



# Rocky Mountain Federation News

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## From Your President's Pen



BY BILL SMITH



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The temperature reached the mid-seventies this past week, and I sure thought spring was in the air. However, I just looked at the weather forecast, and a wind chill factor of twenty degrees below zero is predicted here this week. I guess spring is a little further away.

We've been working on the agenda for the Annual Delegates Meeting to be held in Colorado Springs and need to know of any new business you might want to bring up at the meeting. It may seem like June is a long way off, but when I think about how fast January came and went, we will soon be into spring and time to start traveling.

Changes are continuing to be made to our Committee Chairpersons positions. In my December President's Message, I listed several new Committee Chairpersons and am now adding a couple more. Dr. Robert Carlson is our new Boundaries and Stationary/Trophy Chairperson. I am going to travel to Dodge City, KS to pick up the RMFMS and AFMS supplies from Richard Goodnough and will fill that position for now. Plans are to have a Supplies table at the Colorado Springs show. I also just learned Judy Beck, our Labels Chair, has been very ill and on a long road to recovery. We wish Judy the very best, and get well soon. Until new chairs are obtained, I have appointed Bill Cain as Distribution and Change of Address. If you have a change of address, please send it to Bill.

My greatest concern now is the need for a club to help us host the 2012 and 2013 RMFMS conventions. You can add it to your regular show and many of us will be glad to help you with the RMFMS portion. To me anyway, it is great to have personnel from throughout the Federation attend our show, have the club members meet those that lead the Federation, and get a first-hand view of just how our Federation operates.

Duck season ended recently, and I really had a blast (pun intended). I admit though, there are a lot of 'dead ducks' still flying around.

Until next month,  
Bill



## TREASURER'S REPORT

BY GENE MAGGARD



A few clubs still have not yet reported, so I am delaying the federation membership summary for another month. It becomes very difficult to get those last few reports. I am down to three reports not yet in. Perhaps one more round of telephone calls will do the trick. Otherwise, I am waiting for the weather to warm up and try to find some collectible rocks and also start catching some fish. Winter is getting pretty close to being over in Kansas, and I am glad!

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**Deadline**

Bulletin submissions deadline is the second week of the month prior to publication date; i.e. the deadline for April's bulletin is the second week of March.

**WORDS FROM THE EDITOR**

BY BETTY CAIN



Is your club editor a member of the Special Congress Representing Involved Bulletin Editors? SCRIBE exists to:

1. Improve communications and public relations between gem, mineral, fossil societies, their federations, and other related organizations through involved bulletin editors and authors.
2. To advise and assist new editors with old ideas and old editors with new ideas while giving all editors a share in all ideas for publishing better bulletins.

The SCRIBE logo was designed for SCRIBE members only. It identifies you a member of an organization that represents the most important people in Gem & Mineral Societies. Wear it with pride. Editors are special and should be recognized as such. Ordering information for logos, patches and pins can be obtained from the Scribe Treasurer.



SCRIBE provides many valuable benefits to its members:

- The organization's bulletin, *SCRIBE*, four times a year.
- A Membership/Contact list containing the names, addresses, society affiliations, and email addresses of bulletin editors worldwide is provided to each SCRIBE member annually.
- Annual meeting at Quartside, AZ.
- SCRIBE prepares a yearly CD-ROM which contains a compilation of newsletters, articles, clip art, and computer programs to

assist old and new editors alike. This CD, along with the yearly membership roster, will be mailed free to all paid-up members by the end of February or early March. New members will also receive a free copy of the CD as a welcoming gift. Additional copies of the latest CD may be purchased for \$3, including postage, from the SCRIBE Treasurer, Bob Hughes; PO Box 1633; East Ellijay, GA 30539-0028.

Membership is only \$6/yr or \$8/yr for multiple editors. Visit the new website at <http://scribe.rbnet.net> for a membership application; tell them Betty sent you. ☺

**PROGRAM COMPETITION**

BY JENNIFER BIDDLE, PROGRAM CHAIR

The deadline for the RMFMS program competition is almost here! I look forward to seeing what your group has to submit for it. Remember, they need to be postmarked by March 15, 2011. You can mail the program and entry form to Jennifer Biddle, 1620 Kingsway St, Sapulpa, OK 74066. If it is digital, you can email it to [downcametherain@gmail.com](mailto:downcametherain@gmail.com) (don't forget to include the form!).



I managed to survive the February blizzard here in Oklahoma. We had gotten over 30" of snow over the course of 8 days! I had my sights set on Southern Florida for a bit there, but I am not sure if there is good rock hunting in the swamps. In the meantime, I did get a lot of program work done while cooped up in the house.

