



Newsletter

Of the

New York Microscopical Society

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



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Meeting Announcement

New York Microscopical Society 2009 Spring Lecture Series
Date: Sunday, May 24th 2009, 2pm, New York Microscopical Society
One Prospect Village Plaza, Clifton, NJ

Title: The BioBus
A Mobile Microscopy and Computer Laboratory

Dr. Benjamin J. Dubin-Thaler, Ph.D.
Founder and Chief Scientific Officer, Cell Motion Laboratories, Inc.

Abstract

Cell movement is essential to all life, from bacteria and protozoa to plants and animals. Crawling motility, also known as amoeboid motility, plays a central role in human development and tissue maintenance, while abnormal movement can lead to cancer and other disease. Here I present data from both light and electron microscopes to reveal the exquisite clock-work machinery by which cells move in response to chemical and physical stimuli. In addition, I will introduce the BioBus, a mobile microscope laboratory that leverages the beauty of live cell microscopy to inspire a new generation of microscopists. Following the lecture, I hope the audience will help me brainstorm new ways of sharing the wonder of microscopy with the public on board the BioBus.



Biographical Information:

Ben Dubin-Thaler completed his BA in Physics and Mathematics ('00) and his Ph.D. in Biological Sciences ('07) at Columbia University. His original research has appeared in the journals *Cell*, *Physical Review Letters*, and *Biophysical Journal*. He received a Kirchstein-National Research Service Award for his research and has received numerous awards from Columbia University recognizing his outstanding contributions to both research and teaching. Following graduation, Dr. Dubin-Thaler founded an educational non-profit, the Cell Motion BioBus. The BioBus is a mobile microscope and computer lab built inside a 1974 transit bus. "Dr. Ben" drives the BioBus to schools, festivals, and museums in the New York City area and across the country, providing hands-on, microscope-based science classes to underprivileged students.

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, May 23rd to RSVP for dinner.

Images 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 (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) shown in the upper right corner of page one:



Smith, Beck & Beck, London, England; Compound Monocular Microscope; circa 1865.

This microscope is illustrated and described by its maker Richard Beck in his book "The Achromatic Microscope" of 1865. The catalog of the Billings collection shows a sample from ca 1862 on page 54.

What I find interesting is the mechanical tube length of ca 160 mm at a time when "real" English instruments tended to be of 250 mm tube length. The author explains that this microscope is the result of an all out attempt to reduce the instrument to its essentials without sacrificing its utility or versatility with the aim of reducing the cost. He calls this model the "Universal Microscope", perhaps to preempt the notion that this is an inferior instrument.

A single pivot point has replaced the compass joint; the focusing mechanism incorporates a chain drive. Beck points out the convenience of use and the anatomically favorable positioning of the controls resulting from this novel design.

This validity of Beck's approach becomes apparent if we compare his to the continental microscopes of the period, which laid the foundation for the microscope to become the most important tool of biology.

By Jan Hinsch, image by Mel Pollinger.

Note: The microscope is signed on the base, "Universal Microscope, Smith, Beck, & Beck, London, 5570."

The Earth Fair at Grand Central was an eye-opener. What a lively free event! This is the second year BioBus participated, and on Friday it was very popular. That day I volunteered from 11 a.m. to 7 p.m. with an hour off for lunch (during which a man at the Audubon-NYC booth and I talked of possibly collaborating with NYMS on a project). There were few lulls between surges of school children and adults curious about the newly donated Olympus stereo dissecting 'scope linked to a digital

camera and monitor that Ben set up on a table beside the BioBus. Many lingered, waiting in line to tour inside. Whenever appropriate, I told passersby about NYMS. At closing time we were turning people away.

Cheers,
Jean Portell

Microscope Day At John Jay A Huge Success

I just wanted to say that for me, Microscope Day at John Jay was a real pleasure! Pete and everyone else involved did a great job. The talks were great, NYMS was very visible and a lot of students attended as well.

Good demos, great talks, good food, and pleasant company, what more could one ask for?

I say congratulations to everyone for a spectacular Microscope Day!

Roland Scal

Email for the Newsletter

For those members having access to email, it is a distinct advantage to receive your newsletters electronically. For one

Email Notices

We need your active email address if you wish advance notification of special NYMS events.

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

Lapel Pins Are Here

The Society's long awaited lapel pins will be available to members in about two weeks. The pins are \$10ea plus \$2.00 S&H if mailed. The pin is 22mm in diameter, antique bronze over brass with a deep blue enamel inlay.

Send checks to:

New York Microscopical Society, c/o Mel Pollinger
18-04 Hillery Street, Fair Lawn, NJ 07410-5207



For Sale

Blue-M OV-12A Convection Chamber/Clean Room Oven
See Website Classifieds, or contact editor, Mel Pollinger.



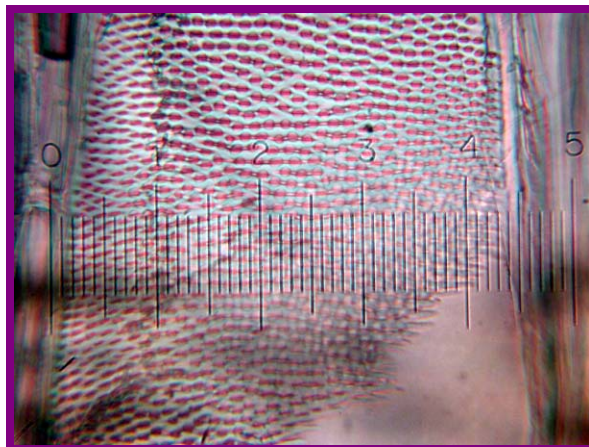


“Break Time” during Microscope Day lectures at John Jay College.

Answer to April 2009 Mystery Photo



Dave Stadden sent us this dramatic image of a crossed polarized (+ full wave plate) view of the .22 caliber, ballistic impact zone in a plastic face shield. Did you guess correctly?



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.

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.



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