Michiana Gem & Mineral Society
Jason Hefner, Editor
229 East State St
Etna Green, IN 46524

April 2011 Volume 51 Number 4

Earth Day is April 22nd
Go collect some “earth”

THE ROCKFINDER

We're on the Web! See us at: http://www.sauktown.com/Michiana

The purpose of the Michiana Gem & Mineral Society is to promote the study and enjoyment of the earth sciences and the lapidary arts, and to share lapidary knowledge and techniques. General meetings are usually held the fourth Sunday of each month at 2:00 p.m. at,

Our Redeemer Lutheran Church
805 S. 29th St.,
South Bend, IN.
Please see the map to the right.

Doors usually open at 1:30 for meet & greet time.

Regular meeting exceptions include May (third Sunday), July (Club Picnic), August (Club Show) and the November/December meeting and Christmas party.

Board meetings are held before the monthly meetings. The annual club show is in late August.

DUES
Yearly Membership Dues are payable by December 15th of each year. Please chose type of membership below.

__Individual $15.00 __Family $20.00
__Junior $1.00 __Subscriber $7.50

Please indicate areas of special interest.
__General Geology __Gems & Minerals
__ Fossils __Micro mounts
__Crystals __Field Trips
__Cabochons __Faceting
__Carving __Beads
__Jewelry Making

Name(s)_____
Street_____
City, ST, Zip_____
Phone(s)_____
Email_____

Please send your dues and the bottom half of this form to:

Please read and sign this section

With my signature I hereby release the Michiana Gem and Mineral Society, Inc., and its individual members and the owners of any premises upon which I enter under permit granted to the society, absolutely free of any liability whatsoever, to my person or property, and further I will respect the equipment and property of the aforesaid owners.

Signed_____Date_____
Signed _____Date_____

Family Information:

Name:_____Birthday:_____
Name:_____ Birthday:_____
Name:_____ Birthday:_____
Name:_____ Birthday:_____
Name:_____Birthday:_____

Michiana Gem & Mineral Society
c/o Marty Perry
29154 Frailey Dr
Elkhart, IN 46514

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Volume 51 Number 4
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The purpose of the Michiana Gem & Mineral Society is to promote the study and enjoyment of the earth sciences and the lapidary arts, and to share lapidary knowledge and techniques.

Michiana Gem and Mineral Society (www.sauktown.com/Michiana), is a not-for-profit organization affiliated with the Midwest Federation of Mineralogical Societies http://www.amfed.org/mwf/ and with the American Federation of Mineralogical Societies www.amfed.org

The *Rockfinder* is published monthly except July and August.

Please note that all items for a given issue of the Rockfinder are due to the **Editor** no later than the **5th** day of the previous month. This means that the due date for the March Issue will be February 5th. Advance items are appreciated. Material may be e-mailed to hefner_family@hotmail.com or submitted via the U.S. Mail.

Editor:
Jason Hefner
229 East State St
Etna Green, IN 46524

Kathy's Column - President Kathy Miller

Our club has lost a true rockhound, friend, and long time member on February 23, 2011. Herb Luckert had been involved making all our Rockfinder labels for years. Herb's wife Phyllis is also a club member and our condolences have been sent to her. Please keep Phyllis and her family in your thoughts, love and prayers. I received this information regarding Herb's passing too late to put in the March newsletter.

By the time you receive this Rockfinder, our first club field trip has taken place to Marion, KY for fluorite. I hope those of you who were able to go on it will bring some samples of what you collected for the display table. Please remember our April meeting will be held on the third Sunday of April (April 17th).

It is possible some opportunities will come up for us to get our club's name out to the general public regarding our club, meetings, and show in the surrounding communities. Continued on Page 2

Up & Coming

Next Meeting:
April 17, 2011
Visitors are always welcome. Doors open at 1:30 and meeting starts at 2:00.

Place:
Our Redeemer Lutheran Church
805 S 29th Street
(29th & Wall)
South Bend, IN.
This is in the River Park area.

Program:
To be announced.

