

Monthly Bulletin of the
West Seattle Rock Club, Inc.
Seattle, Washington



*** Website ***

<http://www.westseattlerockclub.org>

Our Club:

Practices the Rockhound Code of Ethics



WEST SEATTLE PETROGLYPHS

Mike Wall, Editor

P.O. Box 16145

Seattle, WA 98116

email: mike_wall@yahoo.com

SEPTEMBER 2011

BIRTHSTONE: SAPPHIRE



WEST SEATTLE ROCK CLUB, INC.

Mailing Address: P.O. BOX 16145, Seattle, WA 98116

The purpose of this Club is to promote the study and enjoyment of the Lapidary Arts with good Rock-hounding and good fellowship; and to further education and lapidary skills for all; to conduct field trips for exploration and collection of minerals, gems, rocks and fossils; to promote shows and displays; to publish a monthly periodical known as *West Seattle PETROGLYPHS* relating to club activities.

OFFICERS AND BOARD OF DIRECTORS (2011):

President	Lyle Vogelpohl	(206) 932-3292
Vice President	Isabella Francisco	(206) 938-0809
Secretary	Diane Christensen	(206) 938-0790
Treasurer	Audrey Vogelpohl	(206) 932-3292
Federation Director	Audrey Vogelpohl	(206) 932-3292
Director at Large	Ken Schmidt	(206) 932-3626
Mineral Council Reps	Brian Waters	(206) 290-2312
Seattle Regional Reps	Lyle Vogelpohl	(206) 932-3292
Newsletter - Editor	Mike Wall	(206) 935-4953
Current Past President	Ken Schmidt	(206) 932-3626

COMMITTEE CHAIRPERSONS (2011):

2011 Show Chairpersons	Lyle Vogelpohl	(206) 932-3292
	Audrey Vogelpohl	(206) 932-3292
Programs	<Vice President>	<Vice President>
Refreshments/Hospitality	Janet Francisco	(206) 938-0809
Historian	<Open>	<Open>
Field Trips	Brian Waters	(206) 290-2312
Webmaster	Donn Ullery	(206) 633-0721

AFFILIATED WITH:

Northwest Federation & American Federation of Mineralogical Societies
 Seattle Regional Gem and Mineral Show Committee
 Washington State Mineral Council
 ALAA – American Lands Access Association

Meetings are held on the Fourth Wednesday of each month,
 except for November which is the **THIRD** Wednesday and no meetings in July and December

The meetings are held in Adams Hall of the *Tibbetts United Methodist Church*

3940 41st S.W. (corner of 41st S.W. and S.W. Andover Street) Seattle, WA

6:30 PM – Junior Meeting 7:00 PM – Adult Meeting

Dues are: \$20.00 first year (including name badge), then: \$10.00 per adult member per year
 or \$15.00 for 2 adults in same family, \$3.00 per junior member per year

VISITORS ARE INVITED AND ARE ALWAYS WELCOME TO ALL MEETINGS

All material in this Bulletin may be reprinted if properly credited - Exchange Bulletins are most welcome.

CLUB CALENDAR



September 28, 2011

Junior Meeting (6:30 pm)

Program: Mineral Colors and Shapes

General Meeting (7:00 pm)

Program: We know that all of us have an interest in rocks. What other hobbies or interests do you have? Bring some samples of that interest and tell us about it

Show & Tell: Materials gathered this summer.

WHAT'S INSIDE



Club Calendar	3
President's Message	3
2011 Refreshments	3
What's Inside	3
Junior Program	3
August General Meeting Minutes	4
AFMS Website Contest	5
Mineral Myths and Meanings	5
Fossilized Shark Teeth	6
Largest Fossil Spider Found ...	8
Shop Tips	9
Field Trips	10
Rock Shows	10

