



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



March 2015

Editor: (201) 791-9826

Volume 9 (29) Number 3

New York Microscopical Society 2015 Lecture Series

2pm, Sunday March 29, 2015 Lecture at NYMS in Clifton, N.J.

Small is big: understanding the invisible world of phytoplankton
Speaker: Dr. Lee Karp-Boss, Ph.D.

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 phyto-plankton, 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.

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

Fossil insect In amber: Lygistorrhinidae (Diptera: Sciaroidea) image by Paul C. Nascimbene



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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
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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.

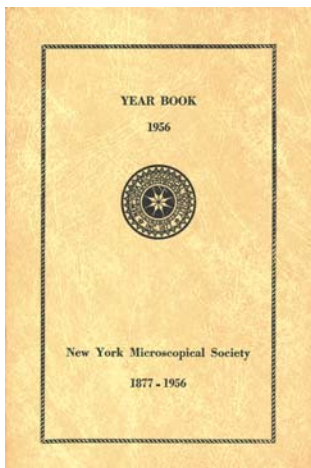
Coming Up in 2015

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



NYMS Yearbook 1877-1956

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

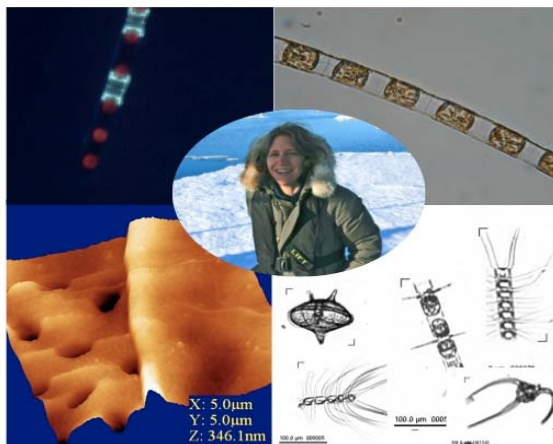
April 15th: Forensic Course:

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 Andrew Winter, Education Chair for info & registration applications.

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

Dr. Lee Karp-Boss, Ph.D.



EAS

CALL FOR PAPERS

On-line submission is now open!

**Join us November 16-18, 2015
in Somerset, NJ**

We invite you to be part of EAS by contributing a paper for oral or poster consideration. EAS seeks contributions from scientists in **ALL** areas of analysis, which make its program uniquely strong. Submit at:

www.eas.org/asubmit

Introducing new submission deadlines for 2015!



From page one... Paul Nascimbene's Presentation on March 1st was an exciting view into his life as a field collector, scientist and researcher for the Paleontological department of the AMNH. From his images and lecture, one feels the intensity of the desert and mountains as the team searches for clues to the past lives of prehistoric insects: Such as the tiny creature struggling to free itself from the sticky resin that will eventually become its amber tomb.

In Memoriam

As reported by his daughter, Amy: Daniel W. McNeil passed away on January 14, 2015. Daniel joined NYMS in 1990, was conferred a Fellow of NYMS and became a Life Member in 2005.

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.

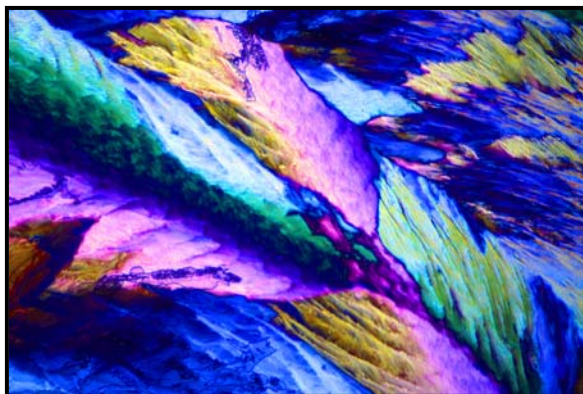
Answer to Mystery Photo for Feb 2015



Did you guess correctly? Shot fired under water.

Correctly guessed by Les Doti.

Mystery Photo for March 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

March 29, 2015 Lecture at NYMS in Clifton, NJ

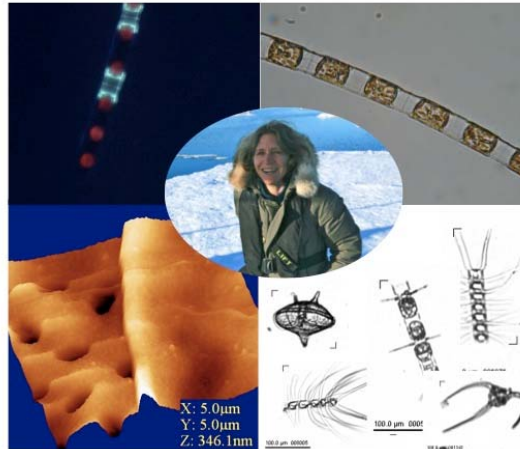
Small is big: understanding the invisible world of phytoplankton

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

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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.



