



Newsletter

Of the

New York Microscopical Society

1 Prospect Village Plaza
(66F Mt. Prospect Avenue)
Clifton, New Jersey 07013-1918



September 2009

N.Y.M.S. (973) 470-8733

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Meeting Announcement

New York Microscopical Society 2009 Fall Lecture Series

The Microscopy of Manmade and Enhanced Gemstones.

Presented by Dr. Roland Scal

Date: Sunday, September 20, 2009, 2pm

New York Microscopical Society

One Prospect Village Plaza, Clifton, NJ

Many gemstones are simulated or synthesized in the laboratory. These created gemstones may fool the unwary, but they also have legitimate uses as substitutes for expensive stones. Not only are substitutes for valuable gemstones grown from scratch, they are also created by making composites. Constructed gemstones, such as doublets and triplets, will be illustrated. As well, cultured pearls have a synthetic origin. They can not easily be distinguished from natural pearls, but sectioning or X-ray analysis may be applied.

In the last 25 years, enhancement of gemstones has become increasingly common. Examples of color-enhanced and fracture-filled gemstones will be given. Many simulants are also made by using enhancement techniques.

Microscopy reveals many characteristics of synthetics and simulants. Sometimes a 10X loupe is enough; in other cases, light and electron microscopy must be applied.

Roland Scal has a Ph.D. in geology and is an associate professor at Queensborough Community College where he teaches physical geology and lectures on gems and semiprecious stones. He is a lifetime member of NYMS and has been a member of the society since 1981.

Refreshments will be available to all during the meeting-day starting at noon. Following the meeting, NYMS members and their guests are welcome to join the speaker for Dinner at a selected, local restaurant. Please contact Roland Scal (rscal@qcc.cuny.edu; 718-631-6071) by noon on Saturday, September 19th to RSVP for dinner.

Dragonfly on Lupine – image by Mel Pollinger



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The Mission of the New York Microscopical Society
is the promotion of theoretical and applied microscopy
and the promotion of education and interest in all phases
of microscopy.

Dues and Addresses

Please remember to mail in your Dues to Mary McCann, Membership Chair (see this page for address).

Junior (under age 18) \$10 Annually

Regular \$30

Student (age 18 or above) \$20 Annually

Supporting \$60 Annually

Corporate (includes one advertisement in NYMS News) \$175 Annually

Life \$300 (payable within the year)

To avoid missing notices:

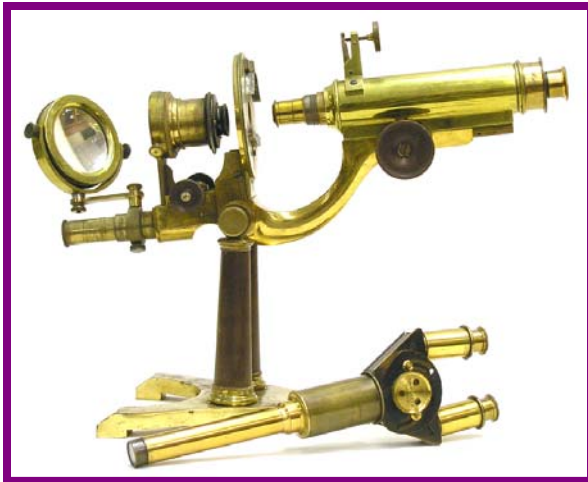
Notify Mary and me if you have changed your address, phone or email.

Alternate Meeting Notifications

Please note that due to time constraints in publishing, some meeting notices may be available by calling Mel Pollinger at 201-791-9826, or by visiting the NYMS website.

Buy and Read a Good Book on Microscopy.

**Antique Microscope (NYMS collection) shown
in the upper right corner of page one:**



Robert B. Tolles Microscope

A microscope very similar to this one from the NYMS collection is shown on page 57 fig. 106 of the catalog of the Billings Collection which was made by the Boston Optical Works (Robert B. Tolles) sometime after 1867. Robert Tolles ranks among the most innovative of the founding fathers of American microscope making. He is credited, together with Charles Spencer, with a new style of correction collar for water immersion objectives. NYMS owns a number of Tolles objectives and even by the high standards of 19th century mechanics they are just admirably executed. Tolles developed an incident light objective with a between-the-lenses reflector and, as shown in this photograph, a binocular attachment of unique prism construction with symmetrically arranged eyepiece barrels. Like all 19th century binocular tubes the prisms split rather than duplicate the objective pupil and what results is a stereoscopic effect. This binocular attachment was made on a very small scale because it was expensive to make.

Article by Jan Hinsch, photo by Mel Pollinger

Note: The microscope is signed "Robert B. Tolles, Boston."

BioBus/NYMS Outreach in the Bronx: Open the file on the NYMS website to see the video (10 second commercial precedes) and read the entire story.