PRESIDENT'S MESSAGE



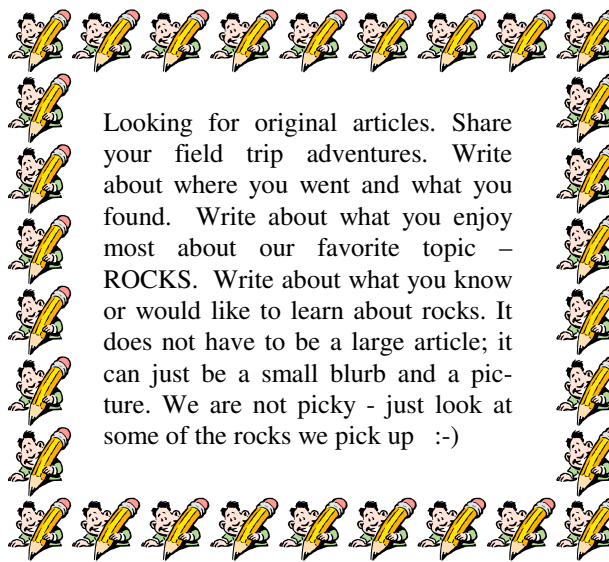
Summer is over for another year and the daylight hours are getting shorter. Yet Fall brings the start of many of our activities - school, regular work schedules, sports.

Also, now is the time to look over all those treasures we dug and collected over our summer adventures and see how we are going to use these materials. Can they be used for your case display next April? Do they need to be worked on to bring out their beauty? What work shops can be arranged to help? Let me know.

Did you take a journey this summer? I'm sure Mike Wall would love to have you write an article for the Petroglyphs describing your adventures. Give it a try.

I'm looking forward to seeing everyone at our September meeting.

Lyle



Looking for original articles. Share your field trip adventures. Write about where you went and what you found. Write about what you enjoy most about our favorite topic - ROCKS. Write about what you know or would like to learn about rocks. It does not have to be a large article; it can just be a small blurb and a picture. We are not picky - just look at some of the rocks we pick up :-)

2011 REFRESHMENTS



Please take note if you are next on the list to bring refreshments. THANKS to everyone who has brought goodies so far!

September Clarence Higuera

- October Michael & Lucie O'Clair
- November Gina & Miles Durnwirth
- December (Christmas Party)

JUNIOR PROGRAM - MINERAL COLORS AND SHAPES
6:30 PM

Minerals come in many colors and shapes.
Malachite is always green, azurite is blue.
Quartz comes in many colors - why?
Crystals come in many shapes.
Let's learn more at our meeting on Wednesday.
Audrey (206) 932-3292

WEST SEATTLE ROCK CLUB – GENERAL MEETING MINUTES

August 24, 2011

Business:

The meeting was brought to order at 7:05 P.M. by club President Lyle Vogelpohl.

There were 9 adult members, 7 junior members and 4 guests present. Janet Francisco distributed the door prizes to this month's winners. Audrey Vogelpohl, Orlando Impas and Rich Russell won the door prizes.

Lyle welcomed everyone and Audrey introduced the new members; Stacy Lewis and sons Orlando and Mica Impas and a member from the past who has rejoined, Joann Churchman.

Lyle asked if there were any corrections or additions to the June meeting minutes. Since there were none, the minutes stand approved.

Newsletter editor, Mike Wall is looking for original articles. If you have recently gone on a field trip, you can write an article about your trip.

WSRC delegates Audrey Vogelpohl and Bo Jeffers attended the NFMS convention in Chehalis, WA. Mark your calendars from May 18th - 20th, 2012 for the NFMS convention in Kennewick, WA next year.

The WSRC show will be from April 20th - 22nd, 2012. A show chair person is needed to coordinate activities. Please contact Audrey if you are interested. Mark McLaren will be coordinating the public relations. Clarence Engkroft has been making around 100 gem trees every year, unfortunately, he is no longer able to do this.

The WSRC annual picnic in July was attended by about 40 members. The auction made \$136.05. Unfortunately we ran out of light, before we ran out of material so the auction could not continue. A big thanks to Ken Schmidt for grilling all the burgers and hot dogs.

April Hichens and Diane Christensen will be coordinating the Christmas dinner. More details will be available soon.

Board positions for next years committee will begin soon. The last three presidents (Ken Schmidt, Audrey Vogelpohl and Dave Clausen) will coordinate this.

Tom and Ruth Tanaka have moved to an assisted living home and donated five trucks loads of material to the club. A thank-you card for the Tanaka's was signed by the members.

Rich Russell from the Cascade Mineral Society put on a program on flint knapping. He told us what safety equipment is needed and why, which tools were needed and that "pressure and angles" is what knapping is all about. Junior members Bella Francisco and Lucy O'Clair both volunteered to take a turn at knapping.