Refreshments:
Carrie Brown
Amanda Highbaugh
Lana Wright

Board of Directors

President:
Kathy Miller
574-291-0332

Vice-President:
Randy Hill
269-465-5814

Secretary:
Michelle Winters
574-267-6127

Treasurer:
Marty Perry
574-295-9050

Liaison:
Linda Garwood
765-592-3409

Past President:
Diane Gram
574-272-6885

Committee Chairs

Displays: Mike Skoczylas
574-251-0255

Editor: Jason Hefner
574-858-9837

Educational: Jesse Zeiger
574-259-5944

Field Trips: John Davis
574-232-8823

Historian: Ed Miller
574-498-6513

Hospitality:
Linda Miller 574-291-5027
Carrie Brown 574-262-5126

Juniors: Trista McIntosh
574-780-1162

Librarian: Pat Bell
574-233-7352

Membership: Joan Hill
269-465-5814

Programs: Randy Hill
269-465-5814

Publicity: Joe Perry
574-295-9050

Show Chair: Marie Crull
574-272-7209

Sunshine: Sally Peltz
269-683-4088

Webmaster: Jim Daly
219-778-2196

Kathy's Column..... continued from Page 1

Take time at the upcoming meetings or picnic to pick up some show flyers to pass out or post. They can even be obtained on-line via the monthly newsletter that our editor Jason Hefner sends out. Bob and I are attending the MWF spring meeting hosted by the Kalamazoo Geological & Mineral Society club during their show the last weekend of April and plan to distribute our show flyers there.

We have four official club meetings left this year: April, May, September and October. Our other gatherings are the July picnic, upcoming field trips, our annual 3 day show in August, and our December Christmas party. Let's make an extra effort to attend all or at least most of these functions. I know we all have really busy lives, but ***a hobby is supposed to be one of the fun stress relievers in our everyday living - right!*** Our times together are to visit and share our knowledge and the same interest with each other. Your presence and commitment to the club is always what makes our earth science hobby so special, I appreciate all of you.

Rock on.

Kathy

March Minutes – Secretary Michelle Winters

The meeting was called to order at 2:00 by Kathy Miller and the pledge was led by Randy Hill there were no new members present at this meeting

Secretary report – Michelle Winters - The secretary's report was accepted by Don Church and then was seconded by Nick Peltz.

Treasurer's report – Marty Perry - The treasurer's report was read by Michelle Winters (as Marty Perry was in Florida) and Randy Hill forgot his glasses and could not read the print

Liaison report - Linda Garwood had a bunch of information on up and coming shows and loads of other information and gave all the information to Jason Hefner for him to put into the April Rock finder.

Randy Hill called for Committee Reports
Displays: Mike Skoczylas – no report

Editor: Jason Hefner – reminded members to look for old Rockfinders

March Minutes continued from page 2

Educational: Jesse Zeiger - Club member Jessie Zeiger has a new daughter in law living with her from Japan and is expecting , as her son is stationed in a submarine and wanted to get his wife out of Japan with the radiation leak going on.

Field Trips: John Davis - spoke about the up coming trip to Kentucky to the fluorite mine.

Historian: Ed Miller – no report

Hospitality: Linda Miller & Carrie Brown - this month's refreshments were supplied by Sally Peltz, Yvonne and Marty Perry (thanks to Joe for all his hard work in remembering to bring these to the meeting)

Juniors: Trista McIntosh - Please bring in metal coffee cans, preferably the smaller cans

Librarian: Pat Bell - We lost a long time club member Herb Luckert and Tom Noe is picking up a book to donate to the library in Herb's name.

Membership: Joan Hill - the new directories are ready and please remember to pick these up at the next meeting if you have not done so already.

Programs: Randy Hill - This month's program was given by Bob Miller on how to build a sphere machine from scratch and how to work it .

Publicity: Joe Perry – the dealer contracts have been mailed out and the August show is to have 20 dealers.

Show Chair: Marie Crull - no report

Sunshine: Sally Peltz – no report

Webmaster: Jim Daly - setting up a Google link from our web site so that it can be found easier by people.

Herb Luckert – by Tom Noe

Everybody in the MGMS sends our condolences to long-time member Phyllis Luckert, whose husband Herb passed away in February. Herb was an active member of MGMS up until a few years ago, and until December 2010 he generously helped out with the *Rockfinder* by selecting and scanning articles for reprint, creating page blanks for layout, and keeping the mailing labels up to date. He was also a great consultant to the editor and could catch errors when an article wasn't using good science. Sometimes when he found an interesting topic, like fossil extinctions, he'd start corresponding with the author to get more information or to trade theories.

Herb and Phyllis traveled to many rock and fossil localities in the US. Especially during the South Bend winters, they often headed for sunnier climes in the South and Southwest. Their basement has the fruit of those collecting trips. Herb always said of Phyllis, "She never met a rock she didn't like!"

