# PICK & SHOVEL


INSIDE THIS ISSUE

"SAGENITE"

MINERAL COLLECTIONS

FIELD TRIP

Volume 31, Number 5
January, 1991

Lincoln Gem and Mineral Club, Inc.
P. O. Box 5342
Lincoln, Nebraska 68505

# 1991 ELECTED OFFICERS

| | | |
|---|---|---|
| President: | **Fred B. Holbert,** 2822 S. 13th St., Lincoln, NE 68502 | 423-5639 |
| 1st Vice President: | **C. David Heffelbower,** 1819 Washington St., Lincoln, NE 68502 | 475-4713 |
| 2nd Vice President: | **Charles Wooldridge,** 836 S. 31st St., Lincoln, NE 68510 | 475-9034 |
| Secretary: | **Vera Lyman,** 420 N. 56th St., Lincoln, NE 68504 | 464-6089 |
| Treasurer: | **Phyllis Parks,** 2435 So. 19th St., Lincoln, NE 68502 | 476-6798 |
| Board Member: | **Francis Belohlavy,** 1919 "K" St., No. 4, Lincoln, NE 68510 | 477-4337 |
| Board Member: | **Roger Pabian,** 315 "D" St., Lincoln, NE 68502 | 474-2034 |
| Board Member: | **Billie Heffelbower,** 1819 Washington, Lincoln, NE 68502 | 475-4713 |
| Board Member: | **Shirley Rockel,** 1134 West Avon Lane, Lincoln, NE 68505 | 464-3059 |

**NOMINATIONS COMMITTEE**

3 Years: Kevin Schwartman, Chair.
Gerald Moore
Don Phillips
2 Years: James Null, Michael Smith
1 Year: Ed Ridge, Roger Pabian

**LONG RANGE PLANNING AND BY-LAWS COMMITTEE**

3 Years: Kevin Schwartman
Jim Marburger
2 Years: Bob Wright
Linda Parks-Lundgren
1 Year: Phyllis Parks
Charles Wooldridge

## STANDING COMMITTEES

Membership: Shirley Rockel
Education: Roger Pabian
Field Trips: Francis Belohlavy
Historian: John & Lillie Lewis
Hospitality: Eddie Ridgeie)
Study Group Coordinator:
Housing/Property: Jim Parks
Junior Activities: Janet Wright
Librarian: Jim Parks/Charles Wooldridge
"Gem Pallette" Corresdpondent: Sandra McNiff
"Geology Day" Coordinator: Charlles Wooldridge

Programs: Charles Wooldridge
MWF Liaison: Vera Lyman

Scholarship: Dwight Miller
Christmas Party: Billie Heffelbower
1990 Rockhound/Year: Charles Wooldridge
1991 Show: John Harrison
1992 Show: Phyllis Parks
1991 Swap: David Heffelbower
1992 Swap: Roger Pabian

**AUDITING COMMITTEE, 1987-1988**

David Heffelbower
Francis Belohlavy

## YOUR PICK & SHOVEL STAFF

Publisher: Lincoln Gem & Mineral Club, Inc., P. O. Box 5342, Lincoln, Nebraska 68505
Editor: Roger Pabian, P. O. Box 5342, Lincoln, NE 68505
Business Reporter: Vera Lyman
Financial Reporter: Phyllis Parks
Circulation : C. David and Wilma Heffelbower

# CALENDAR OF EVENTS

**JANUARY MEETING:** Saturday, January 26, 7:30 PM
Nebraska Center for Continuing Education, 33rd & Holdrege. Norfolk Room.

**SPECIAL EVENT** Annual Midwinter Swap: beginning at 1:00 PM and continuing to 6:00 PM. Swapper's Dollars to be used. Admission: rock specimen(s) for the the silent auction. David Heffelbower in charge.

**PROGRAM:** Advanced Lapidary Techniques, by Bill White, Independence, Missouri. Bill has displayed many of his different kinds of cuts at our shows. Now is your chance to learn some of the techniques from a National Trophy winner.

**JUNIOR MEETING:** 1:30 PM. Special Event: Field trip to the Children's Museum.

**COMING EVENTS:** GEOLOGY DAY: Prairie Interpretive Center Pioneer's Park, Sunday, February 19, 1991. 1:00 PM- 4:00 PM. Charles Wooldridge in Charge.

SHOW: Kansas City, Missouri
March 8-10, Trade Center

SHOW: Lincoln, Nebraska
March 16, 17, 1991
Pershing Auditorium
Nebraska State Show

## REGIONAL SHOWS:

| 1991 AFMS | | | | | |
|---|---|---|---|---|---|
| SAN JOSE, CA JUNE 14-16 | TAMPA, FL SEPT 19-22 | SOUTH BEND, IN AUG 30 - SEPT 1 | SALT LAKE, UT JUNE 14-16 | LUBBOCK, TX JUNE 7-9 | SEATTLE, WA JULY 26-28 |

**DUES ARE DUE** Your 1991 dues are now due. Mail them to the club box or pay them at the January meeting.

**FUTURE MEETING DATES, PLACES:** February 23, 1991, Scottsbluff Room, NCCE, 7:30 PM

March 23, 1991, Beatrice Room, NCCE

**DISPLAY MATERIALS** Bring items that relate to January (Garnet) or specimens with sagenitic inclusions. Cases will be furnished for exhibitors.

## PRESIDENT'S MESSAGE

**SHAKY NEWS:**

Well, the earthquake predicted to strike the area along the New Madrid fault on 12-3-90 did not occur in the form in which it had been predicted. The earth's plates did not slip, slide, and heave. The only upheaval that day was created by the media. Reporters, politicians, promoters, hustlers, and souvenir seekers jammed the town of New Madrid. Twenty TV news satellite trucks lined main street waiting to bring pictures of the decimation into our living rooms. The media was perched like vultures awaiting the eminent demise of some hapless animal in the throes of death. Insurance companies notified their clients that they stood ready to protect them from loss for only a small extra fee. In the best American tradition, the non-event had created a feeding frenzy where the sharks were trying to chew huge chunks of dollars from naive and gullible victims. The atmosphere was like that surrounding Orson Wells' "War of the Worlds" radio broadcast and when the sky fell on Chicken Little. The death, however, did not occur.

All of this attention was because of the prediction of a major earthquake by Iben Browning, expert seismologist (spelled climatologist). The press took the blathering of a person talking about a subject outside of his area of expertise and went looking for sponsors for the event. Unfortunately, the media still does not take seriously its responsibility to report facts. So much of what we see today presented as fact is actually opinion and conjecture. It still hasn't sunk into their heads that many people still assume that whatever is seen in print or on the television must be true.

One of the actual victims of such a fiasco is science and its creditability. The lay press has a terrible habit of reporting on scientific studies without any regard as to the correct interpretation of the results or as to whether the results are verifiable by other studies. This only serves to confuse the public and may actually be harmful in the worst case. We also see the reporting of pseudo-scientific renderings which are used to falsely support philosophies of religion, medicine, and sociology.

If one carefully examines the claim of Mr. Browning, we will find that his prediction was accurate. He predicted that there was a 50-50 chance of a major quake along the fault within a 48 hour window of December 3rd. Reciprocally, his prediction would indicate that there was also a 50% chance that a major quake would **NOT** occur. He hit that one right on the head.

