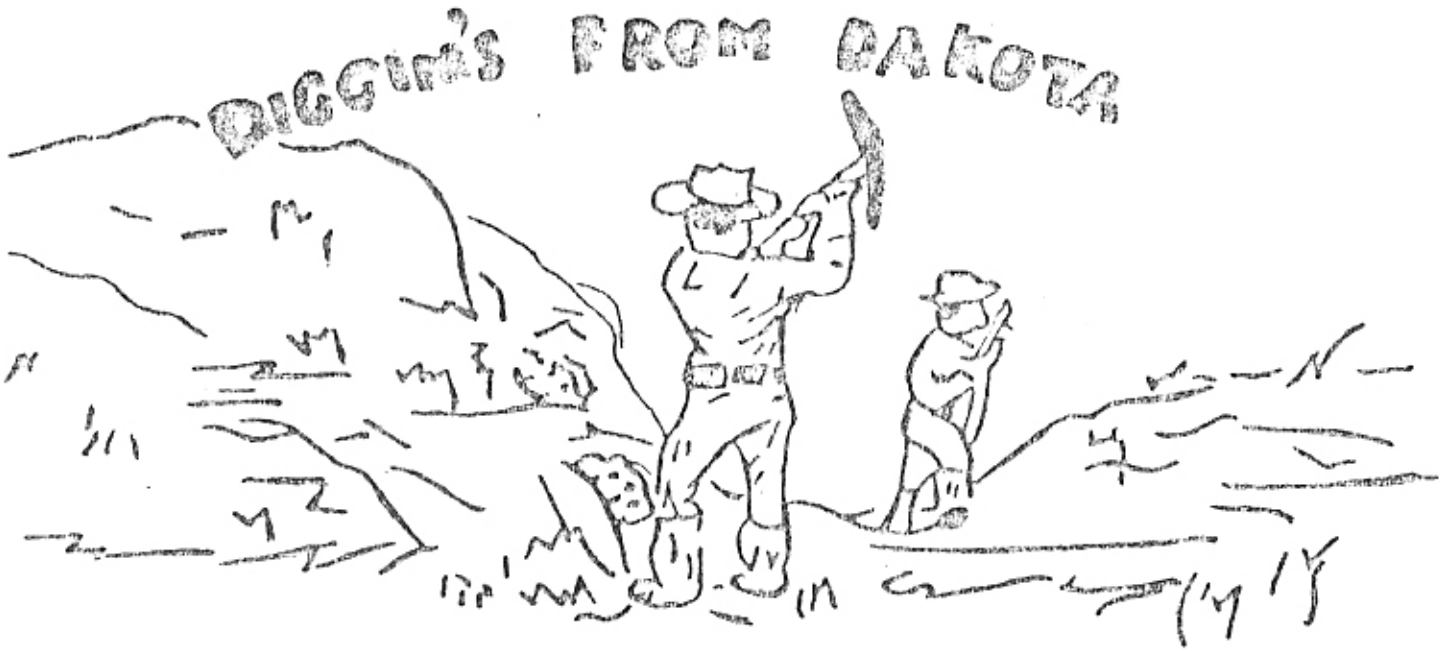

MONTHLY PUBLICATION OF THE CENTRAL DAKOTA GEM & MINERAL SOCIETY
P.O. Box 2445, Bismarck, ND 58502-2445
SERVING BISMARCK, MANDAN, AND SURROUNDING AREAS IN
NORTH DAKOTA

SAVE STAMPS FOR
STAMP CHAIRMAN

SAVE STAMPS FOR

STAMP CHAIRMAN

Gen & Bill Buresh, Eds.
DIGGIN'S FROM DAKOTA
44 Captain Marsh Dr.
Mandan, ND 58554-4704

FIRST CLASS

Volume 31, No. 2
February, 1996

RMFMS - 2nd PLACE, SMALL BULLETINS, 1992
RMFMS - 2nd PLACE, SMALL BULLETINS, 1987
AFMS -- 2nd PLACE, SMALL BULLETINS, 1985
RMFMS - 4th PLACE, SMALL BULLETINS, 1985
RMFMS - 2nd PLACE, SMALL BULLETINS, 1981

