Photo taken in 1900 by U. S. Geological Survey.

Your call!

One very interesting area in far northeastern Colorado is termed the Pawnee Buttes (Fig.8). These high buttes are erosional remnants of the High Plains left isolated by eastern retreat of the Plains. Pawnee Buttes have a caprock of Ogallala Formation covering the Miocene Arikaree Formation and the Oligocene White River Group. The Buttes have produced well-known fossil vertebrate faunas.

North of Colorado Springs is a small subprovince of the Piedmont termed the Monument/Palmer Divide, an eastward extending ridge held up by late Cretaceous sandstones with elevations ranging from 6000 feet on the eastern edge to 7500 feet on Monument Hill. This range of hills is the drainage divide between the South Platte River to the north and the Arkansas River to the south. Tributaries of these rivers have been, and are, eating/eroding in both north and south directions but have not connected. Perhaps either river will capture streams of the other in the future. One could dream that the Arkansas River, at an elevation of ~4660 feet at Pueblo, might capture the South Platte River flowing at an elevation of ~5200 feet in Denver! However, in today's complex world I doubt if the Corps of Engineers

Fig. 9. The Tower near Genoa, CO.

would let that little bit of thievery take place.

Roadside America.com has perhaps the best description of the Tower (Fig. 9): *"From a mile away the Wonder Tower appears to be bustling. 'See Six States!' yell the hand-painted signs. 'Confirmed by Ripley!' One sees cars in the parking lot, and people at the top of the Tower, trying to see the advertised six states.*

Once you arrive, you realize …the people in the Tower are crude fakes - lumps of red sheets wearing sunglasses.

The Wonder Tower, built in 1926 at the highest point between New York and Denver, was once a major stop."

So Donald, take the kids to the Tower, explain the view, and give them a satisfying and happy childhood!

These eastern grasslands [of Colorado] lack Aspen's panache and dazzle; they don't dress the part of High Society in Denver, and have been misunderstood and mistreated accordingly… They are not loaded with flamboyant landforms, breathtaking rock sculptures, dancing waterfalls. Instead they have a sparse, sinewy beauty, full of character, that does not depend on a pretty face…oblivion may be the only way they will retain their intrinsic character and not be tarted up by come-on neon signs and gambling palaces…- Ann Zwinger, Colorado

REFERENCES CITED

Trimble, D. E., 1980, The Gelogic Story of the Great Plains: U. S. Geological Survey Bulletin 1493.

CSMS Field Trips

Field Trips for 2010 have already been set. As usual, check the CSMS website (www.csms.us) for the latest list of Field Trips. Also, if you have an idea about a field trip or would like to lead a field trip, contact Yam our Field Trip Chair at ron.yamiolkoski@aecom.com.

Topaz Claim—Sept. 25, 9 a.m. sharp—Lead by Yam 719.488.5526—Limited to 20 members
Holcim Cement Quarry—Oct. 2, 8 a.m.—Lead by Bob Germano gliders1@hotmail.com—Limited access, safety equipment required—many specimens available
Picketwire Canyon Dino Footprints—Oct. 23, more info. to come—Lead by Terry Beh 303.886.6923—not a collecting trip, fee involved, 4wd required, carpooling advised

FROM THE LIBRARY

by Frank Rosenberg, CSMS

This is your library. We encourage all CSMS members to take advantage of our fairly extensive inventory of reading material. Check the CSMS website to make your selection then Email or call Frank or Ellie to make your request. We appreciate all mineralogical book donations.

CSMS Fossil Group

The CSMS Fossil Group meeting has been moved to the first Tuesday of the month, 7:00 p.m. at the Senior Center. The initial fall meeting will be on Tuesday the 7th of September and chaired by Jack Null with a program by Bob Germano demonstrating a new microscope. For Show and Tell I suggest "summer finds", or "any ole fossil you want, especially if it is small (for the microscope)!". Of special interest would be something you might need help identifying (we have some experts in the Group). The meetings following will be 5 October, 2 November, and 7 December.

The Suburban Rockhound and Clutter Clutter Clutter

As I have said before, rock hounding takes all sorts of equipment. It also results in a lot of material. Each time you go out you bring back a bit more. My simplistic solution was to just take over the garage floor with buckets, bags and boxes. My workbench was also fair game as was the top of anything in the garage. After a while I was stacking boxes on other boxes and the piles were getting a bit precarious. Also, the path through the garage was getting a little tight. My wife was saying “What about my car’s space?” and, anyway, you get the picture.