Herb loved telling funny stories, and his boisterous laughter made him fun to be around. He had a great memory for details and facts, and really enjoyed rockhounding.

Our thoughts and prayers are with Phyllis in this time of loss.

From Carles Millán collection

The 2011 “Rare Earths Rush”

By Kempton Roll, Southern Appalachian Mineral Society
Taken from “LodeStar”, March 2011, The Southeast Federation of Mineralogical Societies, Inc.

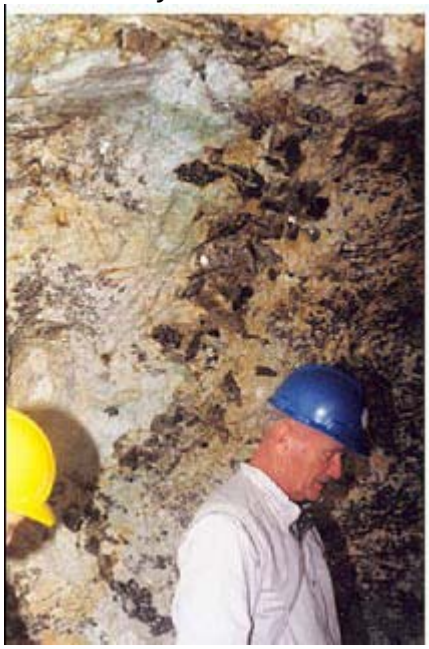
Seeing the words “rare earths” is rapidly becoming not so rare. All nations with mountains containing pegmatite intrusions are beginning to realize they’ve struck a bonanza of minerals that are the source of very valuable metals. Considered almost worthless before WWII, rare earth metals are selling at prices far above what they were a few years ago. And increasing rapidly.

It’s the metallic elements and chemical compounds that can be made from them that are fast becoming absolutely essential in modern manufacturing technology. Rare earths are the key ingredients necessary to enhance the performance of a multitude of today’s high technology products. They possess unique physical properties ideal for applications that cannot be achieved with other metals. Even in miniscule amounts the unique properties they possess make them vital ingredients in today’s way of life ranging from hard drives and microchips in computers to cyberspace communication devices and critical components in hybrid cars. Just half a penny's worth of neodymium helps a cell phone vibrate. The “flint” that creates sparks in a lighter depends on cerium, a rare earth metal derived from the mineral, cerite. Special steel alloys for jet engines, precision-guided weapons, lasers, wind turbines, flat-screen TVs, tiny powerful magnets and even fiber optics all depend on one or more of the rare earth metals or compounds.

In short, rare earths metals have become extremely important in every industrialized nation’s economy, manufacturing technology and defense capabilities. Yet their mineral ore sources are actually not as rare as one might think. They’ve just been ignored. Until now.

What Are Rare Earths?

The term “rare earth” refers to the group of fifteen elements with atomic numbers 57 through 71 in the Periodic Table plus yttrium and monazite. They were first discovered by Johann Gadolin in 1794 but due to difficulty in separating the elements by atomic weight, the full range of rare earth metals was not complete until more advanced separation techniques were developed in the twentieth century. Best known are cerium, lanthanum, yttrium, dysprosium and samarium. They are all characterized by high density, high melting points and high electrical and thermal conductivity. Mixtures of rare earths can be refined into metals, oxides and salts.



The primary sources of all rare earth mineral ores are pegmatites and fine-grained granites. Alanite, cerite, euxenite, fergusonite, formanite, monazite and samarskite are their most important ores. Of those, alanite is the most abundant and widely distributed primarily in pegmatite deposits. Black to brownish-black in color, it can form as massive, bladed or granular aggregates. The photo (on the left) of an alanite/biotite aggregate was taken inside a Carolina pegmatite mine. Besides consisting of 20% rare earths oxides, alanite can also contain thorium (not a rare earth metal) and radioactive uranium oxides (autunite and uraninite). Some abandoned pegmatite mine wastes in North and South Carolina have been the source of fergusonite as secondary inclusions and in Amelia, VA as large crystals. Continued on Page 6

American Federation of Mineralogical Societies News

From The Top! by Bob Miller, President

Sorry folks, but I 'm about to undergo some eye surgery and the doctors advise against doing too much computer work until after I've healed. By the time you read this, I should be back to "normal" . I'll leave it to you to decide what "normal" for me is!