Show and Tell:

- Lyle Vogelpohl brought three giant pieces of material. One of the "mini boulders" was a beautiful piece of mahogany obsidian.
- Molly Hatfield brought a couple of great pieces of black obsidian.
- Kyle Kennedy and his dad Seth brought an impressive obsidian arrowhead and a rock he had gotten from the Pow-Wow.
- Marshall Hatfield brought an awesome bear shaped out of opal from Alaska.
- Lucy O'Clair brought some arrowheads that Jimmy Miller gave to her and one that she even made herself.
- Janet Francisco brought a box of assorted materials she collected 45 years ago from southern Utah. Some of the materials she collected were chips from arrowheads that were carved by cliff dwellers.

(Continued on page 5)

(Continued from page 4)

- Mike Blanton brought some cool petrified wood clothes-pins, and a mirror clothes-pin that he made.
- Ken Schmidt brought some beautiful tumbling material that was donated by Howard House's estate.

Ken Schmidt won the show and tell prize. Refreshments were served and the meeting was adjourned.

Submitted by Diane Christensen, WSRC secretary

AFMS WEBSITE CONTEST

by Cheri George, AFMS Website Contest Chair



We just returned home from the AFMS Meeting in Syracuse, New York and the first thing I want to do is thank the Syracuse Club for hosting this show. It was a wonderful show and all the meetings were very convenient to get to. As a matter of fact the entire staff at the Ramada Inn was wonderful.

The Website Contest for 2011 is a done deal; I hesitate to announce the winners in this article as some of the regional shows have not taken place as of this time, but since this article will appear in the September newsletter I guess I can let the cat out of the bag .

Firstly, I want to thank each and every one of you for entering your websites in this year's contest. The regional winners will be notified by their regional chairman but the AFMS award winners are being sent their score sheets and certificates in the mail.

Congratulations to the AFMS Website Contest winners for 2011. They are listed below.

I want to talk about the Webmasters who DON'T normally think that they have a worthwhile entry. I disagree; all of the Websites associated with the Rock Clubs in the AFMS are worthwhile entries. It seems as though every time I talk to a webmaster he or she tells me that their website isn't good enough, or they are afraid to enter for whatever reason or other. It is not necessary to feel as though you are not good enough to enter. If for no other reason, consider the helpful comments you will receive that will help you improve. 2012 is another chance for you to win.

Rank	Score	Federation	Webmaster	Club	Location	Website
1	94	CFMS	Stephanie Hagiwara	Oxnard Gem & Mineral Society	Oxnard, CA	www.oxnardgem.com
2	93	EFMLS	Jeff Ursillo	Gem & Mineral Society of the Palm Beaches	W. Palm Beach, FL	www.gemandmineral.cc
3	91.5	NFMS	Donn Ullery	West Seattle Rock Club	Seattle, WA	www.westseattlerockclub.org
4	91	SCFMS	Michael Smith	Paleontological Society of Austin	Austin, TX	www.texaspaleo.com/psa/
5	90.5	MWF	Lauren Vaughn	Grand Traverse Area Rock & Mineral Club	Interlochen, MI	www.trockhounds.com
6	88	SFMS	Jennifer Thormans	Mobile Rock & Gem Society	Mobile, AL	www.mobilerockandgem.com
7	86.5	RMFMS	Ron Ginn	White Mountain Gem & Mineral Club	Show Low, AZ	whitemountain-azrockclub.org/

(via AFMS, 9/2011)

Editor's Note: Congrats Donn! The honor is well deserved. You have done an awesome job with our Website!

MINERAL MYTHS AND MEANING (AND A LITTLE SCIENCE)

By Dave Wester

Throughout the ages, man has held a deeper belief of gems and minerals, considering them to bring luck or associating them with health or life facts. When you think about it, there's probably a grain of truth to some of these myths because minerals, gems, and rocks are made up of the same compositions as the human body. If you've taken a chemistry class you'll know this to be true. This column presents a gem or mineral myth (or meaning) each month so that you can become better acquainted with some of the more diverse properties of those rocks we love to collect. This month we talk about one of my favorite minerals... azurite.

