



# THE ROCK RATTLER



## 2005-2006 Club Officers

**President Edna House**  
949-9765

**Vice-pres. John Autry**  
390-9200

**Secretary Gail George**

**Treasurer Bill Hart**  
746-8735

## Board of Directors

Joe Beasley (1)

John Quade (2)

Ike House (3)

Plus all Club Officers

## Show Chairman

Bill Hart

Charlie Johns (Co-chair)

## Dealer Chairman

Joe Beasley

## Rock Rattler Editor

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The Ark-La-tex Gem and Mineral Society meets at 6:30pm on the 1st Tuesday of each month at the Bossier Parish History Center, 2006 Beckett St Bossier City, La. 71111

## PRESIDENT'S MESSAGE

Well, between a little yard work and house work, Wil and I took a day to go to Pollack, La. for the "Becoming an Outdoor Woman" event. There were all kinds of classes pertaining to the outdoor way of life. Making arrowheads, and chipping flint being one of these classes. Wil had 10 very eager and untiring students. The last two ladies were so proud to show their finished arrowheads to me. They also related to me that they had heard "Chipalotta's" stories as well as "Shop-a-lotta's" stories. They loved it.

Joe Beasley is in the process of writing a letter to the top 10 students at the Science Fair, inviting them to attend one of our meetings, and display at our show.

We are looking forward to an interesting program in April, brought to us by our own master silversmith, Mr. Don Talbot.

James and Pam Hendrix are planning on bringing some of their gem trees for show and tell. I love these!

And last, but most importantly, we would like to wish our talented and loyal web master, Dwight House, a happy birthday! See you all at the April Meeting.

Rock on - Edna

## Flat Lapping Without A Machine

The process of flat lapping is so simple that anyone can do it even if you don't have a flat lapping machine. So go to it and polish the bookends you want, or that clock face. Just get a piece of aluminum about 12-14 inches square. (Larger for larger pieces.) Place it on a flat surface. Take a teaspoon of 120 grit (or even 90 grit if you have saw marks on your slab.) Mix your grit with Vaseline or water (I like Vaseline because it holds the grit better, doesn't dry out and doesn't splash.)

Now take your slab to be polished and dop a piece of wood to it so that you have a handle and can hold it down on the grit. Just keep twisting it over and around on the grit. Be sure that the grit is always under the slab. Don't run it over dry aluminum. Move the slab in any pattern you wish, adding grit as you feel necessary. Keep at it until all the saw marks are well gone. Wash the stone and aluminum between grades of grit using progressively finer grits as you go. The slab should now be ready for polishing.

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## OPALS

Opal may be divided into two groups: precious and common types. Precious opal displays a play of internal colors whereas common varieties show no internal colors, but often have a pearly or opalescent luster. Opal has the chemical formula  $\text{SiO}_2 \cdot n\text{H}_2\text{O}$ , with the water content ranging from 6-10% in precious opal. The water content causes the stone to be quite heat sensitive. The phenomenon displayed by opal is called the play of color. The structure of precious opal has been shown to consist of a close-packed array of regular silica spheres forming a 3-dimensional diffraction grating, which is responsible for the play of colors. Most common opal shares a rather unique characteristic of fluorescing some degree of green under the black light, due to traces of uranium salts. Mining is done on a small scale with hand-operated machinery and small tools. Opal has a conchoidal fracture and is quite brittle so it chips easily. It is soft for a gemstone, only about 5.5 on the Mohs scale.

## **HISTORY**

Opal's name evolved from the Roman word opalus from the Greek word opallios meaning, "to see a change of color". The Greek word was a modification of the ancient Indian Sanskrit name for opal, upala, which meant "precious stone". Historically, beliefs associated with the wearing of opal have varied. The Romans considered opal a symbol of hope and purity, an appropriate attribute for a gem with a rainbow locked within it. Eastern people regarded it as sacred. The Arabs believed opals fell from heaven in flashes of lightning, thus acquiring their fiery colors.

## **IMPORTANT VARIETIES**

Opal quality is judged by the number of colors exhibited and the evenness of the pattern. Some varieties of common and precious opal are named for the type of matrix, location, pattern, or color. These types include jelly, black, boulder, hyaline, milk, and moss opal.