The offer of the insurance companies to insure for earth quake losses at a very low premium, would lead one to conclude that the insurance companies were betting against the occurrence of a quake also. If they thought that the chance of an occurrence of a quake in which they would stand to lose many millions of dollars was likely, they would not offer to cover such a loss or that the premiums would be so high that few could afford the coverage. Ask anyone who lives in a flood prone area how much the premiums are for flood insurance.

**MORAL OF THE STORY:**

Just because you read it, hear it, or view it, doesn't make it so.

FRED B. HOLBERT

# HOW TO START A MINERAL COLLECTION

By Edward P. Pedersen

## General Considerations

Mankind has an inborn desire to collect things that are beautiful, rare, or just interesting. One of the most educational opportunities that an individual can provide for his or herself is to start a new collection. No matter how much you expand that collection, you are still required to invest time, effort and learning skills to gain the knowledge needed to further improve it. The collection will, if developed sensibly, provide you with ego gratification, new friends or acquaintances, and a sense of satisfaction. If you do not structure your collection, it can provide frustration, and an increasing sense of wasting your time.

The first question to ask your self is: "Why do I want to start a Mineral collection?" The reasons for collecting minerals are varied but the most common are: a desire to study minerals; the natural beauty of mineral specimens: minerals are interesting; a desire to gain recognition from other mineral collectors; possible ego gratification from possession of the minerals; and a desire to exhibit minerals in shows and competitions. Once you have considered why, yhou should consider the type of collection you desire and what the limitations you may have in acquiring that goal. To set the framework for this consierration you have to know what types of collections are possible.

## Types of Mineral Collections

UNLIMITED COLLECTION: This type of collection is the most common and probably the least rewarding. To assemble this type of collection all you need to do is collect every mineral you see, regardless of specimen size, specimen quality, price, or any other restriction. Any mineral is fair game for the unlimited collector who may easily acquire thousands of specimens. The learning opportunity from such a collection is excellent, the return on time and money invested in the collection may be less than expected.

LIMITED COLLECTION: The limits to an individual's collection can be general or very strict depending on the emphasis that the individual wants to place on it. The main benefit to limiting a collection is that the quality of the collection as a whole can be increased.

DANA COLLECTIONS: A Dana collection, named for the famous mineralogist, is a collection with a specimen of each mineral species. The best Dana collections have specimens from the localities that produced the original specimen described when the mineral was named.

SIZE LIMITED: This is the most common restriction placed on mineral collections. Often this is due to available space. I had a friend who liked specimens the size of his head or larger. His apartment, and the wife who shared it, didn't. If you are going to impose a size limit it is a good idea to use one of the sizes that are used in competitive exhibits. These are: small cabinets (fit in a five-inch cube; miniatures (fit in a two inch cube); thumbnail minerals (fit in a one-inch cube); and micromounts (specimens that need magnification). These sizes are bigger than they sound. If you size limit your collection, it doesn't mean that if you fall in love with a mineral you can't have it follow you home. Another advantage to size limitations is that it

reduces the "burnout" from looking at too many specimens during a show. Quality specimens are more available in the smaller sizes allowing you to advance your collection somewhat faster.

LOCATION LIMITED: If you have a particular part of the world that is your favorite you can learn more about it by collecting the minerals that the area produces. This area can be a continent, country, state or province, county, district, or individual mine or quarry. Reading the rules for competitive exhibits may help you to fine tune your efforts. A collection of minerals from the United States would allow you to collect most of the individual mineral species. Many of the states provide a wide variety of possible mineral species to collect.

SINGLE MINERAL OR MINERAL FAMILY: If you think quartz crystals are the neatest things you have seen, this is the limitation for your collection. Two of the most common mineral groups found in limited collections are the tourmaline group and wulfenites. These are also very addictive to those that collect them. My personal addiction lies with wulfenites and there seems to be no cure in sight! Quartz, calcite, fluorite, or pyrite collections are not as dangerous to the pocketbook.

SELF-COLLECTED MINERALS: This is the most satisfying type of collection that you can build. Each mineral specimen in the world has a history and as the field collector of your specimens you know their history. Each mineral in the collection has some of your effort (sweat and blisters) in it. The disadvantage to self collecting is that it is difficult to visit enough sites to get a wide variety of specimens and you have to work (and be lucky) to get quality specimens. I have a friend who has been awarded a national trophy for his self-collected minerals. The expense of this type of collection can be reduced by charging each and every collecting trip to the recreational travel, or exercise, accounts in your family budget. Politicians can do this type of financing; why not mineral collectors?

As a sidelight-- the division of specimens from a collecting trip needs to be negotiated before collecting starts. If the collecting site permits individual collecting efforts you keep what you dig yourself. If a group effort is needed to get the specimenss, any specimen collected by the group qualifies as self-collected. For example: three of us were collecting in a Colorado mine where the specimens were found in a roof pocket only two feet above the timbers. I lay on my back with my head in the pocket and directed the placement of a long handled chisel resting on the top of my shoulder. Then I called out how hard to hit to one of my friends. He swung the hammer just behind my shoulder aiming for the striking end of the chisel. As the specimens were loosened I handed them down to the third person for wrapping and packing. We got about twenty specimens and drew straws for first, second, and third choice. Since collectors have their own standards as to which is the best specimenb, often everyone comes away happy.

MINERALS WITH ONE CHEMICAL ELEMENT: If a collector has an interest in chemistry, or has taken an interest in the minerals of a chemical group, this may be a viable limitation. This type of collection is usually selected after the collector has a general mineralogical knowledge base. Lead minerals or copper minerals make good groups to collect. A student of mine exceeded my own accomplishments and won a national trophy in thumbnail-sized copper minerals.

LINCOLN GEM & MINERAL CLUB, INC - BOARD OF DIRECTORS - Dec. 6, 1990
NE Hall Rm 115 7:30 P.M.

President Holbert called the meeting to order. Minutes of the Oct. & Nov. Meetings and Treasurer's report were all approved as read.

BILLS: Already paid but presented for approval with motion by Dave Heffelbower, 2nd by Roger Pabian. Carried.
Presented for payment and approval with motion by Roger Pabian, 2nd by Shirley Rockel. Carried.

Motion by Vera Lyman, 2nd by Dave Heffelbower giving Phyllis Parks permission to pay bills that need to be paid before Jan. Board Meeting. Carried.

Motion by Phyllis Parks, 2nd by Vera Lyman to pay Friends Of Museum $ 50. again for 1991. Motion carried.

Motion by Vera Lyman, 2nd by Shirley Rockelfor $ 175. for each of 2 scholarships to UNL. Motion carried. Revised to make retroactive to 1991. Revision carried.

OLD BUSINESS:
Christmas Party was enjoyed by 39 in attendance. Thanks to Billie Heffelbower.

NEW STUDY GROUP: "Minerology" - Question of coordinator; place to hold meetings, etc. Fred will contact Dwight & Dorothy Miller.

SHOW:
Possible purchase of 6 ft. power strips for Show. Need of 2 doz.
Motion by Dave Heffelbower that we allow $ 150. to purchase power strips. 2nd by Roger Pabian. Carried. Depreciate over 7 yrs. Show budget approved.
Phyllis Parks will be 1992 Show Chairperson.

NEW BUSINESS: Standing Committees Chairpersons discussed. Appointments in P&S.