My current brainstorming is figuring out how to cut the costs of sending out the programs. If you have any thoughts or suggestions, please shoot me an email. Any feedback is appreciated! This library is a great resource that I would love to see get used more. We got several new programs in! Check out next month's newsletter for a listing of the titles! The website should be updated between now and then. <http://rmfms.org/pdf/2011%20rules%20-%20RMFMS.pdf>

## ALL ROADS LEAD TO COLORADO SPRINGS: RMFMS 2011— PLANNING YOUR TRIP

By Dr. Mike Nelson, CSMS & LGGMC



*In June 2011 the Colorado Springs Mineralogical Society will host the annual meeting and show of the Rocky Mountain Federation of Mineralogical Societies (RMFMS). Members and visitors traveling to Colorado Springs will be able to observe a wide variety of geological features and several field trips are in the planning stages. This article, part of a series, will give participants a chance to pre-plan their itinerary of exploring the local geology.*

[csrockguy@yahoo.com](mailto:csrockguy@yahoo.com)

**R**MFMS visitors to Colorado Springs for the summer 2011 meeting may have extra time this winter and want to better understand Colorado's fantastic geology. Therefore, I have compiled a list of reading resources that travelers may want to consult before their journey.

For a more comprehensive understanding of Colorado's geology, readers should consider *MESSAGES IN STONE: COLORADO'S COLORFUL GEOLOGY* written/edited by Vincent Matthews, the State Geologist, and his colleagues at the Colorado Geological Survey. The book was the 2004 winner of the Association of Earth Science Editors Outstanding Book Award. The numerous book photos are spectacular and the writing superb. Written for the general public, the book also becomes a reference for the professional. I originally purchased the 2003 edition but now have the new and revised 2009 edition, with "125 new and/or improved photos [and containing] a new section on mountain building". Interested readers may order the book from the Colorado Geological Survey at ~\$20 (<http://geosurvey.state.co.us/>). This publication allows all readers to better understand both the complex and fascinating geologic history of Colorado.

If readers are deeply interested in Colorado's minerals, then the "authority" is the *MINERALS OF COLORADO*. The tome had its first printing in 1961 and is credited to Edwin B. Eckel (1906-1989), a longtime geologist for the U. S. Geological Survey. In 1997 the Friends of Mineralogy-Colorado Chapter, Inc, with assistance from the Denver Museum of Natural History, published an updated and revised volume that includes "the description of 774 different mineral species from Colorado, ... comprehensive locality information, an extensive bibliography,...and 119 color and 26 black-and-white photographs (photography coordinated by CSMS member, Ray Berry). The new version is the "result of more than two decades of work" by several noted geologists and mineralogists of Colorado. The classic is large coming in at 676 pages in an 8.5" X 11" format; however, the information contained within is comprehensive. I have spent tens of hours simply perusing the book and noting interesting facts. It is also my first reference selected when traveling to a new area or inquiring about a Colorado mineral. Fulcrum Publishing, the original publisher, offers a list price of \$150; however, used copies may be purchased from ~\$90 at online book sellers.



I suspect that most RMFMS visitors will be driving to Colorado Springs and therefore should have *ROADSIDE GEOLOGY OF COLORADO* (Chronic and Williams; Mountain Press Publishing; 2002; new at \$16, used much less) at their call. The authors describe the general geology along most of the major highways in Colorado and supply good geologic cross-sections and several nice photos. Some highway mile posts are noted; however, I would prefer to see additional postings in a revised and newer edition. This is a great book for every traveler, and I would strongly recommend it for RMFMS rockhounds.

Advanced hobbyists also should carry the *GEOLOGIC MAP OF COLORADO* with the most recent edition published by the U. S. Geological Survey in 1979 ([www.usgs.gov](http://www.usgs.gov)). A well known USGS geologist, Ogden Tweto, is listed as the compiler since maps of this scale are the result of individual works by tens/hundreds of individual "mappers".

Geologic maps show the different ages of surficial rock units superimposed on a base map with placement of rivers, roads and cities. The uniqueness of the map is due to displayed colors—specific colors represent specific ages of the rocks. For example, Mesozoic rocks, those belonging to the Cretaceous, Jurassic, and Triassic periods are represented by shades of green. In addition, faults are always shown and are represented by specific symbols. On large scale maps, dip and strike symbols, as well as lines representing fold axes, are commonly shown.

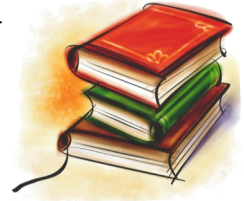
Although this article describes the state map at a scale of 1:500,000, readers should be advised that hundreds of other maps, often at a scale of 1:24,000, exist for Colorado. The major publishers of all geologic maps are the Colorado Geological Survey and the U. S. Geological Survey. The Colorado state map retails for ~\$10 from the USGS.

If visitors are interested in collecting fossils near Colorado Springs I might advise that the best collecting sites are in rocks of Cretaceous age, especially the Pierre Shale. By far the best fossil identification book is a very specific and detailed publication: the July-October 1977 (vol. 14, Nos.3-4) issue of *THE MOUNTAIN GEOLOGIST* (published by the Rocky Mountain Association of Geologists) and devoted to *CRETACEOUS FACIES, FAUNAS, AND PALEOENVIRONMENTS ACROSS THE WESTERN INTERIOR BASIN*. The volume was published as a field guide for the North American Paleontological Convention II. I had the opportunity to participate in the fabulous field trip that started in Salt Lake

City and ended in central Kansas and examined Cretaceous rocks in a variety of environments. However, the important thing about this book, at least to collectors, is that virtually every invertebrate fossil of Cretaceous age found in the Western Interior is represented with a detailed photograph. In addition, there are detailed descriptions of major Cretaceous rock units exposed across this vast area. So, readers will be able to consult a geologic map, locate Cretaceous rocks, and then consult the publication to identify the fossils.