(Continued on page 6)

(Continued from page 5)

AZURITE

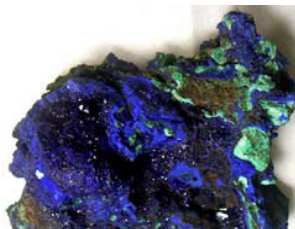
Azurite is a soft, deep blue copper mineral produced by weathering of copper ore deposits and it owes its name to its azure-blue color. It is also known as Chessylite after the type locality at Chessy-les-Mines near Lyon, France. The mineral has been known since ancient times, and was mentioned in Pliny the Elder's Natural History under the Greek name kuanos. The name "Azurite" is derived via Arabic from the Persian lazward, an area known for its deposits of another deep blue stone, lapis lazuli.



A separate book could be written about azurite. It is eternally popular with collectors because of the midnight blue color and typically shiny crystals. It comes in beautifully long bladed crystals, as rose-like floaters and balls, and as specimens that show beautiful sparkling drusy crusts and botryoidal masses. Some of the smaller prismatic crystals are transparent and of such a dark blue color that one can almost could imagine that they are viewing the top end of the ultra violet band of wavelengths. It is found in many different mines—mostly copper mines, often associated with many other interesting minerals, and sometimes partially or completely altered to malachite. There are over 45 well-known forms, and over 100 forms have been described. Azurite is often pseudomorphed to malachite and the two are very frequently found together.



In some localities, the azurite undergoes a chemical change and loses some hydroxyl, altering the azurite to malachite, but retaining the crystal shape of the original azurite. Sometimes, only part of the azurite is altered to malachite, while the other part remains as azurite. Such specimens are green on one end and blue on the other. The two minerals sometimes occur admixed or banded together, forming what is called "azure-malachite" in the gem and mineral trades. A rarer azurite mixture



known as "Bluebird" is azurite mixed with dark red cuprite. Azurite, "azuremalachite", and "Bluebird" all have gem uses.

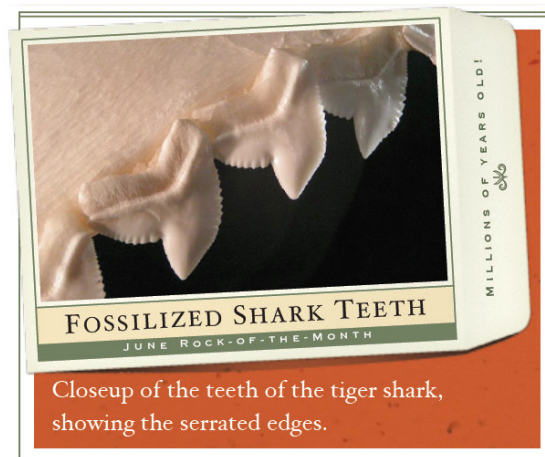
From a mythical perspective, azurite is thought to provide guidance to one's psychic self, aids in cutting through illusion, and enhances communication. During the Middle Ages and Renaissance, azurite was an important pigment in European painting. It was known as Madonna blue.



(via Rocky Trails 1/11)

Fossilized Shark Teeth

http://en.wikipedia.org/wiki/Shark_tooth



Shark teeth are relics of shark evolution and biology, and as they are often the only part of the shark to survive fossilization, represent much of the Selachimor-

(Continued on page 7)

(Continued from page 6)

pha fossil record, extending back hundreds of millions of years. The most ancient types of sharks date back to 450 million years ago during the Late Ordovician period, and they are mostly known from their fossilized teeth. The most common, however, are from the Cenozoic (65 million years ago). Sharks continually shed their teeth, and some Carcharhiniformes can shed approximately 35,000 teeth in a lifetime.

Function

The shape of a shark's tooth depends on its diet; those that feed on mollusks and crustaceans have dense flattened teeth for crushing, those that feed on fish have needle-like teeth for gripping, and those that feed on larger prey such as mammals have pointed lower teeth for gripping and triangular upper teeth with serrated edges for cutting. The teeth of plankton-feeders such as the basking shark are greatly reduced and non-functional.



Scapanorhynchus texanus, Menuha Formation (Upper Cretaceous), southern Israel.

