

## Volume 60-2 :: April 2017

### Website ::: www.vlms.ca

## **VLMS Board**

President :	Vanessa Steffens
Vice-President :	Mike Hill
Past-President:	Cameron Speedie
Secretary:	Alanna Shilito
Treasurer:	Greg Shea
At Large:	Will Wilson
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Brian McMillan

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Librarian :	Sylvan Burnside	<u>burnsidesylvan@yahoo.ca</u> (250-360-0418)
	Christine Patton	<u>christinegems@gmail.com</u> (604-537-9170)
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Show Chair:	David Mullet	davidamullett@gmail.com (250-902-7401)
Membership:	Margaret Braithwaite	margaretbraithwaite@shaw.ca (250-380-2076)
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<b>Refreshments:</b>	Barb MacKenzie	barb.mackenzie@shaw.ca (250-727-0954)
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	Vanessa Steffens	vlms.workshop@gmail.com (250-385-8525)
Editor:	Gary Brooke	gab.bns@gmail.com (250-475-3440)
Sunshine Corner:	Patrick Lydon	perrylydon@hotmail.com (250-472-8554)

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## Announcements

### **Elections**

Elections for the VLMS Executive positions were held Monday March 6, 2017. Vanessa Steffens is the new President. Our appreciation to all those who let their names stand for election and, of course, our congratulations go out to those who were successful. The Executive is listed above.

#### **New Members**

A total of 33 new members have joined the club for this year – 42 members have left the club.

### Meetings

The next regular members meeting will be held as follows: **Date:** May 1, 2017 **Place:** Burnside Lawn Bowling Clubhouse, 274 Hampton Road, Victoria, BC **Time:** 7:30 pm

### **Field Trips**

April – a field trip to Port Renfrew is scheduled for Sunday April 30th.

*May* – field trip is tentatively scheduled to Blue Grouse Mine in Cowichan Lake on May 28th.

June – a gold panning trip to Loss Creek is the current plan for June 25<sup>th</sup>.

### Courses

Basic Lapidary and Basic SilverSmithing courses were held in the January – February timeframe. More courses are planned for the spring and summer. Course participants must be members in good standing (annual fees paid in full) and are selected on a first-come-first-serve basis from the active waiting lists. All inquiries regarding courses, should be directed to the workshop managers at <u>vlmsworkshop@gmail.com</u>.

### Programs

#### VLMS Annual Club Auction

Our annual Auction is coming up at our next meeting, Monday May 1st. If you have something you want auctioned off, you get 85%, the club gets 15% of proceeds) swing on by the clubhouse at 6 pm to drop off your items and a reserved starting bid if you'd like. Once you drop your item off, you must leave until 7 pm. No previewing allowed until 7 pm as the Auction volunteers need time and space to organize everything; No Exceptions....all viewing welcome at 7 pm.

All participants (member and non-members allowed to buy and auction) need to sign up with an auction card. **Bring cash** and an empty car trunk. Auction starts at 7:45pm, following very brief club business.

#### VLMS Strawberry Social - new location!

In an effort to accommodate more club members, it was announced at the April members meeting that the 2017 Strawberry Social on June 5<sup>th</sup>, will be held next door at the Les Passmore Senior Centre. Signs will be posted on the day of the event at the Burnside Lawn bowling hall, to redirect those who may have not received the newsletter or attended a recent meeting.

#### Annual Club Picnic

At the time of this Laphound News edition, the date and location of the annual club picnic has not been determined. Information will be emailed, when possible, by the board. In the interim, if any club members would like to generously host the club picnic at their residence, or have a rockin location where they would like to see it hosted please email the club communication at vlms@vlms.ca.

#### Gemboree

This annual event (held in a different island location every year) is hosted this year by the Ripple Rock Gem and Mineral Club of Cambell River. The location is the Cluxewe Resort near Port McNeill - a truely picturesque and Mineral rich area in the northern island. Please visit

http://www.bclapidary.com/2017Gemboree.pdf

for more information about the 4 day's events, the Clueclux resort, facilites and registration.

\*\* Note \*\*

Next year, 2018, it is our own Victoria Lapidary and Mineral Society's turn to host this event. Get ready to share your ideas and experieces to partake in this rare opportunity and help make our event one that our fellow island rockhounders will be taking about for years.

#### September Meeting

The program for the September meeting includes a presentation of the history of Island Copper mine by Brian Welchman. This is a must see presentation, Brian has worked as management in mines around the world.