The publication is long out of print; however, consult used book dealers on the internet, especially those specializing in geology books. I purchased my last copy with a well-spent \$15.

One of the reasons that I resettled in Colorado is because of the tremendous variety of hikes that are available for novice walkers to experienced alpinists. We are fortunate to have two books available for those readers who may be traveling "on foot": *ROCKS ABOVE THE CLOUDS* (Reed and Ellis; The Colorado Mountain Club Press; 2009; \$13) and *HIKING COLORADO'S GEOLOGY* (Hopkins and Hopkins; The Mountaineers; 2000; \$17). However, even if you are not a walker/hiker the books help one better understand our wonderful geological scenery. The latter book describes the geological features found along 50 hikes, ranging from "easy" (Garden of the Gods) to strenuous (Mt. Elbert at 14,433 feet). All hikes are to areas of geological interest and the book provides explanations for readers of all abilities.



The former, subtitled *A HIKER'S AND CLIMBER'S GUIDE TO COLORADO MOUNTAIN GEOLOGY* concentrates on the high mountains of Colorado. The geological descriptions of the various mountain ranges are well stated and each of the state's 14ers is noted in detail. The book is small (pocket book size) and well suited for a backpack, but finds room to contain both geological and terrain maps. My copy is well used as I take it on every trip to the high country.

There are essentially four mineral/rock collecting guides for Colorado. The oldest guide, and in many ways the best, is *COLORADO GEM TRAILS AND MINERAL GUIDE* by Richard Pearl. First published in 1958, the book is very impressive for its detailed descriptions of "how to find the locality". I have the 1972 edition purchased at \$15 but used copies are widely available from internet book sellers.

Falcon Publishing (AFalconGuide) has a number of state guidebooks on the market and one is *ROCKHOUNDING COLORADO* (Kapple and Kapple; 2004; \$10 new). I found this to be of less interest than Pearl's book since few "exotic" sites are explored and many mineral collecting sites are for common feldspar, mica, etc. This book might be a better choice for the Pebble Pubs.

James Mitchell has written a number of state collecting guides and rockhound books and I have copies of each. The Colorado version (*GEM TRAILS OF COLORADO*) has included good maps for the localities (75) but the book could be greatly improved with some descriptions of the local geology. Copies of the 1997 edition (Gem Guides Book Co.) are being sold for less than \$5 from internet book sellers.

By far the most extensive of the collecting guides is *COLORADO ROCKHOUNDING* by noted Colorado author Stephen Voynick. I like the fact that localities are grouped together by counties and that each locality is referenced. This is the book that I would purchase if only "one" guide is destined for your collection. New copies are \$16 with used books widely available (some at \$1). I believe the latest edition is 1996 so some items seem rather dated. Perhaps a new and revised edition is on the way?

Whatever guide one chooses please remember that: 1) several described localities are on private land and permission is needed to collect; 2) several localities might be under claim; 3) all vertebrate fossils, and some invertebrates, are protected if they are on federal lands; 4) collecting on state-owned lands (and city and county) is often off-limits so make certain to check with appropriate management agencies; and 5) collecting localities described in guides are often "cleaned out" within a few years.

And finally, I mention two books that focus on the general geology of Colorado. *GEOLOGY OF COLORADO ILLUSTRATED* (Foutz; personally published; 1994) describes the geology of Colorado from a locational perspective. That is, geologic descriptions of major features, such as The Denver Basin, The Grand Mesa, The Dinosaur Corner, etc., are described. Each location has a generalized geologic map and several photographs (in black and white). With a publication date of 1994/1999 the book is getting somewhat outdated. New copies list at \$18 with used prices at \$6 or less.

*GUIDE TO THE GEOLOGY OF COLORADO* (Taylor; Cataract Lode Mining Company; 1999), a book that is well-written and used by both serious students of geology and recreational rockhounds. Profusely illustrated with color photographs and printed on glossy paper, the book tackles the geologic time scale and then describes the geology of numerous localities of interest. New copies (perhaps not currently available) come packaged with a general geological map of Colorado. Used copies are available for \$16 or less.

So, RMFMS travelers to Colorado Springs have a variety of publications available for their perusal and possible purchase. And remember, local libraries are excellent resources. If copies of sought after books are not in the book catalog, perhaps you could order the books via Interlibrary Loan.

"People should educate themselves - you can get a complete education [in the public library] for no money." Ray Bradbury.

A Disclaimer: This article, and recommendations contained within, are solely the opinions of the author and do not imply an endorsement by RMFMS, CSMS, or LGGMC. This composition was partially adapted from previous writings in the CSMS Pick&Pack.

