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CEDAR VALLEY GEMS
CEDAR VALLEY ROCKS & MINERALS SOCIETY
CEDAR RAPIDS, IOWA

JANUARY 1988

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PAGE 1

January 20, 1988, Wednesday - 7:15 P.M. Cedar Valley Rocks & Minerals Society will meet at the Linn County Historical Museum, 101 - 8th Ave. S.E., Cedar Rapids, Iowa.

PROGRAM - Hubert Sines of Washington, Iowa, will present a program on Iowa Coal Mines. His father had been active in the Iowa Coal Mines in the days when the mines were underground. Mr. Sines will share some movies with us which were taken in the last working underground mine. He will also bring along some of the artifacts from the coal mining days.

We are indebted to Sue Houg for arranging for this program.

Let's make this a real 'show and tell' by bringing along some of our favorite specimens collected from the coal mines. It will be a learning experience.

DON'T FORGET!!! We are meeting in the LINN COUNTY HISTORICAL MUSEUM ASSOCIATION building at 101 - 8th Ave. S.E., Cedar Rapids.

If you are coming in from Iowa City, take the 5th Ave. exit off 380, turn right at the first corner and follow it right across the 8th Ave. bridge. The Museum Building is just across the bridge. There is parking on the west side of the museum or on the south end of the building. We will try to have someone stationed by the south door until about time for the meeting to start. If you find that door locked, please use the blue door (the second doorway) on 8th Avenue.

HOSTS AND HOSTESSES - Larry and Betty DeSotel; Bud and Alberta Cray.

YOU ALL COME FOR THIS VERY SPECIAL PROGRAM

LOOKING BACK TO OUR CHRISTMAS PARTY

I know several of you who were unable to make it to the Christmas Party and potluck because of the threatening severe storm. While the storms never materialized but it was such an uncertain thing whether you would be able to get home if you got there.

There must have been around 40 members present. Lots and lots of good food. We were especially honored with some fine musical selections played by Ann, Billy and Theresa Sonnleitner, and Quinten Lewis. Ann, Theresa and Quinten played the violin, and Billy played the French Horn. They really did great. What a find gift they brought to us.

SHOW MEETING

Sharon Sonnleitner, Show Chairman, reports we will have a show meeting at Marv and Sue Hougs, January 17, at 2:00 P.M. Bring along egg cartons and any small minerals, fossils, agates that you have. We will be using these to make up sample boxes for the children at the show. Be sure to bring things that are identifiable. Small geodes and pyrites, and shark's teeth are especially popular. Our sample boxes need to be made up of good examples so the children can really see what they look like.

Sharon will be wanting to fill out any committees that have not been filled. Also, the chairman of the various committees will be needing helpers. If you have a particular committee that you would like to serve on, please let Sharon or the committee chairman know of your interest.

Sharon reports that five of our six dealers have confirmed their contracts. They are Custom Gems, DeSotel's Rock Shop, J.J. & L. Rocks, Rockhound Limited, Dave Crawford Minerals. Three of the demonstrating dealers have also signed - L & R Lapidary, J and M Gems, and Gene Eno - glass blower. More contracts are out, so you can look forward to a very exciting show.

See you at 2:00 P.M. on the 17th.

FEBRUARY MEETING

Mark your calendars now and don't miss this one. Dr. Holmes Semken of the University of Iowa will be with us. While we had expected him to talk to us about the bison bones, he chooses to speak to us as a GEOLOGIST in the SOVIET UNION. WOW!!! Well, plan now to bring along your vertebrate fossils and any bison bones that you would like to know more about. I am sure there will be time for a question and answer program. It has been some time since we have had a program on vertebrates.

Looks like we are off to a very exciting year with two excellent programs back to back.

NEEDY BASKETS

We will have a report at the general meeting. I believe there was about \$75 collected to be used for fresh produce, eggs, meats and other items to supplement the canned goods and staples that were donated.

Dale Stout, treasurer, Bob and Darlene Sweet, Blane Phillips and Marv Houg met the Monday night before Christmas to do the grocery shopping and to deliver the baskets.

