



Newsletter

Of the

New York Microscopical Society

1 Prospect Village Plaza
(66F Mt. Prospect Avenue)
Clifton, New Jersey 07013-1918
GPS: Latitude 40.8648N, Longitude 74.1540W



February 2015

Editor: (201) 791-9826

Volume 9 (29) Number 2

New York Microscopical Society 2015 Lecture Series

Paleontomological Field Research by The American Museum of Natural History

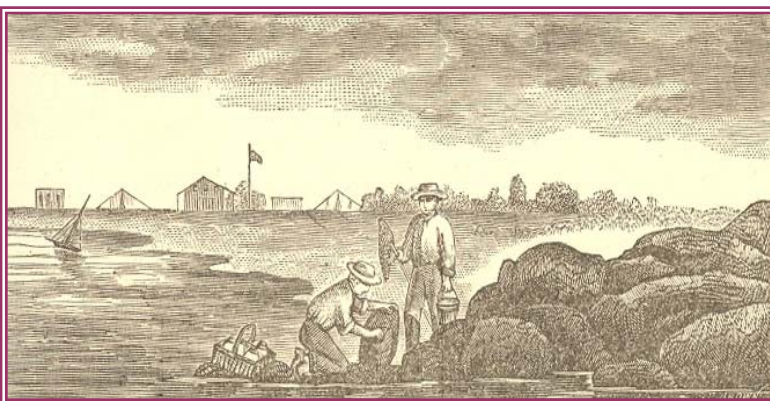
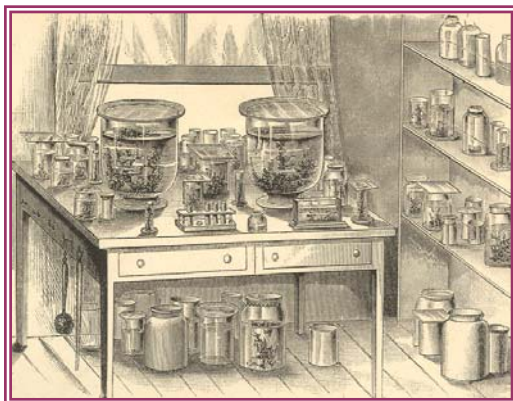
Speaker: Paul C. Nascimbene of The AMNH
Sunday, 2pm, March 1st, 2015, at NYMS in Clifton, N.J.

AMNH staff members from the Division of Invertebrate Zoology have conducted a number of expeditions and field excursions to study and collect amber in various parts of the world. In the summer of 2001, we journeyed north of the Brooks Range in Alaska to explore Cretaceous amber outcrops along the Kaolak River. We have also searched for amber in South Dakota, Wyoming, and even the wilds of New Jersey! More recently, we excavated amber from several lignite mines in central India. Paul C. Nascimbene has also personally traveled to the Dolomites of northern Italy to collect Triassic amber, and to Lebanon to study Lower Cretaceous exposures. Many of these sites have yielded important organismal inclusions. Paul will discuss the trips themselves, as well as significant discoveries.

P. C. Nascimbene conducts research at the American Museum of Natural History on ancient organisms preserved in amber and sedimentary rock, and on the botanical affinities, physicochemical characteristics and conservation of fossil resins. Fieldwork: Lower Eocene amber- India; Triassic amber- Dolomites (northern Italy); Hell Creek amber- South Dakota; Cretaceous amber- Kaolak River (northern Alaska). Also specific research on Cretaceous deposits in New Jersey, Burma, Lebanon and Ethiopia. Paul is a past President of the New York Paleontological Society.

Doors will be open at Noon. Refreshments will be available. For additional information, please contact Mel Pollinger (pollingmel@optonline.net), Home: (201)791-9826, cell (201) 314 - 1354

Woodcuts from NYMS Library



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For additional information contact the Editor: Mel Pollinger at (201) 791-9826, or 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.

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



Mel Pollinger, Editor
 18-04 Hillery St.
 Fair Lawn, NJ 07410-5207

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.



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 by visiting the NYMS website, or emailing: pollingmel@optonline.net

Please remember to pay your dues

Buy and Read a Good Book on Microscopy.

Coming Up in 2015

From the Library:

The NYMS Library contains over 3,700 cataloged volumes, among these is a full set of McCrone's Particle Atlas and copies of Microbe Hunter Magazine.

Come on down and read!

Contact: Mel Pollinger (201) 791-9826, or email Mel at pollingmel@optonline.net

Be A Volunteer – There's Always Something to do and see at NYMS.

If you wish to contribute some of your time to NYMS, please contact me at (201) 791-9826 or by email at pollingmel@optonline.net

EAS Live Webinars for 2015:

Please search on the below indicated web address and review the EAS Website below for information regarding the upcoming Live Webinars in 2015.

http://easinc.org/wordpress/?page_id=2974

NYMS Lecture Meeting March 29th at

Clifton, Speaker: Dr. Lee Karp-Boss, Ph.D. In Oceanography. Associate Professor, University of Maine.

April 15th: Forensic Course:

Announcing our first ever lecture as part of the **NYMS Law Enforcement Lecture Series**. The date is set for Wednesday April 15, 2015 from 8am to 4pm. The title of our first lecture in the series is: **BULLET RICOCHET AND CRITICAL ANGLE IMPACTS**. Our first lecturers will be our own Peter Diaczuk with John Jay College and former NYPD detective James Gannalo. The doors will open at 8am in Clifton, New Jersey with the lecture beginning at 8:30am. at NYMS in Clifton.

Contact Andy Winters, Education Chair for info & registration applications.

andrew.winter@co.middlesex.nj.us
(732) 816-3793

In Memoriam...Fred J. Smokay

Fred J. Smokay, 95, died on Saturday, March 29, 2014 of natural causes in Winter Haven, Florida. He was a resident of Haines City, Florida at the time of his passing.

Fred was born November 4, 1918 in Astoria, New York to William and Jenny (Petran) Smokay. Fred is survived by his Daughter, Diane who emailed me about his passing.