DIGGIN'S FROM DAKOTA

Published by the CENTRAL DAKOTA GEM & MINERAL SOCIETY
P.O. BOX 2445, BISMARCK, ND 58502
Member of
ROCKY MOUNTAIN FEDERATION OF MINERALOGICAL SOCIETIES and
AMERICAN FEDERATION OF MINERALOGICAL SOCIETIES

Organized March 1966

OBJECT: 1. To further the study of mineralogy and geology;
2. To arrange field trips to collect minerals, gems, and fossils;
3. To assist its members to improve in the art of cutting, polishing, and mounting gem material;
4. To provide opportunities for the exchange, purchase, and exhibition of specimens and materials; and
5. To share knowledge about gems, minerals, and activities of the Society with the general public. --Article II, CDGMS Constitution

MEETINGS: First Sunday of each month at Masonic Bldg., 1810 Schafer Street, Bismarck,ND; 2:00 p.m., November through March; 7:00 p.m. April-October.
EARLY CLASS: One-half hour before each meeting. VISITORS ARE WELCOME.
ANNUAL DUES: Family - $10.00; Individual Adult - $8.00; Individual Jr. - $4.00

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Ray Oliger - - - - 223-4986
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Harold Brady -663-3903 or - 663-3904
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RMFMS-STATE DIRECTOR FOR ND: Betty Mautz, Rt. 1 Box 368, Garrison ND 58540 337-5775

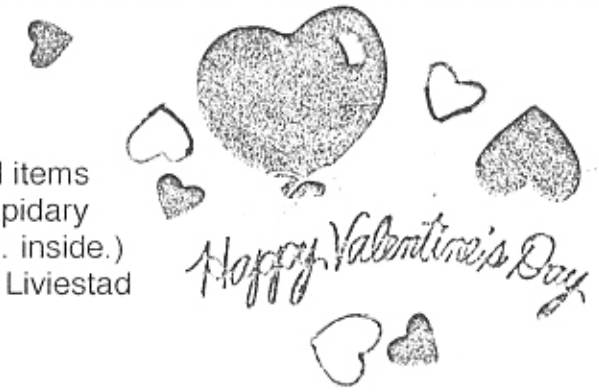
All members are encouraged to submit articles/news items for publication.
Material for the bulletin should reach the editor by the 10th of each month.
Advertisements from members will be accepted for the bulletin. ($2.00 for 1/8 page)
Permission is granted to reprint non-copyrighted articles if proper credit is given.

Central Dakota Gem & Mineral Society's
22nd Annual
GEM & MINERAL SHOW
COMMUNITY CENTER -- MANDAN, ND
Sept. 28-29, 1996
Chr.: Rodney Hickle, HC2, Box 191, Center, ND 58530
Telephone--701-794-3342

DIGGIN'S FROM DAKOTA

VOL. 31, NO. 2 FEBRUARY, 1996

NEXT MEETING--MARCH 3, 1996, Masonic Center, 1810 Schafer St., Bismarck
EARLY CLASS: 1:30 p.m. -- Meeting 2:00 p.m.
PROGRAM: SILENT AUCTION. Bring rocks or related items to sell and also your wallet. Verl Mausehund's lapidary equipment will be offered at the auction. (See ad. inside.)
LUNCH COMMITTEE: Steve Newstrom and Darlene Liviestad



PRESIDENT'S MESSAGE -- February 6. 1996

Dear Friends,

I feel a little guilty enjoying this nice New Mexico weather. Norman and I will be going to Tucson for their show tomorrow. I wish you could come with us.

I'm looking forward to working with all of you in the coming year. It's not too early to start thinking about the show. The Show Committee has already gotten things started. I know we all enjoy the show. We really need everyone's help.

I'll see you at the March meeting. Until then, keep warm!