## Reports

## President (Vanessa)

As the incoming club president, I would first like to thank our past president Cameron Speedie, who has been the club president many times and for many years in our club's history. Moreover, it is my understanding that our current organization has very much to thank Cam for in its current status and strength. I know I join all club members in wishing Cameron a successful and speedy recovery from his recent health issues.

In moving forward, I wish to extend to all club members, be they new or well-seasoned, an invitation to share with me and your board, those functions that you would like to see more (or less) of, in our Rockin' club. Our board has many ideas in how to improve opportunities that meet the interests of all club members. I encourage each of you for your input and your volunteerism as together we grow wiser and stronger.

## **Membership (Margaret)**

I am pleased to report that, to date, our membership numbers have increased to 115. That number is comprised of 145 adults, 2 students and 19 juniors. We extend a special welcome to the 33 new members who have joined (in some cases, re-joined) this year. These new memberships are very important to keeping our club a vital and growing organization and we hope that our new members enjoy the many aspects of our club. Unfortunately, 42 memberships from last year have not been renewed and as we are now well into the fourth month of our year I have had to remove them from our roster. I wish to recognize and thank Arlene for all her help in manning the membership desk at our meetings. Her warm greetings and calm and efficient handling of the paperwork is an immense help to all of us.

## Field Trips (Gilles)

*March* – the annual rock and gem show served as the field trip for March (see pic below).

As usual, all field trips are subject to change due to weather or unforeseen circumstances. Please confirm with Gilles (250 382-6119) with your participation plans and event meeting location and time.



Figure 1. Will and Gilles carrying Magdolina's(60lb treasure from the show) onto the ferry.

## Library (Sylvan)

A few books were returned to the library at April meeting. There are still books signed out and not returned. VLMS pins are \$6.00. Crests are \$3.00. No Library for May due to Auction and No Library in June due to Strawberry social. I don't know if I will be at either meeting due to a broken foot. If you wish to return books call me at 250-360-0418 Thank you and Happy Rock Hounding.

## Sunshine Corner (Patrick)

Cameron Speedie is recovering from major back surgery and will be out of action for some time. He has sent messages to Margaret Braithwaite and me and fortunately, he appears to be making a good recovery at this time. The Club sends best regards to our long time member and past President. Otherwise, all is quiet on the Western Front! Please notify me (Patrick Lydon) at 250 472-8554 if any Members have concerns that should be announced in the "Sunshine Corner".

## VLMS Rock & Gem Show (Allana)

The 2017 Show was a great success. Our Friday and Sunday numbers were some of the highest since we started keeping statistics. Although there are 2 more bill to come in, our profits were over \$9,500. The volunteer count was low this year as the January meeting was not well attended and the February meeting was cancelled due to snow so opportunities to sign up and volunteer were lower.

The Members' Sale weekend, Oct 14-15th at the Da Vinci Hall, will allow members and local community artisans to show and sell their equipment, rough materials, bits and pieces and finished products. If you are looking to downsize, renovate, or trying your hand at sales, keep this weekend open. Table rental prices are directly related to the cost of putting on the show. TO keep rental costs lower, we will only use social media and printed posters - no newspapers.

## Special Events - VLMS Rock & Gem Show: Club Competition Results (Vanessa)

A solid contingent of members participated in the competition this year; hopefully the number of submissions will be even greater next year.

### Advanced Level Competition Results:

### Lapidary:

1st place - Karen Rowe 2nd place - Sarah Hamilton 3rd place - David Jackson Silver-Smithing: 1st place - David Hosking 2nd place - Karen Rowe Wire Wrapping: 1st place - David Jackson 2nd place - Sarah Hamilton

Beginners Level Competition Results: Lapidary: 1st place - Sammy 2nd place - Veronica 3rd place (tie) - Orion, Natasha and Will

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#### Silver-Smithing:

1st place - Veronica 2nd place - Rachael 3rd place – Sammy Wire Wrapping: 1st place - Will 2nd place – Sammy

### Workshop (Vanessa)

Workshop managers are working diligently to accommodate members waiting for the Basic Lapidary and Silver-Smithing courses. In April a new Basic Lapidary course was provided on Saturdays until April 22nd, and plans are in development to schedule two more courses prior to the summer meeting break.