**CSMS Goes Bloggy** - The Colorado Springs Mineralogical Society, host to the summer 2011 RMFMS Show and meeting, has joined the "blogosphere"! The blog, authored by Mike Nelson, may be found at <http://csmsgeologypost.blogspot.com>. Take a look—perhaps your club would like to sponsor a similar site. Mike is available for questions at [csrockguy@yahoo.com](mailto:csrockguy@yahoo.com).



3/13 Daylight Saving Time Begins



3/17 St. Patrick's Day



3/20 Spring Begins

## RMFMS HONOREE FOR THE AFMS SCHOLARSHIP FOUNDATION AWARD

BY BILL SMITH, PRESIDENT

I take great pleasure in selecting Dr. Michael E. Nelson as the 2011 Rocky Mountain Federation of Mineralogical Society's honoree for the AFMS Scholarship Foundation Award.

Dr. Nelson received his B.S. in 1965 from Fort Hays State University in Kansas and participated in an undergraduate research program as a geology major. He received an M.S. from the University of South Dakota and a Ph.D. from the University of Utah: both degrees were in geology.

Dr. Nelson joined the faculty of Fort Hays State University in 1970, became Chair of the Department of Geosciences in 1973, and Interim Dean of the College of Arts and Sciences in 1991.

At Fort Hays State University he taught courses in paleontology and stratigraphy and supervised numerous undergraduate research projects and M.S. theses. His research, and the majority of his students' fieldwork, was centered in the Intermountain West – Utah, Wyoming, Nevada, and Idaho; in excess of 100 articles and abstracts were published. He also authored over 20 unpublished technical articles concerned with salvage of fossils along power lines and pipelines running through federal lands in Utah.

In 1991 he was appointed Dean of the Division of Science at Truman State University, the public liberal arts and sciences University of Missouri. On 1 July 1998 he assumed the position of Dean of the College of Science and Health at the University of Wisconsin – La Crosse and retired from that institution in 2006.

Dr. Nelson is a past president of the Kansas Academy of Science, was active in the Society of Vertebrate Paleontology, the Past President of the Council on Undergraduate Research, has presented at several Project Kaleidoscope workshops, and served a six year term as Treasurer on the National Conferences on Undergraduate Research Board of Governors.

He now lives in Colorado Springs and spends much time hiking, rock collecting, camping, fishing, and working on the archives gathering information for his second "career" – writing about conflicts on the Northern Great Plains 1850-1890. Colorado Springs, Lake George, and RMFMS newsletter editors look forward to including articles written by Dr. Nelson in their monthly publications. I certainly enjoy reading them. He is an active member of the RMFMS Public Land Advisory Committee, representing Colorado, as well as having been appointed to the BLM's Colorado Resource Advisory Council by Senator Ken Salazar. He also continues to travel around the country presenting lectures and workshops detailing the benefits of a strong and viable undergraduate research program.

He will have the opportunity to select two graduate students, in the field of geology, who will receive a \$4,000 dollar scholarship each from the AFMS to further their education. *CONGRATULATIONS, Dr. Mike!!*

Feather River Lapidary and Mineral Society, Oroville, CA is pleased to announce the

## Third Annual World Rock Tumbling Championship



### CONGRATULATIONS TO LAST YEAR'S WINNERS!

First place \$250 prize- Jim Miller of Bothell, WA;  
Second place \$100 prize - Tom Kuzia of Beacon Falls, CT  
Third Place \$50 prize - Susan Oglebay of Ephrata, WA.

It's time to challenge the champions! The Third Annual Rock Tumbling contest is open to everyone, any age, worldwide, who enjoys tumbling rocks and wants a shot at being the best in the world. Here's how:

- Send in a completed application (below) with a \$40.00 entry fee postmarked no later than **May 6, 2011**.
- Nevada Royal Jasper mine owner, Randy Messer, has agreed to provide the contest material this year. Each contestant will receive almost 4 pounds of rough sent USPS Priority Mail by the end of May.
- Contestants will have over three months to tumble the rock in a rotary or vibratory tumbler and mail a half-pound (1/2 lb) of the best pieces for judging.
- The entries must be received no later than **September 23, 2011**.
- Steve Hart, author of Modern Rock Tumbling, will evaluate each entry on the basis of smoothness, shape, shine and overall appeal. He will select the top five entries to be displayed at the FRLMS Rock and Gem Show held in Oroville, California the first week-end of October.
- Everyone attending the Rock and Gem show will examine the top five entries and cast a ballot for their favorite. The top three popular vote winners will be announced following the show.