- 1 Opal that is colorless, transparent to semi-transparent, and has little or no play of color is called jelly or water opal.
- 2 Boulder opals are found in many forms and colors with smooth or uneven surfaces. The opal occurs as a solid piece on top of the ironstone or showing as flashing flecks of color in the ironstone.
- 3 Crystal opal has a colorless background and exhibits play of color, but unlike white or black opal, it lets light pass through it.
- 4 Fire opal is also fairly transparent, but its background color may be yellow, orange, red, or brown. It's often called Mexican opal because Mexico is a major source of this type. Some Mexican deep orange jelly opal has seen considerable success as faceted stones. It has no fire, but the strong orange color is rare in nature.
- 5 The most treasured, rarest, and most valuable variety of opal is black opal with strong play of color, that is, brilliant flashes of different colors. They are solid and generally found as a bar or bars of various colors in a dark (black, blue, brown, or grey) body. Some have complete rainbow of colors while others could have deep blue-green hues.

## **LOCATIONS**

There are only a few major locations that have yielded significant quantities of precious opal. The oldest opal fields in the world are located in Czechoslovakia. The opal from these mines fills fissures in a weathered andesite lava. Mexican opals occur as fillings in spherulitic rhyolite. The best-known precious opal now comes from Australia, in the state of New South Wales, northward into Queensland.

The USA has several precious opal-producing areas. Virgin Valley, Humboldt County, Nevada is the premier locality for large masses of uniform pale green common opal that has a bright green fluorescence. Some opal occurs as nodules filling void spaces in clay. During the summer months, at least two dig-for-fee mines in Virgin Valley are open to individuals.

The precious opal from Louisiana was discovered to cement sands of a sandstone/quartzite Tertiary-age unit with a precious opal cement and matrix. It has blue or purple play of color with some green, and occasional red fire is also seen. The material could be cut into cabs for jewelry and other items of interest. Although insignificant compared to other opal sources, the Louisiana material is interesting as it shows the secondary nature of the opal.

Common opal in Arkansas has been reported from several different types of deposits. A siliceous replacement in the contact metamorphic zone at Potash Sulphur Springs in Garland County is an unusual geologic environment.

One area that has produced colorless, though highly fluorescent, films of a variety of opal termed hyaline is near Spruce Pine, North Carolina. Late fractures are filled with hyaline in several feldspar pegmatites in the area. Specimens are best collected at night with a portable backlight on the mine dumps.

### FINALLY

With all the problems with this gem material, it requires some thought as to what type of jewelry it may be used in and the style of setting to protect the stone. It is usually cut in a dome shape and set in rings, earrings, pendants, bracelets, and pins. It may be joined by accents of ruby, sapphire, or emerald to enhance particular color flashes in the gemstone. A fine opal piece is often guarded in a web of small diamonds, as are other exceptional colored gems. Much precious opal is carved in the orient. Small opal chips are used for inlay work. The Chinese are known for their ornate small relief sculptures. I do not recommend the wearing of opal in rings. The hands take much abuse, consequently the ring stones do also.

Gary Stewart

Ref: U.S.G.S., Chuck and Virginia Brown, Lewiston, Id.

March, 2006 Minutes

After the meal at Catfish King in Bossier, Bill Hart reported on the judging of the Bossier Science Fair. All the judges were impressed with the thought and work each of the winners displayed. The Club presented \$25 to each of the winners in the Elementary, Junior High and Senior High categories.

Joe Beasley will send letters to several of the participants to see if they would be interested in setting up displays at our August show and/or giving a demonstration at one of our Club meetings.

Gail George will be heading up the dealer's dinner for the show this year. Gail will have sign-up sheets soon for food and/or labor contributions. Please be thinking about what you might be able to do.

Okley Davis brought the door prizes.

An announcement was made – Paul Broussard's (a regular attendee of our annual show) wife passed away.

Respectfully submitted,

Gail George

### THE WONDERS OF A CRYSTAL

A crystal is one of the strangest objects of nature. It is not alive, yet it grows. A crystal attracts the same kind of materials of which it is composed, arranges them with great accuracy in geometrical forms, cements the parts together and holds them.

Place a crystal in a liquid, or vapor composed of the same ingredients as the crystal, and the process of accumulation immediately begins. If a crystal was broken in two parts and placed in a bath of liquefied crystal, the broken surface will be repaired and each part will grow into another crystal, providing the other conditions favorable to crystal growth are present.

Even after a crystal has been worn until it is but a rounded grain of sand, it will speedily become a crystal again if placed in a solution containing the ingredients of which it is composed. There is no limit to the ability of a crystal thus to repair itself and resume its growth.

