MICROMOUNTERS OF NEW ENGLAND

The MMNE was organized on November 5, 1966 for the purpose of promoting the study of minerals that require a microscope.

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Dues are $6.00 per year and are due on January 1st, payable to the Treasurer

Contributions of news items for the Bulletin are welcome and should be sent to the Editor.

NEXT MONTH

There will be no meeting of the MMNE in December. The next meeting will be Sunday, January 6th (snow date Jan. 13), **1990, at Boston University.**

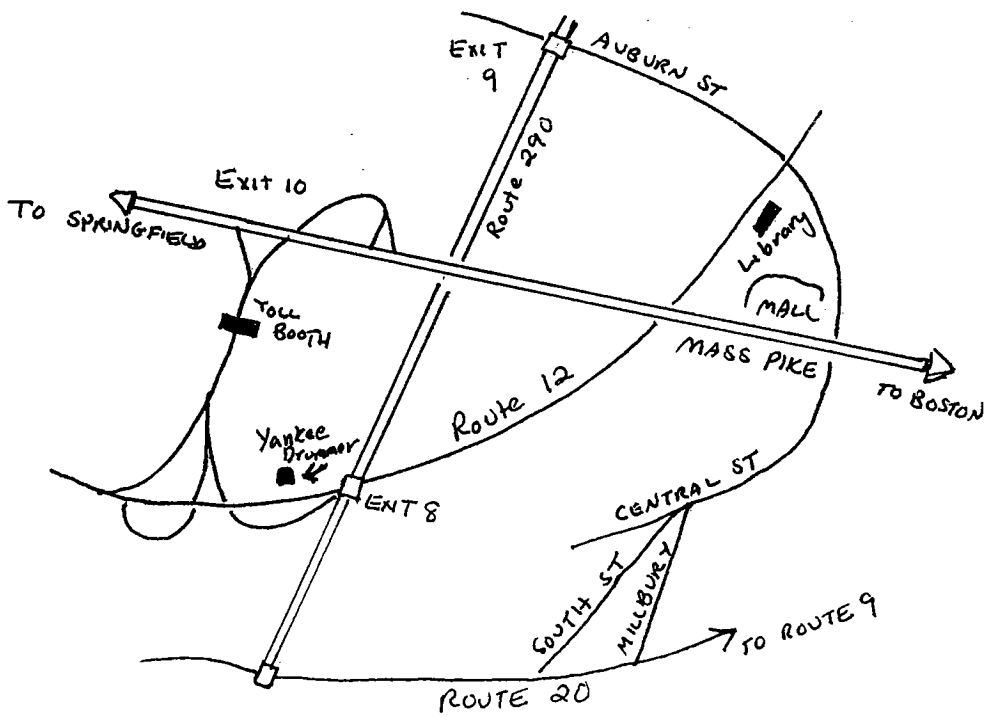
November 1990 Newsletter #145

The next meeting of the Micromounters of New England will be **Saturday, November 17, 1990,** at the Auburn Public Library. This date coincides with the Worcester Club's annual show, which is at the Yankee Drummer Inn, just south of the Library, on Route 12. We hope members take advantage of attending both our meeting and the club show.

President Bob Janules has confirmed that Scott Whittemore will present a short slide program for us at the next meeting. It is entitled: "Rare Earth Minerals of Sugarloaf Mountain, Bethlehem, NH.

During the October meeting, members voted to increase dues to $6 per year, to shield against cost increases, especially postage, which is due to go up again early next year.

Members are reminded that listings for future meeting dates appear in the left bottom corner of this page of our bulletin. We list this information so that members may mark their calendars in case something interferes with the mailing process of their next bulletin.



WORD SEARCH PUZZLE by member George Anderson.
George likes to design puzzles, so he sent me this word search based on the popular locality Mont Saint-Hilaire. He said that if anyone would like a puzzle constructed for a particular mine or quarry, he/she should send him the information with at least twenty mineral species. Have fun!