Special Meeting of Board in conjunction with Show Meeting. (12-4-90) 8:30 P.M. Board members in attendance at Show Meeting (Holbert, Pabian, McNiff, Heffelbower, Belohlavy & Parks) Motion made by McNiff & 2nd by Belohlavy "that we extend an invitation to State Assoc. that if no other Club volunteers, LGMC will host the State Show at our regular Spring Show. Motion was passed unanimously. Dave Heffelbower is is to notify the Assoc. Deadline for the Assoc to reply is 1-15-01.

Meeting adjourned.

Respectfully submitted,
Vera Lyman
Vera Lyman, Secretary

Treasurer's Report for December 1990

| | | | |
|---|---|---|---|
| NBC Checking 12/31/90 | | | $742.03 |
| Monies Received: | | | |
| Prepaid Dues for 1991 | 234.00 | | |
| Prepaid 1991 Show Dealer Space | 250.00 | | |
| Suspense-Subs to '91 Gem Palette | 14.00 | | |
| Suspense-1990 Members Christmas Meal | 374.00 | 872.00 | |
| Paid Out: | | | |
| Rockhound and Special Award Plaque | 74.45 | | |
| Memorials and Sunshine | 39.86 | | |
| Christmas Decor.& Door Prizes | 70.60 | | |
| " Guests,Sales Tax & Gratuity | 108.80 | | |
| " Susp.Members Meals | 374.00 | | |
| Postage President | 25.00 | | |
| Copy Expense Secy. | 5.14 | 697.85 | |
| National Bank Commerce Checking Bal.12/31/90 | | | $916.18 |

## 1991 PRELIMINARY OPERATING BUDGET
## LINCOLN GEM & MINERAL CLUB

| ESTIMATED INCOME: | SUBTOTAL | TOTAL |
|---|---|---|
| Annual Show (net) | | $2,000.00 |
| Interest | | $1,400.00 |
| Membership Dues | | $800.00 |
| TOTAL INCOME: | | $4,200.00 |
| **ESTIMATED EXPENSE:** | | |
| Dues to Affiliate Organizations | | $166.00 |
| Friends of the Museum | $50.00 | |
| MWF | $86.00 | |
| NAOESCI | $30.00 | |
| Housing and Properties | | $360.00 |
| Meeting Site Rental | | $350.00 |
| Insurance | | |
| Officer's Bond & Gen. Liability | | $150.00 |
| Pick & Shovel Publication (net) | | $1,200.00 |
| Mail | | $149.00 |
| Bulk Mailing Permit | $60.00 | |
| P.O. Box Rental | $39.00 | |
| Misc. Postage | $50.00 | |
| Refreshments | | $285.00 |
| Anniversary/Swap | $50.00 | |
| Gen. Meetings | $185.00 | |
| Show Set-up | $50.00 | |
| Scholarships (foundation) | | $350.00 |
| Miscellaneous | | $665.00 |
| Awards | $100.00 | |
| Christmas Dinner Meeting | $100.00 | |
| Corporation fee (biennial) | $20.00 | |
| Delegate Fees | $100.00 | |
| Historian | $25.00 | |
| Field Trip | $20.00 | |
| Juniors | $0.00 | |
| Librarian | $50.00 | |
| Membership ( & Sunshine Corner) | $30.00 | |
| Programs | $150.00 | |
| Secretary | $25.00 | |
| Study groups | $20.00 | |
| Treasurer | $25.00 | |
| TOTAL EXPENSES: | | $3,675.00 |
| NET OPERATING GAIN: | | $525.00 |

MINERALS WITH ONE GEOLOGIC ORIGIN: The most common collection of this type is minerals from pegmatites. Any other restriction can be placed that the collectors area of interest indicates. I saw one exhibit, by a surgeon, of "minerals" that fromed in the human body (gall stones, etc.). Weird but very limited.

SPECIAL MINERAL "GROUPS": Included in this type of restricted collections are minerals containing inclusions and pseudomorphs. Gem minerals could be another group and can make impressive displays when paired with cut or faceted stones of the same mineral. Don't ever think of cutting an undamaged crystal and then calling yourself a mineral collector! Instead, look for collectible crystals in bins of faceting materials (especially tourmaline). I have displayed pseudomorphs (one mineral replacing another but keeping the shape of the original mineral). A very interesting collection but the most ugly exhibit I ever prepared.

COMBINATIONS: Combining two or more of the above restrictions can greatly improve your chances of winning in competition at shows, and give you a very satisfying experience while you build the collection. In my personal collection I have emphasized miniature-sized minerals for over 20 years. However, during the last 8-10 years I have directed my efforts to acquiring minerals from Arizona, and wulfenites (lead molybdate = love). This does not mean that I don't have other specimens in the collection. My pseudomorphs and a number of quite charming small single quartz crystals are very safe. My self-collected minerals come in all sizes, but the regional tropy winning competitive exhibited was composed of self-collected miniature minerals. I can envision that a lot of fun could be had collecting thumbnail lead minerals from Nevada. It would take time, and effort but the costs wouldn't be excessive. A national trophy winning general mineral thumbnail-sized exhibit would probably require a large gem-quality diamond crystal. Some of us have deep enough pockets to support this desire, others do not. In competition, the less restrictive classes get the most exhibits; therefore, your chances are better in a more restrictive class. +++

## JUNIOR NEWS

Get ready for the Mid-Winter Swap! There will a large variety of rocks, minerals and lapidary supplies for you to buy or possibly swap. If you have specimens for trading purposes be sure to bring them along to display on the Junior Table. We will also have an indoor fieldtrip for the youth and interested adults. This year we will be visiting the CHILDREN'S MUSEUM. Depending on the number of young people going we will also need some volunteer drivers. We will gather at the Junior Table at 1:30 PM to begin the fieldtrip and we plan to be back within an hour. If you have been taking lapidary classes this is a great time to look for just the right findings to make jewelry out of the rocks you have been working on.

You are invited to stay for the adult evening meeting and program, however the Junior activities will be over by 4PM. Do plan to talk to me able your DISPLAY at the GEM and MINERAL SHOW which will be coming in MARCH.

HOPE TO SEE YOU AT THE SWAP!!!!! YOUR JUNIOR CHAIRPERSON JAN WRIGHT

## HOWARD J. "JIM" TAYLOR, JR."

The club was deeply saddened by the recent passing of Howard J. "Jim" Taylor, Junior. Known to most of us by Jim, he was a long-time active member in Lincoln Gem and Mineral Club. Jim started in the club as a junior member and remained active for many years. Jim followed in many of his Father's footsteps in gem and mineral activities. Jim's devotion to the hobby led him into many club committees and he served as President in 1983 and 1984. Jim was also active in NAOESCI and MWF activities. Jim will be sorely missed by the entire rockhound fraternity.

We extend our deepest sympathies to Jim's family and friends. +++

## FRANCES TRACY

Charter Life Member Frances Tracy passed away on December 6, 1990. Since her retirement Francis had lived in Cortland with a sister and brother in law. Frances' contributions to the club were many. She began the Pick & Shovel and was its first editor and won the Midwest Federation bulletin editors contest in 1961. Frances was the widow of Maurice Tracy who was the city's first lapidary instructor and she was the first secretary/treasurer, historian, and resident agent for the club. Frances attended our 1990 show and helped take tickets and renewed many old acquaintances and made many new ones.