1<sup>st</sup> Place:     \$250.00  
2<sup>nd</sup> Place:     \$100  
3<sup>rd</sup> Place:     \$50

**Note to Rock and Gem clubs: Get your club noticed! Consider sponsoring a contestant from your club. This year we will include club affiliation when announcing the name of the winners! Also, this is a wonderful opportunity for your junior members to learn more about tumbling and competition.**

*(FRLMS is actively seeking a source of tumbling rough for the 2012 contest. Please contact the club at the address below or through the website [www.oroillerocks.com](http://www.oroillerocks.com) with suggestions.)*

### 2011 Application Form

Name \_\_\_\_\_ Phone \_\_\_\_\_

USPS Mailing Address \_\_\_\_\_

City, State, Country, Zip \_\_\_\_\_

E-Mail Address \_\_\_\_\_ Name of Club: \_\_\_\_\_

Please mail applications with a check or money order by May 6<sup>th</sup> to:  
**FRLMS Contest Headquarters, PO Box 2645, Oroville CA 95965**

## THE TOP TEN REASONS TO TRY MICROMOUNTING

BY TIM JOKELA, JR.  
[TJOKELA@EXECULINK.COM](mailto:TJOKELA@EXECULINK.COM)

Here's a top ten list - just like Letterman's, but without the canned laughter. There are many reasons to get into micromounting, but these are the top ten.

**10 - STORAGE** - While you probably can't fit a thousand micromounts on the head of a pin, you can sure fit them in a box under your bed, making micromounting ideal for apartment dwellers or anyone who has heard the immortal phrase "Get those rocks out of here!"

**9 - EASY COLLECTING** - Field collecting superb 10 cm crystals of a rare mineral isn't particularly easy, but the micromounter can find something of interest almost anywhere. Even poorly mineralized road cuts, or fossil localities will often yield something of interest to micromounters, if only calcite or pyrite crystals.

**8 - PERFECTION** - Micro crystals are perfectly formed and undamaged far more often than cabinet specimens. They are the peak of aesthetics.

**7 - VARIETY** - There's only a few hundred minerals out there that come in nice big crystals, and almost no new species are found in sizeable crystals. Go to any mineral show and what do you see - table after table of aquamarine, quartz, and fluorite. Micromounters work with far more species than hand-specimen collectors, and are familiar with far more rarities.

**6 - LOW PRICES** - The average price of a micromount is \$3. Really expensive ones are \$20. The initial expense of a good scope and proper light is pretty steep, but after that you're set - you can buy fifty great specimens without breaking the bank. (Or why pay at all; trading your duplicates to other micromounters around the world is a huge part of micromounting.)

**5 - NO FAKES** - When a lot of money is changing hands for a fine cabinet piece, one has to be wary that the specimen hasn't been altered or faked in some way. Faking micromounts is not only extremely rare, it's nearly impossible, as a microscope easily reveals glue where it shouldn't be.

**4 - CHEAP SHIPPING** - Sending 100 micromounts by airmail to Europe is far more affordable than 100 cabinet pieces.

**3 - YEAR ROUND FUN** - A large part of what drives field collectors is the thrill of discovery. The micromounter with a good hoard of material doesn't have the constraints of a field season - no matter what the weather is like he can pull some rocks out of storage, trim them down, and find fantastic crystal-filled vugs never before seen by man. The micromounter can delve through his stock of material and find new stuff any day of the week, and he can go collecting in his basement even if it's 2:00 am and 20 degrees below Celsius outside. It's a year round hobby.

**2 - WEIRD & WONDERFUL** - The micromounter sees things that aren't even imagined by 'macro' collectors. Things like spiral Millerite crystals, Sweet Home Mine rhodochrosite rhombs with moving bubble inclusions, or minerals like rutile, pyrite, and boulangerite in ring crystals, to name a very few!

**1 - FREE STUFF!** - Last time you went to your average, garden-variety mineral show, did they have tables filled with fine cabinet specimens free for the taking? At micromount symposia, give-away tables loaded with interesting stuff are standard practice. Micromounters are a very generous bunch!



## Helpful Hints! (they never hurt)

Many lapidarists now heat nodule and thunderegg halves under a heat lamp for a few minutes before polishing with tin oxide or cerium oxide on felt. The polish comes up almost instantly. Alternatives include putting specimens in a 200° F oven until they are warm to the touch or putting specimens in hot water until they are warm. Dry off excess water before polishing.

To repair a spread apart link in a small broken chain, insert a toothpick in the two adjacent links. The faulty link is thus held in place for pliers to pinch it together again.

To break a cavity filled with fragile crystals away from a large matrix specimen: fill the cavity with fine dirt and hold the piece with the cavity facing up to retain the dirt while you trim the specimen. The dirt prevents the shock of the hammer blow from loosening the crystals.

Dinosaur bone is handled much like agate, sanded to 600 grit on silicon carbide, and polished on hard felt with tin oxide. The stone is finished with black rouge on muslin buff. The muslin buff can clean out the tin oxide that remains between the bone cells, and the black rouge

applies a stain to the tin oxide that remains behind. What color rouge you use might depend on the color of your bone.

To spot cracks and vugs before sawing, first soak it in a tub of water for at least an hour. Remove the rock and place it in a sunny spot. The surface will dry quickly, but the fractures and vugs will not. Use a soft pencil to mark the rock for guidance in sawing.

Take lint from your clothes dryer lint catcher and add it to the polishing compound for tumbling. It will speed up the polishing and prevent chipping.