Betty Mautz

CALENDAR OF EVENTS

Feb 13-Mar 6	LORDSBURG, NM: 5th Annual "Rockamania," 1996 Gem & Minerals, Arts & Crafts and Market Show, Hidalgo Co. Fairgrounds
Mar 3	BISMARCK, ND: Central Dakota Gem & Mineral Soc. Early Class--1:30 p.m.; Meeting--2:00 p.m. Masonic Ctr., 1810 Schafer Street. SILENT AUCTION.
Mar 16	BISMARCK, ND: ND Paleontological Soc. Meeting, 7:30 p.m. Cap. Elec. Bldg., Highway 83 North of Bismarck
Mar 23-24	LINCOLN, NE: 38th Annual Show, Lincoln Gem & Mineral Club, Inc.
Mar 23-24	CEDAR RAPIDS, IA: 32nd Annual Show, Cedar Valley Rocks and Minerals Soc.
Aug 17-18	BOSSIER CITY, LA: ARK--LA--TEX Gem & Min. Soc., 22nd Annual Gem & Mineral Show, Bossier Civic Center

Central Dakota Gem & Mineral Society's
22nd ANNUAL GEM & MINERAL SHOW

Mandan Community Center, Mandan, North Dakota

SEPTEMBER 28-29, 1996

Show Chr.: RODNEY HICKLE, HC2, BOX 191, CENTER, ND 58530

SILENT AUCTION ON MARCH 3, 1996

A silent auction will replace the program at the March meeting. In addition to items other members bring, Edna Mausehund is offering Verl's lapidary equipment at the auction. The ad below lists some of the items to be sold.

FOR SALE
Lapidary Equipment

3 Tumblers
15" Beacon Star Flat Lap with 3 pans
8" Beacon Star grinder unit
10" Drop Saw -- Pro Slicer & Miscellaneous items

Edna Mausehund
Rt. 2, Box 30, Linton, ND 58552
1-701-782-4291

DUES ARE PAST DUE

Members are reminded again by Neill Burnett, Treasurer, that dues were due on January 1, 1996. It will be greatly appreciated if this matter is taken care of as soon as possible so that the list will be complete when the roster is printed next month. ❑

****

MARCH BIRTHSTONE:
Aquamarine or Bloodstone
MARCH FLOWER: Jonquil

Happy March Birthday to:

02 Rebecca Atwood
18 Ted Giese
22 Carol Hickle
25 Edna Mausehund
25 Elma Rambough

[No anniversaries on record for March.]

AT THE LAST MEETING, FEBRUARY 4, 1996

The regular meeting of the Central Dakota Gem and Mineral Society was called to order by Vice-President Russ Oliger on Feb. 4, 1996, at the Masonic Center, Bismarck, ND, with the recitation of the Pledge of Allegiance. The next meeting will be March 3, 1996, at 2:00 p.m. The April meeting will be held Apr. 14, 1996, due to the Easter holiday on the 7th.

Minutes of the previous meeting were read and approved. The Treasurer's report was given and approved. Membership stands at 91, with 29 family (58 members), 27 single, 1 junior, and 5 life members. It was suggested that, due to expenses, we may need to raise membership dues, but no action was taken on that issue.

There were no new developments from any of the standing committees. Various communications were shown to the group.

There was no old or new business. There will be a silent auction at the March meeting.

It was announced that the potluck picnic will be held on August 4, 1996, at Sertoma Park, Shelter #9.

The doorcount was 14 adults and one rambunctious grandchild. The doorprize went to Darlene Leivistad, a new member of the club.

The meeting was then adjourned.

The program was a very well-made video of the Rock Cycle. After the program, lunch was served. --From notes by Robb Morris, Sec. ❑

✿ ✿ ✿ ✿ ✿

NEAR THE PHILIPPINE ISLANDS, a giant Tridacna shell was found that weighed two hundred and fifty pounds. Upon opening it the divers found a huge pearl that was nine inches long, six inches high, and five and one-half inches wide! --GEMS OF THE ROGUE, 2/95 via QUARRY QUIPS, 2/96 ❑

TUCSON GEM AND MINERAL SHOW AND SHOW AND SHOW AND ...

by Bill Collins

Tucson 1996 has come and gone. In the tradition of past shows this one was fine and exciting. This was my ninth time to make it to the collection of shows called "Tucson." This year I made two trips of four days each from San Diego, CA. I made the first trip Feb. 1-4.

