
NYMS



NEWS

Newsletter of the New York Microscopical Society

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Meeting Announcement

The Identification of Minerals Using MinSearch, the Spindle Stage with Polarized Light, and Excalibr

Donald B. Peck

Wednesday, March 17, 2004 - 7:30 p.m.

New York Microscopical Society

30 North Mountain Ave., Montclair, New Jersey

(for travel directions, see page 6)

Minerals have fascinated people since antiquity. Today, almost four thousand minerals have been discovered. How does one begin to identify an anonymous specimen? Professional mineralogists depend upon x-ray diffraction, electron probe microscopes, and other esoteric machines. The amateur must resort to simpler historic methods -- and occasionally some that are not so old.

Mr. Peck will describe the construction of the spindle stage and its use on the rotating stage of a polarizing microscope. It is arguably the most powerful tool available for mineral identification by amateurs. It has a unique role for professionals, as well. Mr. Peck also will demonstrate the use of Excalibr, a computer program that is used to reduce the data from the spindle stage. Further, he will show his own computer program, MinSearch. When certain mineral properties, including optical properties, are input, the program produces a list of minerals that have those characteristics.

Mr. Peck has a B.S. degree in chemistry from Bates College in Maine, an M.S. in geology from Union College in Schenectady. He also studied mineralogy and crystallography at the University of Maryland at College Park. Now retired, he taught earth science and related courses at the secondary level, at the University of Connecticut, and at Fairleigh Dickinson University. Mr. Peck has been collecting minerals for more than fifty years. The Matrix Publishing Company will soon publish his book on mineral identification.

NYMS MEETINGS ARE FREE AND OPEN TO ALL

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Next Event - April 22, Microscope Day at John Jay

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All or parts of the newsletter may also be available on the Society's Web site, www.nyms.org

The Society is a non-profit organization that is run by volunteers and supported by membership dues and donations.

"The object of this Society is the promotion of theoretical and applied microscopy

and the promotion of education and interest in all phases of microscopy." (By-Laws, page 1)

The New York Microscopical Society (NYMS) is an affiliate of the Microscopy Society of America (MSA).

Inside This Issue

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SPECIAL MESSAGE ABOUT E-MAIL

Mary McCann
Membership Chair

It would be a great convenience to be able to reach members when there are last-minute changes in monthly meeting arrangements. In addition, some members may prefer to have meeting notifications or Newsletters sent electronically. (This would also cut down on mailing expenses.) NYMS currently has email addresses for about half of our members. We would like to make that list more complete!

I will be sending out an email message the week of March 15th to determine if the addresses we have are correct. If you do not receive an email message from Mary by March 19th, and would like to have the option of receiving NYMS information by email, please send your electronic address to me at mccanns@tiac.net.

Please also answer the following questions:

- 1. Would you be interested in receiving meeting information electronically?**
- 2. Would you prefer to receive the full text of the Newsletter electronically?**
- 3. May we publish your email with your contact information in the NYMS members directory? (A few members have elected not to have any contact information published.)**

Thanks for your help!

Mary McCann

NOTICE

The March Meeting of NYMS is the occasion when the Society elects four members to the Board of Managers. All four members of the Class of 2004 offer to continue serving on the Board, and they will stand for re-election at the March 17 meeting.

MEMBER NEWS**New Corporate Member**

We are pleased to announce that **Ted Pella, Inc.** has become a Corporate Member of NYMS.

Ted Pella Inc. (www.tedpella.com) supplies tools for microscopists in science and industry. Products range from small utensils to microwave processors and vacuum equipment. Ted Pella is located in Redding California is a long time member of the Southern California Society for Electron Microscopy.

Address Change

Dan McNeil and his wife have both retired and they are moving to Virginia. In their new home Dan says he "will have a room with lots of outlets and a specially reinforced counter for my microscopes and lots of storage space." His new address is:

Dan McNeil
8401 Bethia Rd.
Chesterfield Va 23832

Article on Confocal Microscopy

The following email is from **Dr. Charles Koester**, who is a recipient of the Society's Ernst Abbe Award.