Counting

Shark teeth can be said to form rows both parallel and perpendicular to the line of the jaw. In taxonomy, shark teeth are counted as follows: rows of teeth are counted along the line of the jaw, while series of teeth are counted from the front of the jaw inward. Therefore, a single tooth row includes one or more functional teeth at the front of the jaw, and multiple replacement teeth behind. For example, the jaws of a bull shark can have 50 rows of teeth in 7 series, with the outermost series functional.

History of Discovery

The oldest known records of fossilized shark teeth being found, are by Pliny the Elder, in which he believed that these triangular objects fell from the sky during lunar eclipses. According to Renaissance accounts, large, triangular fossil teeth often found embedded in rocky formations were once believed to be petrified tongues, called tongue stones or glossopetrae, of dragons and snakes. Glossopetrae, were commonly thought to be able to be a remedy or cure for various poisons and toxins, includ-



Nicolaus Steno's depiction of a shark head from the *Head or a Shark Dissected*.

ing helping in the treatment of snake bites. Due to this ingrained belief, many noblemen and royalty wore these "tongue stones" pendants or kept them in their pockets as good-luck charms.

This interpretation was corrected in 1667 by a Danish naturalist Nicolaus Steno, who recognized them as ancient shark teeth and famously produced a depiction of a shark's head bearing such teeth. He mentioned his findings in a book, *The Head of a Shark Dissected*, which also contained an illustration of a *C. megalodon* tooth, previously considered to be a tongue stone.

Transitional Teeth

As one species evolves into another, its teeth may become difficult to classify, exhibiting characteristics of both species. For example, teeth from *Carcharocles auriculatus* as it evolved into *C. angustidens*, are difficult to definitively identify as coming from either species.

A commonly referred to transition is the evolution of *Isurus hastalis*, the Extinct Giant Mako, into the Great White shark, *Carcharodon carcharias*. There exist teeth which are believed to represent the transition between the two species. These teeth, from *Carcharodon* sp. Are characterized by the wider, flatter crowns of the Extinct Giant Mako. However, they also exhibit partial, fading serrations which are more pronounced near the root, and disappear towards the tip of the tooth - serrations being found in Great Whites but not Extinct Giant Makos.

Megalodon Teeth

C. megalodon teeth are the largest of any shark, extinct or living, and are among the most sought after types of shark teeth in the world. This shark lived during the late Oligocene epoch and Neogene period,



Model of megalodon shark jaws at the American Museum of Natural History, in New York

(Continued on page 8)

(Continued from page 7)

roughly about 25 to 1.5 million years ago. The smallest teeth are only 1.2 cm (0.5 in) in maximum height, while the largest teeth are in excess of 17.7 cm (7.0 in) in maximum height. These teeth are in extremely high demand by collectors and private investors, and they can fetch steep prices.

Deposits

Shark teeth cannot be collected from any type of rock. Any fossils, including fossil shark teeth, are preserved in sedimentary rocks. Shark teeth are most commonly found between Upper Cretaceous and Tertiary periods. Fossilized shark teeth can often be found in or near river bed banks, sand pits, and beaches. These teeth are typically worn, because they were frequently moved and redeposited in different areas repeatedly before settling down. Other locations, however, yield perfect teeth that were hardly moved during the ages. These teeth are typically fragile, and great care should be taken while excavating them. Phosphate pits, containing mostly fossil bones and teeth, or kaoline pits, are ideal places to look for fossil shark teeth. One of the most notable phosphate mines is in Central Florida, Polk County, and is known as Bone Valley. Near New Caledonia, up until the practice was banned fishermen and commercial vessels used to dredge the sea floor for megalodon teeth.

Tool Use by Humans

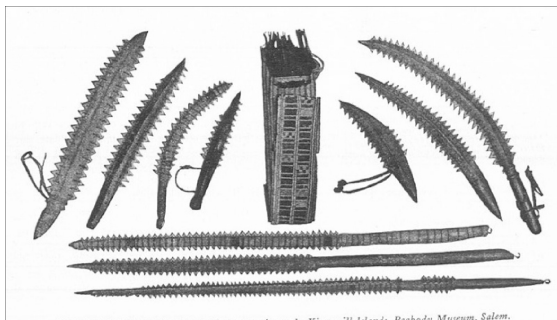


FIGURE 710. *Tobuaji*, Shark's tooth weapons from the Kingmill Islands, Peabody Museum, Salem.

Gilbertese weapons edged with shark teeth.