Upon reaching Tucson, I immediately sought out other mining artifact collectors (both geologists like myself, except that one still has his mineral collection and the other is a dealer) to see what was new in mining treasures. After an hour I could tell it was going to be a good year. Much later I dropped off my mining artifacts for consignment, found a motel, and started getting ready for the next day's activities. On the 2nd, at the Ramada Inn on Oracle, a treasure house of dealers in fossils, I sought out Brad Ross of Fox Hills Fossils. Brad has mixed mining artifacts in with his inventory of ammonites and that morning at 10 A.M. was the Grand Opening for the mining stuff. A crowd of 25 hovered outside the door for over an hour until we were finally let in like vultures. It was grand. After three hours of this, the doors were closed again and then Brad and his wife, Linda, put the mining stuff to the side and set out the fossils for another Grand Opening at 3 P.M.

You can't be lazy in Tucson or you'll miss something. I next ventured with a friend (a Tucson novice from Castro Valley, CA) over to the Executive Inn on Drachman. The Executive Inn is mainly for the mineral collector, with room after room of beautiful specimens. It only tempts me to start collecting minerals again. We spent a few hours at the Executive before returning to the Ramada to pick up a car and travel closer to the center of town and another string of motels with their satellite shows. We managed to check out three more motels (the LaQuinta, Travel Lodge, and Pueblo Inn) before dinner time. We spent a lot of time checking out the dinosaur eggs, expensive as usual, meteorites, and Brazilian amethyst vugs. I had decided that this was the year to buy a nice amethyst vug for myself, and with a hundred or more examples to evaluate it was not going to be a quick buy. The next two days I spent time rechecking the motels for neat things I might have missed in my earlier visit or visits. I added several nice mining treasures to my pile to bring home. On Sat. night (the 3rd), our group of mining collectors, now numbering 50 or so, met for a Mexican dinner and mining auction. My offerings sold well and I made enough to buy a nice old signal bell sign from the Homestake Mine in Lead, SD. The next day I had to finally give up and go back to sunny San Diego.

Try going back to work after a taste of Tucson! Hard stuff! And then people who unfortunately couldn't make the trip want to pry out of me the stories and sights of the trip they could only dream about. It was rough but I found the time. For me it was a short work week, since my return to Tucson was already planned and my vacation approved.

My second trip to Tucson started on Thurs. the 8th. The last four days of Tucson are really dedicated to the main show at the Convention Center. The satellite shows are still open at the motels but activity is lighter. The main show featured calcite as the theme mineral this year. There were several nice cases of calcite, some for competition and others for institutional display. Gaylord's Tennessee Minerals had a very nice display of honey-colored calcites from the Elmwood Mine, Smith County, TN. The specimens featured spotted barite, fluorite or sphalerite associations. Michigan Technological University sponsored a case of scalenhedral calcites with native copper inclusions. The calcites had a fleshy color and many were on native copper. The Smithsonian Institution and Victor C. Yount both had cases of calcites from around the world. There were many more cases of calcite including an especially nice collection from Belgium and Zaire (featuring light purple and rose cobaltoan calcite). Two other displays were of merit. A beautiful collection of quartz crystals from around the world caught my eye. Two quartz crystals were especially noteworthy--the first a vanilla-colored Brazilian about 3 inches long and 1-1/2 inches in diameter, and the second an amethyst and smoky scepter. The base was a pale amethyst with the top smoky; the clincher was the bright amethyst point.

The final case that I took notes on held the Carnegie Mineralogical Award. It also held a beautiful tetrahexahedral native copper specimen that was about 5/8 inch in diameter; this crystal was from the Ahmeek Mine in Michigan.

I spent many hours at the main show seeking out treasures--mining for me, and Christmas presents for others. I finally selected a nice amethyst vug for myself and packed the car for the return to San Diego (which was still sunny).

To me, this was a great show. I sold a lot, bought a lot, traded a bit, visited friends, renewed friendships with old [former? Ed.]college classmates, and found my amethyst. What mineral will it be next year? I think the bug has bitten me again! ❑ ❑

* * * * * *

MANY, MANY THANKS to our California member Bill Collins for this report of his trips to TUCSON in 1996!! Eds.

