Recent Microscopy Experiences in Education at the American Museum of Natural History

There has been some fun microscope work at the Museum over the past year. We work with a wide variety of audiences, from City Librarians to family groups with young children. From a couple students in a “Making” environment to 1200 people participating in a family event. In these various programs we use a variety of microscopes, tools and objects to observe. Join us at the Museum for a sampling of some of these activities. It will be a great opportunity to think about outreach opportunities for NYMS outreach and perhaps brainstorm some new possibilities.

The format for the day will include some hands-on stations around:
- students making microscopes from glass, brass, and wood,
- Darwin’s microscopy on the Beagle and at Down House and
- some fun tools and objects that we use with family engagement activities.

Date:
   Sunday, May 21, 2017
Time:
   1:00-2:30
Location:
American Museum of Natural History
Davis Classroom East

Enter through the Main Security Entrance below the main stairs on Central Park West. (That is very important, otherwise someone is going to want them to buy a ticket.)

Jay Holmes is an educator at the American Museum of Natural History, where for 22 years he has had the opportunity to explore the world with learners of all ages. From the iconic exhibits, to Central Park to the Galapagos Islands, he enjoys thinking about the natural world, our interactions with it and our understanding of it. His fascination with microscopes and the microscopic world started in elementary school, and exploring pond life under the scope has never ceased to amaze him.
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.

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 emailing: pollingmel@optonline.net

Buy and Read a Good Book on Microscopy.

Please remember to pay your dues

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.

Awards Given by the New York Microscopical Society
The New York microscopical Society takes great pleasure in recognizing and rewarding individuals who have contributed to either the activities of the society or to furthering microscopy. These awards are described in our website and in a pdf file for our email newsletter recipients. All members are eligible to nominate individuals for these various awards, and are encouraged to do so. John A. Reffner, Awards Committee Chairperson

Awards Committee
Chair: John A. Reffner
Members
Jan Hinsch
Peter Diaczuk
Angela Klaus
John R. Reffner

The New York Microscopical Society Board of Managers
(Officers Term 2016-2017)

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Vice President, Program Chair, Roland Scal, rscal@qcc.cuny.edu; (718)631-6071, Manager 2016-2019
Treasurer, Mel Pollinger, pollingmel@optonline.net; (201)791-9826, Facilities, Editor, Librarian. Mgr 2014-17
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Manager, 2016-2019 Seymour Perlowitz perlowitz@hotmail.com; (718)338-6695
Manager, 2016-2019 Peter Diaczuk pedicoplanb@gmail.com; (212)237-8896, Past President
For additional information contact the Editor: Mel Pollinger at (201) 791-9826, pollingmel@optonline.net

Dues and Addresses
Please remember to mail in your Dues to:
Mel Pollinger
Treasurer, NYMS
18-04 Hillery St.
Fair Lawn, NJ 07410-5207

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 Mel Pollinger if you have changed your address, phone or email.
NYMS Activities (From B.O.M. minutes)

Monthly Members Meetings: We discussed September meeting, October meeting plan, EAS plans, the Annual / Winter Holidays Dinner, and plans for future meetings through May 2017.

Education: We discussed and approved NYMS' Board and workshops-instructing participation at the spring 2016 SCONYC conference we co-sponsor, and NYMS' summer 2016 Law Enforcement workshop (well-attended, and net $600 to NYMSI), and NYMS' first workshops at STANYC's fall 2016 STEAM teachers conference, and NYMS' no-cost co-sponsorship with NYCF of a fall MicroFader Testing workshop, NYMS' $500 co-sponsorship of an EAS Introduction to IR Spectroscopy Short Course, and ongoing development of NYMS courses.

Member and Manager lectures: We mentioned an Entomological Society microscopy lecture at AMNH, and placing an Ent Soc link on our website.

