

Pacific Northwest Chapter FRIENDS OF MINERALOGY

June 2004 Bulletin



July PNWFM Meeting - July 10th at 1 p.m.

The July meeting of the Pacific NW Chapter Friends of Mineralogy will be held at the campus of Western Washington University on July 10th at 1 p.m. We will meet in one of the mineralogy classrooms for the meeting. Afterwards, we can wander the halls to look at the many displays of Northwest geology, including minerals, fossils, and rock types. George Mustoe, the keeper of the equipment in the department, will be on hand to demonstrate various SEMs, microscopes, and other lab equipment. **See page 4 for directions.**

30th Annual Symposium - Minerals of Skarns

This year's annual symposium is scheduled for September 24-26 and once again will be held at the Red Lion in Kelso, Washington. The Pacific Northwest Chapter has reached another milestone this year with our 30th annual Symposium (see upcoming article in *Rocks & Minerals* by Bill Dameron).

The theme this year is "**MINERALS OF SKARNS**" and we are lucky once again to have confirmed renowned and excellent speakers. **PETER MEGAW** will

be providing the keynote address with a brief overview and illustrations of his personal and professional experiences in skarn deposits. **RAY GRANT** will be presenting his experiences in Russia, highlighted by a presentation on the skarn deposits of Dal'negorsk. **JEFFREY SCOVIL** will be providing a photo tour of specimens from skarns. PNWFM member **DON GRYBECK** has also volunteered to give a presentation on the Lost River Skarns in Alaska.

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Pacific Northwest Chapter FM 2003 - 2005 Board Members

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2004 CALENDAR OF EVENTS

July 10th: PNWFM meeting at Western Washington University

July 31st weekend - Richardson's Rock Ranch Field Trip (p. 3)

August 6 - 8: Annual Washington Pass Clean-Up (p. 6)

September 24 - 26: 30th Annual PNWFM Symposium,
Kelso, WA

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President's Message

Summer is finally upon us, and like many of our members, I am anxious to whittle away at the long list of old and potential new localities I've been maintaining for years. As a few members are aware, I have taken on the responsibility of preparing the Oregon locality index. Consequently, my list this year is focused on trying to track down some obscure and lost Oregon localities. Rudy Tschernich, with the assistance of others, has done an excellent job of documenting Oregon zeolite localities; however, very little is documented about other mineral localities in Oregon. Recently, I have found references to three separate tourmaline-bearing pegmatite occurrences in north-east Oregon, which I am now compelled to track down. So I encourage other members to look upon Oregon with renewed interest.

Summer also means more FM activities are happening. Wes' Nevada field trip is currently underway; we have a July 10 meeting coming up in Bellingham, Washington (see page 1); a field trip to the Richardson's Ranch near Madras, Oregon is planned for the weekend of July 31 (see page 3); the annual Washington Pass cleanup is on the weekend of August 7 (see page 6); and, of course, our annual Symposium happens on September 24-26.

One of the items I would like to bring members' attention to (which I also plan to discuss at the July meeting), is the current state of our Chapter finances. Currently, our finances are very stable and we have more than we need to meet our financial obligations. As I understand it, in the past it has been our goal to have enough cash on hand to cover the cost of the Symposium. I would propose maintaining this (around \$7,000-8,000), plus additional expenses for printing, postage, and field trip expenses, plus a small cushion for emergencies. Thus, I would propose maintaining a bank balance of around \$10,000. This would leave us with a surplus of around \$1,500-

2,000. I believe this gives us a great opportunity to meet some of our organization's objectives. Suggestions made at the April meeting include contributing to materials for the ABC project, if necessary (see page 6), a donation to the Rice Museum for a special project such as the Northwest Gallery, and purchasing a club membership with the Rice Museum. The club membership would cost \$500/year and benefits would include:

- One club event at the museum;
- Museum membership for all club members;
- 2 passes for friends for each member;
- 10% discount on gift shop items;
- Club name on donor plaque;
- Special notice for museum events; and
- Previews of new galleries, displays, etc.

The most important aspect, of course, is that we would be supporting the museum. Other suggestions for appropriate uses of our surplus should be communicated to myself or the other officers. I will raise the topic during our business meeting at the Symposium with the hope of moving forward on at least one or two items.

One final note: FM members were saddened to learn that long-time member Bob Smith has suffered a stroke. Bob is currently receiving care and Rudy Tschernich has provided some assistance in managing his extensive collection. FM members wish Bob and his family the best during this difficult time.