COLLECTING METEORITES

Jet Propulsion Laboratory Public Education Office; Pasadena, CA

(Published in the public domain)

"Shooting stars" are not, of course, really stars. They are actually small bits of rock and metal that collide with Earth's upper atmosphere and, because of friction, burn up. On rare occasions, man-made satellites and spacecraft parts fall into the atmosphere and burn up the same way. The flash of light from this incineration is correctly called a meteor. A meteor is formed when an object, usually the size of a marble or a piece of popcorn, hits the atmosphere at an altitude of 80 to 100 kilometers. The air at that height is very thin but the objects are moving at tens of thousands of kilometers per hour. The friction causes the meteor to heat up and glow. Larger objects do not burn up completely. Surviving fragments fall through the atmosphere and land on Earth. Once one of these objects lands it is called a meteorite. Most meteorites fall into Earth's oceans.

Meteorites can be either rock, metal (nickel and iron), or a mixture of both. Stony meteorites are difficult to identify. Stones outnumber metals, but metallic meteorites are easier to find. Rarely are chunks of metal found lying about. A metal detector can be used to search for metallic meteorites. Dry barren areas where there is little vegetation to cover up the ground and turn over the soil are the best areas to look. Dry lake beds are good places to search since wind can blow dust off of the surface leaving the meteorites exposed. Many meteorites are found on the Antarctic ice sheet.

There is an easy way to collect meteorites, but we must be satisfied with finding small metal ones. They are actually microscopic and are known as micrometeorites. Tons of these fall on Earth each day. To collect micrometeorites you need to find a place where they can become concentrated. The drains of a house or building work well since rainwater can wash particles off of an entire roof and collect them at the drain spout. Tile roofs are best since they drain very well and do not produce many other sorts of particles or debris. To find the metallic micrometeorites, collect and dry some of the material from a deep bowl at the base of the drain spout. After removing leaves and other debris, place the remaining material on a piece of paper and place a magnet under the paper. Tilt and tap the paper so that all of the non-metallic particles fall off. Many of the remaining metallic particles are pieces of space dust! To examine them, place the paper under a microscope. High power will be required to see them clearly. Although most of the particles are not from space, the micrometeorites will show signs of their fiery trip through the atmosphere. They will be be rounded and may have small pits on their surfaces. Much of what you are observing are particles that date from the formation of the solar system system around 4.6 billion years ago! They are the debris remaining from the raw materials that formed into the nine known planets and the asteroids. Most particles have been broken off or ground down from larger objects.

--From LITHOSPHERE Aug-Sept/94 via OSAGE HILLS GEMS 2/96, Mel Albright, Ed. ❑

HOW TO IDENTIFY METEORITES

"It's easy to determine if you've found an iron meteorite," says Robert Haag of Tucson, AZ, who makes a living dealing in meteorites. First, test it with a magnet. A magnet suspended from a string should swing toward the meteorite. Also the meteorite should probably show signs of surface rust, perhaps a thin black glaze. It should feel heavy and dense. If it passes those tests, Haag says, have a small segment tested for nickel content, which should be at least 5%.

Mr. Haag says he will test any suspected meteorite free of charge, but if you want it returned even if it flunks the test, you would have to provide return postage. His address is: Robert Haag, P.O. Box 27527, Tucson, AZ 85726. He can also provide a 64 page booklet on how to recognize every known type of meteorite, complete with 160 color photos, for $5.00.

Haag says an iron meteorite is worth "at least $100 a pound, and up to several thousand dollars a pound, depending on its type." It could be worth much more. The prize of Haag's collection is a meteorite that came from the moon. He says it is worth 1$ million. Haag also has meteorites from Mars. --From EARTH SCIENCE NEWS 1/96 via LAKE AGASSIZ ROCK HOUND 2/96, Wil DeGraff and Ethel Eshom, Eds. ❑

** I have enough money to last me the rest of my life--unless I buy something.

** At least the people who talk to themselves always get the last word.

** Experience: something you stumble across while looking for something else. --BURRO EXPRESS, 1/96 and 2/96

--From THE BURRO EXPRESS, 12/95, Bernadine Riley, Ed.

SAW BLADE CARE

SELECTING THE BEST BLADE

Several factors should be considered when selecting a diamond blade that will best meet your cutting needs: the capacity of the saw and its condition, the type of material to be cut and its purpose, and operator experience.