A basic Silver-smithing course is scheduled for early May and is currently full. Another basic Silversmithing course will be scheduled in the fall, with the possibility of another one in the summer if numbers warrant. Any member interested in participating in a club course, or who would like to see a new course added, contact the workshop via email <u>vlmsworkshop@gmail.com</u>

## **Editor (Gary)**

The relationship of the Newsletter to the VLMS website continues to evolve, albeit slowly. One issue that came up at the Executive meeting prior to the April meeting was that club members represent a wide variety of interests – some like to find the stones, some like to finish the stones, and some like to do both. The club and this Newsletter strive to cater to all member interests. Last issue featured a Crafts section on wire-wrapping. This issue contains a section on rock-hounding in Arizona.

## **Business**

Content in this section is Member-driven. The Newsletter will provide space for Members to advertise their interests to other club members. This could involve buying, selling, or trading materials and/or equipment. It could also involve a desire for collaboration.

# **Roving Rockhound (Gary)**

I am reporting from Tempe Arizona where my wife, Yoko, and I are spending some thirty days enjoying the warm weather, cheap golf, and, as it turns out, rock-hounding. From a gemstone point of view, Arizona is known for turquoise and turquoise jewelry (amongst many other things, of course). Less well known is the fact that it is one of a few places in world in which it is possible to find "fire agate". Fire agate can rival opal with respect to color and beauty. This report details our visits to two separate, public rock-hounding sites which offer the possibility of finding these beautiful stones. For reference consider the map shown below in Fig. 2 in which the two sites<sup>a,b</sup> are identified as (i) Black Hills, and (ii) Round Mountain. Our home base was Tempe and the largest center close to the two sites was Safford. Safford is a 3 hr drive from Tempe: east on the I60 to Globe and then south via I70. Black Hills can be reached within 25 min from Safford; Round Mountain can be reached within an hour from Safford. Both are well marked and are accessible via the family car (there is a "loop" road around Round Mtn for which a high-clearance vehicle is recommended).



Figure 2. Arizona Map – rockhound sites.

## **Black Hills**

The Black Hills site (see Figs. 3 below) is situated a short 2-mile drive along a gravel road north of the I191 highway. There are no facilities on the site (save one garbage can) so it is best to be prepared – water, sunscreen, and more water. The area set aside for public access appears to be huge – I would estimate well over 100 acres. If one can take the heat (there was a breeze that helped somewhat to



### Figure 3. Black Hills site.

- <sup>a</sup> <u>http://skywalker.cochise.edu/wellerr/students/blackhills/project.htm</u>
- <sup>b</sup> <u>http://www.eacourier.com/two-rockhound-areas-offer-world-class-fire-agate-collecting/article\_29ba4a86-9562-5831-845a-b68e5bf0367a.html</u>

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mitigate the 90 deg F temperatures) it was, in my estimation, as close to rock-hounding "heaven" as one could get - there were fire agates lying everywhere on the surface. Of course, as with any rockhounding outing it all depends upon expectations - I soon realized that we would not find many (if any) large fire-agate specimens displaying dazzling colors. Fire agates were abundant - "fire in the agates" was much more elusive. We did manage to find small samples that included a beautiful display of colors – we found many, many others that exhibited an array of shapes and sizes and all containing the signature bubbles associated with this type of agate. The terrain in the Black Hills was physically taxing as one was often forced to operate (bent over) on a slope whilst stepping on and over host rocks that ranged in size from 3" to 12" across. The website information indicated that bigger samples may be obtained at the Black Hills site by digging within the top 2 feet of the surface – digging was relatively easy as the top layer was fairly loose - a rock hammer was all that was required. We did not dig extensively since we were finding so many samples just on the surface (see Fig. 4 below). We did find several small samples that exhibited classic "fire" but the bulk of the material collected fell into the "interesting" category. I would definitely recommend a visit to the Black Hills – you will find plenty of agate and most likely some with fire. One final comment is appropriate at this juncture. The Black Hills is in the desert and therefore contains shrubs, grasses and cacti common to such environments. Fortunately, we did not encounter any snakes – perhaps it was not hot enough.



Figure 4. Digging in the Black Hills.