Look forward to seeing members at upcoming meetings and collectings trips . . . Aaron Wieting ■

IN THE NEWS

The following items were contributed by John and Gloria Cornish.

MINERAL COLLECTION THEFT.

As reported in the AFMS newsletter and many other NW journals, a major mineral collection theft has occurred in Washington and is being investigated by the Island County Sheriffs department. Bob O'Brien, who has just returned from extended duty in Iraq, has come home to nothing. While deployed, a

person or persons invaded Bob's property and stole personal documents, building supplies and all of Bob's collection. Middle Fork quartz, Gallatin, Montana calcite's, and tons of other NW crystal and lapidary materials including Holley Blue agate, and Washington and Oregon thundereggs and geodes were stolen. If anyone hears, sees or is approached by an individual(s) seeking to sell a quantity of these and other typically unavailable local materials, please consider the implications and acquire

contact information from the sellers and make this information available to the authorities.

A TRIBUTE TO LANNY. Lanny Ream is acknowledged for his years of dedication to mineralogy in a letter to the editor of *Rocks & Minerals* magazine in the most recent May/June 2004 issue (Vol. 79, No. 3) submitted by Art Smith under the title, A Tribute to Lanny. Art's letter primarily reflects on Lanny's role as the creator, publisher, editor of *Mineral News*. It is a very well worded and

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Richardson's Recreational Ranch Field Trip

When: Saturday, July 31 - Sunday, August 1

Where: 11 miles north of Madras, Oregon on U.S. 97

Food: Potluck dinner Saturday night

For Reservations: Contact Aaron Wieting

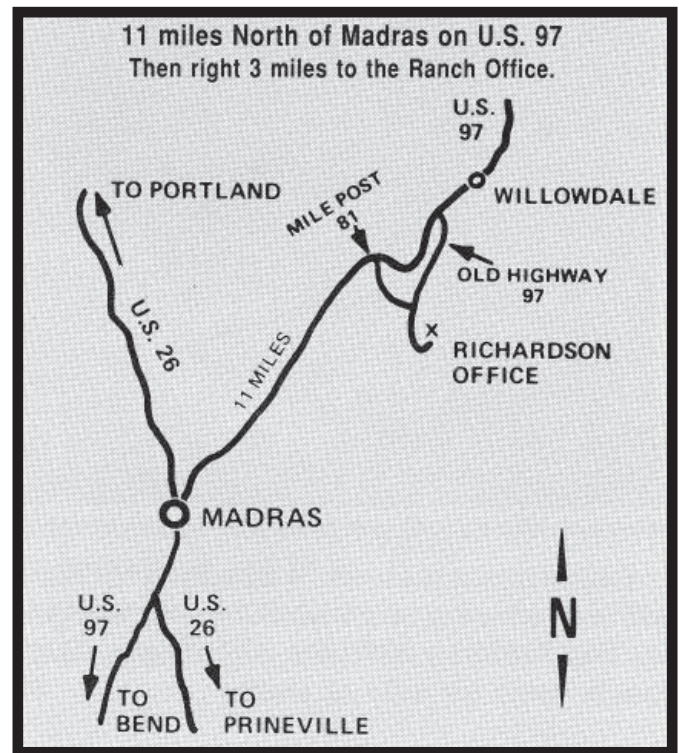
ON THE WEEKEND OF JULY 31ST, Aaron & Jade Wieting will be hosting a field trip to the renowned Richardson's Recreational Ranch, home of the Priday Agate Beds. For the uninitiated, the Richardson's Ranch, north of Madras, Oregon, is a fee-dig area which has been operating for decades and has provided countless collectors with superb thundereggs (Oregon's State rock) for many years. There are multiple beds that can be worked and thundereggs can be filled with opal, agate, and moss or plume agate. Some eggs may be only partially filled with the open portion lined with an opaline silica which fluoresces bright green under ultraviolet light. Also, one unusual bed has hollow thundereggs that are lined with microcrystals of orangish clinoptilolite. Current fees at the ranch are 75 cents / pound if you dig and 25 cents / square inch for cutting.

Since this is an active fee dig area, the trip will be somewhat informal. Collectors can check in at the main office and acquire maps to various areas open to collecting. For those who wish to be part of the formal group, we will meet at 10 am on Saturday, July 31 at the Richardson office (see map). We will spend the day digging thundereggs (geologists picks and buckets are provided at the gift shop if you do not have them) then camp at the gift shop Saturday night. A large grassy area is available for camping at the gift shop and restrooms and showers are available for customers. Sunday collectors can go back and dig more eggs or have their eggs cut and polished at the gift shop. Typically, the line for having eggs cut is shorter in the morning than in the afternoon.