To tackle the problem I first decided that I had two problems. First, was the growing number of things that I will call equipment. This included a metal detector, buckets, containers, digging tools, sieves, a tumbler, safety equipment, etc. It is amazing how much stuff there is when you get it all together. The solution for this was a couple of rugged shelves strategically placed for quick escapes to the field.

The gathered stuff is a different problem. I found the solution required that I have some flexibility and then there was the weight issue. In the end, I decided to build some shelves that could be easily moved and could fit it a small area. The shelves I built are modular. The vertical riser is a 2X6 cut to about 13 inches and attached to a piece of composite 3/4” flooring board cut to 13” width and length suited to fit the spot. The 2X6’s are attached to the board and then I just pile up the modules. These shelves can hold cardboard flats of rocks as well as plastic shoe boxes. The plastic shoe boxes work great for small materials, and concentrates. One thing that this system does is avoid over filling boxes and the accidents that can occur when you do that (you are limited to about 5 ½” of clearance on each shelf). I still need to do some labeling and sorting, but at least I think I’m winning the fight against the clutter, clutter, clutter. And with a bit of luck, my wife’s car will enjoy the garage this winter.

September 2010 — CSMS Calendar

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1	2 7 p.m. Board Meeting	3	4
5	6	7 7 p.m. Micro-Mounts 7 p.m. Fossil Group	8	9	10	11 12-14 Lapidary Group
12	13	14	15	16 7:30 p.m. General Assembly 5:15 & 6:30 Pebble Pups & Juniors	17	18 12 p.m. Jewelry Group
19	20	21	22	23 7 p.m. Crystal Group 7 p.m. Faceting Group	24	25
26	27	28	29	30		

Refreshments for General Assembly Meetings

Feb—Crystal	Mar—Faceting	April—Fossil
May—Jewelry	June—Lapidary	July—Micromounts
Aug—Picnic	Sept—Projects	Oct—Board

Area Code 719

President	Ron Yamiolkoski	488-5526	Ron.Yamiolkoski@aecom.com
Vice President	David Olsen	495-8720	Djnvgo_95@yahoo.com
Secretary	Jennifer Beisel	434-2574	jenniferbeisel@comcast.net
Treasurer	Al Zelenak	598-3515	adzelenak@comcast.net
Editors	Teri Stoiber and Ann Proctor	N/A 684-9010	blacklabaccounting@gmail.com annmgmt@msn.com
Membership Chair	Roni Poteat	390-6065	talknrocks@gmail.com
Member-at-Large	Sharon Holte	217-5683	SHolte@csu.org
Member-at-Large	Bob Germano	487-8945	(gliders1@hotmail.com
Past President	Drew Malin	531-7594	advanceone@comcast.net
Field Trip chair	Ron Yamiolkoski	488-5526	Ron.Yamiolkoski@aecom.com
Historian chair	Brenda Hawley	633-5702	bghsprings@hotmail.com
Librarian	Frank & Ellie Rosenberg	594-0948	emr80918@yahoo.com
Social Committee Chair	*Maria Weisser*	229-1587	mariaweisser@yahoo.com
Show Chair	Ron Yamiolkoski	488-5526	Ron.Yamiolkoski@aecom.com
Store Keeper	Ann Proctor	684-9010	annmgmt@msn.com
Crystal Study	Kerry Burroughs	634-4576	kburrou@comcast.net
Faceting Group	Paul Berry	578-5466	paulpopsplace@aol.com
Fossil Group	Mike Nelson	522-1608	Bill.Arnson@live.com
Jewelry Group	Bill Arnson	749-2328	ritaarnson@msn.com
Lapidary Group	Jennifer Bailey	638-8169	Notes_test@yahoo.com
Juniors & Pebble Pups	Steven Veatch	748-5010	Steven.Veatch@gmail.com
Micromount Group	Phil McCollum		acc@frii.com
Projects Group	Ron Yamiolkoski	488-5526	Ron.Yamiolkoski@aecom.com
Webmaster	Allen Tyson	268-0775	allentyson@yahoo.com

Locations

Board Meeting: 1st Thursday @ 7:00p. Senior Center, *David Olsen: 495-8720*

Crystal Study Group: 4th Thursday of the month @ 7:00p, Senior Center; *Kerry Burroughs: 634-4576*

Faceting Group: 4th Thursday @ 7:00p, Senior Center, *Paul Berry, 578-5466*

Fossil Study Group: 1st Tuesday @ 7:00p, Senior Center, *Mike Nelson, 522-1608*

Jewelry Group: 3rd Saturday @ 12:00p, 15610 Alta Plaza Circle, Peyton, *Bill Arnson, 749-2328*