DUES - Be sure to see Dale Stout, treasurer, at the meeting. Our new membership book will be ready for the March meeting. Only those persons whose dues are current will be listed. If possible, send them in now. Some of you like to wait to pay at the show. That is fine; however, you miss a bulletin or two and you will not be listed in the membership book.

SHOWS AND SWAPS

February 6-14 - International Gem Show, Tucson, Arizona

March 26-27 - Cedar Valley Rocks & Minerals Society - SHOW - IBEW Hall, Cedar Rapids, Iowa

April 9-10 - The Neville Public Museum Geology Club - Howard Johnson Motor Lodge, Hwy 41, DePere, Wisc. - A Rock, Gem, Mineral, Fossil and Lapidary Show and Sale.

April 22-24 - Mid America Paleontology Society - Buy, Sell, Swap - FOSSILS EXCLUSIVELY

July 14-17 - Midwest Federation & Geodeland Earth Science Club Show - Macomb, Illinois

August 11-14 - 1988-ARK-LA-TEX Gem & Mineral Society - hosts the AFMS and the SCFMS Show, Shreveport, Louisiana. (Think warm)

HERE AND THERE WITH OUR MEMBERS AND FRIENDS

In the November Bulletin I told you that the Ken Lewises had had a baby. They were at the Christmas Party-potluck and they had that beautiful baby with them. Conner Buchanan was born October 18, 1987 at Iowa City.

IN MEMORIAM - Wilma Mae Ramsell

January 6, 1913 - January 7, 1988

Many of you will remember Truman and Wilma. They were always very active in our club activities and all the shows and swaps. Wilma was never a rockhound though she continued her membership right up until the time of her death. Wilma was a gracious hostess to many of our rock club meetings.

Wilma is survived by two sons, John of Omaha, Nebraska and Rodney of Oakdale, Minnesota, AND THEIR MANY FRIENDS.

God hath not promised
 Skies always blue,
 Flower-strewn pathways
 All our lives through.
 God hath not promised
 Sun without rain.
 Joy without sorrow,
 Peace without pain.
 God hath not promised
 We shall not know
 Toil and temptation'
 Trouble and woe.

He hath not told us
 We shall not bear
 Many a burden,
 Many a care.
 But God hath promised
 Strength for the day
 Rest for the laborer,
 Light for the way.
 Grace for the trials,
 Help from above,
 Unfailing sympathy,
 Undying love.

BOOKS

Did you order books from that special book sale at the October meeting? Marv has those books now. Many of us picked ours up at the November meeting. If you will be at the January meeting and want to pick yours up, please let Marv know so he does not need to carry all of them in and then have to carry them home again.

Speaking of books - I borrowed a paragraph from an editorial in the Smoke Signal, Jurupa Mountains Cultural Center's Bulletin, entitled "Ending Our Year on a High Note."

"We are high on the value of the human mind. Each one is unique and its potential can only be realized as it is used. Broadening our mental horizons makes life more and more interesting as the years pass. Learning to use this unmatched tool is the best preparation for life's adventures."

Here is something else you may want to do to stretch that mind:

IOWA NATURAL HISTORY CLASS - Neil Bernstein will teach a class in Iowa Natural History during the spring semester at Mount Mercy College. The class will meet three nights a week running from February 4 through May 19. It will also include some weekend field trips.

"This class covers Iowa's geologic history, its geology, weather, plants, animals, and early Indian cultures. Effects of human settlement and human impacts will also be studied. The lab will consist of learning basic plant identification, ethnobotany, and identification of Iowa fish, amphibians, reptiles, birds and mammals."

The course may be taken for credit or audited. For further information call Neil Bernstein. Home - 364-1047 Work - 363-8213

Borrowed from Cedar-Wapsie News

Now there is a class I would like to take - but three nights a week - Wow! I'm just not as young as I used to be. Does sound great though. I saw some

other information on this somewhere. I believe two nights will start at 5:30 and the third night, which will be the laboratory, will start later in the evening.