"Last year I was invited to write a chapter on 'Confocal Microscopy of the Eye' for a book : *Lasers in Ophthalmology - Basic, Diagnostic, and Surgical Aspects*, Ed: F. Fankhauser, et al., Publisher: Kugler. The book is now published, and I was given a substantial number of reprints of my chapter.

I would be pleased to send a reprint to any NYMS member who may be interested. The applications described are primarily related to examination of the cornea. But I took the liberty of suggesting some instrument improvements that can increase sensitivity and optical sectioning capability of clinical confocal microscopes. Involuntary

eyemovement by the patient is a challenge to high resolution photography. A possible method for capturing images (before they disappear) is also described."

Charles J. Koester, Ph.D.
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Ed. note: As soon as we learned of Dr. Koester's new book chapter we asked him for details to publish here. He responded by sending the above note. We would like to hear from many more members, whether professionals or amateurs.

REVIEW OF 2003 EAS

by Mary McCann

The 2003 Eastern Analytical Symposium, held November 17 to 20 in Somerset, New Jersey, provided much food for thought for microscopists.

NYMS had a booth in the exposition and **Jan Hinsch, Pete Diaczuk, Jack Hietpas** and **Meghan Miller** manned the booth. A series of digital images, compliments of **Jan Hinsch, Mel Pollinger** and **Don O'Leary**, were projected during the open hours of the exposition. New York New Jersey Scientific had the booth right next to NYMs, and displayed a number of current Olympus microscopes and cameras. One pleasant surprise at the CRC Press booth, *Color Atlas and Manual of Microscopy for Criminalists, Chemists, and Conservators* by **Nicholas Petraco** and **Thomas Kubic**, both longtime NYMS members. This book has just been published!

The NYMS Ernst Abbe Memorial Award Session at EAS honored **Gerasimos Danilatos** as the inventor of the Environmental Scanning Electron Microscope. The session concentrated on the impact of the ESEM on conservation, and materials science, with presentations by E. Doehne of the Getty Center, and Dale Newbury of NIST. NYMS member **Robert Carlton** described the importance of ESEM in pharmaceutical science.

The Abbe Award session, held on Thursday afternoon, culminated a series of sessions of particular interest to microscopists.

NYMS members contributed the majority of the papers in the Industrial Microscopy sessions. We hope this is the beginning of a tradition and we will continue to look to NYMS members for papers on applications of microscopy to Industrial problems. **Pauline Leary** and **Jennifer Giordano**, coordinated their presentations to illustrate how microscopy is used in the pharmaceutical industry for determining polymorphs chemicals for patent. Ding Jiao of Avon products presented Infra-red microscopy work on both food and cosmetic products. **Ron Mueller's** Industrial Microscopy I session included talks on thermal microscopy, IR microscopy and SEM by NYMs members **Robert Carlton, John Reffner** and **Ron Mueller**, respectively. A new technique Near IR imaging was described by Neil Lewis of Spectral Dimensions.

NYMS members organized and contributed to sessions in conservation and forensic sciences. **Larry Kobilinsky** chaired sessions on the education in forensic science, and on the Innocence Project. **John Scott** was author of the presentation, "Rusting of Sculptural Steels."

Other sessions also included topics of interest to microscopists. The Pharmaceutical and Chemical Imaging sessions arranged by the Coblenz Society had a number of papers on Near IR, IR and Raman Imaging -- and these techniques also used microscopes! Conservation papers included X-Ray microanalysis.

The strong NYMS presence among in the microscopy sessions demonstrates that EAS presents the opportunity for microscopists to talk about their work and to learn about new techniques and applications. Think about contributing a paper at EAS 2004. Contact **Mary McCann** or **Ron Mueller** about Industrial Microscopy sessions next November.

Ed note: Mary McCann was the NYMS delegate to EAS until this year, when Pauline Leary was appointed to the position. Delegates from the co-sponsoring organizations of EAS attend several planning meetings each year.

NATURAL HISTORY Reviews of a Web site of a Wooden Periodic Table and a new Book about Robert Hooke

Jean Portell

The March 2004 issue of *Natural History*, a magazine published by the American Museum of Natural History, contains several interesting articles.

