

CONTENTS

Directory.....	2
Call for Papers.....	2
Tyroleam Museum, Austria.....	2
Quartz- Bob Smith.....	3
Pennsylvania Chapter.....	4
Pacific Northwest Chapter....	4
Great Basin Chapter.....	4
Southern California Chapter..	4
Colorado Chapter.....	5
Oh--Mr. Speaker- M. Weber....	5



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mineralogy  
affiliated with the mineralogical record

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First Class Mail



## Directory

A new updated membership directory of FM members will be printed and distributed by the end of October, 1986. This is being done by Ray Lasmanis. Any last minute corrections or changes should be forwarded to:

Cheryl Stewart  
4305 15th Avenue N.E.  
Olympia, WA 98506

### Announcement and Call for Papers Eighth FM-MSA-TGMS Symposium

The eighth Friends of Mineralogy - Mineralogical Society of America - Tucson Gem and Mineral Society symposium will be held on February 15, 1987 at the Tucson Community Center. The symposium topic will be quartz, the featured mineral for the Tucson Gem and Mineral Show, and papers covering any aspect of quartz mineralogy including structure, physical and chemical properties, paragenesis, localities, etc., are invited.

Presentations will be limited to 20 minutes with an additional 5 minutes for questions. An audience of knowledgeable amateurs as well as professional mineralogists is expected so the emphasis of papers should be topical rather than specialized.

Papers by students will be considered for the "Best Student Paper" award from Friends of Mineralogy. The award is intended to cover part or all of the travel expenses of the student attending the symposium.

Abstracts should be submitted to FM-MSA-TGMS 8th Symposium, Attn: Henry Truebe, St. Joe American Corp., 2002 North Forbes Blvd., Tucson, AZ 85745. Deadline is September 31, 1986.

### DISASTER, TYROLEAN MUSEUM, INNSBRUCK, AUSTRIA

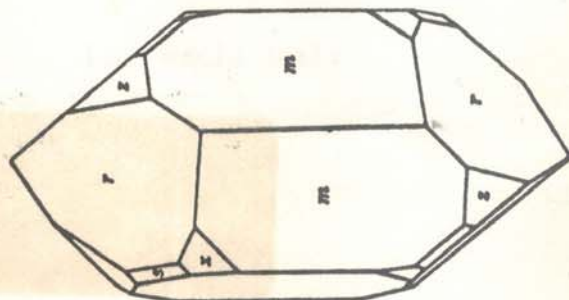
On the 6th of August, 1985, a catastrophic flood devastated the Tyrolean Regional Museum, housed in the Armory of Emperor Maximilian I in Innsbruck. Due to an unfortunate chain of circumstances, the Sill, which normally is harmless, small and well channelled creek, suddenly and unexpectedly rose over its banks and devastated the quarter of the city called "Dreiheiligen", in Innsbruck. This had never happened in the 483-year history of the Armory.

In this flood catastrophe, about  $\frac{1}{2}$  million natural history objects were covered by water and mud. Among these, were the mineralogical collections of the Museum, which were badly damaged by the force of the water which rushed into the basement and literally smashed the cabinets in which these were housed. Many specimens were either so badly damaged that they were unrecognizable, or were utterly destroyed. The salts and selenides were completely dissolved by the water. Numerous beautiful crystallized specimens were broken up, and the parts were washed away by the flood waters. To this day, as far as is known, this is the worst natural catastrophe that has ever happened to a natural history museum.

It is probably impossible to replace many of these specimens. Nevertheless, we would like to appeal to all mineralogically minded colleagues and collectors, to help us as much as is possible with specimens from their collections, so as to enable us to rebuild our collection as rapidly as possible. The emphasis of the Museum encompasses, above all, the regions of North, East and South Tyrol and the Trentino (translator's note: the latter two were Austrian provinces until 1918), but we would gladly accept specimens from the nearby Alpine regions as well. We will put the name of the donor on the label of every donated specimen; and we plan to show the public the progress of the rebuilding of our collections through regular exhibitions.

First of all, our thanks go to those who either helped or offered their help spontaneously. In this almost hopeless situation, it is good to know that we have so many friends.

Dr. Gerhard Tarmann



Quartz ( $\text{SiO}_2$ ) is one of the most commonly occurring minerals in the Geological Kingdom. It is found in a myriad of forms and surroundings. Quartz is a constituent of all major rock types.

Quartz crystallizes in the Hexagonal system as a member of the trigonal trapezohedral class. This class displays a number of very interesting properties. The enantiomorphism of quartz refers to the atomic arrangement in the molecules of silica. Enantiomers are the structures that are not superimposable on each other. In quartz the enantiomorphism is expressed in the right or left handedness of the crystals. (see diagram)

Quartz is also piezoelectric. That is, when the crystal is subjected to mechanical stress it develops electric charges on the surface. Charges also develop as a result of changes in temperature, (pyroelectricity).