In Oceania and America, shark teeth were commonly used for tools, especially weapons such as clubs and daggers, but also to carve wood and as tools for food preparation. For example, various weapons edged with shark teeth were used by the Native Hawaiians (see example here), who called them leiomano. Some types were reserved for royalty. The Guitaca (Weittaka) of coastal Brazil tipped their arrows with shark teeth. The remains of shark tooth-edged weapons, as well as chert replicas of shark teeth, have been found in the Cahokia mounds of the upper Mississippi River valley, more than 1,000 km (620 miles) from the ocean. It is reported that the rongorongo tablets of Easter Island were first

shaped and then inscribed using a hafted shark tooth.

(via *Maplewood News* 6/11)

LARGEST FOSSIL SPIDER FOUND IN VOLCANIC ASH

Charles Q. Choi, LiveScience Contributor,
LiveScience.com Charles Q. Choi, Livescience
Contributor, livescience.com – Wed 4/20, 7:54 am ET

The largest fossil spider uncovered to date once ensnared prey back in the age of dinosaurs, scientists find.

The spider, named *Nephila jurassica*, was discovered buried in ancient volcanic ash in Inner Mongolia, China. Tufts of hair-like fibers seen on its legs showed this 165-million year-old arachnid to be



the oldest known species of the largest web-weaving spiders alive today — the golden orb-weavers, or *Nephila*, which are big enough to catch birds and bats, and use silk that shines like gold in the sunlight.

The fossil was about as large as its modern relatives, with a body one inch (2.5 centimeters) wide and legs that reach up to 2.5 inches (6.3 cm) long. Golden orb-weavers nowadays are mainly tropical creatures, so the ancient environment of *Nephila jurassica* probably was similarly lush.

"It would have lived, like today's *Nephila*, in its orb web of golden silk in a clearing in a forest, or more likely at the edge of a forest close to the lake," researcher Paul Selden, director of the Paleontological Institute at the University of Kansas, told LiveScience. "There would have been volcanoes nearby producing the ash that forms the lake sediment it is entombed within."

Spiders are the most numerous predators on land today, and help keep insect numbers in check. So these findings help us "understand the evolution of the in-

sect-spider predator-prey relationship," Selden said, suggesting that golden orb-weavers have been ensnaring insects and influencing their evolution since the Jurassic Period.

"There were many large or medium-sized flying insects around at that time on which it would have fed indiscriminately," Selden said.

In modern golden orb-weaver species, females are typically much larger than males. This new fossil was a female, suggesting this trend stretches back at least as far as the Middle Jurassic, Selden said — that is, back before the first known bird, Archaeopteryx, or giant dinosaurs such as Brachiosaurus and Diplodocus.

Although this is the largest fossil spider known to date, it is not the oldest. Two species from Coseley, England, *Eocteniza silvicola* and *Protocteniza britannica*, both come from about 310 million years ago.

Selden and his colleagues are now investigating other fossil spiders from China, "as well as those from elsewhere in the world —currently Brazil, New Zealand, Australia, Italy and Korea," he said.

The scientists detail their findings online April 20 in the journal *Biology Letters*

(via *Agatizer*, 6/11)

SHOP TIPS

Editor's Note: Shop tips featured in this bulletin have not been evaluated for safety or reliability. Please use caution when trying out any new idea.



Reclaiming Saw Oil

With the increased cost of saw oil, it is all the more important to reclaim the dirty oil in your saw, as well as an ecological imperative to minimize this type of waste. As we know, oil doesn't wear out, so if we keep it clean, it will last indefinitely.

Here are a couple of methods to reclaim 85 to 90 percent of your oil. Use a stock tank or barrel with legs fitted off the bottom of the tank. Inside the tank, insert a false bottom of metal elevated a foot or so off the bottom of the tank. Install a valve at the bottom of the tank to drain off the clean oil after processing. When your saw oil gets dirty, clean out the sludge and pour it into a common ordinary paper grocery bag(s) and set it on the false bottom of the tank. The oil is filtered

as it seeps through the sides of the paper bag leaving the sludge in the bag and the clean oil at the bottom of the tank.