Did you know that malachite is very poisonous in its raw state? Never lick the material to see the color. Don't even repeatedly lick your finger and apply. When you grind, wipe the contaminated oil off your skin right away. If you smoke and the taste becomes very sweet you are absorbing the malachite dust. The copper oxide dust is mixing with the moisture in your mouth and reacting to the tar in the tobacco, turning it into saccharine. Needless to say, you should take some immediate steps to stop the Inhalation.

*From the Ft. Collins' Lodestone, Feb '11*

## NATURE WATCHING FOR FUN & SCIENCE

BY DR. PETE MODRESKI, USGS, DENVER  
PMODRESKI@USGS.GOV



The following are a variety of hands-on measurement and observation "citizen science" programs that individuals, families, or school classroom participation. Some are quite simple, and some are more involved; some are one-time events, and some can be done year-round. The programs encompass astronomy, botany, ecology, hydrology, meteorology, and ornithology; and some (not all) would fall under the category of "phenology": "*The timing of life cycle events in plants and animals*" or "*The scientific study of periodic biological phenomena, such as flowering, breeding, and migration, in relation to climatic conditions.*"

These all involve ways that an individual or a group can make observations of things in the natural world that can be shared online with interested persons worldwide. I regularly take part in several of these, and I find it interesting and rewarding to do so. Except for one, all these activities are national (or worldwide) programs, not just restricted to Colorado. All of them can be great ways to get students involved and interested in observing and studying nature.

**Globe at Night 2011:** Feb. 21 – Mar. 6 and Mar. 22 - Apr. 4 GLOBE at Night is an annual citizen-science campaign that encourages people all over the world to record the brightness of their night sky. For two weeks every March, when the Moon is not out during the early evening and the constellation of Orion can be seen by everyone everywhere, children and adults match the appearance of Orion with 7 star maps of progressively fainter stars found on the website, [www.globeatnight.org](http://www.globeatnight.org). They then submit their measurements (e.g., which star map they chose) on-line with their date, time and location. Last year the GLOBE at Night 2010 campaign (which took place March 3-16) set a record high of over 17,800 measurements from people in 86 countries.

**Project BudBurst:** springtime (and fall too); <http://neoninc.org/budburst/> Anyone can participate. Familiarize yourself with certain native plants from a list of those growing in your geographic area, then observe and report dates you observe for first leafing or flowering of these plants. Project BudBurst has targeted 97 native trees, shrubs, wildflowers, and grasses for you to monitor throughout the year! With your help, we will be compiling valuable environmental information that can be compared to historical records. By recording the timing of the leafing and flowering of native species each year, scientists can learn about the prevailing climatic characteristics in a region over time."

**CoCoRaHS,** Community Collaborative Rain, Hail & Snow Network: all year; <http://www.cocorahs.org/> "CoCoRaHS is a unique, non-profit, community-based network of volunteers of all ages and backgrounds working together to measure and map precipitation (rain, hail and snow). By using low-cost measurement tools, stressing training and education, and utilizing an interactive website, our aim is to provide the highest quality data for natural resource, education, and research applications. It's easy to join, takes only five minutes a day, and is a fun



way to learn about this wonderful natural resource that falls from the sky. We are striving to have 30,000-40,000 active observers by the end of 2013. COCORAHS is now in all 50 states (as well as the District of Columbia)!"

Participants must register and order a high-capacity (4" diameter) rain gauge, which they will read and submit data from at approximately 7 a.m. each day. The CoCoRaHS website is a great source for daily measurements of local rainfall and snowfall in each community within your state or around the country; anyone can log in and access the daily data. [Let me put in an extra plug for this project; I participate, and it's a GREAT community effort! Please also check out their 2011 Rain Gauge Calendars—you can help the project by ordering one.]

**Colorado RiverWatch:** all year <http://wildlife.state.co.us/landwater/riverwatch/>

A program that, "...started with six schools on the Yampa and grew to cover all watersheds in Colorado and 350 schools. Since 1989 we have involved over 60,000 individuals in Colorado, provided data on 3,000 stations covering over 300 rivers. We have also grown to include individuals, watershed groups and other entities, besides schools, in our program. River Watch is a statewide volunteer water quality-monitoring program operated by the nonprofit 501©3 Colorado Watershed Assembly in cooperation with the Colorado Division of Wildlife (CDOW). Our mission is to work with voluntary stewards to monitor water quality and other indicators of watershed health and utilize this high quality data to educate citizens and inform decision makers about the condition of Colorado's waters. Volunteers agree to monitor on a monthly basis. Samples are collected which the volunteers analyze for hardness, alkalinity, dissolved oxygen, pH and temperature. Additional samples are collected to be analyzed for total and dissolved metals..."

Volunteers must register, receive training and equipment, and agree to conduct regular water monitoring in a selected local stream. All the data collected and archived are publicly accessible via their website.