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As reported by Guy de Baere

WINTER IS FOR MICROSCOPY

Anthony Thomas
mothman@nbnet.nb.ca

As an entomologist I spend much of the warmer months photographing and collecting insects. When the weather is cold and insect activity ceases, late Fall to early Spring, it is time to take off the dust cover and get down to some microscopy. My favorite subjects are the aquatics. Locally there is a spring-fed lake with a small outflow that remains unfrozen for most of the Winter. The few aquatic plants, dead leaves, detritus and bottom sediment supply enough organisms to keep me busy. I normally collect a few samples and place them, in pond water, in an all-glass aquarium which I keep indoors next to a window. The extra warmth of the house and the light awakens any aquatics that had been 'sleeping'.

Equipment

An Olympus BH2-BHS with a trinocular head fitted with a 2.5x NFK projection eyepiece. A Nikon full-frame DSLR is mounted above the NFK on a separate stand so as to reduce/eliminate any vibration during exposure (Fig. 1). The Nikon camera is connected to a TV monitor via an HTML cable which allows me to get a critical focus on the camera's sensor (via Liveview) and then to see the captured image on a large screen. I also have Olympus accessories for phase contrast, polarisation, and DIC.

I use the microscope's 100 w halogen lamp for observation but turn it off and use a wireless remote-control flash to capture the image (Fig. 2). Care needed to use the lamp at low power and not to have the flash too close to the lamp; the 100w halogen gets very hot and will melt the plastic front cover of the flash. For many of my subjects I photograph them alive in water on a slide. For the active ciliate protozoa, and some amoeboids, I add a drop or two of Protoslo. On rare occasions I will fix and stain a specimen using a mixture of formaldehyde and malachite green; such a formulation can be obtained from a tropical fish pet shop, it is sold as a cure for white-spot disease in fish.

Fig. 1.
Olympus
BH2-BHS and
stand
with camera

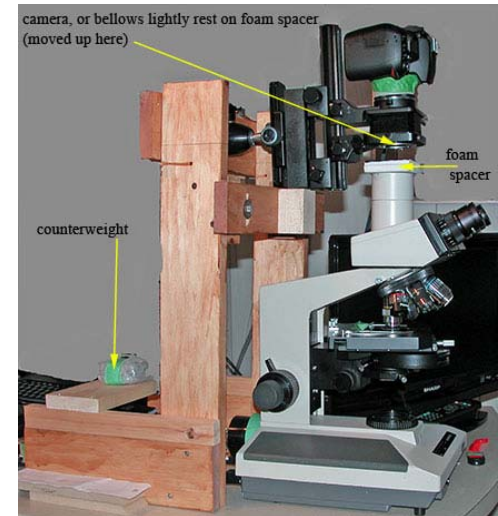


Fig. 2.
Olympus
lamp box
removed,
flash used to
make the
image



The Algae

Three basic types of algae occur in my samples, small unicellular, slightly larger multicellular or colonial species and filamentous species.

Among the unicellular species members of the genus:

Closterium are usually quite common. They are described as having crescent-shaped cells, rarely straight, with a conspicuous vacuole at each pole containing gypsum granules. Each cell contains two chloroplasts separated by a central area containing the cell's nucleus (Figs. 3, 5). The other spheres occurring in the chloroplasts, especially obvious in Fig. 5, top are pyrenoids. These are protein bodies around which starch collects and likely serve as food-storage structures. The cell wall may be smooth or grooved (Fig. 4.).