Fred Joined NYMS around 1952 and became a Life Member. While I have been Newsletter Editor, he communicated to me by phone and small hand-written notes, many of which were directed toward the membership and posted in the NYMS Newsletter. See below. Mel

TO ALL MY FRIENDS IN THE SOCIETY.
I DID A LONG WHILE AGO ENJOY
THE MONTHLY VISIT TO THE SOCIETY AND GET
UP TO DATE TO HEAR THE LATEST IN THE
ADVANCEMENT OF THE SOCIETY.
Have a Blessed
Christmas Season
HOWEVER SINCE I AM 92 IN AGE I SPEND
MUCH TIME AT HOME, AND I AM HAPPY
TO RECEIVE THE MONTHLY NEWSLETTER
THAT MEL SENDS ME. THANKS AND
BEST WISHES FOR A BLESSED
CHRISTMAS.
FREDERICK SMOKAY

(Website sent in by Dan Slatkin):

A look at a new use of light microscopes
Expansion microscopy

<http://www.sciencemag.org/content/early/2015/01/14/science.1260088.abstract>

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?

The various microscopes that are presently set up on the main floor of the New York Microscopical Society building in Clifton, N.J. are there for the use of its members.

From Gary Mayer: In need of parts for older Olympus Microscopes? Contact J.C. Ricky in Ohio at (740) 862-9252

Microscope Cleaning Kit

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 \$35.00 plus shipping & handling, or may be purchased at a meeting. Call or email Mel Pollinger for details (see page two for contact numbers).

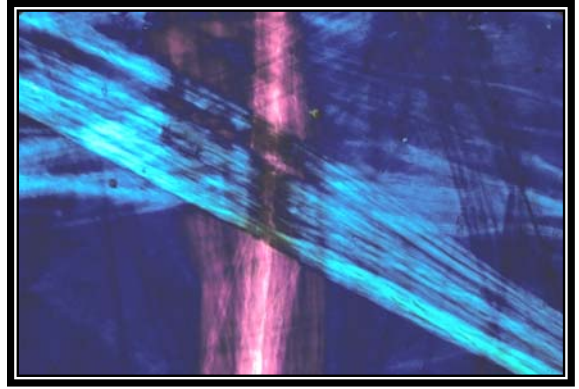
NYMS Meeting Dates

Most meetings of NYMS are usually held in Clifton on the last Sunday of the months of Jan., Feb., Mar., Apr., May, Sep., Oct. Exceptions will be noted in the Newsletter.

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

Please note that our website is presently under repair.

Answer to Mystery Photo for Jan 2015



Did you guess correctly? Collagen (Beef collagen fiber bundles under crossed polars. Magn. 100x). Preparation & image by Mel Pollinger

Mystery Photo for February 2015



Want to take a guess? Send it to me by email or call me: pollingmel@optonline.net, (201) 791-9826

Additional Historical NYMS Supplements
Email Newsletter recipients will also be getting copies of NYMS Newsletter pdf back-Issues from 2007. Copies of older newsletters will be sent 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.



Supporting Member

NYMS Extended Feb 2015 Newsletter Section

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 74.1531W,
GPS: Our building: Latitude 40.8648 N,
Longitude 74.1540 W**

In This Section:

- Article: Jay Holmes, Lace Bugs
- Previous Lecture Images
- Event: SCONYC
- Lecture: 29Mar2015
- Course: NYMS at Clifton
- Course: McCrone
- Links: From Jay Holmes
- NYMS Items for Sale
- Membership Application
- Last page images

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=BusSchedulesP2PTo
http://www.njtransit.com/sf/sf_servlet.srv?hdnPageAction=TrainTo

Lace and capsules

By Jay Holmes

I was surfing around a few months back and ran across an amazing image of a Sycamore Lace Bug by Dr. Igor Siwanowicz < http://photo.net/photodb/photo?photo_id=15808533>. True bugs, from the order Hemiptera and suborder Heteroptera are an interesting group. They include the stink bugs and one of my favorites since I was very young, the Ambush Bug. They have an articulated straw-like sucking set of mouth parts. Some use this arrangement for sucking fluids from plants, others for sucking fluids from other insects. And yes, some, the bed bugs, extract fluids from mammals.

Lace Bugs extract fluid from the leaves of plants. I did a little research to find out more, and it seemed that they can be pests in your garden, one in particular seemed to get a lot of attention, the Azalea Lace Bug – *Stephanitis pyrioides* (Scott), from the Ag Schools. We have plenty of Azaleas and rhododendrons in our area so I figured I would look into these guys.

They are small, about 3-4 mm in length and they like the under sides of leaves, so they might not be so easy to spot, but the signs of their feeding help. As they pierce the leaves and extract the fluid, they cause a browning and in some cases blackening of the leaf, seen from the upper surface. They seem to focus along the mid rib of the leaf. So on August 29, 2014, off Tina and I went, aspirator in hand, to see what we could find.

I spent a lot of time looking at some of the smaller varieties of azaleas in our park, with no luck. Then I swung around to the point where I started (and Tina was waiting patiently on the bench), and there on one of the larger leaved varieties, were some big damaged patches on the leaves. I am pretty sure I looked at these on the first pass through, but I looked again.



I flipped a few leaves and then!