**World Water Monitoring Day:** Sep. 18, and throughout the year; <http://www.worldwatermonitoringday.org/> "World Water Monitoring Day™ is an international education and outreach program that builds public awareness and involvement in protecting water resources around the world by engaging citizens to conduct basic monitoring of their local water bodies. In 2009, over 120,000 people in 81 countries monitored their local waterways. Celebrate with us on September 18, or host your World Water Monitoring Day anytime from March 22 until December 31!

An easy-to-use test kit enables everyone from children to adults to sample local water bodies for a core set of water quality parameters including temperature, acidity (pH), clarity (turbidity) and dissolved oxygen (DO). Results are shared with participating communities around the globe through the WWMD Web site."

**The Great Worldwide Star Count:** October 14-28 2011; [http://www.windows2universe.org/citizen\\_science/starcount/](http://www.windows2universe.org/citizen_science/starcount/) "During this international event, we ask everyone to go outside, look skyward after dark, note the stars they see in certain constellations, and report what they see online. The 2010 Great World Wide Star Count is over. We surpassed our goal of 2,000 observations this year—almost 4,500 observations were submitted by wonderful observers like you! Please join us again next year for the 2011 campaign, which will take place October 14 - 28."

**Project FeederWatch:** Nov.-April; <http://www.birds.cornell.edu/pfw/> "Project FeederWatch is a winter-long survey of birds that visit feeders at backyards, nature centers, community areas, and other locales in North America. FeederWatchers periodically count the birds they see at their feeders from November through early April and send their counts to Project FeederWatch. FeederWatch data help scientists track broadscale movements of winter bird populations and long-term trends in bird distribution and abundance. Project FeederWatch is operated by the Cornell Lab of Ornithology and Bird Studies Canada. Anyone with an interest in birds can participate! FeederWatch is conducted by people of all skill levels and backgrounds, including children, families, individuals, classrooms, retired persons, youth groups, nature centers, and bird clubs. There is a \$15 annual participation fee which covers materials, staff support, web design, data analysis, and a year-end report (Winter Bird Highlights). Participants receive a Research Kit, which contains instructions, a bird identification poster, a wall calendar, a resource guide to bird feeding, and a tally sheet—everything you need to start counting your birds. U.S. participants receive a subscription to the Lab of Ornithology's newsletter, BirdScope.

**Audubon Society Christmas Bird Count:** Dec. 14-Jan. 5 annually; <http://www.audubon.org/bird/cbc/> Conducted by local Audubon Society groups. "The Christmas Bird Count season is December 14 through January 5 each year. Your local count will occur on one day between those inclusive dates. There is a specific methodology to the CBC, but everyone can participate. The count takes place within "Count Circles," which focus on specific geographical areas. Each circle is led by a Count Compiler. Therefore, if you are a beginning birder, you will be able to join a group that includes at least one experienced birdwatcher. In addition, if your home is within the boundaries of a Count Circle, then you can stay home and report the birds that visit your feeder once you have arranged to do so with the Count Compiler. In either case, if you have never been on a CBC before your first step is to locate and contact your local Count Compiler to find out how you can volunteer. There is a \$5 fee to participate in the CBC for all field participants aged 19 or older."

To have your RMFMS member club sponsored event listed here, email [bettycain3@comcast.net](mailto:bettycain3@comcast.net). Include the following information:

- You may include other info about your show if you wish but
- |                      |                  |                      |
|----------------------|------------------|----------------------|
| • Show dates & times | • Sponsor (club) | will only be printed |
| • Show location      | • Contact name   | as space permits.    |
| • Phone number       | • Email          | All RMFMS clubs      |
| • Club web site      |                  | are also encouraged  |

to register their event listings on the RMFMS web site at: [www.rmfm.org](http://www.rmfm.org). Email your submissions to the Webmaster.

#### **March 10-13, 2011 Demin, NM**

46th annual Rockhound Roundup, SW New Mexico Fairgrounds, Deming, NM; Thur-Sun 9a-5p; contact Bud Daily 575-267-4399, [www.dgms.bravehost.com](http://www.dgms.bravehost.com)

#### **March 18-20, 2011 Albuquerque, NM**

Treasures of the Earth, Creative Arts Center Bldg, NM State Fair Grounds, Fri & Sat 10a-6p, Sun 10a-5p contact Paul Hlava 505-255-5478 [paulhlava@q.com](mailto:paulhlava@q.com).

#### **March 25-27, 2011 Fort Collins, CO**

Fort Collins Rockhounds Club Gem and Mineral Show at The Ranch in the Thomas M. McKee 4-H building, Larimer County Fairgrounds, 5280 Arena Circle, Loveland. For more info see <http://www.fortcollinsrockhounds.org/gemAndMineralShow.shtml>.