# **Round Mountain**

The Round Mountain site (see Fig. 5 below) also yielded plenty of agate samples (in much the same vein as the Black Hills), however, in over four hours of searching, we did not find any examples containing "fire". For this reason we label this site as somewhat of a disappointment. Round Mountain can be reached along a gravel road south off of I70. One actually leaves the I70 in N. Mexico but upon arriving at the rock-hound site is back in Arizona (be careful interpreting the time displayed by your digital devices since there is a time zone change at the state border). The gravel road (~10 miles) to the site is dusty but well maintained. The rock-hounding area includes and surrounds three small hills (these hills appear to constitute Round Mountain). We made the mistake of spending our time there scouring the large flat area (in front of the hills) that one encounters upon entering the site. In retrospect, we should have taken the "Loop Road" that circles around the three hills – on the back side, one can access the slopes of the hills and my impression was that was a better place to search for fire agates (although we were done for the day, we drove the "loop" and I managed to spend a few minutes up the hillside to gain some perspective of the difference from the flat area at the front of the site. It is important to re-emphasize that the "loop" road requires a vehicle with high clearance - we had rented a SUV for that purpose. Overall, we found many interesting samples at the Round Mountain, it was much less taxing physically that the Black Hill and while we were glad we had "experienced it", I personally would have found another day at Black Hills to be more productive.



Figure 5. Round Mountain site.

## Samples

The following figures give some examples of the types of stones we collected including ones containing "fire" although it can be hard to see in the photographic setting. The bulk of the stones collected (some bigger, some smaller) fall into the category exhibited in Figs. 6. These agates obviously form by a viscous fluid (volcanic activity) that cools as bubbles and swirls in the most fascinating and interesting way. The sample shown to the left in Fig. 6 is typical of the "clear" variety of fire agate that we found. The samples shown to the right in Fig. 6 are typical of "tinted material" in which the clear material (left) modified in places by a beautiful golden brown hue.



Figure 6. Clear and tinted fire agate samples.

Some examples of fire and color are shown below in Fig.7. The photos don't do the colors justice – the lighting is poor as well. In bright sunlight, some of these specimens are truly magnificent.

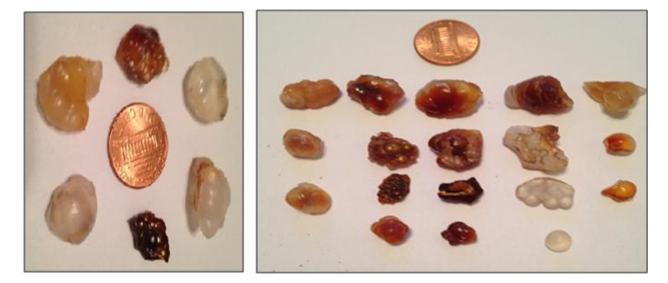


Figure 7. Assorted and colored fire agate samples.

In summary, the three days we spent at these two sites has been a highlight of our trip thus far - lots of agates and no snakes.

## **Fun Facts**

## Lappy the Lapphound

" All that glitters isn't gold .....but it might be opal !!!!



## Foxey the Foxhound

" Diamonds are a girls' best friend ....cubic zirconia... not so much !!!!



## Lappy – in your dreams!

**Lappy**: Gary, I hear you have spent some time rock-hounding in Arizona, did you find any turquoise....my favourite stone?

**Gary**: No I didn't Lappy, I was hunting for fire-agates. However, there are two turquoise mines nearby to our rock-hounding travels (see Fig 2. above), namely (i) Globe, and (ii) Morenci. Turquoise is getting really hard to come by and therefore is expensive.

**Lappy**: Darn, I was hoping you might bring some back for me. I have heard that turquoise is different depending on which mine it is obtained from, is that true?

**Gary**: Well, as far as I know that is true for turquoises produced in the US. The Globe mine produces Sleeping Beauty turquoise<sup>1</sup> whereas the Morenci mine produces Morenci turquoise<sup>2</sup>.

Lappy: Wow, I would like to go to those mines and look for my own turquoise.

**Gary**: Not sure it is possible to rock-hound turquoise any more ....the turquoise mines are typically associated with big copper mining operations. I don't think these operations cater to rockhounds. Globe is a huge mining area with over 60 different mining operations that operate locally – they produce Copper<sup>3</sup>, Gold<sup>4</sup>, Lead<sup>5</sup>, Molybdenum<sup>6</sup>, Silver<sup>7</sup>, Vanadium<sup>8</sup>, Zinc<sup>9</sup>, Manganese<sup>10</sup>, and Asbestos<sup>11</sup>; so turquoise is really a secondary product in this area. I know that you can buy rough turquoise at a store in Gilbert AZ (a suburb of Phoenix) called AllTribes<sup>12</sup> – based on my experience it is one of the few establishments in Phoenix and Tucson that sell rough turquoise in any quantity.

Lappy: Okay, for now I guess I will have to keep dreaming.