Outreach: We discussed NYMS Education activities with SCONYC, NYCF, STANYS and Ent Society, and that Guy Debaere and John Scott enabled a Manhattan elementary/secondary school's to use NYMS microscopes in a program one weekend. We also discussed past outreach efforts, and Jay Holmes mentioned that NYC's Parks & Recreation Dept has new education funding so NYMS should recontact asking to resume NYMS participation. ~John Scott, President

Scanning Electron Microscopy Course
At McCrone Research Institute, Chicago
August 21 - 25, 2017

******************************************************************************

Mystery Photo for May 2017

Cyanocobalamin is one of the most widely manufactured vitamers in the vitamin B12 family (the family of chemicals that function as B12 when put into the body), because cyanocobalamin is the most air-stable of the B12 forms. It is the easiest to crystallize and therefore easiest to purify after it is produced by bacterial fermentation, or synthesized in vitro. It can be obtained as dark red crystals or as an amorphous red powder. Cyanocobalamin is hygroscopic in the anhydrous form, and sparingly soluble in water (1:80). It is stable to autoclaving for short periods at 121 °C (250 °F). The vitamin B12 coenzymes are unstable in light. After consumption the cyanide ligand is replaced by other groups (adenosyl, methyl), which are the biologically active forms. The cyanide is excreted. ~Wikipedia

******************************************************************************

Cyanocobalamin crystallizing from water
Photomicrograph by Mel Pollinger

Upcoming events are noted on the NYMS website and the NYMS Newsletter Supplements
Visitors Always Welcome to NYMS

Although most of our lecture meetings, workshops and classes are held in the NYMS Clifton facility on the last Sunday of the month, the building may be opened for special purposes at other times, by appointment only. For such an appointment, please contact Mel Pollinger by phone at (201) 791-9826, M-F noon to 9:30pm, or by email at pollingmel@optonline.net.

From the Editor...

if you have an email address: Getting the newsletter by email means you can receive an extended pdf version that cannot be sent by "snail mail." Even if you only continue your USPS delivery of the newsletter, NYMS needs your email address for reporting priority events and special news. Being able to contact you quickly by email means better communication between you & NYMS. Mel

Need to use a Microscope or Book?

The various microscopes and library are presently for use on the main floor of the New York Microscopical Society building in Clifton, N.J. To arrange for a visit, please contact John Scott, or Mel Pollinger (see pg 2 for details).

Microscope Cleaning Kit: Only 3 left

A complete set of tools and accessories to keep your microscope in optimum operating condition. The kit is put together by our previous Curator/Educational Chairman, Don O'Leary, and available directly from NYMS, while they last, for only $40.00 plus shipping & handling, or may be purchased at a meeting. Call or email Mel Pollinger for details (see page two for contact numbers).

NYMS microscope slide collections are available for study at meetings and by appointment.

Errata: On page 7 of the Feb 2017 extended Newsletter; The title section reads “Feb 22,” which should have read as Jan 22. Also, the March 2017 supplement page’s inadvertently unlabelled photomicrograph is of cyanocobalamin crystallizing from an aqueous solution: See pg 3.

Additional Historical NYMS Supplements

Email Newsletter recipients can also receive copies of NYMS Newsletter pdf back-Issues from 2007. Copies of older newsletters will be included in the supplement section as I convert them.

Attention NYMS Members

Got something to sell? Article to publish? Pictures for the newsletter? Looking to buy something? Want to use the library? Want to use a NYMS microscope? For any of the above, contact the Editor, Mel Pollinger.

ANSWER TO MYSTERY PHOTO ON PG3.

Reflection in water of a sign on the bank.

From: "Richard Howey" <tunicate@wyoming.com>
Subject: An extraordinary series of images by a Panamanian amateur microscopist
Page 1 of 1
4/20/2017
These are truly remarkable--I may have to hang up my camera and take up skiing. There are 6 pages here to explore.
https://www.flickr.com/photos/rogeliomorenog/

By Roger Moreno – Many more on his website

“Man was given toes as a device for finding furniture in the dark.” Unknown author

NYMS Meeting Dates

Most lecture meetings of NYMS are usually held in Clifton on the last Sunday of the months of Jan., Feb., Mar., May, Sep., Oct. Exceptions and additions will be noted in the Newsletter, or by email.

Supporting Member
Myoglobin (Rheinberg&Polarized light), 200x (P1870402)av: by Mel Pollinger
Jeremiah Lott Zabriskie, 1835 - 1910

by Brian Stevenson
last updated February, 2017

After retiring from the ministry in 1884, Zabriskie devoted considerable time to microscopy and biological studies. For at least 7 years, from 1884 until 1891, he prepared and sold microscope slides. He also served as President of the New York Microscopical Society in 1886, and afterward served both as the Secretary of that society and Editor of its journal for many years. A man of diverse interests, Zabriskie published numerous reports on a wide variety of scientific observations.