#### **April 2-3, 2011 Siloam Springs, AR**

Northwest Arkansas Gem & Mineral Society Spring Gem & Mineral Show, 110 N. Mt. Olive St; contact Charlotte Leinger, 479-721-3882 [TheSwankyStone@aol.com](mailto:TheSwankyStone@aol.com), [www.nwarockhounds.org](http://www.nwarockhounds.org)

#### **April 8-10, 2011 Ogden, UT**

Golden Spike Gem & Mineral, Weber County Fairgrounds, 1000 N. 1200 W., Ogden, UT; 801-648-5060, [club@goldenspikegem.org](mailto:club@goldenspikegem.org)

#### **April 15-17, 2011 Wichita, KS**

Wichita Gem & Mineral Show, "World of Wonders", Cessna Activity Center, 2744 George Washington Blvd., Wichita, KS; contact Gene Maggard 316-742-3746, [gandpmaggard@wildblue.net](mailto:gandpmaggard@wildblue.net)

#### **April 29-May 1, 2011 Salt Lake City, UT**

Wasatch Gem & Mineral, Idaho Gem & Mineral Club State Fairgrounds, Expo Idaho Fairgrounds 155 N. 1000 W 5610 Glenwood & Chinden Zions Bldg, Boise, ID Salt Lake City, UT

#### **May 6-8, 2011 McPherson, KS**

19th Annual McPherson Gem & Mineral Club Rock Sale & Swap; located at 4-H Fairgrounds, 710 W. Woodside, McPherson, KS; Contact Jim Nutter 620-241-2433 or Marvin Lundquist 620-241-7003.

#### **June 24-26, 2011 Colorado Springs, CO**

2011 RMFMS Convention & Show hosted by the Colorado Springs Mineralogical Society; Gene Maggard, RMFMS Show Chair, 316-742-3746, [gandpmaggard@wildblue.net](mailto:gandpmaggard@wildblue.net), and Ron

Yamiolkoski, CSMS Show Chair, 719-488-5526, [yamofthewest@gmail.com](mailto:yamofthewest@gmail.com)

**SHOWS  
AND  
MORE**

#### **July 2-4, 2011 Farmington, NM**

San Juan County Gem & Mineral Club, Farmington Civic Center, Fri/Sat 10-6, Su 10-5; contact Mickie Calvert 505-632-8288 [mickie2@earthlink.net](mailto:mickie2@earthlink.net).

#### **July 7-11, 2011 Syracuse, NY**

2011 AFMS Show & Convention, joint show with Eastern Federation of Mineral and Lapidary Societies (EFMLS).

#### **July 9-10, 2011 Cody, WY**

Code 59er & Shoshone Rock Clubs host the Wyoming State Mineral and Gem Society Show, Cody Auditorium, 1240 Beck Ave, Cody, WY, Sat 9a-6p, Sun 9a-3p; contact Stan Strike, [strikes@bresnan.net](mailto:strikes@bresnan.net), 307-250-1244 or Jim Ulmer, 307-272-5330; Lysite field trip July 11.

#### **July 9-11, 2011 Durango, CO**

Four Corners Gem & Mineral Club, La Plata County Fair Grounds, Fri/Sat 10-6, Sun 10-5; contact Bill Birza 970-385-6850 [wcbirzzz@durangolive.net](mailto:wcbirzzz@durangolive.net); [www.durangorocks.org](http://www.durangorocks.org)

#### **July 17-18 Tulsa, OK**

Tulsa Rock & Mineral Society, "Treasures of the Earth", Central Park Hall, Expo Sq, Tulsa County Fairgrounds 21st & Yale, Sat 9-6, Sun 10-5; contact Wayne Mouser 918-582-8700 [okyrocks@peoplepc.com](mailto:okyrocks@peoplepc.com) [www.townrockhound.org](http://www.townrockhound.org).

#### **August 12-15, 2011 Buena Vista, CO**

"The Rock Show at Buena Vista: A CONTINental Divide TAILgate", Carolyn Tunnicliff 720-938-4194, [ctunnicliff@comcast.net](mailto:ctunnicliff@comcast.net).

#### **August 20-22, 2011 Lake George, CO**

Lake George Gem & Mineral Club, U.S. Hwy 24, 8a-5p, free admission; contact Becky Blair 719-748-3030, [blairra@hotmail.com](mailto:blairra@hotmail.com) or Jack Rakowski (719-748-3861, [rak-geologist@yahoo.com](mailto:rak-geologist@yahoo.com)

#### **September 3-4, 2011 Silver City, NM**

The Grant County Rolling Stones Gem and Mineral Club 28th Annual Gem and Mineral Show, 10a-5p, Grant County Business and Conference Center, Hwy 180 East, Silver City, New Mexico, Marcia Andres, 575-534-0006, [rollinstonesgmsshow@gmail.com](mailto:rollinstonesgmsshow@gmail.com), <http://rollingstonesgms.blogspot.com/>

#### **September 5, 2011 Palmer, KS** (*Did I get it right this time?*)

North Central Kansas Gem & Mineral 2nd Annual Show, 2nd & Nadeau St, Palmer, KS; 9a-4:30p. Vendors wanted. Contact Marty Weber, 785-763-4316, [martywbr@yahoo.com](mailto:martywbr@yahoo.com).

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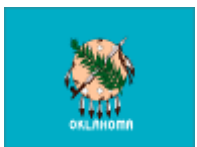
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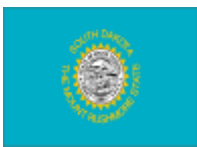
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