Newsletter
Of the
New York Microscopical Society

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

February 2009 **N.Y.M.S. (973) 470-8733** **Volume 3 (23)*** **Number 2**

Meeting Announcement
New York Microscopical Society 2009 Winter Lecture Series

Date: Sunday, Feb 22nd 2009, 2pm, New York Microscopical Society One Prospect Village Plaza Clifton, NJ

Title: Focus on Fort Lee: A Key and Guide to the Micro-Minerals of Fort Lee, New Jersey

Mel Pollinger, FNYMS
Treasurer, Librarian and Newsletter editor

During the period between1961 and 1962, road construction of route 80 to connect it to the George Washington Bridge had been started. Blasting and the inevitable incursion of mineral collectors brought to light many species of minerals that had formed in the diabase of the Palisades. It was not until that material was studied under the microscope that the reality of what the Palisades had hidden from sight became evident. By April 12, 1975, the diabase traprock had given up its secrets to the members of the Micromount Study Group amongst others. Mel will present details and images representative of the vast quantity of excellent microminerals that were found during the construction.

Mel Pollinger was born in 1939 and lived in the Bronx until 1975 when he, his wife Jackie and daughter moved to New Jersey. Mel had his first microscope, a Gilbert 210x set, at the age of nine years. His growing intense interest in light microscopy and natural science led him to his position as Senior Specialist Regulatory Affairs with Boston Scientific from which he retired in January 2008 after twenty years. Mel and Jackie now have two daughters that are teachers and three grandchildren that use him as a trampoline.

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 Angela Klaus (avklaus2@yahoo.com; 201-988-6251) by noon on Saturday, Feb 21st to RSVP for dinner.

****

Collecting at Cape Ann, MA – photo by Jeff Glover

(see page 2 for alternate meeting notifications)

Save a Tree: Get The Newsletter By Email – It's Faster!

N.Y.M.S. BOARD OF MANAGERS

President
Peter Diaczuk, exp. 2010
John Jay College
445 W 59th Street
New York, NY 10019
Department of Sciences
212-237-8896
pdiaczuk@jjay.cuny.edu

Vice President
Angela V. Klaus, Ph.D., exp. 2009
Department of Biology
Seton Hall University
400 South Orange Ave
South Orange, NJ 07079
klausang@shu.edu

Treasurer, Librarian & Newsletter Editor
Mel Pollinger, 2011
18-04 Hillery Street
Fair Lawn, NJ 07410-5207
(201) 791-9826, pollingmel@verizon.net

Secretary
No information
No information
No information
No information
No information

Past President
Pauline Leary, 2011
Smiths Detection
21 Commerce Drive
Danbury, CT 06810
(203) 207-9754
Pauline.Leary@smithsdetection.com

Past President
John A. Reffner, Ph.D., exp. 2011
John Jay College CUNY
97 Ocean Drive East
Stamford, CT 06902
(203) 348-8098, jareffner@cs.com

Curator & Education Chair
Don O'Leary, exp. 2010
10 Sampson Street, Unit 113
Saddle Brook, NJ 07663
(201) 368-8849
dkoleary@verizon.net

Membership Chair
Mary McCann, exp. 2009
McCann Imaging
161 Claflin Street
Belmont MA. 02478
(617) 484-7865 Fax (617) 484-2490
mccanns@tiac.net

Webmaster
Roland Scal, Ph.D., exp. 2010
Dept. Biological Sciences & Geology, M-213
Queensborough Community College
222-05 56th Avenue
Bayside, NY 11364-1497
Tel 718-631-6071
Fax 718-631-6678
rscal@qcc.cuny.edu

Board Member
Gary Mayer, exp. 2011
mayer@co.somerset.nj.us

Board Member
Seymour Perlowitz, exp. 2010
perlowitz@hotmail.com

Board Member
Craig Huemmer, exp. 2009
craig.huemmer@jjay.cuny.edu

Archivist & Associate Curator
John Scott

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 (less than 18 years old) $10
Annual $30 (students >=18 years old $20)
Supporting $60
Life $300 (payable within the year)
Corporate $175 (includes one advertisement in NYMS News)

To avoid missing notices:
Notify Mary 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) as shown in the upper right corner of page one:

Monocular, polarized light microscope, SN 146775, ca 1911

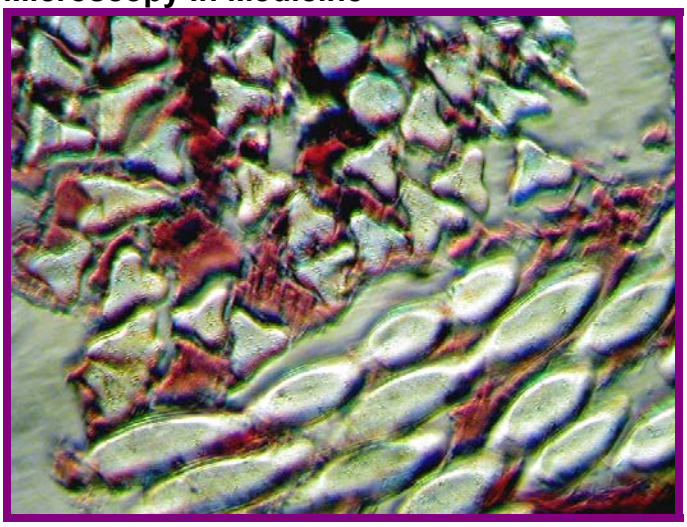
Continental type, single pillar with inclination joint. All brass construction clear laquered except for the substage which is nickel-plated. Cast iron horseshoe base, black enameled. Rotating stage, 1 degree divisions and veneer. Signed Ernst Leitz, Wetzlar. Height 335 mm with drawtube set at 170mm. Analyzer (prism) on slider. Condenser with swing-out front lens, R&P height adjustment. Prism polarizer in cylindrical sleeve, rotatable with markings at 0-90-180-270 degrees. Drawtube with receptacle for Bertrand lens on slider. The draw-tube permits focusing of the Bertrand lens. Lambda and lambda/4 plates to fit compensator slot, which is E–W oriented above the objective. Objective 10:1. Eyepiece #1, registration pin, focusable eye lens, Huygens 5x, crosses lines made from spider web.
This microscope was missing an objective, lambda & lambda/4 plates, and a Bertrand lens. For the photograph these were borrowed from a companion microscope