FM activities will also include a potluck dinner on Saturday night. Also, the gift shop includes rock and mineral sales, a small museum with the

Richardson's collection of Chinese soapstone carvings, Mr. Richardson's collection of over 1,000 baseball caps, and numerous spheres for sale of both local and exotic materials. The spheres are made using the Richardson's homemade sphere-making machines which can be observed in action at the gift shop. On my last visit (over ten years ago), there were two 55-gallon drums shipped from Brazil in the parking lot, each with a single water-worn quartz crystal completely filling the drum. Both of these were to be turned into large spheres in the Richardson's shop.

If you are interested, please contact Aaron Wieting with the number of trip members and menu item that you will be bringing. We do not need to make reservations; however, the Richardsons would like a rough headcount prior to the field trip. Hope to see you there! ■



well deserved tribute for one of our most active and influential NW FM members. With the sale of both the Mineral News and the Rat's Nest claim, some have wondered at Lanny's direction. Thankfully, mineralogically, these folks have little to worry about! Lanny continues to produce MinDex and retains proprietary ownership of L. R. Ream Publishing and is currently working on compiling years of field notes into what I hope will become one of his newest publication efforts,

his personal adventures as recorded in his field diaries. Here, here Lanny, job well done!

LYN KILIAN HONORED. Our very own Lyn Kilian has been honored in the most recent issue of Rocks & Minerals magazine, Vol. 79, No. 3, 2004, for her exceptional artistic skills. Under the heading, Washington Mineral Artist, Susan Robinson reports that while having no formal artistic training, Lyn's paintings have found a wide acceptance spanning a varied palette of naturalistic subjects. Six

paintings are presented in bright vibrant glowing color highlighting minerals from around the world. Presented are Afghanistan aquamarine, South African rhodochrosite, Romanian gold, and North American wulfenite, calcite and a wonderful unknown locality smoky quartz. No discrepancies were found in this report other than Lyn's birth date, obviously grossly in error! :-). Lyn and her husband, John (The Kilian Collection) are supportive FM members and are dealers at our symposium.

THE SKARNS OF MONTANA

by Lanny Ream

Brief Descriptions of a few of the Skarns and Their Mineralogy

INTRODUCTION: The geology of Montana is perfect for the formation of the contact deposits known as skarn or tactite. The mountains of the state have an abundance of limestones and other carbonate rocks, and many of these have been intruded by igneous rocks of various composition. It is this combination, an igneous body rich in fluids intruding a carbonate rock, that creates the contact zone that many mineral collectors love: the skarn that typically contains calc-silicate minerals such as epidote, garnet (especially andradite and grossular), diopside, vesuvianite and titanite, as well as quartz, hematite and calcite. Skarns also form in regional metamorphic environments and in other metasomatic environments.

It is also fortunate that these bodies also often contain tungsten, titanium, copper, gold or iron. For man's search for these metals often leads to the development of prospect or mine excavations that expose the mineralized bodies of interest to collectors. Many skarn deposits in Montana have been prospected or mined, and some of these are skarns that have cavities and the minerals of interest. Other skarns, that appear to be devoid of metallic minerals, and thus have not been prospected to any extent, have also been producers of mineral specimens.

BALD MOUNTAIN: This skarn is well known and has produced specimens for many years, although it has not been as productive in recent years. The skarn is located to the northeast of Toll Mountain southeast of Butte, and is accessible by the Rader Creek road. The skarn forms a layer on the eastern and northeastern side of Bald Mountain. On the northern part of the east side, there are three small pits that have been dug by crystal collectors.

The pits expose massive green diopside with cavities that are lined with coarse diopside crystals and filled with blue calcite. The diopside crystals are commonly up to about an inch long and uncommonly up to 2 inches or more. Many of them are twinned and they have a green color, often with dark green terminations. Very fine groups, sometimes with doubly terminated crystals have been collected, although they often are fractured and tend to fall apart.