In looking over the NY1.com website, I did not see any regular section on kids and science. Therefore, in hopes that such a section could be seriously considered by NY1.com, I recently emailed the following to them:

"I would like to see a regular section on "Kids and Science," especially in the light of sidewalk-type science events supported by the New York Microscopical Society

and the BioBus. These non-profit groups travel around the city with the intention of opening the minds of children to the wonders of the unseen world as seen through many different kinds of microscopes. These hands-on events are both fascinating and inspiring to youngsters about to enter a world in dire need of doctors, scientists and teachers, but more than that, it's lots of fun!"

In my opinion, more such requests and notices of events should be sent to the media by our publicity chair and other NYMS members. Mel

NYMS Summer 2009 Picnickers



(Jan took the photo.)

The picnic was held, this year, at the beautiful home and gardens of Jan & Wiebke in Woodcliff Lake, N.J.



Wiebke handled the impressive spread of food (including homemade potato salads that I indulged in way too much); Mel was on beverage duty. Jan, of course, handled the microscope demonstrations in the garage (out of the rain) and the instruction on mounting techniques for thick live specimens and time-lapse imaging of cytoplasmic streaming in Elodea. Roland

got the picnic off the ground in the first place and managed the followup information and emails. Thanks Roland!

Reported in brief by Angela V. Klaus and Mel Pollinger (see nyms.org for photo montage).

Then there was the hydra that declared bankruptcy, because he had overextended himself. mp

**New York Microscopical Society
Bernard Friedman Memorial Workshops
Use of the Microscope**

October 3,10,17,24, 2009

A basic course on light microscopy which will cover the following topics:

Theory of microscopy, Kohler Illumination
Diffraction Theory, Contrast Methods
Polarized light, Phase Contrast, Interference
Hoffman contrast, Rheinberg, Dark-field & oblique
Illumination, etc.

Contact Don O'Leary or see nyms.org for details.

To Order Your NYMS Lapel Pins



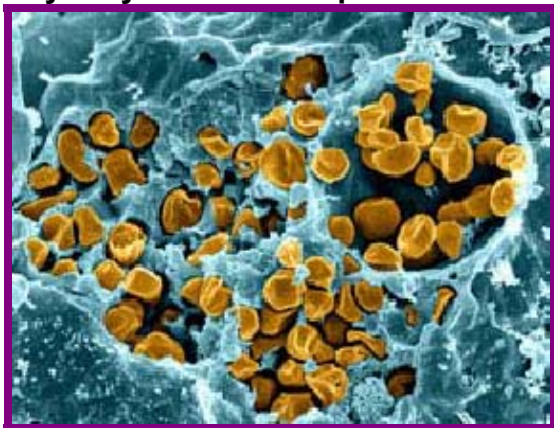
Send a check in the amount of \$12.00 per pin to New York Microscopical Society, c/o Mel Pollinger, 18-04 Hillery Street, Fair Lawn, NJ 07410. To avoid shipping & handling charges, pins may be purchased directly at any NYMS meeting for \$10.00.

Answer To Summer 2009 Mystery Photo



Correct answer from Hal Sherman: Two [upper front teeth] and the space (gum) in between. Image by Mel Pollinger

Mystery Photo for September 2009



Call or email Mel Pollinger with your guess.
(201)791-9826, pollingmel@verizon.net

From the Editor

For those members having access to email, it is a distinct advantage to receive your newsletters electronically. For one thing, email newsletters allow those members to receive additional material that cannot be sent by a standard newsletter paper mailing. NYMS has many old issues of newsletters, technical papers, images, etc. that are presently being scanned and available by email along with the newsletter. To try and send these extras by paper mail would be a financial and production disaster. If you receive email, electronic copies are definitely to your advantage. It is easy to convert from paper to email; just write to me at pollingmel@verizon.net and I will do the rest. You'll be glad you did! Mel Pollinger



**Need a Microscope or part?
Visit NYMS' Surplus Department when you visit
NYMS headquarters in Clifton, New Jersey.**

Library News

NYMS library is nearing completion in the electronic listing of all of its books. When this is completed (probably in a few weeks), NYMS will start offering its duplicate books to its members. To help expedite this project, we can use some volunteers from the membership. The work would involve transferring specific books from their present locations to a bookcase set up for sales. If you are interested in helping, please contact Mel Pollinger at:
(201) 791-9826 or pollingmel@verizon.net.

Got something you want to sell, trade or publish in the Newsletter and/or on the website? Write, call or send an email message to:
201-791-9826 or pollingmel@verizon.net (images accepted)

or
Mel Pollinger, Editor
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Regarding how you can receive future newsletters, you may choose one of the following methods:

1. Regular mail, folding may damage images: Do nothing.
2. Email with undamaged full color images, pdf file: Needs your active email address.