### Foxey Visits the Rock and Gem Show

Foxey went to the VLMS Rock and Gem show in March. She wore her topaz jewelry and was hoping to see some topaz stones at the show. She had been in previous years so she recognized some familiar faces. As soon as Foxey entered the main hall she saw Mike working a piece of Rhodonite<sup>13</sup> on his machine, she saw Herb grinding a piece of opal<sup>14</sup> on his machine, and Brian was cabbing what looked like some jasper<sup>15</sup> at his machine (as Foxey had only ever seen these guys behind their Genies<sup>16</sup>, she wondered to herself ... are they physically attached? ...ouch!). As she made her way around the show, Foxey saw Christine and her sugilite<sup>17</sup>, Vanessa and her Brazilian Piranha agate<sup>18</sup>, Dave (from Toronto) and his lapis<sup>19</sup>, that couple from Silverton with their shungite<sup>20</sup>, Linda from Vernon with her Ammolite<sup>21</sup>, and finally, Bob and his fire agates<sup>22</sup>. Foxey did eventually see some topaz<sup>23</sup> in Dave's (from Oyama) display.

Note: all of the technical information presented in this section (and below in the Appendix) was obtained from the web i.e., Wikipedia. For those interested, there are many more sites that deal with the subject matter and in much more detail that quoted above/below – just Google it!!!

## Acknowledgements

Once again I would like to thank all those members who contributed to this Newsletter – it will only be as useful and complete as the information you provide.

### Forum

### **Editorial Comment**

My recent experience in eastern Arizona, hunting for fire agates, has reaffirmed a lesson that I learned from my parents some sixty years ago – rock-hounding can be a fun way to spend a few hours communing with nature. Have a plan and manage expectations.

# Appendix



The Sleeping Beauty mine is located near Globe, Arizona. Its turquoise is noted for its solid, light blue color with no matrix. Sleeping Beauty turquoise is the favorite of the Zuni Pueblo silversmiths for use in petit point, needlepoint, and inlay jewelry. This mine is one of the largest in North America and is still operating.

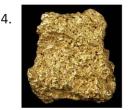


Morenci Turquoise is mined in southeastern Arizona. It is high to light blue in color. Morenci has an unusual matrix of irregular black pyrite that, when polished, often looks like silver. Morenci turquoise is well known because it was one of the first American turquoises to come on the market. It is very difficult to obtain now because the mine is depleted. It is a collectible turquoise.





Copper (Cu) is a soft, malleable, and ductile metal with very high thermal and electrical conductivity. A freshly exposed surface of pure copper has a reddish-orange color. Copper is used as a conductor of heat and electricity, and (amongst other things) as a constituent of sterling silver used in jewelry. Copper is one of the few metals that occur in nature in directly usable metallic form.



Gold (Au) is a bright, slightly reddish yellow, dense, soft, malleable and ductile metal. It is often found in free elemental (native) form, as nuggets (or grains) in rocks, veins and alluvial deposits. Its many uses include jewelry, coinage, and electronics. Gold is found worldwide but as of 2014, the largest producing nation is China.



Lead (Pb) is a soft, malleable, and heavy metal with a density exceeding that of most common materials. Lead is bluish-white; it tarnishes to a dull gray upon exposure to air. It is easily extracted from its ores and was known to prehistoric people in Western Asia. Lead is a neurotoxin that accumulates in soft tissues and bones, damaging the nervous system and causing brain disorders and, in mammals, blood disorders.



Molybdenum (Mo) does not occur naturally as a free metal on Earth; it is found only in various oxidation states in minerals and is associated (and sometimes confused) with lead. The free element, a silvery metal with a gray cast, has the sixth-highest melting point of any element. It readily forms hard, stable carbides in alloys, and for this reason most of world production of the element (about 80%) is used in steel alloys.



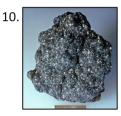
Silver (Ag) is a soft, white, lustrous transition metal. It exhibits the highest electrical conductivity, thermal conductivity, and reflectivity of any metal. Most silver is produced as a byproduct of copper, gold, lead, and zinc refining. Silver has long been valued as a precious metal. As one of the seven metals of antiquity, silver has had an enduring role in most human cultures.



Vanadium (V) is a hard, silvery grey, ductile, and malleable transition metal. The elemental metal is rarely found in nature, but occurs naturally in about 65 different minerals and in fossil fuel deposits. It is produced in China and Russia from steel smelter slag. Large amounts of vanadium ions are found in a few organisms, possibly as a toxin. The oxide and some other salts of vanadium have moderate toxicity.