Figure 1. Dated March 27, 1888, a J.L. Zabriskie slide of transverse, radial, and tangential sections of wood from a giant sequoia tree, (Sequoia gigantea), mounted in glycerine.

WOOD SECTIONS

Chiefly of Native Trees of North America, taken from the duramen, midway between the heart and sap-wood; the three main sections (transverse, radial, and tangential), each one-quarter of an inch square, mounted under one circular cover; prepared with special reference to photography.

Price, by Check or Postal Order (Stamps for fraction of a Dollar), - - - 60 Cts. per Slide, post-paid.

LIST OF SPECIES FURNISHED ON APPLICATION.

- - - - - - -

Prepared and for Sale by

J. L. ZABRISKIE, Nyack, N. Y.

Figure 2. An 1885 advertisement for Zabriskie’s microscope slides. He lived in Nyack, New York, for several years after his retirement, then moved to his home town of Flatbush circa 1888.
Rev. J. L. Zabriskie.

Figure 3. J.L. Zabriskie, near the end of his life. From a 1910 obituary.

Jeremiah Zabriskie was born on February 3, 1835, in Flatbush, a suburb of Brooklyn (New York City) on Long Island. He was born into an established, wealthy family of that town. Jeremiah was the second of three sons. His father John B. Zabriskie, a physician, died in 1840. Records imply that Jeremiah received a considerable inheritance, as he had a personal estate of $14,000 in 1870.

He graduated from Columbia University in 1853, then studied for the ministry at Rutgers Theological Seminary (New Jersey). Zabriskie served several congregations over the next twenty-odd years, including Port Jervis, New Baltimore, and Nyack, all in New York.

Jeremiah married Sarah Lyles in 1866. The pair had three children: two girls, then a boy.

He was fascinated with biology and microscopy for some time before his retirement. In 1878, Zabriskie published an engaging account of exploring a woodland near his New Baltimore home, with details on a hatching clutch of eggs of treehopper insects.

According to a biographer, "In 1884. Mr. Zabriskie, owing to ill health, retired from active duty, and spent much time in travel". A memoriam stated, "from that time Mr. Zabriskie devoted his life to studies in natural science, principally in microscopy and the microscopic structure of insects. He was skilled in the preparation of microscopic material; made a collection of sections of wood and mounts of parts of insects”.

Professional production of microscope slides began in 1884. During that year, The American Monthly Microscopical Journal announced, “The list of wood sections prepared for the microscope by the Rev. J.L. Zabriskie includes a large number of species. Transverse, radial and tangential sections of each kind are mounted under one cover, for 60 cents per slide. A set of these preparations would certainly be interesting and
instructive to a botanist". An 1885 advertisement is shown above in Figure 2, and later advertisements are illustrated below in Figure 4.

Zabriskie explored a wide range of biological phenomena and published numerous papers. These ranged from the explosive expulsion of *Wisteria* seeds from their pods, to fungi that infect caterpillars. Accompanying illustrations show Zabriskie to have been a competent scientific artist (Figure 5). His studies of the carpenter bee *Ceratina dupla* revealed two parasitic dipteran flies that were named in his honor, *Diomorus zabriskii* and *Axima zabriskiei*.

He joined several local scientific organizations. Zabriskie served as President of the New York Entomological Society, the Brooklyn Entomological Society, and the New York Microscopical Society. He later served as N.Y.M.S. Secretary and edited their journal (Figure 6). Both Jeremiah and Sarah were members of the Brooklyn Institute of Arts and Sciences.

His advertisements indicate a move from Nyack in 1887-1888 (Figures 2 and 4). A biographer wrote, "a longing for the scenes of his early boyhood, and a desire to be among his friends, impelled his return to Flatbush, where he erected a handsome residence on what was then known as Waverly Avenue, and now as Regent Place. The interior of the house is replete with heirlooms and many interesting articles which have been handed down from his ancestors. Among them is a set of old Dutch tiles that were brought from Holland about the year 1700, and were imbedded around the arch forming the open fireplace in the old Zabriskie homestead, which stood at the corner of Flatbush and Church Avenues until 1877, when it was razed to the ground. Each tile symbolizes an event in Biblical history. In constructing the open fireplace in his newhome, Mr. Zabriskie had the tiles placed in a similar position, and above them he has placed a bronze tablet bearing the following inscription: 'Dutch tiles from the Zabriskie homestead, located for 150 years, until 1877, at N.W. cor. of Flatbush and Church Avenues, Flatbush, L.I. The tiles here set in 1886 by Jeremiah L. Zabriskie'. Mr. Zabriskie combines all the characteristics of his early ancestors, who were noted for their honesty, prudence, patience, and forbearance. He is beloved for his Christian and courteous disposition to all with whom he comes in contact".