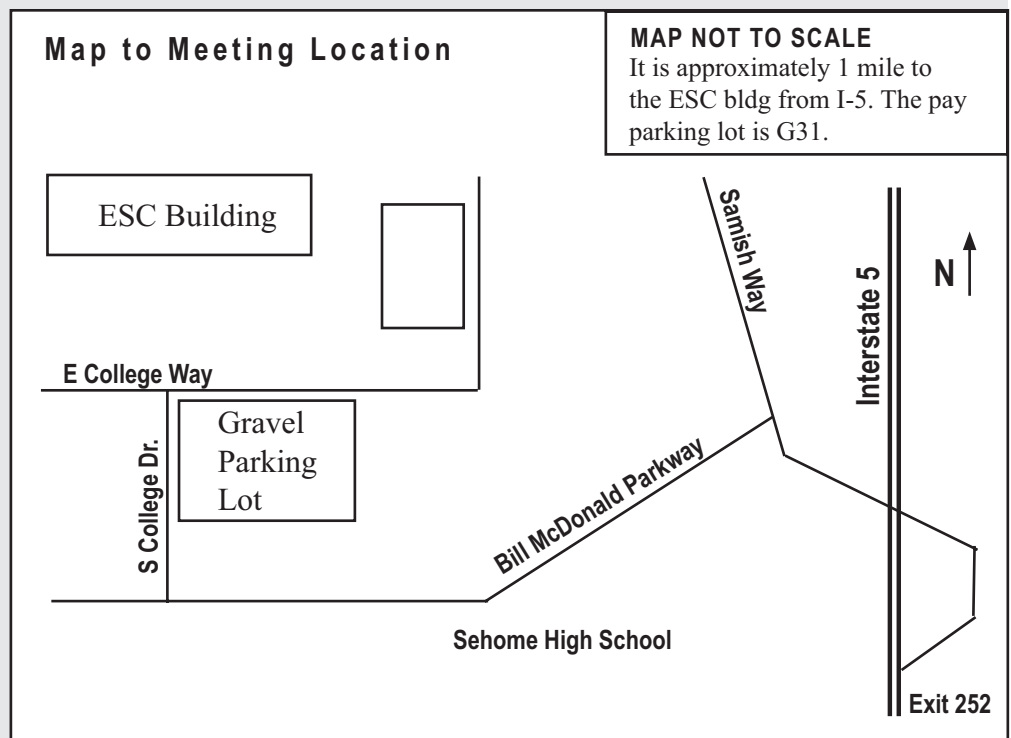
Some fine quality brown to orange-brown grossular crystals have also been collected, up to about an inch across. Apatite crystals have been found but are uncommon. These form white to cream colored crystals up to more than an inch long, occurring in groups with diopside.

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DIRECTIONS: July PNWFM Meeting

(Continued from front page.)

To get there, take the Bill McDonald Parkway-Samish Way exit 252 from I-5 at south Bellingham. Follow the Parkway up around the south side of Sehome hill past the High School and take the first right up College Drive and turn right on East Campus Way. Take the second driveway into the parking lot. You can park at a meter or buy a ticket for your car. The ticket is cheaper at \$1/ hour. This is the only campus in Washington that charges for parking on weekends. A parking ticket from the U costs \$20. A free parking lot is the large gravel lot on the right of College Drive, next to Fairhaven College. You would then have to walk the ¼ mile up into the campus to the ESC building. I don't know the exact room that we will be using yet but will post a sign on the doors of the ESC.



A small pit has been developed on the northeast corner of the mountain, not far from the above diggings. This pit is developed on a pod of granular calcite. The top of the calcite contacts more skarn which has produced some good quality diopside, grossular and vesuvianite crystals. Epidote has also been reported in the Bald Mountain skarns. In the area of the pit, there are tiny crystals that may be stilbite or other zeolite and what may be wollastonite.

PAT'S GULCH: A skarn is exposed in mine workings on Pat's Gulch, off of Snowshoe Gulch north of Elliston, west of Helena. This is a typical skarn with large masses of brown garnet. The best exposure is in a small pit, but there are also other workings that expose the skarn. Like most large garnet masses in skarns, large cavities with fine quality crystals are uncommon, but they do exist. The location is best known for very fine quality epidote crystals with crystals forming groups and radial groups. However, good quality specimens are rare. Some fine garnet specimens have also been recovered from this location.

DRY GULCH NEAR HELENA: This is one of the better known skarns in Montana due to the blue spinel crystals that occurred there. This deposit has been mined for specimens and heavily worked by many collectors. The zone that produced good specimens has reportedly been mined out. The skarn is near the top of a small hill a few miles south of Helena on Dry Gulch.