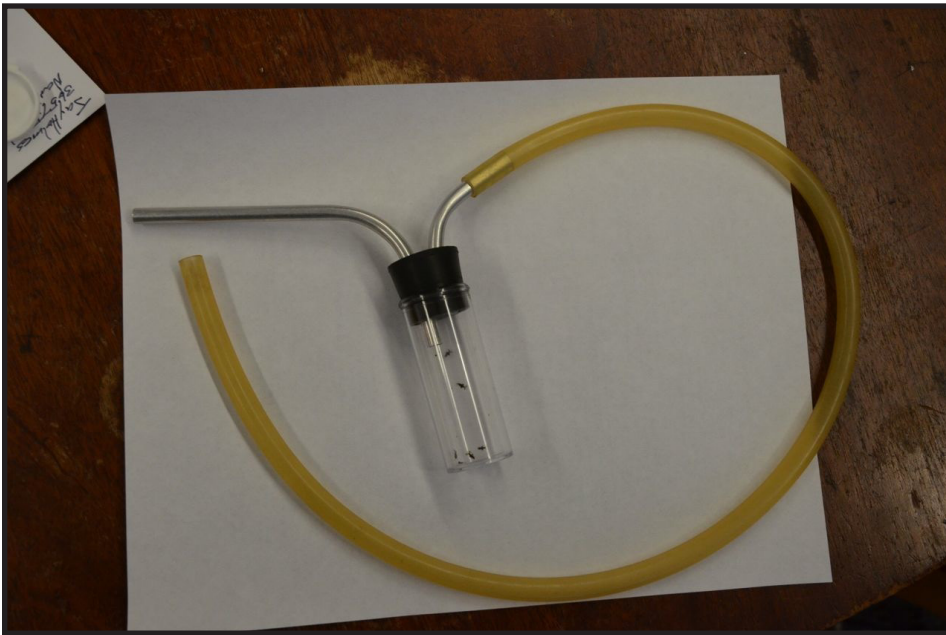


There they were! Their wings are largely transparent so, visually, they are smaller than their absolute dimensions would lead you to believe.

In some areas there were nymphs and adults, here is a photograph of the nymphs on a leaf, with one molt on the mid rib of the leaf.



The nymphs do not have the lacy wings, but do have some interesting spiky protrusions around the edge of the abdomen, they really have the look of some small seeds.



These little insects are too small to grasp without risk of damage, so I used an aspirator which works like a little vacuum cleaner. You place the rubber tube in your mouth and then the metal tube next to the item you would like to capture, then suck on the tube. The specimen is drawn up, into the little vial. I ended up with about seven Azalea Lace Bugs. I took them home and popped them into the freezer.

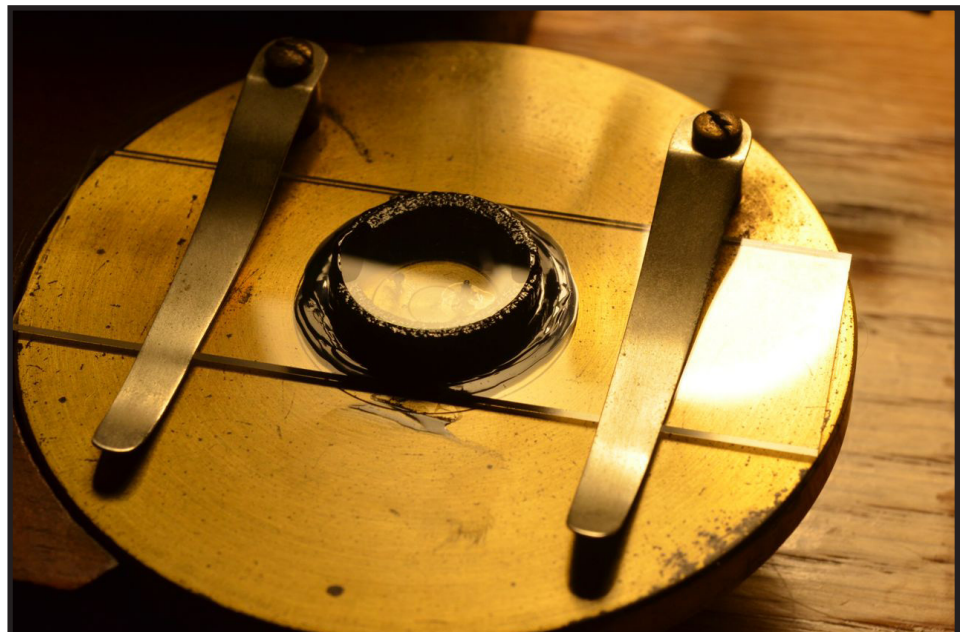
I had seen many deep, dry slide mounts from the Victorian period on eBay, so I thought that I would try something like that. I used the lathe to cut some small wooden rings, slightly wider in outside diameter than my cover slips and slight smaller on the inside diameter. I put a thin coat of clear lacquer on the rings and sanded that down and repeated that a few times. Then using a small turntable for “ringing” slides, I painted a ring of black nail polish on the slide. While this was fresh, I placed the wooden ring onto the polish. Allowed that to dry and then applied a few coats of the black nail polish to the joint between the ring and the slide, up the side and on the upper surface of the ring. Once this had dried, I placed a small dab of clear nail polish on the right half of the glass inside the wooden ring. I quickly placed one Lace Bug, legs down into the clear nail polish. The Lace Bug had been in the freezer and I was concerned that the insects had become too dry and brittle while in the freezer. So I placed some wet paper towel into the storage container and allow the insects to stay in a humid environment until they had softened. Timing will vary for this sort of thing, for these small Lace Bugs it seemed a few hours were sufficient. The nail polish dries rapidly, so it is important to move quickly positioning the insect. I also mounted a second lace bug for a lateral view on the left side inside the wooden ring.