The Cedar-Wapsie News also carried the information that the ENVIRONMENTAL FAIR will be at Westdale Mall February 27. This is an all-day event and which our club has participated in the last several years. Our booth has commanded a great deal of interest. Start planning now what you can do to help make it a success.

IT'S FOR THE BIRDS

At our Christmas potluck Gladys Wanek of the Old Capitol Club area, also a member of Cedar Valley, handed me a bulletin called I.O.U. NEWS (Iowa Ornithologists' Union). It is a very interesting bulletin. Of particular interest to me is the paragraph on BALD EAGLE DAYS. Now I have never attended one of these, but until three or four years ago, I had never seen an eagle. We made several trips down to the Mississippi, stopping at various points along the river to watch for the eagles.

Bald Eagle Days will be celebrated at Keokuk, Iowa, January 22-24. February 6-7 will be the days to watch the eagles in the Quad City area. In western Iowa at DeSoto National Wildlife Refuge, February 19-21 will be the dates.

Now, of course, the eagles can be seen in these areas any time this winter, and I have no idea what they do special on these particular dates, but anyway I hope you will take time to go see these birds that are not seen in Iowa except during the winter months. **

Interesting to me is the number of field trips these "Bird People" go on in the cold, cold winter when we rockhounds are busy high grading last summer collections somewhere in the far corners of our basements.

(Asst. Editors Note: Three eagles were spotted in the C.R. area on census day in December - two by Gladys & Ott Zobac north of C.R.; one on the south-east side. This winter eagles have been spotted in a number of areas far from rivers and streams).

FROM THE INDIAN CREEK NATURE CENTER bulletin:

February 6, Saturday, 8:00 a.m. to 5:00 p.m. - Eagles, Ice and Eats. Join Naturalist Jan Moore-Ecker on an all-day eagle watching trip to the Mississippi, including a stop at the Peterson Natural History Book Shop, Woodland Gallery and other sites in Davenport's East Village. Lunch at Slices and Scoops, or bring a sack lunch.

Members - \$15 --- Nonmembers - \$20

Fee includes leadership and transportation. Reservations by January 25.

February 7, Sunday, 2:00 p.m. - Armchair Adventure - experienced photographers Bill Desmarais and Jim Messina will take us to forests, waters, mountains, prairies and more. At the Nature Center. Bill Desmarais presented a beautiful program for our club at our December 1985 Christmas Party, "Hiking In The Rockies." His photography in this film was super. Bill Desmarais is a biology/earth science teacher. He is a friend of Jeff's.

Well, there are so many things to share with you from so many sources. So many things to do and they all sound so interesting. Would you believe there are still people around who say there is nothing to do, or that weekends are so boring? Hmm, are we rockhounds and people interested in nature really that different?

**Call the U.S. Army Corps of Engineer Rangers at 309-788-6361, extension 484 for more information and a free brochure.

HELLO

I had a note from Diane Dare of Evansville, Indiana, telling me how much she enjoys hearing from all of us via the CEDAR VALLEY GEMS. Diane is the secretary of the American Federation of Mineralogical Societies this year (as of November 1). Diane has served in various capacities in the Midwest Federation and has been on our mailing list for a period of years. To me, she has always seemed to be a real paragon. She writes articles for numerous bulletins on various subjects, has been an officer in both the Midwest and her local club, worked at a full time job and did a super job at all of them. I don't know how she finds the time.

As she says, she knows several members of our club, and she asked me to tell you 'hello' and to extend her best wishes for a happy holiday season to all my friends in the Cedar Valley Club.

FOSSIL BOOK - FOSSIL INVERTEBRATES

This is a new book, edited by Richard S. Boardman and Alan R. Cheetham, National Museum of Natural History, Washington, D.C.; and Albert J. Rowell, University of Kansas.