The mineral will rotate plane of polarization of light that is traveling parallel to the c-axes either to the right or to the left.

The morphology of quartz is quite interesting. The basic habit usually display faces of the hexagonal prism, m (1010), the positive rhombohedron, r, (1011), the negative rhombohedron, z, (0111), as well as the trigonal dipyramids, s (1121) and s' (2111) and the trapezohedron, x (5161).

Twinning (the geometric position of intergrowth between two or more crystals of the same species following reproducible laws) is very common in quartz. However it is not always obvious.

Chemically, quartz is a polymorph of silicon dioxide. There are a number of polymorphs of silica. The common quartz is the phase that is thermally stable below  $573^\circ\text{C}$ . This is also called low or  $\alpha$ -quartz. Some of the other silica forms are high quartz, tridymite, cristobalite, coesite and stishovite. Refer to the pressure-temperature diagram for the relationships between these forms.

Coesite and stishovite are high-pressure polymorphs, which can exist metastably (sort of trapped) at surface temperatures and pressures. Cristobalite and tridymite are also found at surface conditions.

There is an ambiguity about the position of quartz in the general mineralogical picture. Chemically quartz could be considered as an oxide of silica and fit with the oxides. However, since it exists structurally in  $\text{SiO}_4$  tetrahedra, it is also considered as a silicate. Therefore it is possible to find quartz under oxides in reference and under silicates in another.

Not only is quartz widespread in the rocks of the earth, but it also occurs in a wide variety of forms. We are all familiar with the fine clear rock crystals of quartz found in many parts of the world and in many habits. We also can find a wide variety of colors in quartz. Sometimes these colors come from impurities in the chemical makeup of the mineral. Other times these colors come from structural features and often the color comes from minute crystals of other minerals included in the quartz.

Speaking of inclusions, there is a range of interesting inclusions in quartz. These include crystals of rutile, the tourmaline family, hematite and many others. There are even inclusions of quartz in quartz forming fascinating phantom crystals.

Besides the quartz that is found in fine crystals, there is also a variety of microcrystalline quartz habits. Chalcedony is a variety of fine grained quartz that includes the many forms of agate. Chalcedony is a fibrous form of microcrystalline quartz.

Other forms of quartz include chert, flint and jasper. These tend to be very fine grained and quite dense.

Quartz is often found as the replacement mineral in a number of pseudomorphs. One of the most common of these is the "petrified" wood found in many locals.

The world of quartz is wide and it is complex. A full study of quartz would take far more than one small report or one short symposium. It is hoped that this will spur you on to further study in the world of quartz. A bibliography is attached to help you get started.

## PENNSYLVANIA CHAPTER

Jay Lininger will be the new Pa. Chapter historian and chairman, as well, of the forthcoming publication on the mineralogy of Pennsylvania. At this point, the thought is that the book will be an update in the style of Sam Gordon's 1922 volume: in other words, a county by county listing of mineral occurrences throughout the state. The information presented will be a compilation of data gathered by all of us in the field of mineralogy, from individual professionals and amateurs to clubs and societies.

### Phoenixville Mines Collecting Update

I recently spoke with Jim Thompson about the current status of mineral collecting at the Phoenixville mines (Brookdale, Phoenix, and Southwest Chester County mines) on the Pickering Golf Club property (Thompson farm). The mines are still open to collecting and will remain open, even when the back 9 holes are completed. Collectors should tell the person on duty at the golf course desk that they are going to be mineral collecting. Do not walk on the greens or on any freshly planted areas. Please observe the Thompsons' request so that this locality can remain open. Individual collectors may collect at any time. Groups should make arrangements a week or two in advance by contacting one of the Thompsons (923-2223).

### Annual Fall Symposium, October 31 - November 2, 1986

The annual Fall Symposium will begin on Friday evening, October 31, 1986 at Schmucker Hall, West Chester University. The Friday evening activities will include registration, socializing, trading, give-aways, and "What's New in Pennsylvania Mineralogy".

The Saturday, November 1, 1986 program will include lectures about the mineralogy and geology of the Reading Prong by professional and amateur speakers. The annual auction and banquet will be held Saturday.

A field trip will be conducted on Sunday, November 2 to locations to be announced.

## PACIFIC NORTHWEST CHAPTER

The 1986 election results are:

Chapter President - Jack Zektzer

Vice President - Bob Smith

Chapter Treasurer - Sharleen Harvey

Chapter Secretary - John Bodisch

### Symposium 1986

The TWELFTH ANNUAL SYMPOSIUM sponsored by our Chapter will be held in Tacoma, Washington September 26, 27, & 28. The contract for space in the Doric-Tacoma Motor Hotel has already been signed.

The Symposium Topic selected is MINES and MINERALS of MEXICO. Speakers for the twelfth symposium will include Bill Panczner and Miguel Romero, noted Mexican collector.