Be sure to make your hotel or camping reservations and send in your display and registration forms for the big shindig in Syracuse this coming July. You can download all the forms and information you'll need by visiting either the AFMS website of the Gem & Mineral Society of Syracuse website www.gmss.us.

Kathy and I are looking forward to meeting many of you and sharing what promises to be a wonderful weekend along the Erie Canal.

Until next month,
Bob

AFMS Newsletter – April 2011

Midwest Federation of Mineralogical Societies News

More DVDs as a Premium for Endowment Fund Donations

By John Washburn – Midwest Federation News, April 2011

As promised we now have several DVD's as premiums for donations to the Endowment Fund. These are all the presentations that were given at the MWF Convention and shows last August in Peoria. So those of you that were there and took in the programs know how good they are. Any one of them would be a great program for a club meeting. Well now they are all available to those wanting a personal copy. They will of course be available from the MWF library, but otherwise they are being offered as a premium for a $20 or more donation to the Endowment Fund. For each one ordered , please include $2.00 for postage. Send your request with check payable to the MWF Endowment Fund, plus $2.00 cash for postage for each to. John R Washburn, 107 Deer Creek Road, Rochester, IL 62563. Titles include; **Mazon Creek Fauna** by Dr. Merrill Foster, Phd, **Keokuk Geodes** by Ed Wagner, **Homer the Triceratops** by Michael Henderson, **Illinois Fluorite Story, part III** by Dean Stone or all 4 DVDs for a $60 donation. Also available is **Danville's Fossil Forest** by Scott Elrick

Purpose of the AFMS

To promote popular interest and education in the various Earth Sciences, and in particular the subjects of Geology, Mineralogy, Paleontology, Lapidary and other related subjects, and to sponsor and provide means of coordinating the work and efforts of all persons and groups interested therein; to sponsor and encourage the formation and international development of Societies and Regional Federations and by and through such means to strive toward greater international good will and fellowship.
www.amfed.org

Purpose of the MWF

To promote interest and education in geology, mineralogy, paleontology, archaeology and lapidary, and to sponsor and provide means of coordinating the work and efforts of groups interested in these fields.
www.amfed.org/mwf

Coming Events

April

16-17: COLUMBUS, OH, Columbus Rock & Mineral Society, Veterans Memorial, 300 W Broad St, Sat 10:00-6:00 Sun 11:00-5:00, The Many Facets of Quartz; Veterans Memorial, 300 W. Broad St.; Sat. 10-6, Sun. 11-5; Adults $7, Youth 6-16 $3, under 6 and Scouts in uniform free; senior discount. Contact: Ken Harsh, karmakenha@aol.com, or Craig Kramer, (614) 436-4511, craig.kramer@woway.com Show Flyer

16 - 17: Benton Harbor, MI. The Blossomland Gem and Mineral Society -Rock and Gem Show at Orchards Mall (near Entrance 4), 1800 Pipestone Rd. (north of I-94, exit 29); free admission, special presentations on gem faceting and gold panning in Michigan. Saturday 10 - 7, Sun. 11 - 4; contacts Andrew Green: rock_club@comcast.net or Nancy: 269-983-4900

23-24: CUYAHOGA FALLS, 0H, Semi-annual Gemboree Show, Akron Mineral Society & Summit Lapidary Club, Emido Expo Center, 48 E Bath Rd, 10:00-6:00, Contact Evelyn Tryon, 2028 Tallmadge Rd, Kent, OH 44240, (330) 673-9664, gemboree76@yahoo.com

22-24: DECATUR, IL, Annual Show, Central Illinois Gem & Mineral Club, Decatur Macon Co Fairgrounds, 3700 N Westlawn Av, Contact Tony Kapta, 1483 E Wood St, Decatur, IL 62521, (309) 830-6516, cigmc@comcast.net

29-May 1: KALAMAZOO, MI, Annual Show, Kalamazoo Geological & Mineral Society, Kalamazoo Co Expo Ctr 2900 Lake St, Fri 4:00-9:00, Sat 10:00-6:00, Sun 10:00-5:00, Contact Bill Mitchell, 3605 Woodcliff Dr, Kalamazoo, MI 49008, (269) 375-5678, mitchellvickybill@sbcglobal.net

May

14-15: BEREA, OH. 43rd Annual Show, Parma Lapidary Club, Cuyahoga County Fairgrounds, 164 Eastland Rd, Sat 9:00-6:00, Sun 10:00-5:00, Contact: John Zaborowski, 926 Lake Breeze Rd, Sheffield Lake, OH, 44054, (440) 949-8242, j751@centurytel.net