We extend our deepest sympathies to family and friends. +++

## SHOW COMMITTEE MEETING

The 1991 show committee will meet Thursday, February 7, 1991, at the meeting room in the Reunion, 16th & "W" Streets, 7:00 PM. Please attend. +++

## BOARD MEETING

The February board of directors meeting will be Monday, February 4, 1991, room 115, Nebraska Hall, 7:30 PM. +++

## GEOLOGISTS DIRECTORY

**Directory of Nebraska Geologists** compiled by R.R. Burchett and D. A. Eversoll, lists over 200 geologists in academia, industry, and government and is now available from Conservatioin and Survey Division, 113 Nebraska Hall, University of Nebraska, Lincoln, NE 68588-0517. Please enclose $1.00 to cover postage and handling costs. +++

## THINGS TO REMEMBER

Remember to pay our dues by the end of January to keep receiving your Pick & Shovel and be sure to remember the annual swap on January 26 at Nebraska Center. Don't forget to bring a contribution to the silent auction.

# CHRISTMAS DINNER, 1990

**By Charles Wooldridge**

On December 1st, the Lincoln Gem and Mineral Club held it's annual Christmas Dinner at the Nebraska Center. Fred Holbert began the festivities by telling sad jokes that made everyone's eyes water. Thanks were given to past board members and new board members were introduced. Charles Wooldridge announced that Don Phillips is the recipient of the Rockhound of the Year award for 1990. Don has been very active in the club's activities including facilitating the fossil dig at the annual show, giving talks to groups of school children, and writing informative articles for the Pick & Shovel.

A special recognition and plaque was awarded to Roger Pabian by Fred on behalf of the club. Roger is appreciated for the tremendous amount he donates to the club. He is editor of the Pick & Shovel, fills in with programs for meetings, brings cases and materials to each meeting, has served as chairman on the show committee, and led a study group on quartz this past year.

Before the dinner, a moment of silence was observed for Jim Taylor who recently passed away and for friend Linda Plock whose National Guard Company has been sent to active duty in Saudi Arabia.

Dinner was exquisite, a tasty salad, main course of braised chicken breast, and strawberry shortcake for dessert. It was enjoyable for so many people from the club including some who are rarely seen the rest of the year socializing with oneanother. The dinner was relaxed, friendly, and warm. Many thanks were extended to Billie Heffelbower for her hard work in arranging the dinner.

Special Guests were Tom and Pearl Bushnell from Australia and the Roger Uhlingers, their Nebraska hosts. Tom and Pearl brought about 30 gem and mineral specimens from Australia for our viewing pleasure.

Following the meal, Tom Bushnell presented a slide program of a six to seven thousand kilometer tour of the eastern half of Australia. A number of annual shows and gemborees were visited on the sojuron. I was amazed at the great diversioty of gems and minerals that are to be found in Australia. Usually when considering Australia one is drawn immediately to opals. Mr. Bushnell's trip included beryls, quartzes, zeolites, toummalines, gold, petrified wood, Turitella, topaz, jasper, marble, labradorite, chrysoprase, and various forms of opal.

The countryside was as diverse as it was beautiful with numerous mountain ranges, deserts, rain forests, and aboriginal paintings. The opal fields of Lightning Ridge and Yawah were explored among others. These areas looked as if a world war had taken place and they can be quite dangerous with the great number of underground shafts that are seemingly everywhere. Mr. Bushnell's accent provided an Aussie flavor to his comprehensive and educational presentation. He donated maps, literature, and some specimens to the club.

Following the program club members who had brought gifts exchanged them and the beautiful center pieces were raffled off.

Fellowship and a good dose of Christmas spirit were ubiquitous this year and I am sure all who attended are already looking forward to next year. +++

## DUES ARE DUE

Dues are now payable for the 1991 calendar year. They may be sent to Phyllis Parks, treasurer, at the club address on the outside cover of the bulletin. The dues schedule appears on the inside of the back cover of this and all issues of Pick & Shovel. You may also pay dues at the January meeting and swap. +++

## GEOLOGY DAY

The club's 4th annual Geology Day will be hald on Sunday, February 19, 1991, at the new Prairie Interpretive Center at Pioneer's Park from 1:00 PM to 4:00 PM. Displays, demonstrations, and programs are needed for this event which has proved to be a good forerunner to the show. Contact Charles Wooldridge for further information. +++

## WELCOME ABOARD

This month's Pick and Shovel contains articles by two new contributors, Ed Pedersen and John Abel. I'm sure that you will enjoy their articles and will ask for more contributions from both of them in future issues. Thanks! Ed, John, for your efforts in producing the monthly bulletin. RKP

## OTHERS WRITE

From The Conglomerate of the Michigan Mineralogical Soc., October, 1989

## THE RAY SCHALL DIAMOND

A 78 year old retired painter named Ray Schall moved to Arkansas in 1976 because he wanted to try his hand at diamond hunting at the "Crater of Diamonds State Park at Murfreesboro,the only confirmed diamond mine in the United States.

In time with experience he started finding diamonds. In fact he has found 70 diamonds, searching almost every day the mine was open over the past five years (That's one diamond about every 26 days.)

The majority of diamonds found at the "Crater of Diamonds" or any other diamond mine in fact are small and not of gem quality, but everyone keeps looking for their dreams.

I'm sure that deep in the back of Ray's mind he also had a dream of riches, but Ray was only aware of his pleasureable days of passing time with his diamond hunting. Then on Nov. 14, 1981 Ray realized an unbelievable dream and found HIS diamond, the "Ray Schall Diamond" named in hornor of its finder by the present owner.

After finding the diamond, Ray said: "I looked down and I almost fainted. There was this diamond on the ground. I could tell it was a diamond and I just fell on it. When I got it in my hand I was shaking like a leaf in a windstorm. I called over some people and they helped me to the office. I could hardly walk."

His age and health prompted Ray to sell his prize four years later to a friend, the present owner.

The diamond was a rare stone indeed, a 6.07 ct, flawless icy white diamond. In 1985 the crystal was given to a diamond cutter named Ron Kreml of Wichita Fall, Texas, to be cut. The crystal shape lent itself to be fashioned into a pearshape cut (2.88 ct.) of near ideal proportions. The "Ray Schall Diamond" crystal is the 7th largest diamond to be found at the "Crator of Diamonds" since the mine became a State Park in 1972. To date, it is the finest diamond of this size found in the United States.▼

# SAGENITIC INCLUSIONS

**By Roger K. Pabian**

The term "sagenite" has caused some confusion in mineralogical and gemological circles but it is really not a geological problem that rates the same space in newspapers as does plate tectonics (continental drift) or rates of organic evolution. Nevertheless, the audiences of our little publication are probably much more interested in the term "sagenite" and its implications than in either of the above problems that are of global magnitude.

In his Dictionary of Gems and Gemology, Shipley uses the term "sagenite" as a noun, calling it: "Chalcedony or quartz containing numerous needle-like crystals of other minerals, such as rutile or tourmaline, is called **sagenite** or **sagenitic** quartz (p. 176)". The very next entry into Shipley's dictionary is **sagenitic quartz**: "Term used for transparent colorless quartz containing needle-like crystals of rutile, actinolite, goethite, tourmaline, or other mineral, regardless of the manner in which the crystals are arranged." See **sagenite; rutilated quartz.**

In Dana's Textbook of Mineralogy (4th Edition, Ford, 1958) the term sagenite appears in the index but reference to page 472 reveals the term sagenitic used as an adjective to describe certain kinds of quartz. Here Ford used the term: "Sagenitic.---Inclosing acicular crystals of rutile. Other included materials in acicular form are: black tourmaline; goethite; stibnite; asbestos; actinolite; hornblende; epidote.