Under a microscope, a crystalline solution can be seen forming into crystals, and it is a wonderful sight. First, innumerable dark spots form in the fluid; they stand still and then begin to move. It is soon seen that the movement arranges the spots in straight lines, like beads. The beads speedily coalesce into rods and the rods arrange themselves into layers until a crystal is created. The process proceeds so rapidly that it is almost impossible to follow closely.

From - The Calgary Lapidary Journal via: Rock Scoop 02 / 01 Via Dusty Rocks, Golden Spike News and Siloam Springs Earth Science Club 04 / 03

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To polish, use a piece of leather about 12x12 inches. Stick it to a board and keep it for polishing only. Don't tack it down because the tack heads can scratch. Put your favorite polishing mix all over the leather and start polishing your stone. This is the oldest way to polish slabs; it still works well, if slowly. In answer to the statement that it will take a long time, a question, "what else would you be doing?"

Author unknown

From Strata Gems Sept.05 via Chip & Tips 4/03 Pickins & Diggins via Huntin & Diggin 12/02  
via Geniss Times 5/03

The Rock Rattler is a monthly publication of the Ark-La-Tex Gem and Mineral Society located in Bossier City/Shreveport, Louisiana. The society is affiliated with the American Federation of Mineralogical Societies (AFMS) and the South Central Federation of Mineralogical Societies (SCFMS). Permission is given to reproduce this document all or in part with proper credit given. Articles with no byline are by the editor.

The Ark-La-Tex Gem and Mineral Society is a nonprofit educational organization devoted to promoting interest in the various earth sciences, particularly the art of lapidaries and their related fields. Informational speeches presented at area schools and the presentation of awards and cash prizes at the Public School Earth Science Fair are two of the ways the society achieves its goals. Another contribution to the community is the annual show, held at the Bossier Civic Center, 620 Benton Road, in Bossier City. This "Jewelry, Gem, & Mineral Show" functions as a fund raiser for our group and a venue for the demonstrations of gold and silver casting, jewelry making, bead stringing, faceting, cabochon making, and flint-knapping (the art of flaking stone tools such as arrowheads). The monthly meetings (including programs of interest to rockhounds), information from the Rock Rattler, and jewelry making classes through Bossier Parish Community College complete the educational objectives of the club.

**DOOR PRIZES WILL BE PROVIDED BY:**

- BILL HART -- FEBRUARY**
- OKLEY DAVIS -- MARCH**
- DON TALBOT -- APRIL**
- JOHN QUADE -- MAY**
- RED FLUITT -- JUNE**
- IKE HOUSE -----JULY**

**UPCOMING SHOWS**

**APRIL:**

**8-9 ABILINE, TEXAS**

**29-30 LUBBOCK, TEXAS**

**MAY:**

**6-7 WACO, TEXAS**

**27-28 FORT WORTH, TEXAS**

**JUNE:**

**16-18 COLORADO SPRINGS, CO.**

**2-4 PENSACOLA, FLA.**

**CLASSIFIED ADS**

**Wanted:** index wheels for an Allen faceting machine. Wil House. Contact me at wihouse@bellsouth.net or see me at club meeting.

**Remember,** want ads may be placed in the Rock Rattler by club members, and may include rock related items. ( relation can be very loosely made)

**Space** as needed will be devoted to want ads. Get yours in now.

**YOU MIGHT BE A ROCKHOUND IF...**

Please drop the Editor a note if you have any "interesting" reasons that someone could use to identify themselves as a "Rockhound".

**REFRESHMENT SCHEDULE**

- FEBRUARY-----JOHNAUTRY**
- APRIL-----DON TALBOT**
- MAY-----DAVID HOWARD**
- JUNE-----THE STEWARTS**
- JULY-----IKE HOUSE**
- AUGUST----**
- SEPTEMBER---PAM HENDRIX**
- NOVEMBER---**

**Note: March, October and December are special meetings, and "normal" refreshments will not be provided. Volunteers for open months are requested**

**ARK-LA-TEX GEM AND MINERAL MEMBERSHIP APPLICATION**

- Individual Membership \$15.00 per year
- Couple Membership \$20.00 per year
- Family Membership \$25.00 per year

Mail to:  
Ark-La-Tex Gem and Mineral Society  
P.O. Box 6633  
Bossier City, La. 71111

Name(s).....

Address.....

Renewal?.....Phone(s).....Email.....

Membership option (check one) Individual:..... Couple:..... Family:.....