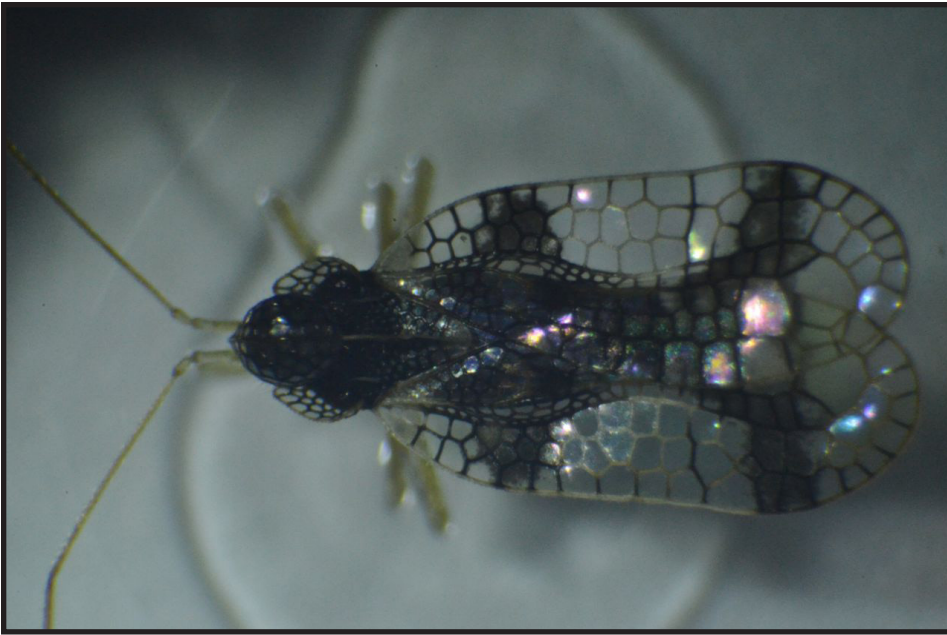


I was a little concerned that if I sealed this up and there was moisture inside, I would have a mold problem. So I placed a single dab of nail polish at “3 o’clock” and another at “9 o’clock” on the wooden ring and then placed the round coverslip on top of the ring, not sealing it completely. You can see those two dabs in the photo below, and the reflection of the coverslip.

I then placed the slide inside a small jar with lots of silica gel to dry things out. I left the slides in the jar for about a week.



Then I removed the slides and sealed the coverslip completely with more black nail polish. Then I had a very nice preparation of small insects protected inside their little capsule. I used a Bausch & Lomb Stero Zoom microscope to get this image. The light could have been better, I will experiment with that.

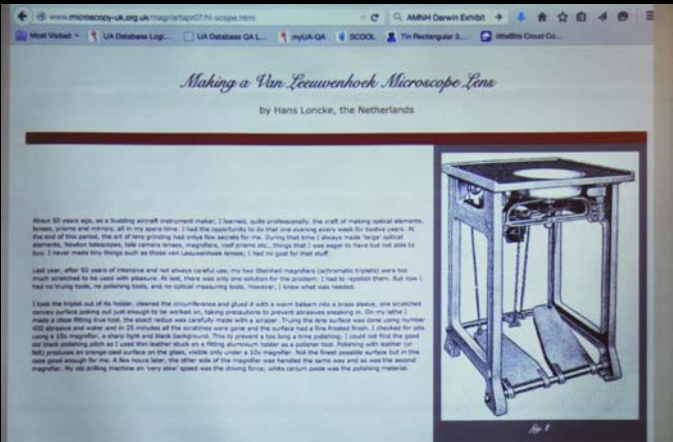


These insects have some amazing structures around the head: a large lacy ball, and a lacy collar. The cells of the wings are transparent material that catches the light and sparkles with color periodically.

A few reflections or next steps:

- I might have to thin the black nail polish (Sally Hansen Hard as Nails Xtreme Wear) a little next time, it goes on a little thick out of the bottle.
- A set of small Heteroptera would make a nice teaching collection. There are many great examples of camouflage in the group, and those like the Ambush Bug, equipped for a predaceous life style vs the plant feeders.
- I would like to figure out a way to preserve the nymphs so they could be placed on the slide with the adults to illustrate simple metamorphosis.
- I have since read that “in the old days” the rings were made of lead, and the idea was to get the height of the ring as close as possible to the height of the specimen, so you could get a lens in close if needed at high magnification. So the lead was soft enough to squish and get the right thickness. Hard to get lead these days...
- Other materials for use instead of the nail polish include: shellac, gold leaf size (not the quick drying kind).

Jay Holmes: Building a Microscope Scope
Lecture and Demo from 01-Feb-2015 meeting
at Clifton, NJ.







SCONYC

Science Council of New York City



37th Annual All-Day Conference and Luncheon

Science 2015: A New Beginning

Saturday, March 28, 2015

8:00 AM – 4:00 PM

On Site Registration begins at 7:45 AM

Stuyvesant High School
345 Chambers Street
New York, NY 10282

Located at the intersection of Chambers Street and West Street

Register
Early & Save
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Workshops for
All Levels of
Science

Certificate available for SIX (6) HOURS of professional development
New York City Department of Education Endorsed

- ☐ Keynote Address: **Dr. Lee Karp-Boss**, Associate Professor of Oceanography, School of Marine Sciences, University of Maine
- ☐ Special workshops planned for new and in service science teachers on understanding of current assessment system
- ☐ Informal educational resources available for NYC including museums, zoos, aquariums, environmental and National parks
- ☐ Information and samples of books, educational materials, programs and ideas
- ☐ Commercially developed educational workshops
- ☐ Easy access via many major Subway lines and the NJ PATH system
- ☐ Exhibition Hall featuring books, programs, and classroom materials
- ☐ Hot buffet luncheon available

For more information visit our website at <http://www.sconyc-nyc.org>

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SCONYC is a Non-Profit Organization and an associate member of the National Science Teachers Association

Member Associations of SCONYC

Catholic Science Council-Diocese of Brooklyn - Chemistry Teachers Club of New York - Educators for Gateway
Elementary School Science Association - New York Biology Teachers Association - New York Microscopical Society
New York State Marine Education Association - Physics Club of New York - Science Supervisors Association
Science Teachers Association of New York State (NYC Section)

Associate Members

Environmental Education Advisory Council
New York State Science Olympiad, Inc.