PRICE: If the blade is going to be slabbing primarily hard, dense agate and/or petrified wood, and material loss is not critical, standard rim blades with sturdier cores should be selected. However, if material loss must be held to a minimum, then a premium notched rim or continuous rim blade should be your choice. Similarily, if you are considerng the purchase of the thin rim trim saw blade versus one of standard thickness, consider the material you'll be sawing. If it is precious, such as sapphire, yag, spinel or ruby, your choice should be the thin rim. But, if it is Brazilian agate, jasper, or other material, a standard more durable blade will be correct. Thin rim blades are extremely delicate and require an experienced lapidary's patience and touch. If your trim saw will be operated by inexperienced people, for example, students in a class, thicker rim diamond saw blades should be considered.

CARE AND MAINTENANCE

Whenever a new blade is installed, drain coolant and thoroughly clean and inspect for the following: ARBOR SHAFT PLAY--To check for radial play, grasp the blade end of the shaft, and try to move it back and forth. If you feel any movement, there is radial play. To check for axial play, try to move the shaft in and out; any movement indicates axial play. If either condition exists, the blade will not run smoothly when sawing. Radial play will cause the blade to pound against the workpiece causing short blade life. Axial play will cause the blade to shift, dishing it, or even causing loss of tension. The core will fatigue and eventually break out the center. Arbor shaft play indicates worn bearings or a bent shaft. It is wise to install new bearings and, if necessary, an entire arbor assembly.

ARBOR SHAFT SURFACE--All lapidary blades are manufactured with an arbor hole .005" oversize to provide snug fit on the shaft. If the shaft is worn, the blade will not spin concentrically with the arbor. A worn down arbor shaft should be replaced before any cutting is done.

FLANGES--Very special attention should be given to the blade flanges (collars). Their purpose is to support the blade over a large surface area and to help prevent deflection at the beginning and ending of a cut where there is little or no workpiece support. They must measure at least 1/4 of the diameter of the blade. Remove both from the arbor, clean and inspect them throughly. If you detect gauges or burns on the contact surfaces, they should be replaced or resurfaced at a machine shop. When the contact surfaces are put together, they must lie flat and no light should be visible. If there is, then the faces are not parallel and will distort the blade. They should be recessed approximately 3/4 of their diameter. Flange contact surface must contact the blade away from its center in order to support and not distort it. When you install the blade, tighten the armor nut fimly, but not so much you will collapse the flanges. Never grip the blade for tightening leverage. Instead, handgrasp the arbor drive.

DRIVE BELT--Adjust belt tension so that you can squeeze the belt approximately 1/2" on a trim saw, 1" on a slab saw.

CUTTING--Start cuts by feeding in the workpiece when the blade is running at operating speed. Make sure the workpiece surface will not cause blade deflection at the point of contact. If the blade starts cutting to either side of its plane of rotation, you will get a nonparallel cut and a "dished" blade in need of repair. When a cut is almost complete, often a break will occur leaving a jagged spur. When the spur is a hard material such as agate, the blade may not cut it off, but may instead be deflected, allowing the spur to rub and machine a groove in the core. In order to prevent this, in-feed pressure should be stopped near the end of your cuts. Saws with automatic power cut-off will do this for you. The face of a diamond blade, like a grinding wheel, can become "glazed" when cutting certain hard, dense materials. To sharpen the blade, make a few cuts in a soft abrasive material. A soft abrasive-like material is easy for the exposed diamonds to cut, and it will abrade away some of the metal bond and rim to increase diamond protrusion. A diamond blade should be reversed occasionally to insure even wear and long life. When a blade becomes "dished" and/or loses tension due to prolonged distortion during cutting, the blade will require factory repair to restore it to its original cutting capability. Some of the reasons a blade loses tension are: worn bearings, bent arbor shaft, a carriage misalignment, workpiece-infeed deflection, too rapid an in-feed rate, improper installation and insufficient coolant/lubricant. If you continue to use a diamond blade in need of repair, it is possible it will become unrepairable.

ELECTRICAL POWER--Check all corrections for breaks in insulation. Keep motor cord [as] short as possible to prevent power loss. If you installed [the] motor drive yourself, it should be the same horsepower and rating as recommended by the manufacturer. --From brochure of MK DIAMOND PRODUCTS, INC., reprinted from GEM TIME (Los Vegas) 12/95 via BURRO EXPRESS 12/95

---From THE BEACHCOMBER, May 1987 via LAKE AGASSIZ ROCK HOUND, Sept. 1987

SEDIMENTARY ROCKS

by Adele Burckle

Even the most deeply buried igneous rocks will some day be exposed by erosion.

