



Rhode Island Mineral Hunters
A 501 (c) (3) HP Organization

BOWEN-LITE

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CUMBERLANDITE –OFFICIAL STATE ROCK

BOWENITE – OFFICIAL STATE MINERAL

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RIMH

RIMH

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Bill Wilson - Historian
Webmaster - Bruce Hecker bbhecker@cox.net
Edited by Paul Koczwanski pakman844@aol.com
*If anyone would like to submit an article or anything for future publication let me know

Merry Christmas and a joyous holiday season



Upcoming Meeting Details

Executive Meeting date in December is:
Tuesday December 6th. All meetings start at 7pm.

This year meetings will be held at Lou Fazzinas' rock shop
(Apple Valley Minerals)
7 Homestead Avenue
Smith field, RI 02917
*Homestead is off Farnum Pike.

Next general meeting: The RIMH Christmas party will take place on December 2nd in lieu of the general meeting for the month The Christmas party starts at 7pm

***** Room 1130 *****

More Christmas party information on the next page

Ralphie's house from movie "A Christmas Story"



CHRISTMAS PARTY

Hi Everyone,

It's that time of year! Time to celebrate all RIMH's accomplishments as well as give out awards for those of us who spent time collecting

There is a pot luck meal that evening. Bring whatever you like. As usual club supplies drinks, utensils, paper plates and cups, etc.

You may pay your dues at this meeting

Bring a wrapped gift (\$15 or more). Rock, mineral, fossil, geology related. Last year members wrapped gifts of jewelry, minerals, gems, tools, books, etc. If you want to receive a gift, you must bring a gift.

Bring your best specimens awards will be given out

We will announce the winners at the party and the club will get the award to you as soon as possible.

Categories for awards

Birger Anderson Award for best self-collected specimen found in RI or any club sponsored field trip this year.

Sal Avella for best self-collected fossil award for the member who has collected the best fossil specimen this year

William Wilson Award for Best of Show Theme (CRAZY CRYSTALS) for the member who has collected the best specimen based on this year's show theme.

Cecil Foster Award for the best self-collected mineral specimen found outside RI this year.

Kids bring whatever you collected, you can win the following award.

Ralph L. Carr JR. Award given to the junior member for the best self-collected specimen found this year.

O. Albert Johnson Award given to the member who has done the most for RIMH and the hobby of mineralogy/geology/lapidary/silver-smithing.

Eugene Reynolds Award given to the member who has done the most for RIMH as club and organization.

First, second, and third place award for the members who have gotten the most ads/sponsors this year

First, second & third place award for the members who have gotten the most members to join this year

A reminder: we will also have officer and executive member elections then. If you are interested in volunteering for being on the board or officer. Submit your name

Please let Tony Cesana know if you are going and what you are bringing as far as pot luck items are concerned. His phone number is (401) 766-9076 email a_cesana@verizon.net

Commonly found minerals

While mineral hunting, you come across different material that you might not know especially ,when you are new to the field. Last month, we started with a very common mineral. This month, we will look at Mica. *Mica is invaluable in the electrical industry because of its unique combination of physical, chemical and thermal properties, low power loss factor, dielectric constant and dielectric strength. Mica is common in New England.*

In Latin it is known as micare which mean to shine or to glitter or the Latin mica is a crumb or grain.

Mica is finding increasing use in equipment that encounters very high temperatures like rockets, missiles and jet engine ignition system. It is reported that in the manufacture of Telestar transmission satellites by the USA, good use of mica has been made.

A group of minerals having perfect basal cleavage and capable of splitting into thin laminae is called mica. Chemically they contain complex silicate of aluminium and alkalies with hydroxyl. They crystallize in monoclinic system. Some varieties may contain iron, magnesium, lithium and rarely fluorine, barium, manganese and vandium. There are seven important mica minerals:

- Muscovite or potassium mica
 $H_2KAl_3(SiO_4)_3$
- Paragonite or sodium mica
 $H_2NaAl_3(SiO_4)_3$
- Lepidolite or lithium mica
 $K Li Al(OH, F)_2Al(SiO_4)_3$
- Phlogopite or magnesium mica
 $H_2KMg_3Al(SiO_4)_3$
- Biotite or magnesium iron mica
 $(H_2K)(Mg, Fe)_3Al(SiO_4)_3$
- Zinnwaldite or lithium iron mica
 $Li_2K_2Fe_2Al_4Si_7O_{24}$
- Lepidomelane or iron mica
 $(H, K)_2(Fe, Al)_4(SiO_4)_5$

Muscovite is the commonest of all and whenever the word mica is used it is understood to mean muscovite.

Mica is found in pegmatites intruding mica schists. It is found to occur in book form in the pegmatites. The mode of formation of mica which is found in the form of small flakes to big slabs cleavable into the fine laminae is still the subject of active research.

One thing has been clearly established is the degree of presence or absence of orthoclase felspar indicates the possibility of finding mica in the pegmatite is indicative of the presence of more mica. This establishes that mica forms at the expense of orthoclase felspar.

The presence of tourmaline crystals and decomposed felspar in the pegmatites shows the possibility of finding good quantity of mica.

Mica pegmatite consists of quartz core with felspar on the sides adjoining the country rock, mica-schists. In the quartz and felspar zones, which usually form the core, the formation of mica is sparsely found and also the flakes are not big

Mica pegmatites have been found to occur in various shapes and sizes mostly occurring as lenses. They may occur as parallel veins, pipes or in massive form. It is difficult to ascertain when the vein will pinch out and hence the mining of mica is regarded as quite speculative. Also, the abrupt decrease in degree of mineralization and disappearance of mica from the working face is quite common. Pipe mica veins have been worked up to a maximum depth of 300 feet.

For more information see mineralzone.com



Mica book



Mica sheets