Sarah died in 1901. Jeremiah died on April 2, 1910, "after a brief illness, in his seventy-sixth year". His memoriam in The Journal of the New York Entomological Society continued, "notwithstanding his advanced age, Mr. Zabriskie was an active member of the Society, in constant attendance at its meetings. His physical and mental powers were remarkably preserved; he took part in the 1909 Decoration Day Excursion and at the meeting of March 15, about two weeks before his death, he spoke for an hour on the anatomy of Bruchus discoideus, illustrating his remarks with lantern slides prepared by himself."

![Microscopical Preparations](http://microscopist.net/ZabriskieJL.html)

**Figure 4.** Advertisements for Jeremiah Zabriskie’s microscope slides, from 1888 (left) and 1891 (right). The 1888 advertisement made a typographical error with his middle initial.
Figure 5. Illustrations by J.L. Zabriskie from his 1885 paper on fungi that infect caterpillars and other insects. (A) "New Zealand caterpillar fungus either Torrubia Sinclairii or Torrubia robertsii"; (B) "a species native to this country, and frequently met with, is the Torrubia militaris. It infests those pupae of moths which are concealed just beneath the surface of the ground. The fruiting stem issues usually from the head, but sometimes from the articulations, of the pupa, and it rises in the air to perfect its fruit"; (C) "one more native species, the Torrubia clavulata ... It infests the coccus, or scale-insect, of the Black Ash. ... The male is a two-winged creature, which passes through its sportive life in a very short period. But the noticeable member of the family, on account of her endurance, and her attachment to her home, is the female. When very young, she fastens herself to some suitable spot on the ash twig, thrusts her beak into the bark, and lives on the sap of the plant. She now begins to be covered with a shell. This enlarges and hardens into a nearly hemispherical mass firmly attached to the twig and about a quarter of an inch in diameter. Here the insect lives and dies, without ever moving from her selected station. She is frequently affected with the fungus last mentioned, - the Torrubia clavulata - which, as autumn approaches, bursts through various parts of the rounded shell in little fruiting stems about one-tenth of an inch in length. I have collected this fungus on Haight's Island, - an island in the Hudson River, about fifteen miles below Albany, - where it appears to be quite frequent. Sometimes the fruiting stems number from fifteen to nineteen on one insect. Usually the stems are simple, slender, and curved; and the head, which is about one-quarter or one-sixth the length of the stem, is black, broadly elliptical, and crowded with the comparatively large, rounded perithecia, thus presenting the appearance of a miniature mulberry. On one specimen the stems were nearly all branched - an unusual occurrence."
Figure 6. Front matter from an 1894 issue of the Journal of the New York Microscopical Society, showing J.L. Zabriskie as both the journal's Editor and the society's Corresponding Secretary.

Resources


Flatbush of To-Day (1908) Vol. 2, page 141


Journal of the New York Microscopical Society (1894) Front matter

The Microscope (1888) Advertisement for J.L. Zabriskie’s microscope slides, Vol. 8, December issue advertisements
The Microscope (1891) Advertisement for J.L. Zabriskie’s microscope slides, Vol. 11

Schenck, P.L. (1881) Historical Sketch of the Zabriskie Homestead (removed 1877), Flatbush, L.L., self-published

U.S. census, birth, marriage, and death records, accessed through ancestry.com


Reprinted by the New York Microscopical Society with the permission of the author
A Collection of Educational Outreach Events
Photos sent in by Jay Holmes and John Scott

Photos from Family Science Night at a school
Outreach Events – pg 2

AMNH Meeting Location

Microscope Makers
NYMS Expo

From Darwin Observations

Bladderwort through a period microscope – Jay Holmes
Scanning Electron Microscopy Course
At McCrone Research Institute, Chicago
August 21 - 25, 2017