The forces of weathering will then begin to attack the rocks, causing them to crumble and decompose. Some of the fine particles may be dissolved by rain water as it seeps through the soil and into the pores of the bedrock underneath. The rest may be washed away bodily by streams, or by the wind, or carried in the frozen grip of giant glaciers.

When either the dissolved rock matter or the transported sediment is deposited somewhere else, it afterward hardens into firm rock. Thus we have sedimentary rock, the second of the three major kinds of rock.

Two types of sedimentary rocks are possible--whether the original material had been dissolved in water or had been moved in the form of fragments.

In the first case--for such rocks as rock salt--the minerals are deposited when the dissolving power of the solution is reduced. This may happen because the water gets cooler and some of it evaporates, or because of the action of certain plants and animals which exract chemicals from the water.

The second type of sedimentary rocks is built up by the accumulation of separate grains of mud, sand or gravel. Thus mud becomes shale, sand becomes sandstone, and gravel becomes conglomerate. These sediments very their mineral composition, and they grade into one another in the size of their particles .

The loose sediment eventually becomes solid--solid as a rock--because mineralized underground water cements together the individual grains. The distinctive property of most sedimentry rocks is their stratification, which refers to layers or beds as each one is deposited on top of the earlier ones.

Only in sedimentary rocks are fossils comon. Another form of sedimentary rock is the presence of foreign lumps or nodules called concretions.

COAL: It is found in layers or beds. All coal once existed as growing plants which died, became decayed and then were preserved by burial. The first step in the forming of coal is peat. Gases and water are forced out and the material left behind is thereby enriched by carbon. Under pressure peat thus turns to lignite; still more pressure changes the lignite to bituminous (soft coal)--and eventually to anthracite (hard coal).

SHALE: Shale consists of various clay minerals and accumulated into beds. It is a soft and easily eroded sedimentary rock and can be split with little effort. Some shale is rich in carbon and is black; some is grey, green, red--almost any color. It is valued as a mixing substance in the manufacture of cement.

LIMESTONE: It is a sedimentary rock composed solely of calcite mineral and is often full of fossils. It is white or grey except when impurities cause a darkening. There are many kinds of limestone. Chalk seems to be fine powder when seen under a microscope, where it can be seen to have been made up of the skeletons of tiny one-celled animals. Mexican Onyx is a limestone marked by swirling patterns in attractive colors. Stalactites and stalagmites are mostly built of limestone.

SANDSTONE: It is an accumulation of grains of quartz sand, cemented together more or less firmly to become rock. Very fine sandstone grades into siltstone. Coarse sandstone grades into conglomerate. Some specimens contain particles of feldspar, flakes of shiny mica, and small grains of heavy minerals. The color of sandstone depends largely on the nature of the cementing solution. Iron oxide gives red, yellow and brown shades. The shape of the particles vary from perfectly round to sharply angular. ❑

* * * * * * * * *

THE ROCKHOUND

He is a special breed. He is a hunter, collector, and craftsman. He loves nature's hills, but is always trying to bring them home with him. He appreciates nature's beauty, but is never satisfied until he has polished it. He is a safety-minded citizen, but is willing to scale a mile-high cliff for that "special" rock specimen. A ROCKHOUND has the swapping instinct of a pack rat, the agility of a mountain goat, the immunity to rain of a duck, and the perseverance and patience of Job. He is a person who searches for, finds, and cherishes forever those bits of chemical beauty, rocks and mineras, and traces of former life, fossils, which afford him a glimpse of infinity on a shelf. --From ARCHAEOLOGICAL & GEOLOGICAL SOCIETY [n.d.] via LAKE AGASSIZ ROCK HOUND, 2/96 ❑

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WHAT'S A HOBBY? A hobby is getting exhausted on your own time. A hobby is something to go goofy over to keep you from going nuts over things in general. A hobby is anything you don't have to do for a living. The best thing about a hobby is it gives you something to do while you worry. -PETRIFIED DIGEST 7/95 via BURRO EXPRESS 12/95

The only thing more obnoxious than a wise guy is a wise guy who's right. --BURRO EXPRESS 12/95