In describing varieties of agates, Sinkankas (1962, p. 276) used sagenitic as an adjective: "sagenitic---containing many fine needles of another mineral or the cavities left by them."

Pabian (1978, p. 23) stated that sagenite was a "catch-all" term that applies to slender, needle-like inclusions of various minerals. Citing Mayer et al (in Myatt, 1972, p. 152-153) Pabian indicated that sagenite also included zeloite, rutile, tourmaline, hornblewnde, actinolite, and cinnabar among the sagenite forming minerals.

All of the above authors agreed on one thing to be sure: sagenite is not a mineral as such but a term used to describe a certain kind of inclusion. They further agreed that the adjective sagenitic is preferable to the term sagenite. Implicitly, all of the above authors seemed to agree that sagenitic is a term that is used almost exclusively with quartz minerals.

In more recent years, there has been a tendency to refer to quartz containing rutile or tourmaline as rutilated or tourmalinated quartz rather than sagenitic quartz.

Pabian made an interesting observation (1978, p. 23, Table 1) that geologically young agates (eg. froms from northern Mexico) contained sagenitic inclusions of unaltered aragonite, calcite, barite, gypsum, goethite, or rutile crystals. In geologically old agates (eg. Lake Superiors) these inclusions were represented by chalcedony pseudomorphs of these minerals (i.e., replaced by chalcedony).

Pabian (1978) furhter separated plumes, dendrites, and stalk-like aggregates from inclusions that some might consider to be sagenitic. Thus, sagenitic inclusions may appear to the eye as radiating groups (Fig. 1) of generally acicular crystals or randomly oriented sprays

(Fig. 2) of usually acicular crystals. Although most radiating sagenitic inclusions contain acicular crystals, I have observed both tabular and prismatic forms in agates from northern Mexico and the Lake Superior region.

Pabian (1978, p. 23) furhter showed that most sagenitic inclusions are of minerals that formed under low temperatures and pressures (about 1 atmosphere at 20-25 degrees Centigrade) and related the carbonate and oxides to soil forming processes.

Sagenitic inclusions will make up the featured material of the month. Bring along anything you think qualifies to display so that we can learn more about these fascinating inclusions. +++

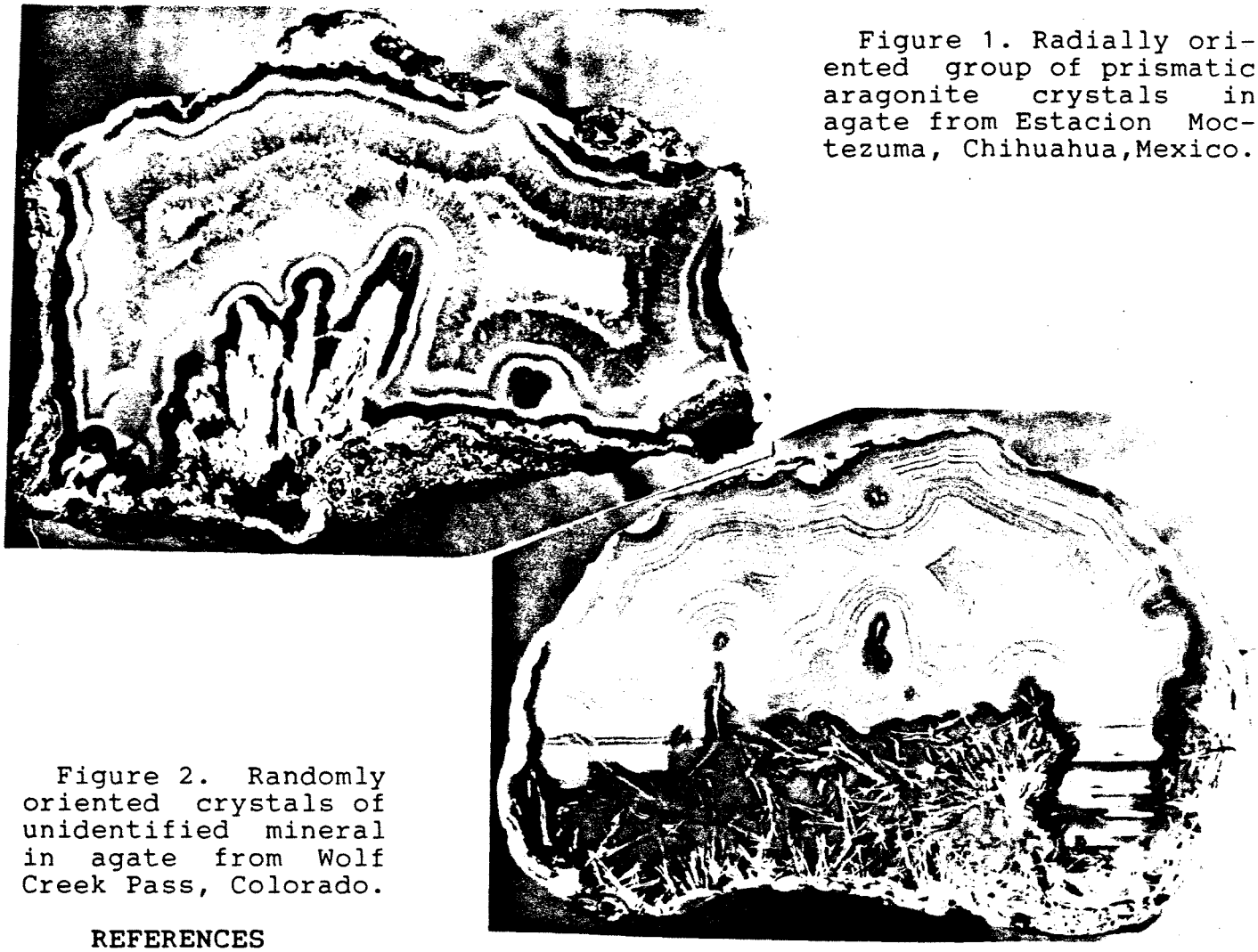


Figure 1. Radially oriented group of prismatic aragonite crystals in agate from Estacion Moctezuma, Chihuahua,Mexico.

Figure 2. Randomly oriented crystals of unidentified mineral in agate from Wolf Creek Pass, Colorado.

**REFERENCES**

Ford, W. E., 1958. A Textbook of Mineralogy. 4th edition, revised and enlarged. Johy Wiley & Sons, Inc. London. 851 pp.

Myatt, W. J., editor, 1972. Australian and New Zealand Gemstones. Paul Hamlyn Ltd., Sydney, London, New York, Toronto. 511 pp.

Pabian, R. K., 1978. Inclusions in Agate and Their Origins and Significance. Gems and Gemology, Spring, 1978: pp. 16-28.

Shipley, R. M., 1971. Dictionary of Gems and Gemology. 6th edition. Gemological Institute of America, 230 pp.

Sinkankas, J., 1962. Gem Cutting, a Lapidary's Manual. 2nd edition. Van Nostrand Reinhold Company, New York, 297 pp.

# QUARTZ STUDY GROUP

By Dwight D. Miller

The Quartz Study Group met for its final session at 7:30 p.m. November 13, 1990, in Room 115 Nebraska Hall at UNL. Those attending wer Francis Belohlavy, Billie Heffelbower, Fred Holbert, Dwight and Dorothy Miller, Charles Wooldridge, and, of course, Roger Pabian. When asked for a topic for the evening's session, Roger replied that it was a "surprise" and witheld the information a while to heightn suspense.

