



# Newsletter

Of the

## New York Microscopical Society

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



March 2009

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

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## Meeting Announcement

### New York Microscopical Society 2009 Spring Lecture Series

**Date: Sunday, Mar 29th 2009, 2pm, New York Microscopical Society  
One Prospect Village Plaza, Clifton, NJ**

**Title: JEWELS OF THE NYMS MICROSCOPE COLLECTION**

**Mr. Jan Hinsch, Director, Leica, Retired**

The great microscope collections, such as the Billings collection in Washington DC or the Optical Museum in Jena, Germany have well over 100 microscopes on display which systematically trace the development of the instrument. The hand of a curator who turns the individual pieces into a meaningful collection is evident.

The NYMS collection is different. Its pieces come from our members who donated their prized possessions. The result is a deliciously haphazard candy store of wonderful things microscopical. Historians a few hundred years from now will have a field day sorting out this junkyard of microscope history. For the meeting on March 29 we will display some of our most remarkable antique instruments and, if possible, put them on benches in working condition for all to experience and look through.

For the formal part of the meeting I have done some research into a Culpeper microscope that I would like to present. This instrument precedes the invention of achromatic microscope optics and I have documented in digital micrographs what can be done with very modest optics. The Book "The Microscope made Easy" by Henry Baker is a classic from 1769 and it features a Culpeper microscope that is rather similar to ours. I have augmented my talk with many of the fine illustrations from this book, which is part of our rare book collection and will be on display as well.

CV Jan Hinsch: Joined Leica/Leitz 1958, retired 2003, Immigrated to the US 1964, lived in Durham NC, Washington DC, 1978 Moved to NJ 1978, appointed director of the Leitz Microlab, Member of NYMS, 1995 Ashby Award, 2002 Ernst Abbe Award, shared with Mortimer Abramowitz and Ernst Keller

**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, Mar. 28th to RSVP for dinner.**

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#### Golden Blades of Rutile as Inclusions in a Quartz Slab



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### **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  $\geq 18$  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) shown in the upper right corner of page one:**

### **A Culpeper Microscope in the NYMS Collection**



The society owns two microscopes that are representative of 18<sup>th</sup> Century design. One pictured here, a so-called Culpeper microscope (Edmund Culpeper 1660-1740), is remarkable for its excellent condition and completeness of components and accessories. It is also historically interesting because the optics are from the pre-achromatic era and provide a point of reference by which to gauge the spectacular progress that achromatic optics delivered. A number of specimens on ivory sliders are among the accessories. The objects, such as insect parts, fish scales etc are dry mounted between mica disks and give no inkling of the development of micro technique that lay ahead and contributed just as much to the power of microscopical investigation as did the advances in optics.

Culpeper introduced 3 variants of his instrument beginning ca 1720. Around 1790 the cardboard tube of the original gave way to an all brass revision. In its final stage a rack & pinion was added for focusing to replace the sliding action of its predecessors. The instrument in NYMS collection is of that last type.

The NYMS microscope is labeled inside the case William Harris & Co, London. Mr. Harris who, after working for Sir David Brewster, went into business for

himself from 1816 – 1839. So, while the manufacturing date most likely makes this an early 19th century instrument its technology, style and performance is firmly rooted in the 18<sup>th</sup> century. The Billings collection catalog shows a total of 8 brass Culpepers made from 1745 to after 1800 by several different manufacturers; it deserves the additional distinction of being an early



consensus microscope, a classic if you will, like, for example, the horseshoe microscope of a much later period.

What signifies any Culpeper microscope is the rotational symmetry about the optic axis,

which lends stiffness to the design as compared to previous ones. Also, the instrument having a distinct substage section makes it suitable for transmitted as well as incident light illumination. The base holds a spherical mirror of an aperture of ~ 0.2 which equals or slightly exceeds the moderate apertures of the objectives.



There are four objectives of single element design, which provide total magnifications of 32x, 40x, 58x, and 322x. The eyepiece is non interchangeable with a two element eye lens and an additional field

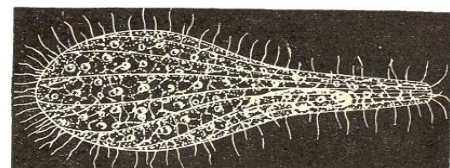
Fig. 1

lens. The base houses a drawer with accessories for incident light illumination (Lieberkühn mirror), a fixture to hold small fishes for the observation of blood circulation.

Brass plaque on top of the wooden base engraved:  
In memory of  
Herbert B. Baldwin  
President to the New York Microscopical Society  
New York  
by his family – Oct 8<sup>th</sup> 1939

**Text and Culpeper photomicrograph of Coleoptera dytiscidae (fig. 1) by Jan Hinsch. Other images by Mel Pollinger**

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**"Between The Tides" Library Ref: NYMS5047**



## From The Editor

### Use The Facility

NYMS members have a wealth of microscopes to use and to view. All that is needed is to call Curator Don O'Leary or Librarian, etc., Mel Pollinger for an appointment and the doors will be flung open. Some of our members have already made good use of the microscopes for their own purposes, commercial, medical research and/or undergrad projects.



Some just like to look through the prepared slide collections. Others have meandered through the multitude of scopes and parts available for purchase. Thousands of microscopy-related books, manuals, images and prepared microscope slides are

housed at NYMS just for the sole purpose of being viewed and used by its members.

### Email for the Newsletter

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](mailto:pollingmel@verizon.net) and I will do the rest. You'll be glad you did.

Mel Pollinger

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**Micro-Minerals, etc.** Anyone interested in micromount minerals may want to consider visiting the following upcoming show in mid-March.

**Mar. 14-15: Clifton, NJ: 19th Annual Show for 2009:**  
*Sponsored by the North Jersey Mineralogical Society, and held at the Pope John Paul II Elementary School, 775 Valley Rd. Clifton: Sat. & Sun. 10-5.; adults \$5, seniors \$3, children over 12 \$2; gems, jewelry, minerals, meteorites, fossils, crystals, New Jersey and worldwide specimens, fluorescent minerals, spheres; for information contact Robert Horn, 411 Mansfield Village, Hackettstown, NJ 908-813-0808; e-mail: [Mineraldog@Comcast.net](mailto:Mineraldog@Comcast.net).*

### Answer to February 2009 Mystery photo



Frost on the edges of a maple leaf. Photo by Barry Jansen. No winners.



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

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

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**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](mailto:pollingmel@verizon.net) (images accepted)

or  
Mel Pollinger, Editor  
NYMS Newsletter  
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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.