Another way for reclaiming saw oil uses two five-gallon plastic buckets. Drill a number of holes every two inches or so in the bottom of one of the buckets. Place one large paper grocery sack in this bucket, which will act as a filter. Place a large metal coffee can face down in the bottom bucket to keep the top bucket suction free and easy to lift and drain off the oil in the bottom bucket. Pour the dirty oil in the paper sack and let it drain.

Warm weather or a heated shop will speed up the process. Trim off the edges of the paper sack and cover the five gallon bucket with a bucket lid or place a piece of cardboard over the top to cover the oil. You can drain the oil, easily, from the bottom bucket as it collects by switching the top bucket to another bucket and then continue the settling or filtering process.

(via *Golden Spike* 9/11; via *Pick Hammer News*, 8/11; via *Beehive Buzzer* 8/11; via www.stoneageindustries.com/reclaiming_saw_oil.html)

Orienting Obsidian – by Jim Small, Small Wonders Lapidary

Orienting obsidian depends on what type of obsidian and what you are doing with it. If you are polishing flats, the best way to orient rainbow sheen obsidian is 10-15 degrees off the plane of the parallel bands. If you are capping it, cut it exactly parallel to the bands. Gold sheen is always cut parallel to the bands or the effect is lost or diminished. Fire obsidian sometimes loses its fire sheen when cut parallel and should be cut after careful examination of the best angles for viewing the fire which is actually in between bands. Other types of obsidian look different when cut at different angles to the bands; midnight lace is one such example, where you should experiment until you find the "look" that pleases you.

(via *The Tumbler* 1/09; via *Breccia*, 10/08, via the *Yahoo Lapidary List*, via *Gem Cutters News*, 11/06)

Slow Down That Tarnish

Tarnish is caused by sulfur gases in the air. Chalk naturally absorbs sulfur. Place sticks of ordinary chalk in your cases, and jewelry boxes. Put it in your tool chest, too, since it also absorbs moisture. To make labels that glow in the dark for fluorescent rocks, mix quinine and water to use for ink. It glows a bright bluish-white under black light.

(via *The Tumbler* 2/09; via *Breccia*, 1/09)

2011 FIELD TRIPS

- Sept 24/25** Marysville Rock Club – Wasco, OR – 9:00 @ Goldendale, WA – China Hollow, Picture Jasper – Must be registered – Stu & Kathy Earnst (360) 856-0588, 27871 Minkler Rd, Sedro Woolley, WA 98284, earnstkk@comcast.net
- Oct 1** Rock Rollers of Spokane – Red Marble Quarry – 8:00 @ Chewelah Safeway – Magnesite, Barite Minerals – Container, and rock hammer – Mike Shaw (509) 244-8542, mikeshawmoose@yahoo.com
- Oct 29** Marysville Rock Club – Miller River – 9:00 @ Hwy 2 Skykomish, WA – Picture Jasper – Rock Hammer & Container – Christina Morrissey (425) 398-1300, cmvw@frontier.com

See WSMC <http://www.mineralcouncil.org/index.htm> for additional field trips and details

2011 SHOWS

- Sept 24** 9am-6pm **Hellgate Mineral Society Show**
- Sept 25** 10am-5pm Ruby’s Inn & Convention Center, 4825 North Reserve Street, Missoula, MT
- Oct 7** 10am-5pm **Clallam County Gem & Mineral Association Show**
- Oct 8** 10am-5pm Boys & Girls Club, 400 West Fir Street, Sequim, WA
- Oct 9** 10am-2:30pm
- Oct 8** 10am-5pm **Marysville Rock & Gem Club Show**
- Oct 9** 10am-5pm Totem Middle School Cafeteria, 7th Street & State Avenue, Marysville, WA
- Oct 8** 10am-5pm **Billings Gem & Mineral Show**
- Oct 9** 10am-4pm Billings Hotel & Convention Center, 1123 Mallowney Lane, Billings MT

See the Northwest Newsletter for additional show listings and times.
 Available online at: <http://www.amfed.org/nfms/newslet2.htm>



HOW CAN YOU HELP

- Your Federation:** Save stamps and give to our club treasurer.
- Your Hobby:** Join ALAA. - Contact Lyle Vogelpohl
- Other:** Volunteer to teach beginners what you are good at.

TO LEARN MORE ABOUT ...

Cabbing ... contact Lyle Vogelpohl ... (206) 932-3292