The blue spinel occurs as opaque anhedral to euhedral crystals commonly 1/4 to 1/2 inch across, but fine quality crystals to more than an inch across have been found. The spinel occurs mostly as octahedrons that are sharp and with dull but smooth faces. Tiny crystals are sometimes gemmy.

Occurring with the spinel are bundles of a bluish black tourmaline which has not been identified. Grossular occurs as white to light green crystals, often rounded, but sometimes sharp and well formed up to more than an inch across. Stilbite occurs as small spherical groups. Vesuvianite is uncommon. Other minerals include small books of clintonite, phlogopite, scapolite, epidote, diopside and calcite.

SCRATCHGRAVEL & JOHN G MINE ROAD: North of Helena a few miles, is a well known occurrence in a low cut alongside a railroad track. This location is on the east side of the Scratchgravel Hills. Access is by going north out of Helena on Green Meadow Drive to the road to the Scratchgravel landfill, parking at the railroad tracks and walking up the railroad tracks. The exposure is in a low cut in massive green diopside which has cavities with euhedral crystals to about an inch long, although most are much smaller. Most of the cavities are filled with blue calcite which must be etched away to expose the diopside. There also

are small crystals of a greenish gray micaceous mineral, possibly clintonite, but this has not been identified.

To the north of this, accessible via the John G Mine Road are small workings in more skarns. The prospects in this area are accessible by following the John G Mine road west off the Green Meadow road, and parking on the west side of the railroad tracks. The land is BLM, and the diggings are a short distance north and northwest of the parking area towards and in the foothills. These deposits have produced a few dark brown to black andradite(?) garnets, vesuvianite and diopside. The andradites are up to about an inch across and some have a fair luster.

FARLIN: Farlin is a small mining district west of the Apex exit on I-15, north of Dillon. Access is easy via a well-maintained county and forest road. The mines of the district are mostly located in one area on the north side of a narrow canyon near the site of the smelter. Several workings here have dumps with oxidized ores showing azurite and malachite.

A few outcrops near the workings show massive garnet with epidote, quartz and hematite. These have not been very productive, but a few good specimens of quartz, epidote and brown garnets have been collected.

There are a few workings in outlying areas and one of these is at a skarn that produced a few fine specimens of epidote and quartz Japan law twins. Apparently these were from one cavity and extensive prospecting by collectors has failed to produce any more good specimens.

IVANHOE MINE: This skarn is another one exposed in a mine. The location is west of the Glen exit off I-15, north of the Apex exit. The pit sits on the side of the canyon a mile above Brownes Lake in a narrow canyon in the mountains. It is accessible by a walk up the old mine road. There is not much to collect at this mine. The skarn is mostly massive garnet and unidentified very fine grained rock, showing layers in limestone. It was mined in the 1950s during the tungsten boom years.

The brown garnet mass has small cavities with crystals that are typically less than 1/4 inch across. Most do not make attractive specimens, being tightly packed coatings on the cavities. One area in one of the garnet masses shows malachite staining and some potential for tiny fuzzy malachite.

Some areas of massive diopside also have small cavities with crystals up to about 1/4 inch. There is potential here for small specimens. Quartz also occurs at the mine in small crystals.

The one mineral that is noteworthy here, but rare, is hematite as small floater roses. At least one piece of calcite was found that contained an abundance of hematite roses from microscopic

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ABC Project Report, May 2004

By Lorna Goebel

At the September 2003 annual meeting, the members present voted to join the Northwest Federation of Mineralogical Societies in developing a traveling educational display for teachers featuring the ABCs. FM chairs for the project are Lorna Goebel and Rusty Etwiler, and the NW Federation chairs are Toby Cozens and Marc Cimolino. Helpers (proof readers, idea people, etc.) for the Federation are Gary Buhr and for FM Arlene Handley and Carol Bartlett; other helpers from both FM and the Federation are Gerry Klein and John Cornish.

After the Symposium Arlene and myself, using input from the views expressed by the members, put together the project. There are four axioms: 1) you must get the imagination of children in minerals for it to become a life long interest, 2) however, the design should be appropriate for all age groups, 3) keep it simple, and 4) for a traveling display; keep it easily packable.

Using these axioms it was decided that the loaner kits will consist of the following: 1) A mineral for each letter of the alphabet, 2) permanently mounted minerals in 2" polycarbonate sealed tubes, 3) a set of hands-on minerals for the students to examine and use for simple tests, 4) a reduced version of the Mineral Photo Atlas featuring the minerals in the set, 5) a small booklet about the featured minerals, and 6) games, possible test questions and Internet sites on minerals.