McCrone's Scanning Electron Microscopy (SEM) and X-ray Microanalysis course will prepare students to successfully handle the imaging and compositional analysis requirements of nearly any material, e.g. metals, polymers, minerals, forensic trace evidence, pharmaceuticals, etc. Techniques are presented for analyzing insulating beam-sensitive or vacuum-sensitive samples. Discussion topics include electron optics, electron-beam specimen interactions, image formation, sample preparation, and qualitative and quantitative energy dispersive spectroscopy (EDS) X-ray microanalysis. Learn more and register online

Other McCrone Courses

Select a title to read the course description and register online:

Asbestos Fiber Counting [NIOSH 582] -- May 1-5
Food Microscopy -- May 8-12
Microscopical Identification of Asbestos -- May 22-26
Inter/Micro Workshop: Image Processing and Measurement -- June 15-16
Forensic Fiber Analysis: Advanced Microscopy and Microchemistry -- June 26-30
Applied Polarized Light Microscopy (PLM) / Forensic Microscopy
-- July 17-21
Advanced Asbestos Identification -- July 17-21

View All Microscopy Courses

McCrone Microscopy Courses by Category

Asbestos, Fungal Spore, Pollen, Dust, and Other Indoor Air Quality Courses
PLM, Forensic Microscopy, and Advanced Microscopy Courses
SEM, FT-IR, Fluorescence, Raman, Sample Prep, and Other Micromethods Courses
Specialty Microscopy and Other Courses

Visit www.mcri.org for full descriptions of all courses, secure online registration, hotel information, and more.

Since 1960, McCrone Research Institute in Chicago has offered intensive courses in microscopy that emphasize the proper use of the microscope and more specialized microscopy, focusing on a particular technique, material, or field of application. All courses are hands-on, featuring lectures, demonstrations, and laboratory practice.

We look forward to seeing you in Chicago!

McCrone Research Institute: 2820 S. Michigan Avenue, Chicago IL 60616-3230
Phone: 312-842-7100

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Managers Quorum count: eight present in person or electronically at outset, one arrived later during proceedings.

Call to order: Vice President John Scott, acting as President due to ex-President Angela Klaus' resignation.

Selection of Managers for 2016-2019 term:
(All returning) Peter Diaczuk, PhD, Brooke Kammrath, PhD, Seymour Perlowitz, M Sc, Roland Scal, PhD. We discussed appointing AMNH Educator and microscopist Jay Holmes to serve out A Klaus' unexpired Manager term. All welcomed Jay volunteering to serve, but we inadvertently neglected to actually appoint him.

Managers nominate Secretary, Treasurer, Vice President, President, for 2016-2017 term
Nominated, and to be announced at October 30, 2016 Members Meeting, then elected at next Bd of Mgrs Meeting: Managers Peter Diaczuk, PhD, Brooke Kammrath, PhD, Seymour Perlowitz, M Sc, and Roland Scal, PhD, and Officers John Scott President, Roland Scal Vice President, Mel Pollinger Treasurer, and Brooke Kammrath, Secretary. All these terms would normally have begun last summer. Brooke volunteered for Presidency next term, and Pete stated he may volunteer to serve after Brooke.

NYMS Activities

Monthly Members Meetings: We discussed September meeting, October meeting plan, EAS plans, the Annual / Winter Holidays Dinner, and plans for future meetings through May 2017.

Education: We discussed and approved NYMS' Board and workshops-instructing participation at the spring 2016 SCONYC conference we co-sponsor, and NYMS' summer 2016 Law Enforcement workshop (well-attended, and net $600 to NYMS!), and NYMS' first workshops at STANYC's fall 2016 STEAM teachers conference, and NYMS' no-cost co-sponsorship with NYCF of a fall MicroFader Testing workshop, NYMS' $500 co-sponsorship of an EAS Introduction to IR Spectroscopy Short Course, and ongoing development of NYMS courses.

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NYMS membership, and Internet: We discussed needs, including website updating, esp the Events calendar.

Treasurer Mel Pollinger reported: Money Market balance ca $374,000, CDs ca $42,000, checking ca $3000.

Old Business, and then New Business None recorded

Adjournment

Respectfully submitted John Scott, NYMS Vice President, acting Pres., from scant notes
One month remaining to submit an oral abstract!
www.eas.org/asubmit

EAS Call for Papers Deadline is May 26
Submit a paper and be a part of EAS in November!