## GREAT BASIN CHAPTER

The Nevada State Museum needs our help! The museum (located in the Old Carson City Mint), is in the process of constructing an Earth Science Gallery. What is needed is funding for an "Earth Science Professional," who would assess the State's Mineral Collection, and oversee development of the educational exhibits.

If you would like to donate to this important cause, send your contribution to:

Friends of the Nevada State Museum  
P.O. Box 2598  
Reno, Nevada 89505

## SOUTHERN CALIFORNIA CHAPTER

Of major interest was the fact that the International Mineralogical Association held their annual meeting at Stanford in July. Numerous papers were presented. In addition there were a few field trips. Of particular note, one to the San Benito Gem Mine.

The next chapter meeting will be held in Pasadena in conjunction with the Pasader Show November 1st and 2nd. They have lined up different speakers; among them Bill Moller from the L.A. area. The Pasadena Show will again be held at the Pasadena Convention Center.

## COLORADO CHAPTER

The Colorado Pegmatite Symposium was held during the end of May and the beginning of June this year and was an outstanding success! Over 200 people attended for two days of lectures and two days of field trips. The field trips were to the Pikes Peak area and the Larimer County area. Approximately 25 papers were presented. At the final banquet, the guest speaker was Dr. Paul Moore of the University of Chicago. There was a 120 page book made available on all of the symposium papers. A limited number are still available from Jack Murphy for a \$15 charge. Jack's address is the Denver Museum of Natural History, Geology Department, City Park, Denver, CO 80205.

At the upcoming Denver Show, the club is sponsoring a talk to be given by Ed Rains of Houston, TX. The topic will be the history and minerals of Gilman, Colorado. The chapter will also display the minerals of Gilman at the show.

It should also be noted that the new president is Barbara Muntyan.

Barbara Muntyan  
6978 Wapiti Court  
Boulder, CO 80301

In a recent discussion, a comment was made that it really did not make any difference if a mineral name was pronounced correctly as long as everyone knew what was meant. Sounds fine, but that common understanding is not always easy to achieve. If you say hematite or "hee-matite", it is understandable. If you say chabazite with a ch=k, ch=sh or ch=ch, it is understandable. If you say siderite or "seye-derite", it is understandable. (However, if you use the English name chalybite, you may lose some of us.) There are any number of minerals fitting in this "understandable" category.

In a conversation recently, I misunderstood sincosite (with which I am not familiar), thinking a correctly pronounced synchysite was the subject. So how about these? Millerite and milarite; mesolite and messelite; gmelinite (when the g is not pronounced), melonite, melanite and malanite; sericite and one of the pronunciations for cerussite; smithite and smythite (if you pronounce Smith and Smyth the same); lazulite and lazurite, if you slur either one; and leonhardite-leonhardtite.

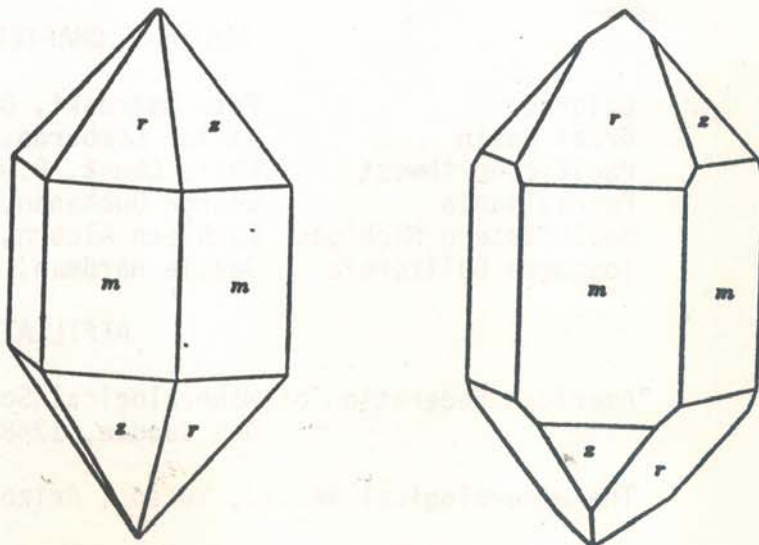
We are there to learn, but are we hearing what you mean to tell us?

Marcelle H. Weber

OH--MR. SPEAKER.....

Glancing through the speakers for the many symposiums and shows, I notice many who are FM members. Therefore, the FM Newsletter becomes a suitable forum to present a message to the speaker, from one of the audience.

Mr. Speaker (and Madam Speaker, too), are you sure the listeners are hearing what you intend them to hear? Both pronunciation and enunciation are involved here. A slur, a turn away, a mumble, and we have received the wrong information. Further, we can only determine what you are saying based upon our own individual knowledge and experience, unless the message is very clear.



Diagrams from Frondel  
Dana System Vol. 3 Silica Minerals

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