Roger teaches three courses at the University: on the Quartz Family Minerals, on Gem Stones, and on Diamonds. Our November 13th session featured a final examination from the Quartz Family Minerals course, and copies of the exam were passed out --with just the suggestion of a warning not to photocopy or give away (or sell) this exam. The sketchiness of this report can be attributed partly to the author's effort not to reveal too much of the exam's contnets and partly to ignorance of the proper details of all the answers. The following is barely a hint at what the well-prepared stuident in the course ought to have known.

The first section asked for definitions of five terms which I'll not list --but they must be regarded as so elementary that it would have done no good to consult the Glossary of such a book as "Quartz" by Michael O'Donoghue, because none of them is there (better go to a book like "Field Guide to Rocks and Minerals" by F. H. Pough in the Petersen Field Guide Series, where I was able to find two of them).

In the True and False section one would have found it helpful, for example, to know the following: limestone replaced by quartz is termed "jasperoid" --as in the case of the prairie agates (in contrast to true jasper); medical literature <u>does</u> <u>not</u> abound with examples of disease cured by piezoelectricity from quartz crystals (newspaper Sunday supplements notwithstanding); and the numbers in the Mohs Hardness Scale <u>are</u> <u>not</u> related to each others as powers of 10 (unlike the Richter Scale for earthquake magnitude).

Everybody should have known about the phenomena called chatoyancy, found in tiger's eye, and asterism, as illustrated by the 6-rayed star visible in rose quartz. And it surely would have added to one's success in this examination (and pleasure in life) to have been familiar with such cases of silicified fossils as the horn corals of the Weeping Water, Nebraska, area (and blocks of limestone found in local dams) and petrified wood as in the Petrified Forest of Arizona. One should have also known a good deal about the two important forms of macrocrystalline quartz: transparent (rock crystal, amethyst, citrine, rose quartz, and b) opaque (milky quartz, sandstone, and repeated in this category, both rosy and smoky quartz). And, of course, one should have possessed knowledge pertaining to the noncrystalline, hydrous silicon dioxide known as opal --sources, colors, etc. The exam.ended with some pictures of agate and amethyst for identification of parts and types.

In presenting to us this final examination Roger had the kindness and courtesy not to require that those in our group actually take the examination, nor to grade us on the answers we sometimes expressed orally --though some in the Quartz Study Group did well and might have gotten very good grades if the exam. had been for real. +++

# COLORADO SCHOOL OF MINES, ENERGY AND MINERALS FIELD INSTITUTE, 1990 FIELD PROGRAM

By John C. Abel

Attending the 1990 July field program sponsored by the Energy and Minerals Field Institute of the Colorado School of Mines was a highlight of my summer.

For six days we toured a variety of resource production operations, including oil and gas drilling, surface mining, underground hardrock mining, synthetic fuels and renewable energy production. During the trip, issues of public policy,resource management, environmental considerations and regulations, and socioeconomic issues were discussed. We were introduced to various communities and had an opportunity to experience "The West".

On Sunday, July 15, we visited the Solar Energy Research Instiutute in Golden, Co. Rocky Flats facility, learned about the Rocky Mountains' development and geology, toured the Flatirons, and visited the Cross Gold Mine in the historic Caribou District mining towns. We spent the night at the Lodge in Georgetown, CO and dined at the Renaissance where a lady in period dress sang ballads of the Gold Rush days.

Monday we toured the AMAX Henderson Mine and Mill (molybdenum), the URAD reclamation site, the Colorado School of Mines' Wetlands Research Project at the Big 5 Tunnel, Colorado ski country and spent the night in Glenwood Springs, CO at the Hotel Colorado.

Tuesday was a review of western oil shale tours of the Occidental and UNOCAL oil shale mines at Carachute Creek, CO, the BLM in Craig CO and the Colowyo Coal Company near Meeker. We overnighted at the Sleepy Cat Guest Ranch in Meeker, CO.

Wednesday we learned about coalbed methane resources, the Rocky Mountain petroleum history,and oil and gas formation. We toured the Rangely Oil Field, Dinosaur Nat'l Monument, Flaming Gorge, and Chevron's Vernal phosphate operation. We overnighted at Little America, Wyoming.

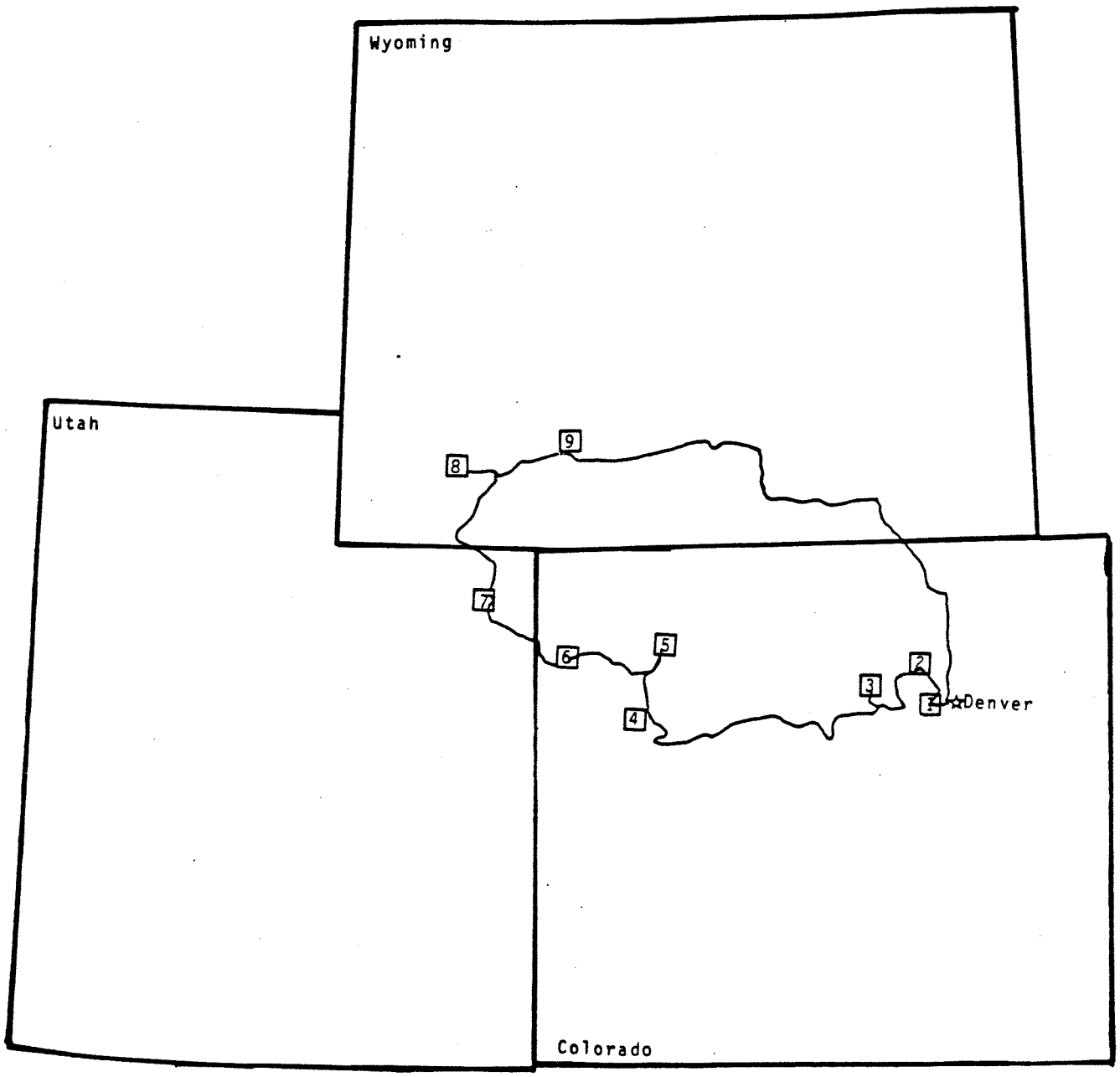
Thursday we toured the FMC trona underground mine (3rd largest in U.S., 36 sq. mi. underground, 2,200 ft. under the surface, and over 1,500 miles of tunnels), near Rock Springs, WY and spent the night at Saratoga Inn, Saratoga, WY.