We invite you to be part of EAS's technical program Nov. 13-15, by contributing a paper for consideration for an oral or poster presentation. EAS seeks contributions from scientists in all areas of analysis, which make its program uniquely strong.

**Oral** abstracts submission closes **May 26th**
Poster abstracts submission closes **Sept. 1st**

Submit Now
Reminder: Invited speakers should **NOT** submit abstracts to EAS until requested

Check out the **April Retort** to read about all the exciting programs being planned for Nov. 13-15, 2017 at our **NEW location**: The Crowne Plaza Princeton - Conference Center in Plainsboro, NJ!

Click here to download the April Retort

**Short Courses**

EAS short courses are designed to help the practicing analyst develop new skills and enhance knowledge. Taught by experts, the short courses
emphasize practical knowledge of a variety of important topics to help one keep current with best practices and new techniques.

List of Short Courses

Technical Program
A preview of this November's invited and award sessions and speakers is now available.

We invite you to submit an abstract and be a part of our technical program. Complementary papers to the topics mentioned are especially welcome.

Invited Sessions

Exposition
Explore the wide range of products from our vendors. The Expo also offers special events, a technology tour, an employment bureau and much more.

The Expo is held November 13-15. Check out the preliminary list of exhibitors.

List of Exhibitors

VISIT OUR WEBSITE

Connect with us: www.eas.org
NEW YORK MICROSCOPICAL SOCIETY BULLETINS
The following original-print bulletins can be purchased by NYMS members. The bulletins are limited in number and can be purchased, while they last, at $2.00 each, 8 copies for $10 plus $2.00 S&H. Also, in limited supply are original-print NYMS journals, while they last at $5.00 each. The journals date back to 1896. The bulletins, Journals and other out-of-archive publications may be viewed at the NYMS Library in our building in Clifton, New Jersey. If interested in owning a part of NYMS history, please contact Mel Pollinger by email pollingmel@optonline.net or by daytime phone at (201) 791-9826.

Vol. 1 New York, N. Y., January, 1937 No.3
COLLECTING RECENT DIATOMS By JOSEPH F. BURKE
Vol. 1 New York, N. Y., February, 1937 No. 4
PREPARING RECENT DIATOMS By JOSEPH F. BURKE
Vol. 1 New York, N. Y., November, 1937 No.5
MOUNTING RECENT DIATOMS By JOSEPH F. BURKE
Vol. 3 New York, N. Y. June, 1951 No. 1
PREPARATION OF METAL FOR MICROSCOPICAL EXAMINATION
by F. Gordon Foster Fellow, New York Microscopical Society
Vol. 1 New York, N. Y., December, 1936 No.2
MAKING A ROCK SECTION
By GEORGE E. ASHBY
Vol. 1 New York, N. Y., February, 1936 No.1
THE MYCETOZOA
By ROBERT HAGELSTEIN
Vol. 2 New York, N. Y., April, 1944 No.1
THE HISTORY OF THE MICROSCOPE
By ROBERT HAGELSTEIN
Vol. 1 New York, N. Y., January, 1940 No.6
MOUNTING INSECTS BY THE PRESSURE METHOD, By Roy M. ALLEN
Directions to NYMS Headquarters

One Prospect Village Plaza
(66F Mount Prospect Avenue)
Clifton, NJ 07013

GPS: Intersection of Colfax & Mt. Prospect:
Latitude 40.8656 N, Longitude 74.1531 W,
GPS: Our building: Latitude 40.8648 N,
Longitude 74.1540 W

From George Washington Bridge:
Take Interstate Route 80 west to Exit 57A, Route 19 South. Take Route 19 to Broad Street and continue two lights to Van Houten Avenue. Turn Left. Go to second light, Mount Prospect Avenue and turn left. Building 66F is on the left side, one and a half blocks from Van Houton. From Lincoln Tunnel:
Follow exit road to NJ route three west. Continue to Bloomfield Avenue exit. Turn right to Circle and go three quarters to Allwood Road West. Mount Prospect Avenue is a few blocks on the right (a small street) Turn right and go to first light (Van Houton) continue. Building 66F is on the left side, one and a half blocks from Van Houton.