1987 - 720 pages - 633 illustrations - \$9.95 cloth. ISBN 0 86452
302 4

This is the most up-to-date scientific publication on fossil invertebrates. Check your college bookstore. If this book is being used as a text, you will find it there. Or:

You may order from Blackwell Scientific Publications, Inc., P.O.
Box 50009, Palo Alto, CA 94303-9952

Royalties go to The Paleontological Society.

The above information comes from MAPS Digest

FOSSIL STAMPS

Received this note in late November. Missed it last month so will share it with you this month:

Sirs:

I am a member of MAPS, The Cleveland Museum of Natural History Fossil Society, The Brunswick High School Geology Society and the Medina Stamp Club.

I collect Minerals and Fossils, and I also collect stamps depicting minerals, fossils, gems and prehistoric animals from all over the world.

(He notes that the United States has issued a total of six stamps touching on his interests and a total of 260 stamps depicting animals and plants, adding that the numbers indicate we are top-heavy on the living world and almost nil on the non-living).

"With the help of the many rockhounds and fossil collectors, I feel that we can convince the U. S. Postal Service to issue four fossil stamps within a few years.

I am asking every member of every rock club to write a short letter to the Citizens Stamp Advisory Committee requesting a block of stamps depicting fossils be issued. If enough requests reach the postal service, I feel they will honor our requests."

Thank you, Toni Verdi

He enclosed a letter which you may copy and sign, or suggests you may want to write your own. If you wish more information, please call me for a copy of the complete letter.

FENS

Jeff Nekola sent along a long article on the FENS which had been especially requested by Adrian Anderson at the museum - as the result of all of the activity at the Hughes Peat Bog last summer and fall. Incidentally, have you seen the bison bones which Sharon Sonnleitner has prepared and has on display at the museum?

In the spring 1987 Iowa Chapter Newsletter from The Nature Conservancy is an article WHAT THE HECK IS A FEN? I am hoping to get permission to share this article with you. At least for those who are interested in the bogs and fens, I am sure this is something you will want to add to your notebooks.

GLACIERS AND WORMS

A glacier is a moving river of ice. The weight of the ice, sometimes hundreds of feet thick, creates so much pressure that masses of ice slowly move down into the valleys. While moving along, they take dirt and rock from the canyon walls with them. This debris is deposited along the terminus or the end and along the sides of the glacier. When the glacier recedes, the mounds of rocks, called morains, are left behind as a reminder of what was once there.

Glaciers are responsible for "U" shaped valleys, not the "V" shape of valleys formed by rivers. When we find a bowl shape impression high in the mountains with perhaps a small lake, or small glacier or ice field, this is called a cirque - this is the remnant of a much larger glacier that once carved the canyon below.

If one goes hiking on a glacier - they may find it necessary to jump across crevasses - some over 100 feet deep. These cracks will be colored from white at the top to various shades with deep blue at the bottom. Crystal clear icy water flows over the surface and converges at a central point below, disappearing into a deep dark canyon (moulin) with such a loud rumble that it resembles that of a jet flying overhead.

And now about the worms - although they are annelids and members of the biological class of oligochaeta or the same class as earthworms, these creatures live in the top one foot of the ice. Sometimes there are as many as 100 in a square foot. Strange as it may seem they live on the algae which grows in the ice and sometimes eat the pollen of plants which blow onto the surface. So, while on your vacation this summer if you visit a glacier, look for the ice worms; discover the little known creature that has the unusual ability to survive only in a very harsh environment.

From Jurupas Smoke Signals, California

DID YOU KNOW THAT...the first Brazilian diamonds were used as counters for card playing, while the first South African diamonds were given to children as toys.

Monterey Peninsula Herald via Scribe and Tulip City Bulletin

HINT - Jasper is more troublesome to polish than agate because many jaspers contain hematite, which is very difficult to polish. If you're on a field trip, a good way to test for good jasper is to wet it. If it stays wet, and does not dry out right away, it contains a high amount of chalcedony, and will take a good polish. Most jaspers polish well on leather with Linde A, but good results can be obtained with tin oxide on either felt or leather.