Friday we toured the Medicine Bow Nat'l Forest, learned about Western U.S. diamond resources, and returned to the Colorado School of Mines in Golden, CO where our trip terminated.

For those wishing to accumulate further references and field information relating to this area, I have submitted some of the data from the field trip guide book for this and future Pick & Shovel issues for you to file or save. See maps on next page. +++

# ROUTE FOR CSM 1990 FIELD TRIP

## REGIONAL LOCATOR MAP




1 SERI

2 Cross Mine

3 Henderson Mine & Urad Site

4 C/b Oil Shale Site

5 Colowyo Coal Mine

6 Rangely Oil Field

7 Chevron Phosphate Mine

8 FMC Trona Mine

9 Rock Springs BLM

Lincoln Gem and Mineral Club, Inc.
P. O. Box 5342 Lincoln, Nebraska 68505

*Invites you to attend its*

Big 13th ANNUAL

# SWAP

**Saturday, January 26th 1:00-6:00 P.M.**
**Nebraska Center for Continuing Education**
**33rd & Holdege St., Lincoln**

BUY, SELL, TRADE
Rough, Finished Stones, Minerals, Fossils
and Miscellaneous

Tables, chairs and coffee furnished

Swapper Bucks(10% surcharge)

Silent Auction; Proceeds to scholarship fund

GENERAL PUBLIC WELCOME

MIDWEST FEDERATION OF MINERALOGICAL AND GEOLOGICAL SOCIETIES

*MEMBER OF THE AMERICAN FEDERATION OF MINERALOGICAL SOCIETIES*

# NEWSLETTER

Published Monthly Except June, July, August

November 1990 - Issue 300

Judith Washburn, Ed.
107 Deer Creek Rd.
Rochester, IL 62563

## PRESIDENT'S MESSAGE.

Dear MWF Members,

The Fall Executive meeting was held at Stow, Ohio, on October 27th, hosted by the Akron Mineral Society and the Summit Lapidary Club. Our sincere thanks for supplying us with a meeting room and an excellent luncheon and show.

The attendance at the meeting was very low, due probably to the distance east. Of 110 people on the Executive Board and Executive Committee, only about 30 made an effort to attend. Of these, six were officers.

There are three meetings a year, the Convention, the Fall, and the Spring meetings, which give the Committees the opportunity to bring suggestions, problems, and etc. to the Board. This is one way to help "run" the Federation. By scheduling the meetings in more distant areas of the Federation, we had hoped to increase attendance of the Committee heads and members from that area.. This has causes some officers and heads to drive 12-14 hours and spend two nights in a motel, which is expensive. Perhaps a more central location in the future would be advisable.

A written report is VERY IMPORTANT at all meetings, and should be sent to the Secretary prior to the printing deadline, whether you plan on attending or not. If you miss the deadline, and do plan on attending, please bring your report and a copy to each officer.

In early October, the officers spent a weekend in Blooomington, IL, up-dating and revising the Operational Procedures Manual for the MWF. Many hours were spent prior to this meeting, by all officers, organizing the various committees' updating suggestions. Twelve hours were spent in Bloomington, and many more hours will be required, to prepare the changes and updating to have them ready for the Spring meeting. There they will be presented to the Executive Committee for approval or rejection. We hope to see more of you at the Spring meeting to help with the business of the Federation.

When final plans are made for the Spring meeting, we will publish dates and place, so you may plan on attending.

On a more positive note - Bob and I would like to wish you a wonderful Thanksgiving.

Sincerely yours,

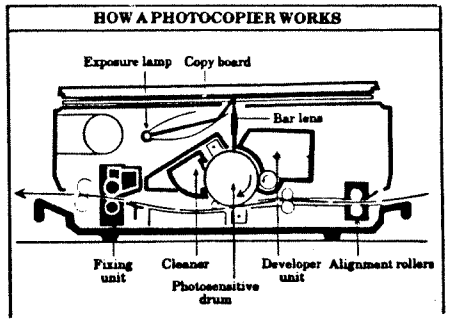
Margaret F. Heinek, President





## Editor's Note

The electrostatic photocopier is now the most common type in use. It uses a dry process, copies on almost any material and now develops few copying faults. The copy is placed face down on the copy board, is scanned, and the image is transferred to the photosensitive drum. The developer, or toner, adheres to the image on the drum, which is transferred to the paper. The image is then fixed on to the paper by heat and pressure. The photocopier is an invaluable tool. Not only can it be used for ordinary document copying and as a short run printing machine, it is also useful for visualizing, preparing artwork, and proofing. A visual can be partly or completely constructed of photocopied elements which can be cut up and colored. High quality photocopiers will sometimes produce copies good enough to use as artwork. Modern machines can copy on white and colored paper and acetate sheet. Many can reduce and enlarge the original, and color photocopiers are now available.




At our workshop this summer, several people commented on their displeasure with copying services they were receiving at fast-print places. Fellow editors - you do not have to put up with smudgy pages or lines that don't appear, or words that run off the edge of the page. These people are being paid to do a quality job. If they aren't, it's not because they don't have the capacity to do the job, they are just being sloppy. The machines CAN run at top grade quality, it's the people running them that might not be. Voice your concerns and insist on quality. If you don't get results, take your business elsewhere and let them know why you're doing that.

## Program News -

### LATEST VIDEO ADDITIONS TO MWF LIBRARY

#V5. PERUVIAN FOSSIL WHALE & MORE (VHS)
produced by The Black Hills Institute

In brief but comprehensive segments, this video shows the exciting process of recovering, preparing, and mounting large scale fossils for display. (Fossil whale from the Peruvian desert and a duck-billed dinosaur from the Ruth Mason Dinosaur Quarry in South Dakota.) Another brief segment gives background regarding the renowned Black Hills Institute of Geological Research.

While best suited for an audience with some background, the information is presented so that any group will understand and appreciate it. 15 min.

#V6. SMITHSONIAN GEMS & MINERALS (VHS)
produced by The Smithsonian Institution

Starting with a behind the scenes tour of the Smithsonian Collection of Gems, this presentation explores the lore and legend of famous gems such as the Hope Diamond; gives a brief overview of the mineral collection; and takes viewers on a trip to Antarctica to recover and study meteorites.

Anyone interested in the beauty and mystery of gems and minerals should appreciate this program. 25 min.