Guidelines for choosing minerals are 1) no radioactive minerals, 2) use only stable minerals, 3) a common mineral, if possible, and 4) the availability of a mineral.

These ideas were proposed to the Northwest Federation who accepted them. The Federation has a small amount of money each year to complete the project.

At present, using mostly the minerals from my personal collection, we have two traveling sets. Marc Cimolino and I are sharing taking a case to the various Federation shows. So far we have shown it at 2003 Spring and Fall Seattle Regional, Bremerton, West Seattle, Everett, Spokane, and Bellingham shows and are planning on the Boise, ID show if possible.

We are soliciting donations of specimens for the cases. To be mounted they must be thumbnails, however rugged miniatures are OK for hands-on specimens. Two large contributions have been received: Larry Huestis (FM) donated his teaching collection and Vern and Leona Tovrea made minerals from their collection available to the NW Federation. From these minerals and smaller donations we have material suitable for mounting of 1 barite, 1 diamond, 2 dolomites, 7 ilvaites, 5 pyrites, 1 quartz scepter and 1 rhodochrosite.

At this year's symposium the case will be shown containing examples of mounted specimens.

Contact Lorna if you have questions or ideas. E-mail works best: lmgoebel@hotmail.com. Note that is a lower case "L". ■

Ideas for the ABC Project

Operate using only 2 axioms:

1. You have to be taught to like something usually as a child for it to be a life long interest.
2. Design the project so that it can be readily adopted for all age groups.
3. Keep it simple.

Using these statements as guides we can address minerals at all education levels.

1. The loaner kits will consist of one mineral for each letter of the alphabet.
2. The minerals will be glued into closed 2" polycarbonate tubes that are sealed. Polycarbonate is not brittle and keeps its glass-like transparency.
3. The kit will contain a small set of minerals that the teacher may keep. These should be used as hands-on type specimens. They may include small pieces of mica for splitting, calcite pieces to break showing cleavage, pyrite to show streak, barite to show density, a small quartz crystal, a piece of agate, etc. Really, it will be what is readily available.
4. If money is available may include an UV lamp and some fluorescent minerals. However, the danger of eye damage must be recognized.
5. A reduced version of the Mineral Photo Atlas featuring the minerals in the set might be included.

6. A small booklet for the teacher to use that will describe the minerals in the set, including possible uses and handouts that can be photocopied for the students. A set of lesson plans for the teacher to use. These plans will have various levels of difficulty so that K-12 grade levels may use the same kit.

Suggestions by FM members in addition to some of the ideas above:

1. To prompt proper return of the kit have a fully refundable deposit of up to \$50.00.
2. On loan slip get the name and phone number of the principal, if going to a school.
3. For a club or group to use the kit, they would need at least one member that was a member of either the Northwest Federation or FM.

GUIDELINES FOR CHOOSING MINERALS

1. No radioactive minerals
2. Stable minerals
3. Availability of mineral
4. A common mineral if possible

Contact Lorna if you are interested in a list of examples of minerals for each letter of the alphabet.

Minerals of Skarns (Continued from page 1)

Registration forms will be mailed out to members in July. Also, please note that Symposium flyers have been included in the newsletter that can be passed out to other interested parties. Questions and inquiries on the Symposium program can be directed to the appropriate committee members listed on page 7. Also see Bob Meyer's call for displays on page 8.

For those needing a refresher on what a skarn (sometimes also referred to as a tactite) is, a couple of excellent websites provide detailed information:

- <http://www.wsu.edu:8080/~meinert/skarnHP.html>
- <http://earthsci.org/mindep/depfile/skarn.htm>

Einaudi, et al (1981) proposed that the term skarn be used descriptively in reference to localities characterized by a particular suite of calc-silicate minerals consisting primarily of garnet, pyroxene, and amphibole. Typically, these may form along the contacts of felsic to intermediate intrusions (such as granite or monzonite) with limey sediments (such as limestone or dolomite). Since skarns are typically associated with intrusions, ore-bearing fluids may have also been present. Subsequently, the topic of skarns is really a huge topic as demonstrated by the list of different types of economic skarn deposits presented on Dr. Meinert's website. For more examples of skarns, please refer to Lanny Ream's article on page 4 of this newsletter on the Skarns of Montana. Also look for more skarn-related articles in the next newsletter.