In "It's Elemental" (page 70), Robert Anderson describes Web sites that will appeal to anyone with an interest in collecting and identifying minerals. Visit www.theodoregray.com to view a wooden periodic table with compartments for every element, each of which can be opened to reveal images of minerals and links to pertinent information. Mr. Theodore Gray crafted it and its Web page with great skill. The original wooden periodic table is installed at DePauw University, in Indiana.

Another site that is worth "bookmarking" on your computer is www.mindat.org. *Natural History's* reviewer calls it "the largest mineralogy database on the Internet."

In a separate article in this month's *Natural History*, Laurence A. Marshall reviews a new book by Lisa Jardine, entitled *The Curious Life of Robert Hooke: The Man Who Measured London* (HarperCollins, 2004; \$27.95). A seventeenth century man of multiple interests who was also a superb craftsman, Hooke became the official curator for the Royal Society's meetings, responsible for creating needed equipment and setting up shows. After the Great Fire of London, he was appointed chief surveyor for the city's rebuilding project. In later years he quarreled with Isaac Newton over the discovery of the law of gravitation.

Hooke is perhaps best known to NYMS members as the author and illustrator of the grand *Micrographia*, a large-format volume with fold-out drawings that was first published in 1665. (The Society owns two copies of the book, from different editions.) The original volume is available on CD-ROM from Octavo Editions at www.octavo.com.

The following information was contributed via e-mail.

BIOLOGY IMAGE LIBRARY

"We are an online biomedical publisher setting up a new biology image library. Our intention is to encourage people to make their images and movies available to the research community without losing any rights to their work, and my hope is that the library would be an ideal way for members of The New York Microscopical society to non-exclusively publish their work."

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I would rather have men ask why I have no statue than why I have one.

—Marcus Porcius Cato

Accept that some days you're the pigeon, and some days you're the statue.

—Roger C. Anderson

Directions

to

New York Microscopical Society

30 North Mountain Ave., Montclair, N.J. 07042

phone: (973) 744-0043

BY BUS Take DeCamp Bus #33 to Montclair from the Port Authority Bus Terminal. At Windows 24-28 purchase tickets (about \$5 each way) and ask for the bus departure time (and return schedule) and the gate number. A ticket is required to board the bus in NYC. Allow 10 minutes to reach the gate via a few escalators. The bus usually leaves on time. After a ride of about 45 minutes, exit on Bloomfield Ave. across from the Montclair Art Museum. The museum (a gray building with light-green roof) is on the corner of South Mountain Ave., to the left of Bloomfield Ave.; NYMS is on the right, 1 1/2 blocks up North Mountain Ave. Walk along the left side of N. Mountain Avenue to #30, which has a large lawn sloping up with a curved driveway leading to a handsome old 2-peaked building with large front porch. Enter on the side, through the kitchen.

DeCamp Bus Lines, Montclair, NJ 07042 Phone: (973) 783-7500 (Call 9a.m.-5 p.m.)
www.decamp.com

BY CAR The Montclair Art Museum's Web site has driving directions to the Museum, located at 3 S. Mountain Ave.: <http://www.montclair-art.com/info3.htm>. From the Museum, at the intersection of Bloomfield Avenue with South and North Mountain Avenues, proceed to 30 North Mountain Ave. Parking is available.

Correction

By mistake, flawed captions for the September 2003 Mystery Photos were printed in the October 2003 newsletter. Image A is "Mars rising behind the Moon" and Image B is "Diffflugidae Centropyxis."



Mystery Photos

Welcome back! See if you can identify the object(s) in the mystery photos. It may be a close-up of some ordinary object or setting, or something photographed at an odd angle, or in an unusual setting.

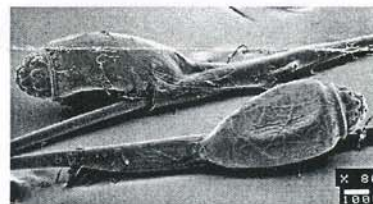


Its electrifying

Submitted by Christopher Hayden

Even if you have no idea what it is please send your comments. If you have something you would like to share, please send your mystery photos for inclusion in the NYMS newsletter.

Previous Mystery Photo



Body Louse Nits (eggs) attached to hair

Please respond to **Greg Argentieri**
gregory.argentieri@pharma.novartis.com
Phone: (862) 778-8617.