United Federation of Teachers Science Committee
United Federation of Teachers Outdoor-Environmental Education Committee

Tentative Schedule

7:45-9:30 AM		Walk in Registration	
7:45-9:00	Coffee, Tea and Muffins	11:30-12:30	Session B and Exhibits
8:00-9:00	Session A	12:30-1:30	Luncheon and Exhibits
9:15-10:30	General Session/Keynote Address Dr. Lee Karp-Boss	1:40-2:40	Session C
10:30-1:30	Exhibits and Free Materials	3:00-4:00	Session D
4:00 PM Certificate of Completion of Six (6) Hours of Professional Development and Door Prize Giveaway			

Register online at <http://www.sconyc-ny.org/WebPages/ConferenceRegistration.html>

Print your completed registration form
and with a check or money order
payable to **SCONYC**, mail it to

Harry Kranepool
31-31 138th Street Apt 4D
Flushing NY 11354-2633

Register by mail complete this form and mail it with a check or money order payable to **SCONYC** to the address below. **EACH** registrant must use a separate form. Please **PRINT** all information. Please **duplicate** this form as needed. **Payments MUST be received by February 27, 2015 to be eligible for the early bird discount and door prizes.**

Last Name: _____ First Name: _____ M. I. : _____
Home Address: _____
City: _____ State: _____ ZIP Code: _____
Home Phone Number (with area code) _____ Cell Phone Number (with area code) _____
e-mail: _____
School or Institution: _____
School Phone Number (with area code) _____ ext _____

Check where applicable

Position ☐ Full-Time Teacher ☐ Supervisor ☐ Student (Undergraduate or Graduate) ☐ Other

Teaching Level: ☐ Early Childhood ☐ Elementary ☐ Middle School (6-8) ☐ High School (9-12) ☐ College

Organization Affiliation(s) Check box(es) for all the organizations for which you are a **PAID** member.

- | | | |
|---|---|---|
| <input type="checkbox"/> Catholic Science Council | <input type="checkbox"/> New York Biology Teachers Assoc. | <input type="checkbox"/> New York State Marine Education Assoc. |
| <input type="checkbox"/> Chemistry Teachers Club of NY | <input type="checkbox"/> STANYS (NYC Section) | <input type="checkbox"/> Physics Club of New York |
| <input type="checkbox"/> Educators for Gateway | <input type="checkbox"/> STANYS (other section) | <input type="checkbox"/> Science Supervisors Association |
| <input type="checkbox"/> Elementary School Science Assoc. | <input type="checkbox"/> New York Microscopical Society | |

Registration Fees:

On Site Registration		Early Bird Registration must be received by February 27 th	On-Site or Mail-In Registration after February 27 th
7:45 AM on March 28, 2015 At Stuyvesant High School			
Full-Time Undergraduate or Graduate College Student ** include a copy of your college ID and current course schedule with this form		\$20	\$30
Teachers and all others participates		\$25	\$35
Hot Buffet Lunch (Only available with Early Registration)		\$15	
Total Amount Enclosed: \$ _____	Mail registration form along with your check or money order payable to SCONYC to: Harry Kranepool 31-31 138th Street Apt 4D Flushing, NY 11354-2633 Payment must be received by February 27 th to qualify for the Early Registration Discount. You MUST pre-register and pay for lunch in order to receive a meal ticket. Total Cost for students is \$35. Total cost for teachers and all others is \$40.		

****All undergraduate and graduate students must include the information below.**

Name of College/University _____ Instructor: _____

Major _____ Anticipated Graduation: _____

How did you learn of the SCONYC conference? _____

March 29, 2015 Lecture at NYMS in Clifton, NJ

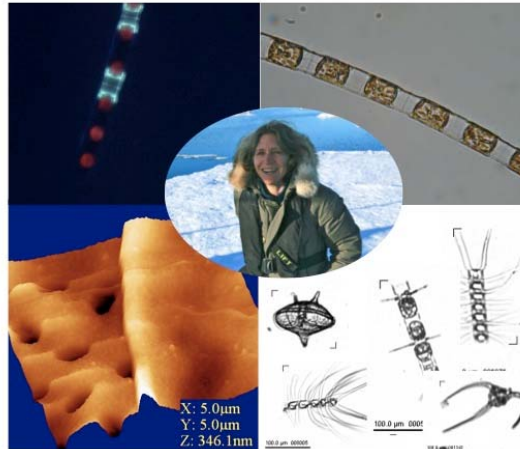
Small is big: understanding the invisible world of phytoplankton

The ocean contains a universe of tiny wanderers, collectively called plankton.

Though invisible to the naked eye, plankton account for most of the living biomass in the ocean, sustains fisheries worldwide, and plays an

important role in the

global carbon cycle. At the root of planktonic ecosystems are phytoplankton, a group of photosynthetic organisms that produce ~40% of the oxygen we breath. When viewed under the microscope phytoplankton display a magnificent diversity of forms that have attracted the attention of scientists, amateur microscopists and artists alike. In this talk I will discuss how the different branches of microscopy- optical, electron and scanning probe microscopy- as well as new advances in imaging technologies have been applied and integrated to reveal the secret world of phytoplankton.



About the speaker: Dr. Lee Karp-Boss is an Associate Professor of Oceanography at the University of Maine, School of Marine Sciences. Her research focuses on interactions between planktonic organisms and micro-scale physical processes in the marine environment, how they shape planktonic communities and marine food webs, generate observed distribution patterns and affect biogeochemical cycling in the ocean.

As reported by Guy de Baere



New York Microscopical Society

First Annual Law Enforcement Lecture Series

Wednesday April 15, 2015

The purpose of this NYMS Law Enforcement Lecture Series is to explore various forensic related topics and “real world” case work and find their nexus to the examination of evidence through microscopic work within the forensic crime laboratory. The proper identification, collection, documentation and photography of scene evidence will be critical to analysis conducted by forensic crime laboratory personnel and for effective prosecution. Let’s take the journey.