Juniors & Pebble Pups: 3rd Thursday @ 5:15p & 6:30p, Senior Center, *Steven Veatch, 748-5010.*

Lapidary Group: 2nd Saturday @12:00p, 6570 Ramrod Road, Colorado Springs,, Jennifer Bailey, 638-8169

Micromounts Group: 2nd Tuesday @ 7:00p, 1514 North Hancock, *Phil McCollum, acc@frii.com, Moyra Lyne, 442-2673*

Project Group: Meeting time TBD, *Ron "Yam" Yamiolkoski*

JULY 15, 2010 GENERAL ASSEMBLY MINUTES

BY JENNIFER BEISEL, CSMS SECRETARY

Ronald "Yam" Yamiolkoski called the meeting to order at 7:33pm and led the salute to the Flag.

Announcement of deceased and a Moment of Silence - Randy Stapleton a 14 year member of CSMS and a member of the Micro-Mount, Lapidary and Crystal Group has passed away from a heart attack. Our best wishes to Kim Brodie and Randy's family at this sad time. His memorial service will be held at the Capedonia funeral home at 1020 E. Fillmore St. on Wed., 21 Jul at 1:00pm. Members shared warm memories followed by a moment of silence.

Approval of the June 2010 minutes is postponed until Sept. to ensure everyone has the opportunity to read them.

Treasurers Report – Al Zelenak – Rock fair report $647 silent auction, $79 pins/shirts, about $752 overall. The club made an $800 donation to Florissant interns. The upcoming expenses are the scholarship, $1250, and WMMI donation, $500.

Introduction of New Members: Mark Shultz

Chair's Group Introductions:

Faceting Group – Paul Berry – Schedule for the Senior Center classes comes out at the end of Aug. Faceting classes will start up again in Sept; The Faceting Group meets the 4th Thursday of the month at 7:00 PM at the Senior Center

Pebble Pups/Juniors – Steven Veatch – going to Leadville, if folks are interested in going need to be willing to let the kids work good areas. They meet the 3rd Tuesday of the month at the Senior Center. Juniors meet at 5:15 PM and Pebble Pups meet at 6:30 PM

Librarians – Ellie & Frank Rosenberg – going to be traveling in September for several months. Joanie Peterman will be taking over while they are gone.

Rock Fair Chair – Ronald "Yam" Yamiolkoski - Thank you to all who helped to make this year's Rock Fair a success (John Massey, Bob, Ellie & Frank, etc.)! Next year's show will be three days. Planning starts in September.

Field Trip Chair – Ronald "Yam" Yamiolkoski - We have 13 Field Trips posted on our website as of today (working on #14). The FT with the Gold Prospectors of Colorado to pan gold on the Arkansas is this Sunday. Meeting place is the Wellsville Bridge at 9:00 AM. Details are on the website.

Tom Towles shared details of a field trip folks can take. Folks can find sow belly, turquoise, and amethyst. Has a cabin available and the only cost is a donation.

Jack Morris is the owner of Last Chance mine in Creede. Yam shared that the community center in Creede was built inside the mine.

Presidents Report (Yam): Nothing more.

Vice Presidents Report (Dave Olsen):

Picnic – Saturday, August 14th at 11:00 AM at the WMMI.

Theme: The Food of Central & Northern Europe.

The usual tailgate/swap activity. We'll present the check to the WMMI and present the check to our 2010 scholarship winner.

Membership Report – Roni Poteat 243 total members, 92 family, 14 juniors, 30 lifetime members

Editors Report – Teri Stoiber/Ann Proctor

Remember: There is no August Pick & Pack.

Final reminders:

1. I am still looking for Field Trips to offer to our members. Please help out. It's easy and fun.

2. Picnic sign ups are up front.

3. Lastly, thank you to Maria Weisser our Social Committee Chair and the Micro-mounters Group for tonight's treats.

Close Meeting at 8:05pm.

* Dave Olsen will now introduce tonight's speaker, Bob Carnein whose talk is entitled "Mineral Luminescence"

July 2010

PICK&PACK

Our Staff…

Teri Stoiber and Ann Proctor
Editors

CSMS Members *Reporters*

We encourage everyone to submit articles, photos, illustrations or observations.

Share your experiences, trials and tribulations, your new finds, or simply your experience at our last field trip.

The ability to write well is NOT a requirement. We will fix the grammar while keeping the author's voice, style, and work intact.