Via Arrowhead News and Tulip City Bulletin

TOURMALINES

by Helen R. Neuman (in the Crystal Gazer)

Tourmaline is one of the wonders of the gem world and it is increasing in popularity every year, both as a gemstone and as a specimen for rock collectors. It is unsurpassed in its diversification of color for it varies from completely colorless and transparent to opaque and black, including almost every known hue and tint.

Many interesting specimens reveal several colors and some rare crystals show blue and green color at opposite ends. "Watermelon tourmaline" has a red center, a green outer border, between which is an area of white. Because of the combination of colors and the range of tints and shades, tourmaline has been nicknamed "the rainbow gem" which indeed it is.

Its chemical composition and crystal structure are complex. The crystals occur in prisms having a rounded, triangular outline with lines and furrows along their length. If an individual crystal is heated or cooled, it becomes electrically charged--positive at one end, negative at the other.

Of the silica series, tourmaline is hexagonal-ditrigonal pyramidal crystal. It has a hardness of 7 to 7.5, gravity 3.0 to 3.3, fracture uneven to conchoidal, cleavage poor prismatic and rhombohedral and the magnesia varieties (in dolomite) fluoresce yellow in short-wave ultraviolet light.

It is a high-temperature and pressure mineral, found in igneous and metamorphic rocks ... usually more often in pegmatites but sometimes in high-temperature veins. Gems usually not found elsewhere are deposited in pegmatites ... however, tourmaline is an exception, although the finer specimens are lodged in pegmatites.

Black tourmaline is known as "schorl," brown is "dravite," white is "lime-dravite" and the more famous and precious "lithia" tourmaline is red, green and blue. Tourmaline and beryl are often found together in pegmatites because they originate in the same way.

Usually the crystals are prismatic and quite large ... some have been found to measure a yard long. It is most often triangular in its cross section and tabular crystals have been found but this is a rarer occurrence. More often than not, the colored crystals change in color from one end to the other and from the center outward. It is also found in veins of fine needles (the black tourmaline from the Emerald Mine in North Carolina produces this type), and it is also found in black masses.

The variance in colors stems from the mineral properties and the tourmalines are composed of a complex series of compounds with differing quantities and ratios of sodium, calcium, magnesium, lithium, aluminum and iron but with a constant structure and content of boron, aluminum, silica and the volatiles.

The attribute of fusibility depends on the composition, and in the case of the brown magnesium varieties, they are most easily fused. The lithia varieties, however, are infusible. Some form a crust of brownish powder and will attract dust, ashes or bits of paper if warmed and cooled.

The chief distinguishing characteristic of tourmaline is the bulging triangular cross section of the crystal ... although its poor cleavage is another recognizable feature.

It is well known that the colored tourmalines make valuable gems and these, as well as the glassy black varieties, are also used for electrical apparatus which depends upon their pressure-electric (piezo-electricity) peculiarity. The gem varieties have been given special names: the red is known as "rubellite" and the blue as "indicolite". "Tourmaline" to the gem trade means the beautiful green variety.

Where are tourmalines found? This is the most important question to the rockhound ... and the United States boasts of several good locations (Mine in Maine. This is guarded by specially trained fierce Doberman Pinscher dogs.) Tourmaline is found wherever coarse granitic rocks and related pegmatite dikes surface. Those from Newry are the most beautiful green and watermelon kind.

San Diego and Riverside counties in California are famous for their colored tourmalines. Black tourmalines are also found in pegmatites in many states and tourmaline-bearing schists have been discovered in Maine and California. The writer picked up a nice specimen at the Ruggles Mine in New Hampshire. The brown magnesium tourmalines of St. Lawrence County, New York, have been seen in the Inwood dolomite along the Harlem River in New York City.