Bullet Ricochet and Critical Angle Impacts

WHEN: April 15, 2015 (8am to 4pm)

WHERE: One Prospect Village Plaza, Clifton, NJ 07013

COST: Active law enforcement and/or crime laboratory analysts - \$40.00
Students currently enrolled in a qualifying program - \$25.00
(Lunch will be provided to all attendees)

HOW: Register using form below. Seating limited (25).
Fax Registration Form to: Det. Andrew J. Winter | Fax: (908) 429-1363

FURTHER INFORMATION: Contact: Andrew J. Winter, NYMS Education Chair
Email: ajwinter112@verizon.net | Cell: (201) 207-2550

This first workshop in the series is restricted to active law enforcement and crime laboratory professionals engaged in firearm examination, crime scene and shooting reconstruction. Students enrolled in forensics and/or criminal justice programs are encouraged to attend. Attendees will receive a Certificate of Attendance.

Payment must be received prior to the event | cash or check (no purchase orders).

Please make checks payable to NYMS.

Please contact Det. Winter to confirm your seat.

NYMS LAW ENFORCEMENT LECTURE SERIES | WEDNESDAY APRIL 15, 2015

PLEASE MAIL THIS REGISTRATION WITH YOUR PAYMENT

Name _____
Address _____
City _____ State _____ Zip _____
Phone (cell) _____ (work) _____
Email address _____

Mail Payment:

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

COURSE SYNOPSIS:

Knowledge of the angle at which a bullet will successfully ricochet is a valuable asset if a shooting investigation involves indirect fire. There will be occasions when the bullet fails to ricochet, and occasions when the bullet does ricochet. Familiarity of bullet behavior with some common substrates provides useful information when assessing shooting scenes where bullets have interacted with intermediate targets.

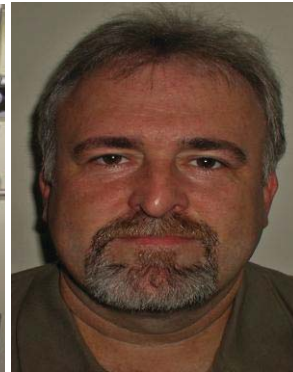
This presentation will specifically include bullet interactions with water, gypsum drywall, automobile sheet metal, concrete block and steel plate. Ricochet angles were calculated for comparison to the bullet's incident angle (the angle at which the bullet approached the substrate surface). Ricocheted bullets were recovered for damage or deformation assessment with relation to their incident angles.

This presentation will also review a shooting incident in 1967 that resulted in the death of a seventeen (17) year old young lady in Brooklyn, NY. The case proved to be extremely difficult to solve due to a limited amount of evidence combined with an unusual set of circumstances and a deflected bullet.

GUEST SPEAKERS



Peter Diaczuk



James M. Gannalo

Peter Diaczuk is a past president of both the New York Microscopical Society and the Northeastern Association of Forensic Sciences. He is currently an adjunct instructor in the Department of Sciences at John Jay College of Criminal Justice. He has presented numerous times at regional and national forensic science conferences and symposia across the United States on firearms, explosives, ammunition, and shooting reconstruction topics. He has also taught workshops on trace evidence, reconstruction, and on firearm and toolmark examination.

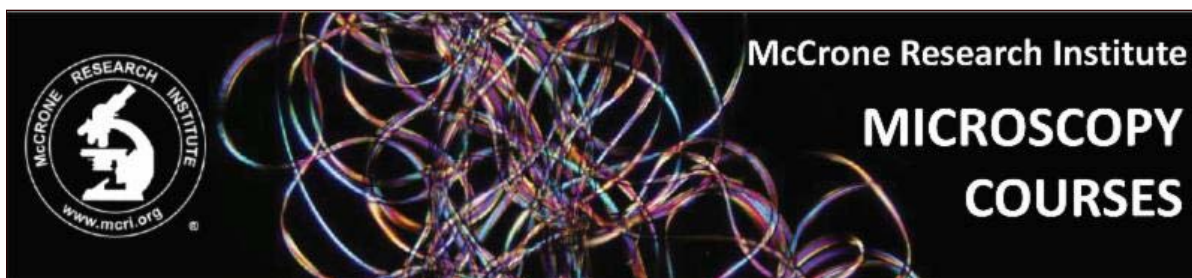
Mr. Gannalo has been an active firearms examiner for the past twenty-six (26) years. He successfully completed more than twelve-thousand (12,000) firearms related cases while assigned to the NYPD Ballistics Squad from 1989 through 1998. For the last sixteen (16) years, he has worked as an independent consultant and owner of the Stria Consulting Group which he established in 1998.

Mr. Gannalo has been recognized as an expert witness at more than six-hundred and fifty (650+) criminal and civil proceedings. He has assisted hundreds of attorneys in case analysis, trial preparation and presentation at criminal and civil trials conducted in (sixteen states) New York, New Jersey, Connecticut, Virginia, Massachusetts, West Virginia, Pennsylvania, Texas, Maryland, Delaware, Kansas, Vermont, Florida, North Carolina, New Hampshire and North Dakota.

Mr. Gannalo has created and/or instructed a number of forensic firearms training programs implemented by the New York City Police Department, City of Philadelphia Police Department, Arkansas State Crime Laboratory, the Connecticut Division of Scientific Services, the Houston Police Department and the Georgia Bureau of Investigation Crime Laboratories. He has recently been retained by the New York City Police Department (for the second time) as the lead training consultant for the Firearms Analysis Section, managing a team of instructors training the unit's members in both basic and advanced firearm examination.

Main Identity

From: "McCrone Research Institute" <courses@mcri.org>
To: <pollingmel@optonline.net>
Sent: Monday, February 09, 2015 11:07 AM
Subject: Upcoming Microscopy Courses at McCrone Research Institute, Chicago



March-April Microscopy Courses at McCrone Research Institute Register Today -- Seats Are Limited!