21-22 Rock and Mineral Sale, Marv & Kitty Starbuck. 7636 East V Ave, Vicksburg, MI 269-649-1 991 cell1-231-740-5512. Sat 9 – 6, Sun 9 - 4

June

10-11-12,2011 MISSOURI MINES ROCK SWAP 9 a.m. - 6 p.m. Friday and Saturday; 9 a.m. - 4 p.m. Sunday, Historic Site on south side of Highway 32, l.5 miles west of US Highway 67

The 2011 “Rare Earths Rush” continued from Page 4

Monazite is found in New England and both Carolinas as well as Virginia. Its high thorium content accounts for Thomas Edison’s interest in Western North Carolina mines back in the late 1800s when he needed thorium-based chemicals for gas lamp mantles. Samarskite occurs chiefly in pegmatites associated with columbite, monazite, clevelandite, zircon, beryl, muscovite, albite, topaz, garnet and tourmaline. Large masses weighing up to twenty pounds have been found in some North Carolina pegmatites.

Contrary to their names’ implication, rare earths are widely distributed and fairly abundant in the earth’s crust. The largest known reserves are found in China, Australia, North America and Russia. Renewed mining operations are starting up in Australia and California where they ceased in 2002. Production is also being increased at mines in India and Vietnam. China presently is the world's largest producer of rare earths: and for some of them, the only producer. According to Australian authorities, China possesses 35% of known global reserves of rare earths minerals but supplies more than 95% of the demand of which 60% is domestic. With some "heavy" rare earths, such as dysprosium which helps magnets keep their properties at high temperatures, its own market share is nearly 100%.

Where Does The USA Stand?

As a nation and major consumer of these metals the United States is growing rapidly as a consumer but shrinking even faster as a producer. For the most part, the ores are still in the ground just ignored and un-touched. Though abundant in nature, especially in pegmatite dike intrusions, extracting metal from them is very difficult and costly; recycling even more so. Another reason why they’ve been ignored involves pegmatite mining methods. While the Southern Appalachian Mountains are well known to all rockhounds because of their unique, easily recognizable and recoverable mineralization, they were being mined during the last century primarily for their high grade mica, feldspar and quartz content. And they still are in the Spruce Pine area of North Carolina (see photo below). During those early years “hand-cobbing” was the only way to separate unwanted matrix minerals and use them as back-fill or abandon them as surface “tailings”. It is most likely that all the rare earth minerals associated with these pegmatites were considered a nuisance by the mine operators and simply discarded. Neither did they hold much appeal for rockhound collectors, but at least they were visible in the tailings and could be collected. Continued on Page 7

The 2011 “Rare Earths Rush” continued from Page 6

Modern mining and mineral concentration techniques changed all this. Today the highly efficient, labor-saving “flotation process” for separating the primary minerals - mica, feldspar and quartz – requires grinding the ore plus all its other matrix minerals into a granulated sludge. No more tailings from which rockhounds could collect the “good stuff” much less the rare earth minerals. Nowadays nearly everything hauled out of a pegmatite mine is trucked away and crushed into fine particles. All its mineral contents are destined to suffer the same sad fate as the crushed aquamarines, sapphires, garnets, tourmalines, etc. that also typically occur in those pegmatites. But at least all those rare earth minerals are still there and, hopefully, recoverable in some form or other.

Where Are These Mines?

The United States Geological Survey reports that known placer deposits of rare earth minerals exist in the Appalachian foothills of both North and South Carolina and along the beaches of Georgia and Florida where they’re mixed with the black “heavy” sand particles. Most of these deposits are the result of weathering of ancient pegmatite intrusions and the tumbling action of sea surf. All during the last century, the best known exposed and mineable pegmatite intrusion areas in the eastern United States were open-pit mines first operated in Paris, Maine and later in Middletown, Connecticut where some were mined primarily for their gem-quality tourmaline and aquamarine crystals. Opaque beryl crystals also common in these deposits were usually recovered as the ore for beryllium metal. But all those early pegmatite dike intrusions have been worked out commercially. The only recent and still active ones are in North Carolina’s Yancey, Macon and Mitchell counties. While many of the earlier ones, such as every rockhound’s favorite, the Ray Mine complex near Burnsville, NC, have already been abandoned, many in the Spruce Pine, NC area are still active.