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15th Annual Washington Pass Cleanup and Field Trip

It is time to plan for the 15th annual Washington Pass cleanup and collecting field trip for the weekend of August 7th and 8th. The camp sites will be open for those able to arrive Friday evening on the 6th. We will be using the same 3 camp sites at Klipchuck Campground. Remember, there are only spaces for 2 cars per site and the overflow will have to park and walk a short distance to the sites. Klipchuck is located on Highway 20 about 3.5 miles west of Mazama in Okanogan County, WA.

A potluck dinner is planned for Saturday night, and there may be a breakfast for the mornings. The daytime activities will include a work party on Saturday morning. We will be directed by the campground host as to the type of work, maybe clearing brush or roadside pickup. Then we will be able to go up to the Washington Pass area and collect. Hopefully we won't have the fire restrictions or other obstacles to keep us from having fun and collecting. Contact Wes Gannaway for more information, reservations, and what potluck item you would be bringing.

CONTACT WES GANAWAY for more information, reservations, and the potluck item you will be bringing.

phone: 360-384-4209

e-mail: debnwes@comcast.net

THE SKARNS OF MONTANA *(continued from page 5)*

to about 1/4 inch across. These were freed by dissolving the calcite in HCl. The small hematite specimens are lustrous and well formed.

CALVERT HILL TUNGSTEN MINE (RED BUTTON CLAIMS):

This mine, located on Calvert Hill, southwest of Wise River, is accessible by a Forest Service road that is in fairly good condition. It consists of two pits, a small one, and a larger one that is nearly filled with water. Steep sides on the large pit prohibit collecting around most of it, but the smaller pit is accessible. There also is a large dump with boulders up to the size of a car.

The Calvert Hill skarn is an interesting deposit with several minerals available, including two that aren't commonly seen in skarns. It is best known for the aquamarine that occurs there; this is unusual, beryl is rarely reported in skarns. Also, it has produced some very fine quality smoky quartz crystals.

Garnets are moderately common in sharp crystals that are various shades of brown and reddish brown. The dodecahedral crystals are often lustrous and up to more than an inch across. Epidote is a common mineral at the deposit, but most of it is frozen in quartz. Sometimes the epidote can be freed from the enclosing white or smoky quartz mass, and fine quality crystals are sometimes found in cavities. The epidote can be of large size, up to more than 6 inches in length and an inch across, but most good crystals are under 3 inches long. Some of it is lustrous dark green, and smaller crystals may be transparent.

The aquamarine occurs frozen in quartz, white calcite or brown siderite. Often it occurs in clusters of crystals varying from an inch or more in length and only 1 or 2 mm across, up to 2 inches or more in length and over 1/2 inch across. Crystals have been found that are 6 inches in length. Most of it is fractured, but a few very fine quality crystals have been recovered.

Small clusters have been etched out of the siderite or calcite enclosing them.

Smoky quartz is common as masses, often filling in the space around epidote crystals. There also are high quality smoky quartz crystals 1-3 inches in length, and a few have been found more than 6 inches in length. Sometimes they are gem quality, and a few have been found with epidote inclusions.

Tungsten occurs as scheelite which forms microscopic to large masses, and this mine was also mined during the tungsten boom years of the 1950s. Other minerals include tiny micaeous groups of an unidentified mineral. Hematite has been found as small roses up to around 1/4 inch across. Rutile has also been found as tiny prisms epitaxial on the hematite roses. Other minerals include small flakes of molybdenite, pyrrhotite and actinolite.

BURNT CREEK SOUTH OF NORRIS: This occurrence is little known among collectors of Montana minerals. It is located on private land a few miles south of Norris at the intersection of sections 34 and 35, T. 3 S., R. 1 W. with sections 1 and 2, T. 4 S., R. 1 W. The deposit is exposed in low hills incised by small intermittent drainages. The skarns were prospected and are best exposed in the few small pits and shafts dug in the skarn.

This deposit shows good potential for lustrous brown garnet (andradite?) up to about an inch across. One outcrop consists of an abundance of these crystals, mostly around 1/2 inch intergrown with an unidentified green fibrous mineral. Some of the garnets are complete, but most show contacts where intergrown. At other workings, quartz is exposed, and the dumps show small quartz crystals, sometimes with rutile inclusions. A 1 1/2 inch goethite pseudomorph of pyrite was also found at this location. ■

A Call for Symposium Display Cases

We look forward each year to viewing the cases full of minerals and related items that are displayed by our members, speakers, and participating museums. The display cases represent many possibilities, as an educational tool, as a chance to see fine mineral specimens, and to learn about the collections and tastes of our fellows. Creating a mineralogical display represents a substantial investment in time, but is a very satisfying and rewarding contribution which is appreciated highly by the symposium attendees!