Forensic Microscopy of Glass

March 23-27, 2015

This course covers a variety of natural glass sources and their characteristic morphologies, and manufacturing procedures and their impact on glass morphology. Refractive index measurements will be treated in detail, including immersion using dispersion staining and variation of both temperature and wavelength. Scanning electron microscopy with energy dispersive X-ray analysis will be used for analysis of glass fragments. [Learn More or Register](#)



Microchemical Methods

March 23-27, 2015

Students are introduced to microchemical reactions conducted on microscope slides, in capillary tubes and on the tips of fibers. Once the basic techniques have been developed they are applied to the elemental and chemical characterization of inorganic and organic compounds, polymers, metals and complex substances. The identification of real-life unknowns is emphasized. [Learn More or Register](#)

Modern Pollen Identification **New course**

April 7-9, 2015

This course will help the beginning pollen analyst learn the necessary fundamentals of palynology (microscopy, plant reproduction, pollen morphology and aerobiology). Students will learn the characteristics necessary to identify a variety of common pollen types, particularly those

that are most abundant in the air. [Learn More or Register](#)

Advanced Indoor Air Quality: Identification of Fungal Cultures

April 21-23, 2015

Students will learn how to identify fungi in culture, particularly those species that laboratory analysts or technicians encounter from indoor environments. The course focuses on identification of commonly found mitosporic fungi (mostly molds) and a few meiosporic species from indoor environments, either from surfaces or from the air. [Learn More or Register](#)

Other McCrone Microscopy Courses

Click the following links to view all McCrone microscopy courses by type:

[Asbestos, Fungal Spore, Pollen, Dust and Other Indoor Air Quality Courses](#)

[PLM and Forensic Microscopy Courses](#)

[SEM, IR, Fluorescence, Raman, Sample Prep and Other Micromethods Courses](#)

[Specialty Microscopy and Other Courses](#)

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.

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McCrone Research Institute | 2820 S. Michigan Avenue | Chicago | IL | 60616

Main Identity

From: "Jay R Holmes" <jholmes@amnh.org>
To: <prelowitzs@hotmail.com>; "Mel Pollinger" <pollingmel@optonline.net>
Sent: Sunday, February 01, 2015 7:37 PM
Subject: Link from today's conversation at NYMS
 Hi Mel and Seymour.

Here are some links related to the presentation from today:

Sherline Lathe:

<http://www.sherline.com/>

The Home Shop Machinist Magazine:

<http://www.homeshopmachinist.net/home>

W R Smith the clock maker's Home Page:

<http://www.wrsmithtelegraphkeys.com/>

The Single Lens: the story of the simple microscope by Brian J. Ford:

<http://www.brianjford.com/wsingle1.htm>

Darwin's Plankton Net:

<http://darwin-online.org.uk/content/frameset?keywords=net%20plankton&pageseq=53&itemID=F1925&viewtype=text>

Darwin's Coralline drawing:

<http://darwin-online.org.uk/content/frameset?pageseq=1&itemID=F1840&viewtype=side>

Keynes, Richard ed. 2000. *Charles Darwin's zoology notes & specimen lists from H.M.S. Beagle*. Cambridge: Cambridge University Press.

Insectivorous Plants (Utricularia/Bladderwort)

<http://darwin-online.org.uk/content/frameset?pageseq=411&itemID=F1217&viewtype=side>

AMNH Darwin Exhibition pages: (Exhibition closed)

<http://www.amnh.org/exhibitions/past-exhibitions/darwin>

Rockler Woodworking:

Magnetic Flex LED Dual Base Work Light

Item #: 50449

<http://www.rockler.com/mag-flex-led-work-light-dual-base>

I wait for this to go on sale (sign up for their e-mail sale fliers)

Making Lenses:

Making a Van Leeuwenhoek Microscope Lens

by Hans Loncke, the Netherlands

<http://www.microscopy-uk.org.uk/mag/artapr07/hl-scope.html>

THE CHALLENGE OF GRINDING LENSES FOR SINGLE LENS MICROSCOPES

By: Alvaro Amaro de Azevedo - (Brazil)

<http://www.microscopy-uk.org.uk/mag/artjan06/aalens2.html>

Amateur Telescope Making, Edited by Albert Ingalls

<http://www.willbell.com/tm/tm7.htm>

Volume 3, Subjects covered: ... Eyepieces and Small Lenses ...

http://www.willbell.com/ATMSupplies/ATM_Supplies.htm

My related pages:

<https://cryptolithusblog.wordpress.com/>

<http://www.cryptolithus.com/microscopy/Bancks/bancks.html>

http://www.cryptolithus.com/microscopy/Bancks/bancks_2.html

That is most of them, feel free to share this list with others who were present. If I missed anything, e-mail me and I will find the link.

I had great time today, it was fun to have such a great group of people to share my scope with.

Jay

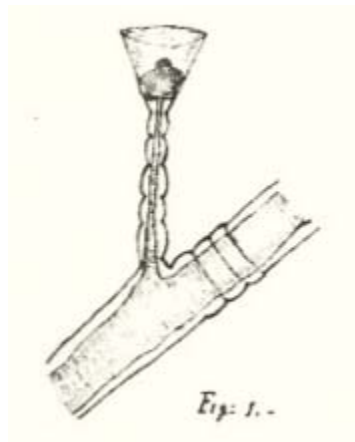
Jay Holmes

jholmes@amnh.org

"I never saw anything more beautifully luminous than this Coralline was; when rubbed in the dark every fibre might be traced by the blue light."

- Charles Darwin September 1832 on the HMS Beagle, Bahia Blanca, Argentina

<http://cryptolithusblog.wordpress.com/>





New York Microscopical Society

Please Print

Please send with payment directly to:
New York Microscopical Society
c/o Mel Pollinger, Treasurer
18-04 Hillery Street
Fair Lawn, NJ 07410-5207

I hereby apply for membership in the New York Microscopical Society

Name: (Dr., Ms., Mr.) Nickname

Home Address

Phone Fax E-Mail

Work: Company Address

Phone Fax E-Mail

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?

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Degree	Conferring Institution	Date
.....
.....