MONT SAINT-HILAIRE

G R A I T E K K H Q J W N E P I S T O L I T E C U B P W B D
O E B H B B Z E D V K Z P D G B J A U I F F Y U H P P B Q U
W Y N T E J S Y E T B E T N U D Z K U P L E T S K I T E B K
C B R T D Z A I P M A C T I N O L I T E A R F D B S M Y I P
G J Q E H G W F V E O H R O S E N B U S H I T E H H H I V D
A K Y B V E Q F T A L T I B G D P A R I S I T E R P J Z R A
D C C R U H L I G R R R O A V Y E Q E E Z H X D T Q E Q D Q
W O P A O D G V T T N F Q M F Z P Z E I G R H M Z T I E I P
Q V V J C N E A I I J T M B R Y O W P I Y F X Z I L H C W R
D S T V I A L N C T N L A S Z A N O O R U L E N Y Q G E E D
H J C S E J U V V B E R G O O Q H K C G W U Y W A K L Q X M
W L S M T T R Y W N Y I L Z T G J E Y E G O Y D C O X N A Y
O U V W C W I A F L J P B B K R A T B M M A G L G C S G C S
L X J M Q F O N I K L N U K B K R B Z E P O G A A V N L Z H
A W T O F G Y T I Y R S G U K Q O Y L T Z U N Y B E F E I L
U X M T V A E S U R O R Z V E M S Y F J F I O G S V T L E E
M K D G G V G L E R C K T F A Q I O B B T F S I G I D F T T
F E Q A T Y T J T M C N F G P D T A L E O T T V V N G T I I
Z T S I E W X W I W U G A W S D E N A R J E M O D V F H N L
H I N Q T R E U D A H G H C Y C L N T V N E D I Q M D O A L
X N B O I N N L N E R X W Y F T D I E G O A W X L E E R M Y
K O H K N U O J A X C Y C C H E E T K Z R R U B T P A O F H
O C Z T E K T O R I N A W H S R I U S G T N U I Q Z P G R P
P N V T M V I W T X A Z R I I A P E O B N E R R G O W U O O
T A T H L X M V S J I G N T N Y A N N A O E A M M O O M D E
V R N B I P E R D K B E E I Z L I P Y O S D O M N M G M X Z
M F K W I F H Z R V W T B X U V P Q F I R D D H N G E I N V
X S M Q D A E Q O Q U A R T Z F R U M K I T S I K Q G T Y L
U Y C U K O U M N K S J W Q U N A W V F H X A L G Z H E C E
T H A L C U S I T E Z I T T U S P B R L P A Y N G V T R C C

ACTINOLITE
ANDESINE
BARYLITE
CANCRINITE
DORFMANITE
EPISTOLITE
FRANCONITE
GENTHELVITE
HARMOTOME
ILMENITE
JAROSITE
KUPLETSKITE
LEMOYNITE
MAGNESITE
MISERITE
NATRON
NORDSTRANDITE
PARISITE
QUARTZ
RAITE
ROSENBUSHITE
SABINAITE
THALCUSITE
THOROGUMMITE
USSINGITE
VINOGRADOVITE
WELOGANITE
XENOTIME
YOFORTIERITE
ZEOPHYLLITE

Photomicrography
By Paul Smith

In the same way the lapidarist cuts and polishes to allow display of the beauty of frequently nondescript rocks, the photography of microcrystals allows beautiful, often perfect, and sometimes rare crystal forms to be shared with others.

Photomicrographs also provide an art form for the interest of mineralogists alike by display of prints in books and magazines.

Mineral collectors who self-collect know the pleasure and excitement of discovery in the field. Micromounters double their fun because they can have the pleasure of the initial discovery of the matrix material in the field and again under the microscope. The microphotographer finds a third pleasure, to photograph the crystal and then to be able to display it magnified many times, for all to see.