It is not inconceivable that property owners with access to abandoned hand-cobbed pegmatite open pit mines could re-work the tailings for its rare earth minerals that even the most dedicated rockhounds had been ignoring. Should they also recover a few facettable aquamarines, garnets or tourmalines, so much the better. At least they weren’t cruelly crushed to death in a flotation mill!

The photo to the left was taken recently when a shelf of pegmatite was being blasted at the Wakefield Mine in Spruce Pine, NC.

What’s Happening Now

Some American economists have put rare earths-producing countries in the same category as the oil-rich OPEC nations citing how they have gotten a strangle hold on all industrialized nations requiring oil for energy. Those economists apparently are not aware that inorganic metals and organic petroleum are entirely different. Oil is expendable. The metal’s “supply and demand game” can go on forever. It’s only a question of who’s got them and if they are willing to trade them with other nations who need them. The rate of worldwide industrialization and subsequent globalization of their economies has increased remarkably since the beginning of the new century. Continued on Page 8

The 2011 "Rare Earths Rush"

continued from Page 7

On March 17, 2010, the Assistant Secretary of Energy for Policy and International Affairs announced that the U.S. Department of Energy is developing its first-ever strategic plan concerning rare earth metals and minerals. With 97% of production controlled by China, the implementation of a ban by them on the export of rare earths is a move that could have a drastic crippling impact right now on industries around the globe. The only possible exception seems to be Australia where they are actively mining some rare earths-rich pegmatites (and just as actively promoting investment in their company's stock!). Other foreign governments and mining companies may also support alternative sources if only to avoid a Chinese monopoly.

The Future Outlook For America

Because the market demand for rare earth minerals and metals is in the process of making them far more valuable than they've ever been, now seems to be the time for those involved in the pegmatite mining industry, or at least familiar with mineral resources, to take a closer look at abandoned mine waste minerals: the ones that had been used for back-fill or tailings detritus. Now seems to be the time to start prospecting for rare earths minerals wherever pegmatite dikes are located in the Appalachians. Old dikes that have already been mined out and whose owners discarded what-ever was not considered saleable in those days doubtless still have some of this re-discovered mineral treasure hidden on their premises under years of Nature's debris.

Active mine operators may still rescue unattractive yet rare earths minerals before they are cast aside or sold as road-fill. Better still, mineral ore treatment and recovery researchers like those operating the NC State Mineral Research Laboratory in Asheville and flotation mill operators themselves might start looking for a "soap" that will enable them to separate and collect crushed rare earths minerals from their mountains of sludge. Who knows, the sludge that also contains all those beautiful gemstones could also become part of the "2011 Rare Earths Rush"!

SAVE ROCKHOUND STATE PARK

American Lands Access Association – By Tom Noe **Send E-Mails by April 18!**

Rockhound State Park is located near Deming, NM, on 249 acres that were dedicated in 1966 by Governor Jack Campbell. The property was donated to the State Parks Division by the Deming Ranchettes development company. The park's original intent was to cater to rock collectors. Commonly found are a variety of minerals, including perlite, thundereggs, jasper, geodes, agate, rhyolite and quartz.

Visitors have always been encouraged to collect rock and mineral specimens for personal noncommercial use up to 25 pounds per visit. But today the practice of collecting rocks at Rockhound State Park and on other public lands is no longer considered a recreational activity by those who are charged with managing the public's use of our public lands. In fact, the park managers are trying to make it a misdemeanor for a member of the public to remove any geological item from Rockhound State Park.

The final decision requires input from the public on changes to the Rockhound State Park Management Plan. In the revised management plan all reference to rockhounding in Rockhound State Park has been removed and replaced with fines and legal actions for removing rocks and minerals. Even the name is being changed from Rockhound State Park to Florida Mountains State Park. Already, most of the published state literature has already deleted any reference to our hobby of rockhounding.

The fate of Rockhound State Park has not yet been completely sealed. To maintain our hobby within the park will take a lot of effort from the rockhound community. Many letters need to be written to the managers and elected officials of New Mexico letting them know that rockhounding is a responsible recreational activity and that Rockhound State Park should remain a location where collecting is encouraged.

Please submit comments by April 18, 2011.

Fax: 505-476-3361;

Mail: 1220 S. St Francis Drive, PO Box 1147, Santa Fe, NM 87505

E-mail: nmparks@state.nm.us

More information on Rockhound State Park, a copy of the revised management plan and sample letters from which you can choose your comments and points can be found on the ALAA web site www.amlands.org. Please get involved and become a rockhound activist.