From North:
Take Garden state Parkway South to Route 46 Clifton Exit. On 46 Make second exit to Van Houton Ave. Continue to third light Mount Prospect Avenue and turn left. Building 66F is on the left side, one and a half blocks from Van Houten.

From Route 46 coming from west:
Take Broad Street Exit in Clifton and follow Directions above from GW Bridge.

From route 46 coming from East: Take Paulson Avenue Exit in Clifton and follow to Second light, Clifton Ave turn right. Go to next light, Colfax, turn left, go three blocks and turn right on Mount Prospect Ave. Building 66F is half block on right.

Public transportation from NY:
Take NJ Transit train from Penn Station to Secaucus Transfer Station. Change trains to Bergen Line to Clifton (call NJ Transit for schedules). From Clifton Station cross under tracks to first street and go left one block to Mount Prospect Street, turn right and Building 66F is one half block on Right.

If you plan to come by bus or train, please copy the links below into your browser:
http://www.njtransit.com/sf/sf servlet.srv?hdnPageAction=TripPlannerItineraryTo
http://www.njtransit.com/sf/sf servlet.srv?hdnPageAction=TrainTo
New York Microscopical Society Items For Sale
29-Feb-2016

N.Y.M.S. Microscope Covers

<table>
<thead>
<tr>
<th>Item #</th>
<th>Size</th>
<th>Member Price</th>
<th>List Price</th>
</tr>
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<tbody>
<tr>
<td>MT-003</td>
<td>Small Microscope or Stereo, 15&quot;W x 17&quot;H</td>
<td>$18.00</td>
<td>$20.00</td>
</tr>
<tr>
<td>MT-004</td>
<td>Lab Microscope or Large Stereo, 20&quot;W x 18&quot;H</td>
<td>$23.00</td>
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<tr>
<td>MT-005</td>
<td>Large Lab Scope, 22&quot;W x 21&quot;H</td>
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<td>MT-009</td>
<td>Large Lab Scope with Camera, 9&quot;W x 19&quot;Deep x 23&quot;H</td>
<td>$31.00</td>
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<tr>
<td>MT-010</td>
<td>Universal Scope with Camera, 11&quot;W x 25&quot;Deep x 23&quot;H</td>
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N.Y.M.S. Microscopes (see below for images)

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<th>Model</th>
<th>Description</th>
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<td>131</td>
<td>H.S. Student Microscope</td>
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<td>131-FLU</td>
<td>H.S. Student Microscope (Fluorescent)</td>
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<td>125-LED</td>
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Other Items

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<td>NYMS Patch</td>
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<td>Microscope Cleaning Kit*</td>
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<td>NYMS Lapel Pin</td>
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<td>Rotifer Book by Howard Taylor</td>
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*When available

Model 131: Tungsten
Model 131-FLU: Fluorescent
Model 185: 20x
Model 125-LED Cordless
I hereby apply for membership in the New York Microscopical Society

<table>
<thead>
<tr>
<th>Name: (Dr., Ms., Mr.)</th>
<th>Nickname</th>
</tr>
</thead>
<tbody>
<tr>
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<tr>
<td>Work: Company</td>
<td>Address</td>
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<tr>
<td>Phone</td>
<td>Fax</td>
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Would you prefer to receive NYMS mail at home □ At work □ By e-mail (best way) □
Principal work or interest in Microscopy

On what topic are you available as a speaker?

Would you like information about NYMS committees? Yes □ No □ Awards □ Membership □ Education □ Library □ Finance □ Curator □ Housing □ Program □ Publications □ History □
Who referred you to NYMS?

**Academic and Honorary Degrees:**

<table>
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<tr>
<th>Degree</th>
<th>Conferring Institution</th>
<th>Date</th>
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Scientific Publications

Membership in Scientific Societies

Date of birth (optional if over 18)

I have enclosed a check for $............ to cover my application fees for membership (Annual $30, Supporting $60, Life $300 (payable within the year), Corporate $175 (includes one advertisement in NYMS News), Junior $5 (under 18 years old)). Student (over 18) $20

I understand portions of the above information may be used in NYMS publications.

I would prefer my home □ work □ address/ phone included in the NYMS Directory.

Signature ................................................. Date ..........................
Potassium iodide (Rheinberg illumination), 40x (P1930323)a6x4x200: By Mel Pollinger

Proline, 200x (P1670111)b6x4x200: By Mel Pollinger