REQUIREMENTS FOR MICROPHOTOGRAPHY:

The following is a partial listing of equipment essential for microphotography: microscope; SLR 35mm camera; adaptor to connect camera and microscope; light source; film appropriate for the light source; and the usual tools of a micromounter. Obviously the items listed are necessary for photographing a microcrystal, and equally obvious, there are many other items that may be helpful or even essential as one progresses in the various techniques. These include devices such as: bellows; tubes; extenders; special lenses; etc., that are useful in producing microphotographs. However, the discussion in this paper includes only the basic requirements.

CAMERA AND ADAPTOR:

To use the microscope as the camera lens, it becomes necessary to have an adaptor to connect the camera to the microscope. This interlocking device attaches to the camera in the same manner as the camera lens is attached. The connector or adaptor is slipped over the eyepiece of the microscope, holding the camera securely. There are microscopes with a third eyepiece to which the camera may be attached, thereby avoiding the constant attaching and detaching necessary with binocular microscopes.

A note of warning: Not all adaptors fit all cameras, nor do all adaptors fit all microscopes. Some camera companies have a variety of adaptors to fit a particular brand of microscope. Other devices may be designed that have more universal use, and some microscopes require specially designed adaptors to accommodate a particular camera.

The beginner with neither camera nor microscope has the most options, and he should take advantage of this opportunity to research the matter seriously to find the camera and microscope for which there is an adaptor, before making the investment. The micromounter who has a microscope but no camera should consult the manufacturers of both the camera and the microscope to determine if an adaptor is available for that particular microscope. The same is true if one has a camera but no microscope.

LIGHT SOURCE:

While the selection of subject matter, angle of view, selection of film, etc., are important, the light source will make the greatest difference in the final photograph. The light source must be capable of furnishing sufficient illumination to allow the camera to produce a satisfactory photograph. This must be accomplished without shadows and without excessive heat that could damage the specimen. There must be the capability to clearly illuminate the crystal tucked away in a vug from the most difficult angles. And, of course, the light source must be right for the film being used. High intensity lights are economical light sources, and for many purposes provide sufficient light; however, it is difficult to direct the light where it is needed. The most satisfactory light source for my purposes is a dual coaxial cable fiberoptic illuminator. The dual cables allow positioning of the light directly on the subject from two angles and the intensity of the light is adjustable without the problem of too much heat.

FILM:

The choice of film involves considerations such as light source, color authenticity, slides or prints, etc. The choice can be made by trial and error, but this can be expensive and frustrating. Probably the combination of research, discussions with fellow photographers, consultations with knowledgeable photo supply dealers, and trial and error will produce the best results.

MAGNIFICATION:

Magnification is a limiting factor. As magnification is increased, more light is required. In addition, the higher the magnification, the more shallow the depth of field. More sophisticated equipment and considerable research and understanding of the science of photography will assist those interested in such refinements.

CONFESSION:

I have been moderately successful in obtaining photomicrographs of a variety of specimens from my personal collection as well as of prized specimens from other collections. I use Kodachrome color reversal film, 40 Type A, in my Olympus OM2S, 35mm SLR camera. Not being an expert in the fine points of cameras, I have satisfactory results using the Program setting of this camera.

All of my photomicrographs are in the form of slides. I prefer this because I find it easier to share the viewing of slides with others since I can prearrange the slides for the presentation in slide programs, and, at the same time, I can have prints made from the slides of especially photogenic and interesting specimens for illumination in an album or for publication, and for personalized Christmas cards.

Photocopies of prints are highly unsatisfactory as a means of displaying the results of one's work; however, they are the only economical means for publication in this newsletter. The prints shown include a few of the more photogenic crystals from my favorite road cut near Sugar Grove, West, Virginia.

From Mineral Mite, bulletin of the Micromineralogists of the National Capital Area, January 1990, Kathy Studinski, Editor.