COMPLETE INFORMATION REGARDING these and any other programs in the MWF Library is available in the *1990 MWF Directory*, pages W-7 to W-10 or in the *Program Planner's Manual*. Or contact **Marge Collins**, 3490 S. Hannan, Canton, MI 48188, (313) 722-6043, if these sources are not available. NOTE: Separate $15.00 Deposit required for videos.

Marge Collins, Chairperson
MWF Program Library


Your editor responded to a comment sent in that the type size on the lst two newsletters was too small. "People with bifocals have difficulty readin it."

Even though I too wear bifocals, I decided to run the bulk of this newsletter a point size larger and see how folks felt about it. It allows less space for copy. For comparison - this note was printed in the former size. What do you think?

# FROM ENVIRONMENT & LEGISLATION

## LEGISLATION UPDATE
## BLM FOSSIL REGULATIONS DELAYED

A progress check on the proposed regulations for fossil collecting on public lands indicated a slow-down of the review procedures. An influential Senator from Wyoming asked that the review be slowed until after the elections. This means that publication of the proposed regulations in the Federal Register for public comment may not be issued until December/January or later.

It is important that the amateur have a chance to comment on the consensus agreement reached at Boulder and Salt Lake City meetings by the BLM, Forest Service, professional paleontologists, commercial dealers, and the amateur representatives. All sides were heard and a consensus agreement was reached that satisfied almost all of the attendees. A summary of the proposed rules for the amateur/professional and the dealers has been written in past issues of the AFMS Newsletter. Now the special interest groups want to change some of the collecting rules for public lands before they are published for public comment. They feel that only a handful of people have the expertise to remove fossils on the surface or below the surface including fish, sharks' teeth, and any part of vertebrate animals.

The government people and paleontologists say their numbers are too small to have any effect on the politicians, and only the amateurs have the numbers to request that the proposed rules be released for public comment.

Send your comments to your Senator, Senate Office Bldg., Washington, DC, 20510 and to Interior Secretary Manuel Lujan and BLM Director Cy Jamison, Washington, DC, 20240.

John Boland, Chairperson
Environment/Legislation

## VERBATIM USE OF COPYRIGHT MATERIAL

### "NO - NO"

There was legislation years ago that prohibits the use of copyrighted material in other publications without the author's or publisher's permission. This was the subject of one session during the Editor's Seminar at Evansville this summer. It was a reminder to those who attended that editors cannot copy material from books, magazines, and newspapers verbatim without asking permission. Not all of the 140 bulletin editors of the MWF attended the seminar, but a review of club bulletins indicates some editors may not be aware of this law. Perhaps they are new editors and the previous editor did not pass along the rules.

Editors often find or are given interesting articles to use in their bulletin. If the source is a publication, then it is necessary to get permission from the publisher to copy all or large portions of it. As youngsters, we have all had to write book reports and we did not copy the words out of the book, but probably summarized the first and last chapters. For emphasis, we may have used several key statements in quotes. That is the only way you can use copyrighted material in your bulletin without permission.*

Some articles are published in bulletins that were written by club members. Sometimes the articles are of technical nature and contain information from the author's readings. If the information given was not developed first hand, the author should provide a list of references at the end of the article.

Information copied from federal and state publications are part of the public domain and may be used - but please indicate your source.

You like to see your bulletin recognized when material is used in another bulletin, so please credit other bulletins for material you use. Some really good articles may appear in bulletins for years; at least credit the original bulletin and the one where you found it.

John Boland, Chairperson
Environment / Legislation

## AS AMATEURS - WRITE YOUR SENATOR

*[Editorial Note: If you are reviewing a book, portions of the text may be cited as an illustration of writing style. It should be so noted.]



# *From the AFMS*

Each Midwest Federation Club of Society is also a member of the American Federation of Mineralogical Societies (AFMS). Twenty-five cents of each member's dues to the MWF goes to support the AFMS. In order to communicate with our members, clubs, societies, and individuals, and AFMS Newsletter is published monthly, except for the summer months. Each member club or society is entitled to two copies of this newsletter without charge.

Our problem is learning the names and addresses of the two people **YOUR CLUB WANTS** to have on the mailing list. Please help us by asking your club President to designate the two persons (usually the President and the Editor) who are to receive the newsletter. Send their names and addresses to:

AFMS Central Office
Dan McLennan, Administrator
920 S. W. 70th
Oklahoma City, OK 73139

Please send this information even if the two people who should receive the newsletter are getting it now. **AND, PLEASE** follow-up with a similar notification **EACH YEAR** whether your society changes officers or not.

Be sure to include the name of your club and have the letter signed by a club officer.

Sincerely,

Fred C. Schaefermeyer
Sr. Regional Vice-President, AFMS

MIDWEST FEDERATION NEWSLETTER
Judith Washburn, Ed.
107 Deer Creek Road
Rochester, Illinois 62563

NON-PROFIT ORG.
U. S. POSTAGE
PAID
PERMIT # 10
ROCHESTER, IL

DELIVER TO:

Roger Pabian
315 D. St.
Lincoln, NE 68502

Read your bulletin to spot new materials or specials of the above advertisers.

Advertising by a rock-hobby business or interest is permitted with the approval of the Board, at a rate now set at $15.00 per full page per insertion, paid in advance.

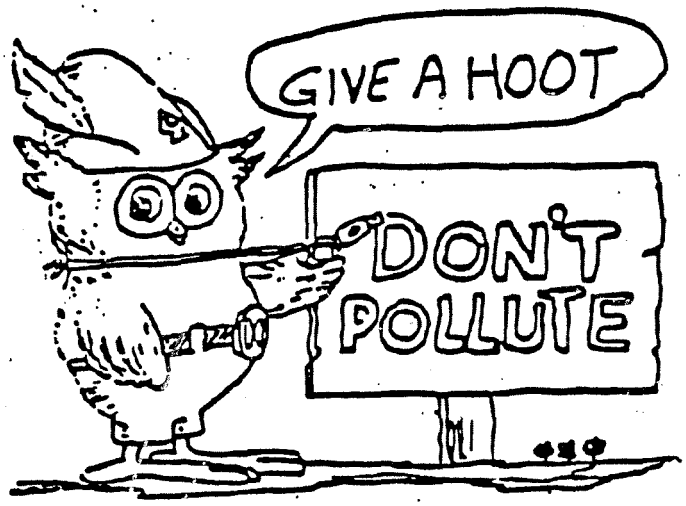
1/2 page, $7.50; 1/3 Page, $5.00; 1/4 page, $3.75 (Min). These ads will be placed throughout the bulletin as space permits.

Subscriptions to the PICK & SHOVEL ARE $10.00 per year mailed.

Dues to LINCOLN GEM & MINERAL CLUB are as follows:

Adult membership fee $10.00 (age 16 and over)
Junior membership fee $2.00 (age 12-16)
Family membership fee $22.00 (husband, wife, and all children under 16---permanent residents of household).

New memberships must be approved by the Board, after applicant attends at least one (1) regular meeting of the club, and pays the above dues plus $5.00 registration fee.




# H.E.L.P.

HELP ELIMINATE LITTER PLEASE!

MAIL ALL EXCHANGE BULLETINS TO:

Lincoln Gem & Mineral Club
BOX 5342
Lincoln, Nebraska 68505-0342

Popcorn Wagon
16.7 USA 1902
Bulk Rate

Edward Ridge

2507 A st.

Lincoln, NE 68502

Member