Zinc (Zn) is chemically similar to magnesium: both elements exhibit only one normal oxidation state. Zinc is the 24th most abundant element in Earth's crust and has five stable isotopes. The most common zinc ore is sphalerite (zinc blende), a zinc sulfide mineral. The largest workable lodes are in Australia, Asia, and the United States. Brass, an alloy of copper and zinc in various proportions, was used as early as the third millennium BC.

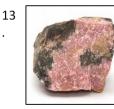


Manganese (Mn) is not found as a free element in nature; it is often found in minerals in combination with iron. Manganese is a metal with important industrial metal alloy uses, particularly in stainless steels. Manganese phosphating is used for rust and corrosion prevention on steel. Ionized manganese is used industrially as pigments of various colors. It is a required trace mineral for all known living organisms.

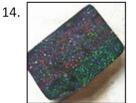


Asbestos is a set of six naturally occurring silicate minerals, which all have in common long thin fibrous crystals that can be released by abrasion and other processes - for this reason, despite many desirable properties, prolonged exposure to it results in debilitating respiratory illnesses and should be avoided. They are commonly known by their colors, as blue asbestos, brown asbestos, white asbestos, and green asbestos.

#### 12. http://www.alltribes.com/



Rhodonite is a manganese inosilicate (structure composed of silicate tetrahedrons). Pink rhodonite (native to Vancouver Island) coupled black manganese oxides is sometimes used as gemstone material. Rhodonite has also been worked as an ornamental stone. Rhodonite is the official gemstone of the Commonwealth of Massachusetts.



Honduran Opals vary from milky-white to matrix based, are found in volcanic black basalt, and are formed mostly by volcanic eruptions. Due to the porous nature of this opal it can be polished on a warm wheel and no need for water. Best results are obtained on hot wheel to have a high polish. Honduras has the oldest recorded opal mines all over the world.

9.



Jasper ia an aggregate of microgranular quartz and/or chalcedony and other mineral phases. It is opaque, and usually red, yellow, brown or green in color; but it is rarely blue. The common red color is due to iron inclusions. It can be highly polished and is one of the traditional birthstones for March.



The complete, all-diamond grinding & polishing machine- 1/4HP, 1800 RPM, sealed capacitor motor. 115V, 60 Hz motor. Mike Hill is our local supplier.



Sugilite is also known as lavulite, royal azel, cybeline, and wesselite. It is a relatively rare pink to purple cyclosilicate mineral and is mostly translucent. Sugilite was first discovered in Japan, but is also found in Quebec, Italy, Australia and India.



Piranha Agate comes from the State of Parana, near Guarapuava, Brazil. The name is believed to be a misspelling of its location. No gemstone is more creatively striped by nature than agate, chalcedony quartz that forms in concentric layers in a wide variety of colors and textures. Each individual agate forms by filling a cavity in host rock. As a result, agate often is found as a round nodule, with concentric bands.



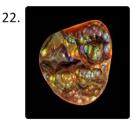
Lapis lazuli or lapis for short, is a deep blue metamorphic rock used as a semi-precious stone that has been prized since antiquity for its intense color. As early as the 7th millennium BC, lapis lazuli was being mined in northeast Afghanistan. Today, operational mines are found in Afghanistan, Pakistan, Russia, Chile, Italy, Mongolia, US and Canada.



Shungite is a black, lustrous, non-crystalline mineraloid consisting of more than 98 weight percent of carbon and is found mainly in Russia. Shungite has two main modes of occurrence, disseminated within the host rock and as apparently mobilised material. Migrated shungite, is bright and lustrous. Shungite has been used as a water purifier and a pigment for paint.



Ammolite is an opal-like organic gemstone found primarily along the eastern slopes of the Rocky Mountains of North America. It is made of the fossilized shells of ammonites, which in turn are composed primarily of aragonite, the same mineral contained in nacre, with a microstructure inherited from the shell. It is one of few biogenic gemstones; others include amber and pearl.



Fire Agate is a variety of Chalcedony (Quartz family). It has a translucent deep reddish-brown base, with flashes of orange, red, green and gold. The colors are caused by light interference on thin layers of iron oxide or limonite crystals within the Chalcedony. Fire agates are found in Mexico and south-western US states e.g., near Safford AZ.



Topaz is a silicate material of aluminum (AI) and fluorine (F). Pure topaz is colorless and transparent but impurities cause it to occur in a variety of colors. Topaz is commonly associated with silicic igneous rocks e.g., granite. Topaz can be found worldwide, including locations in Utah and Texas; Brazil is the world's leading producer.