Since it now is a much valued gem mineral, foreign localities have been sought and the state of Minas Gerais, Brazil, at present, is the chief locality for this gem. Large crystals with interesting color-zoning in triangular patterns following the growth stages of the termination have been located in Madagascar and fine green crystals have been discovered in southwest Africa and on the Island of Elba. (Napoleon should have been a rockhound!) ... which is off the Italian coast. Also on Elba, many pink crystals tipped with black have been unearthed. Beautiful deep-red tourmalines have been uncovered from their hiding places in the Ural Mountains of Russia.

thanks to the Rockpile. and Shawmish Roktawk

TOUCHSTONE

Touchstone, Lydian Stone, or Basanite are all names for a velvet black jasper. This stone was used as early as 450 B C by ancient jewelers and goldsmiths because of its hardness and uniformity of texture and color as a streak tablet for determining the relative amount of baser metal and pure gold in alloys. The sample is rubbed on the stone and the color is then compared with a series of standards of known composition.

The expert is able quite accurately to determine the fineness of the sample. The streak becomes redder as the percent of copper increases or yellower as the percent of gold increases.

Today's use--for backing opal doublets and triplets to make color more brilliant and stone more durable. It can also be used as is as it will take a high polish.

thanks to Boulder Gazette, Skagit Gems and others via Osage Hills Gems
and Shawmish Roktawk

ALL SHOOK UP

The Richter Scale is today's standard method for classifying earthquakes. The measure of an earthquake on this scale is usually one of the first facts given in a report about quakes. It was developed in the 1930's by a Caltech Seismologist, Charles F. Richter, to provide a way of comparing the strength of earthquakes.

In the Richter scale, the term magnitude means the size, or strength, of an earthquake's waves. It is an absolute measure of the quakes strength at its place of origin. A magnitude of 3 is usually barely felt, magnitude 5 causes minor damage, 6 or higher may lead to wide-spread destruction. The scale can be deceptive unless one is aware that each whole number represents a tenfold increase over the previous number. Thus the waves of a magnitude 7 earthquake are 10 times as large as those of a magnitude 6 quake, 100 times as large as a magnitude 5.

Unlike magnitude, intensity of an earthquake varies from area to area. A quake has only one magnitude, but usually has several intensities. Today the internationally accepted scale for describing the intensity of quakes is one based on the work of an Italian priest, Giuseppe Mercalli (1850-1914). Called the Modified Mercalli Scale, it has twelve intensities designated by Roman numerals. Whereas the values on the Richter Scale are expressed in complicated mathematical terminology of interest primarily to scientists, the descriptions, in narrative, as they correspond to the Modified Mercalli Scale are easily understood by everyone.

For example:

- I - Not felt, except by a few in favorable conditions.
- III - Felt quite noticeably - but not recognized as seismic activity.
Like passing of a truck.
- VI - Felt by all - many frightened and run outdoors. Some heavy furniture moved; few instances of fallen plaster, damaged chimneys.
- IX - Damage considerable in masonry structures; well-designed structures thrown out of plumb. Buildings shifted off foundations. Ground cracked considerably. Under ground pipes broken.
- XII - Damage total. Waves seen on ground surfaces. Lines of sight and level distorted. Objects thrown into air.

Via LOESS Bulletin and The PICA PICK

STAR STONES

The optical phenomena of some gem materials to display a single ray of light on their surface is called CHATOYANCY, a French word meaning cat or cat's eye. Stones displaying this characteristic show a single narrow band of light with changeable luster.

Another optical effect is shown when some gem materials show more than one ray of light. These rays will cross or intersect each other at some central point or points on the surface of a cut and polished stone. This phenomena is called ASTERISM or is more commonly known as a star.

The cause of asterism is attributed to tubes or needlelike inclusions within the gem. When these inclusions are highly uniform in alignment within the stone, they can concentrate, reflect or transmit the light which enters the gem. However, this occurs only when the gem has the necessary optical shape for focus and magnification of the light.

When the foreign inclusions are aligned in only one direction, a single ray is possible. If alignment is in two directions, the gem will emit two rays that intersect each other creating a star with 4 legs...3 rays or a 6 legged star.

Star stones may be made of quartz, rose quartz, opal, enstatite, garnet, sapphire or ruby.

Thanks to Flint Chips via Memphis Archaeological and Geological Society
The Gravel Gazette and Shawmish Roktawk

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