This year's symposium display coordinator, Bob Meyer, invites those interested in displaying at our 30th annual symposium to contact him, via e-mail (pyrite111@aol.com) or telephone (425.433.1088).

Northwestern Tucson Report

by Aaron Wieting

Though it was a last minute decision, 2004 was the first year that I finally made it to the legendary Tucson Gem & Mineral Show. I was only there for the tail end of the various shows; however, it was still everything I had expected. As everyone says it's quite overwhelming.

Since it was the 50th Anniversary of the TGMS show, the theme was "gold" and I was hoping that some dealers would bring out some dusty old Oregon gold specimens to sell. However, the only Oregon gold specimens for sale that I found were a couple placer nuggets and a well-crystallized 1 cm specimen from the Baker City area at the Arkenstone booth. It's possible that having arrived late at the show, most of the good stuff was gone already.

Gold specimens from the northwest were well-represented in the displays at the TGMS show. Several displays included good specimens of Washington gold, mostly from Kittitas County. The Houston Museum display included an excellent 7 cm mass of wires from the Ace of Diamonds Mine; however, Washington gold was best represented by the Rice Museum display.



Wire gold to 3 cm, Santiam Mine, Oregon. American Museum of Natural History Collection

Only one Oregon gold specimen was on display which was a matrix specimen with sprays of wires to 3 cm (see photo). The specimen was from the American Museum of Natural History and the locality was reported simply as "Santiam Mine, Oregon". This is likely one of the Santiam group of mines in the North Santiam District in Marion County, Oregon.

A couple of Idaho specimens were on display including a 1.5 cm flattened nugget from Murray, Idaho (Harold Prior and Glenn Williams display), and a 5 cm quartz "river rock" with masses of leaf and spongy gold from Lewiston, Idaho (Detectors Unlimited display). Montana gold was represented by a 1 cm roughly crystallized nugget from Columbia Basin in Powell County (Harold Prior and Glenn Williams display), and by a gold in quartz specimen from Twin Bridges (Detectors Unlimited display).

A fair number of other northwest minerals were on display though virtually all were from localities well-known to most northwest collectors such as Washington Pass, Bunker Hill, Spruce Ridge, and the Black Pine Mine. The real standout was a spectacular vivianite plate from the Blackbird Mine in Lemhi County, Idaho on display in the Walt Lidstrom Memorial Award reunion display. This specimen is pictured in Figure 17 on page 260 of the May-June issue of the Mineralogical Record with large stibnite and elbaite for scale.

Overall, it was a worthwhile experience and I hope to go again next year (and drag Jade along with me....). Some of the most interesting dealers' rooms, I felt, were the foreigners who brought specimens from only a locality or two, so one could see the full range of and variety of specimens from a single locality. Prices were in ranges to be expected, though there were still some deals to be found. There was so much to look at that I really didn't spend much money since I really couldn't decide what to spend my limited funds on (except for books and back issues....). Next year, I'll be better prepared to spend my money on rocks.... ■

Noble Witt Award Call for Nominees

If a member of the FM community stands out to you as making great contributions to minerals, the science and the life-long hobby, please submit your nomination to one of the Board members. All nominees will be considered and the recipient will be honored at the Symposium.

2003	Sharleen Harvey	1997	Richard & Helen Rice
2002	John Lindell	1996	Ray Lasmanis
2001	Harvey Gordon		Cheryl Burchim
2000	Rudy Tschernich	1995	Norm Steele
1999	Bob Boggs	1994	Bob Smith
1998	Arlene Handley	1993	Mike Groben

2005 DUES

The Pacific NW Chapter's fiscal year runs from July 1 through June 30. Dues are \$15 annually, of which \$5 goes to the National FM. Those members who paid for 2004 by July 1, 2004, will be current with both the Chapter and the National FM through December 31 this year (and will probably receive the first newsletter next year). Dues for 2005 are payable anytime between July 1, 2004 and June 30, 2005. For last year, we ended up with 85 members. The easiest method for accounting and bookkeeping practices, is to pay your dues as part of our Symposium Registration.

To insure we have current information with which to contact you please return the form to the right if any of your contact information has changed.

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