Note on technical details:
The objective is screwed into a changer ring, which is held by a centering clutch at the bottom of the tube. The axes of the centering screws are at 90 degrees and act against springs located at diametrically opposed points. The centering action therefore can always be resolved into two linear, perpendicular directions, which makes the procedure predictable and intuitive. This method was introduced in 1908 and was succeeded by a later design (Berek 1925) where the centering screws are part of each collar and no re-centering is necessary when the objectives are changed. Even when nosepieces with centerable holes became available the clutch remained a popular option for U-stage work and the use of long compensator wedges, which can protrude to either side of the slot without restraint. With the atrophy of analytical uses of the polarizing microscope the clutch, along with many accessories, became extinct.

NYMS owns 6 of these instruments and I look at them as tokens of the dedication to discourse and teaching all things microscopical by members of nearly a century ago.

(Text by Jan Hinsch, Image by Mel Pollinger)

Microscopy In Medicine



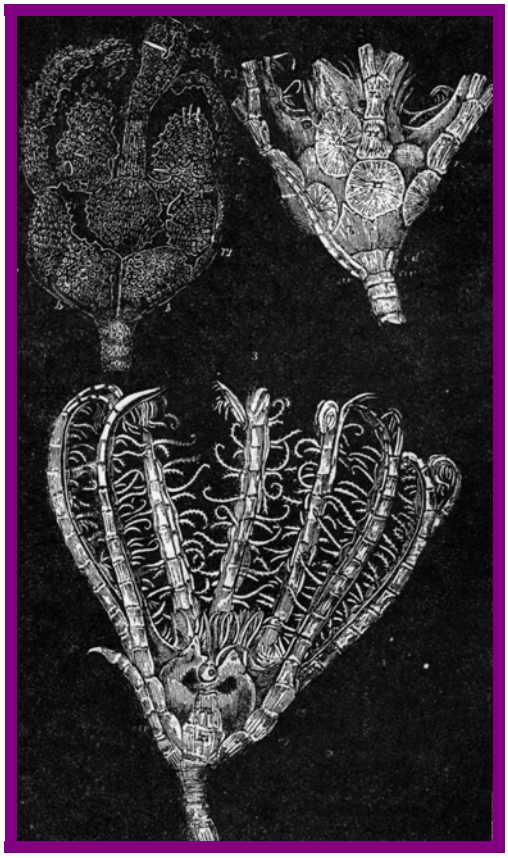
Vascular grafts are medical devices used for treating certain types of vascular disease such as abdominal aortic aneurysms. An aneurysm is a ballooning out of an artery and can be caused by a localized weakening of the arterial wall which may be due to blockage. When an artery becomes aneurysmal, its walls can get extremely thin and may burst, causing hemorrhage and death. If the aneurysm is discovered in time, the life-saving vascular graft can be sewn inside the diseased artery that has been precleaned of debris, clots and any other occlusive material. The above image was made from a prepared slide of a cross-section of a surgically explanted textile vascular graft (synthetic artery). The spindle and the tooth-shaped objects shown are two types of yarns that were used together to create the synthetic arterial graft. The dark material in between the yarns is arterial tissue. The section is stained with hematoxylin & eosin.

Digital photomicrograph taken at 400x with an Olympus Camedia D400Z digital camera, at full optical zoom, attached directly to the eyepiece of an Olympus BH2 microscope using oblique Rheinberg illumination.

Article and image by Mel Pollinger
(Reprinted with permission)

Speaker John Scott, Meeting on February 01, 2009

Pentacrinoid Larva of Antedon



A drawing of the skeleton of early Pentacrinoid under both dark-field illumination and incident-light, showing its components, articulations, bifurcations and projections. (From "The Microscope and it's Revelations" by William B. Carpenter, Sixth Edition, Volume II, 1883, Plate XXI, page 125). NYMS library No. 0041.

****

Astronomical Microscopy

Throughout the ages, astronomers and astrologers have given names to the various stars and stellar patterns seen in their night skies; Polaris in Ursa Major, Betelgeuse in Orion, Sirius in Canis Major and so on. Microscopists are also included in the night show of our universe. The image above is an artist's rendition of the Southern hemisphere's constellation Microscopium, which is located just above Telescopium (I kid you not!). Look for it on your next trip "Down Under." Mel

Answer to January 2009 Mystery photo

Correct answer is Chicken Embryo.
Winners are Jan Hinsch, Ben Glassman, John Scott, Angela Klaus

Mystery Photo – Do you think you know what it is? Email or phone me your answer. > Mel

****

Need a Microscope or part?

Visit NYMS' Surplus Department when you visit NYMS at our new home in Clifton, New Jersey.

****

Bernard Friedman Memorial Workshop
Polarized Light Microscopy
May 2, 9, 16 & 23, 2009

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
NYMS Newsletter
18-04 Hillery Street
Fair Lawn, NJ 07410

****

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.**

(Read more about Joe Orosz on the Website)