Handwrite it, type it, or email it. Format does not matter. All submissions are welcomed.

DEADLINE for items to be included is the Saturday after the General Assembly every month.

To submit an item, please use the following:

For hardcopy photos or articles, mail to the address below or bring them to the General Assembly Meeting. All hardcopy photos remain the property of the submitter and will be returned. Electronic photos should be submitted at resolutions above 200 dpi in TIF, BMP, JPG, or PIC format.

All articles not shown with an author are provided by the Editor.

Mail or email to:
blacklabaccounting@gmail.com
PO Box 2
Colorado Springs, CO 80901

The PICK&PACK is published at least ten (10) times per year; 350-375 copies e-mailed/ mailed per month (no issues in January or August).

2010 AFMS Bulletin Editor's Contest Winners

These are the awards the Pick & Pack Contributors won: **Original Adult Articles Advanced, Top 10**—2. The Paleontological Resources Preservation Act: What Does It Mean For LGGMC Members by Mike Nelson, Lake George Gem & Mineral Club (RMFMS) From: *Lake George Gem & Mineral Club News, 4/09;* 6. *Dryopteris*: A Fossil Fern from Florissant by Steven Wade Veatch, Colorado Springs Mineralogical Society (RMFMS) From: *Pick & Pack, 6/09;* 7. Grab the Kids, Ma; She's Agoin' Ta Blow: Sand Dunes, Volcanoes and Uniformitarianism by Mike Nelson, Colorado Springs Mineralogical Society (RMFMS) From: *Pick & Pack, 3/09.* **Junior Articles – Under 12, Top 10 (7 entries)—**2. A Quick Look at Vanadinite by Aaron Hendricks (10), Colorado Springs Mineralogical Society (RMFMS) From: *Pick & Pack, 9/09.* **Junior Articles – 12 to 17, Top 10 (8 entries**) 3. Amber: Nature's Window to the Past by Kurt Lahmers (12), Colorado Springs Mineralogical Society (RMFMS) From: *Pick & Pack, 4/09.* **Written Features, Top 10** 6. Gem-O-Rama: Hanksite and Pink Halite by Bob King, Colorado Springs Mineralogical Society (RMFMS) From: *Pick & Pack, 11/09.* **Adult Poetry, Top 10** 3. Clovis Once Upon the Land by Steven Wade Veatch, Colorado Springs Mineralogical Society (RMFMS) From: *Pick & Pack, 5/09.* **Large Bulletins, Top 10** 4. *Pick & Pack*, 12/09, Betty Cain, Editor Colorado Springs Mineralogical Society, Colorado Springs, CO (RMFMS)

CLASSIFIEDS . . .

NOTICE—Items listed for sale in the Pick & Pack are displayed only as an informational service to our members and advertisers. CSMS and/or the Pick & Pack do not promote nor warranty any item displayed. The sellers and buyers are responsible for the condition and ownership of any item shown.

CSMS T-Shirts, Badges, and Pins are available for sale at each meeting. See Store Keeper, Ann Proctor.

Have You Picked Up Your Membership Award Pin?

If you celebrated a CSMS anniversary in 2007, 2008 or 2009, your year pin award is available from the Storekeeper, Ann Proctor. Last call for 2007 pins.

Postage Here

PICK&PACK
P.O. BOX 2
COLORADO SPRINGS, CO 80901-0002

Time Value
Do Not Delay
Sept 2010

Joining the Colorado Springs Mineralogical Society (CSMS)

General Assembly meetings are held the third (3rd) Thursday of each month, except January & August, beginning at 7:30 p.m. at the Colorado Springs Senior Center, 1514 North Hancock Blvd., Colorado Springs, CO. **Visitors are always welcome**.

CSMS also offers Satellite Group meetings that allow more focused attention in specific areas of our members' interests. Our current Satellite Groups consist of the following: Crystal Study Group, Faceting Group, Fossil Group, Jewelry Group, Lapidary Group, Micromounts Group, and Pebble Pups/Juniors. For details on Satellite Group meetings, see page 13.

Yearly dues include 10 issues of the *PICK&PACK*, all field trips (additional fees may be required on some field trips, and members are responsible for all transportation to and from), participation in all Satellite Groups (some groups may request additional fees to help cover resource costs), free admission to the *Western Museum of Mining & Industry*, a year of learning and enjoyment, plus a lifetime of memories.

Individuals—$30 Family—$40 Juniors—$10 Corporate—$100

If you are interested in joining CSMS or would like more information, we encourage you to attend our next General Assembly meeting or visit our web site: www.csms.us.