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

NYMS Headquarters: One Prospect Village Plaza, Clifton, NJ 07013 Telephone (973) 470-8733

New York Microscopical Society Items For Sale

N.Y.M.S. Microscope Covers

Item #	Size	Member Price	List Price
MT-003	Small Microscope or Stereo	\$18.00	\$20.00
MT-004	Lab Microscope or Large Stereo	\$23.00	\$25.00
MT-005	Large Lab Scope	\$28.00	\$30.00
MT-009	Large Lab Scope with Camera	\$31.00	\$33.00
MT-010	Universal Scope with Camera	\$36.00	\$40.00
MT-012	X-large Scope	\$45.00	\$50.00

N.Y.M.S. Microscopes

185	Monocular Dissecting Microscope	\$85.00	\$99.00
131	H.S. Student Microscope	\$190.00	\$245.00
131-FLU	H.S. Student Microscope (Fluorescent)	\$200.00	\$255.00
125-LED	H.S. Student Microscope (LED)	\$240.00	\$309.00

Other Items

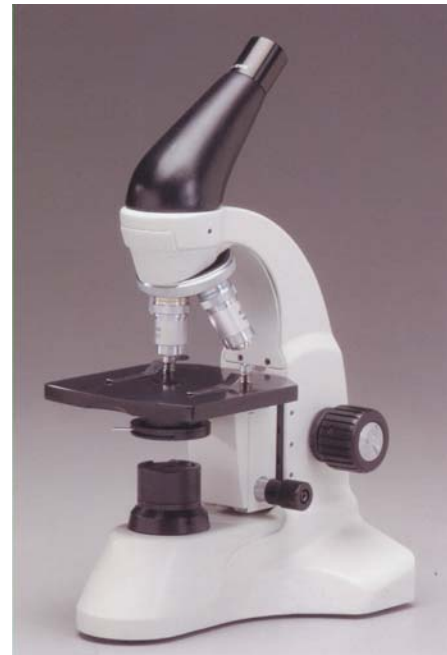
NYMS Glossary of Microscopical Terms	\$20.00
NYMS Patch	\$5.00
Microscope Cleaning Kit	\$35.00
NYMS Lapel Pin	\$10.00



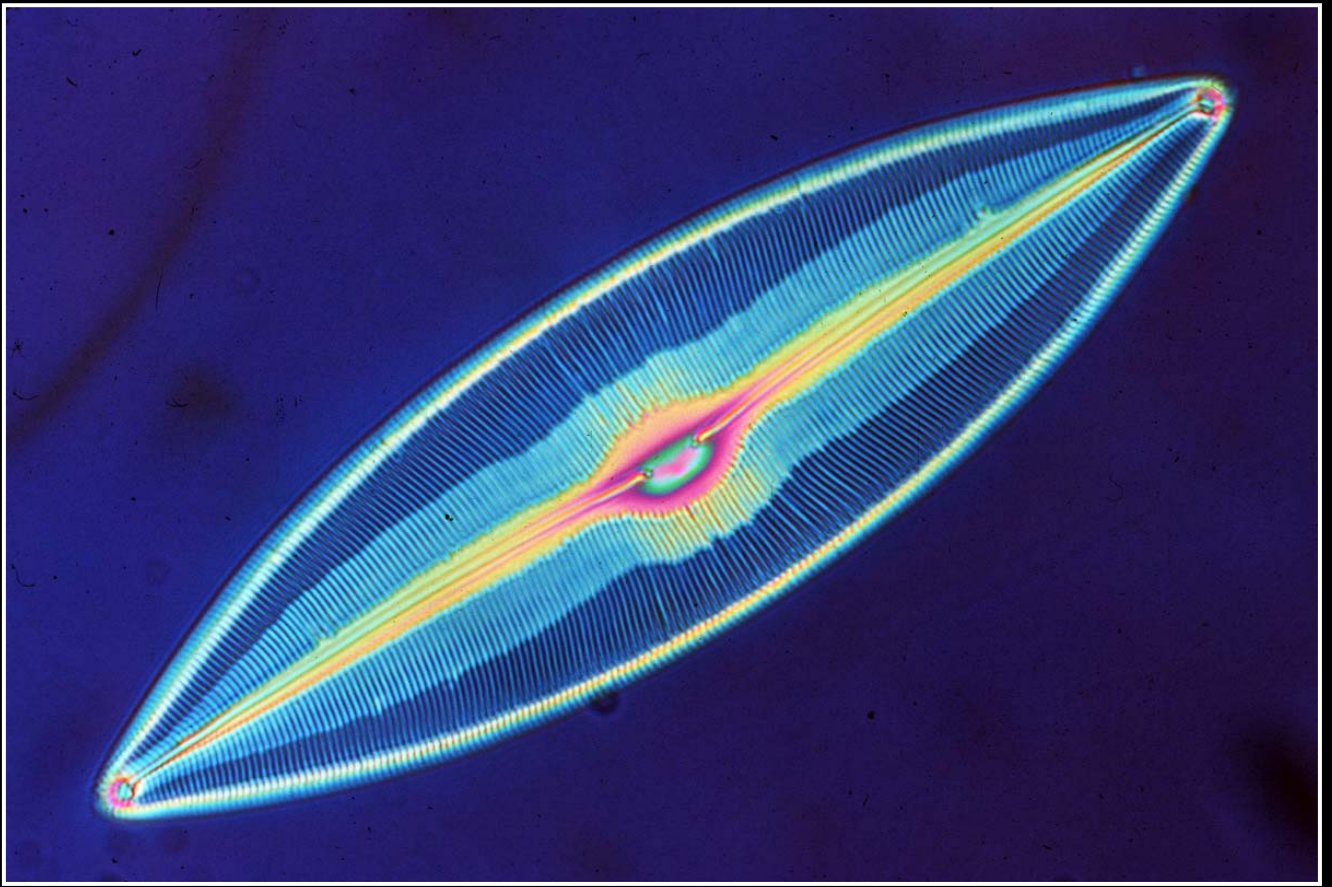
Model 131: Tungsten
Model 131-FLU: Fluorescent



Model 185: 20x



Model 125-LED Cordless



Caloneis permagna, 160x Apr89 fr17a6x4x200, Eric Grave image



Spider, 9A, a6x4x200, Len Tilstra