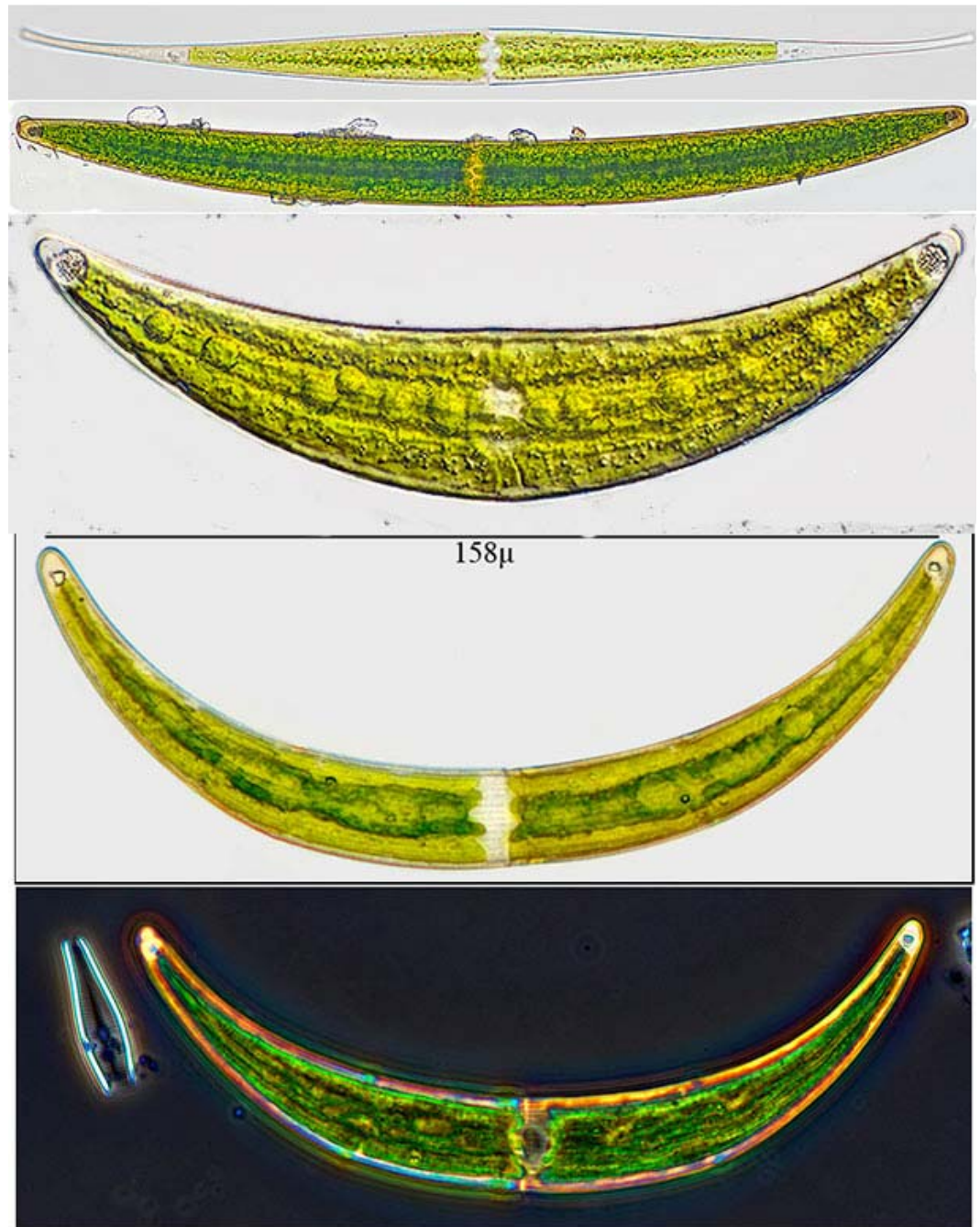


Fig. 3. Various shaped *Closterium* spp.

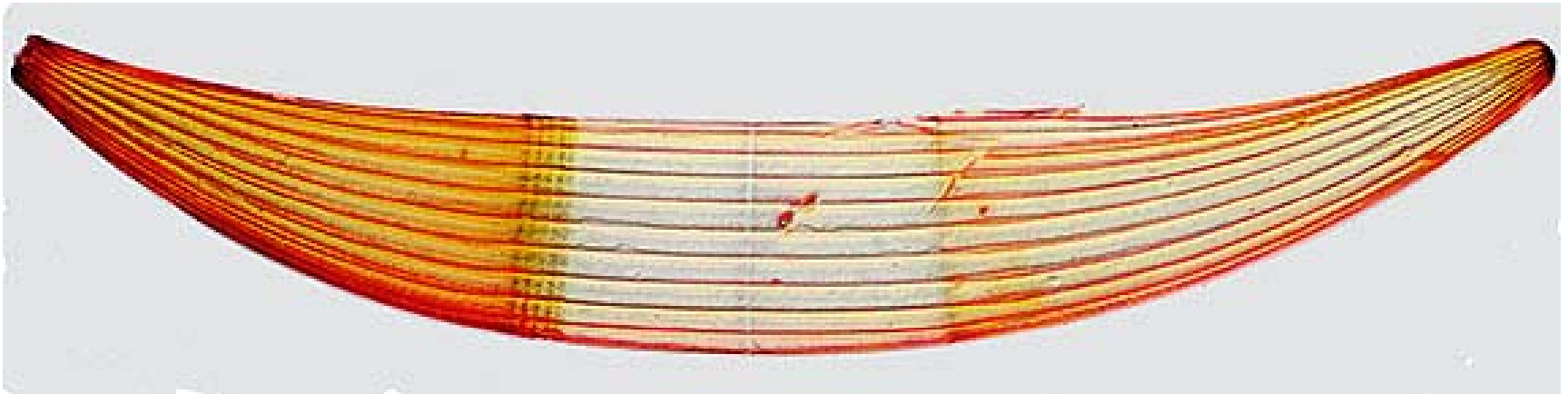


Fig. 4. *Closterium* showing grooved cell wall

Closterium navicula is boat-shaped and in this respect differs from most of the other species in the genus (Fig. 5, top).

***Netrium* spp.** are described as 'cucumber-shaped' with two large chloroplasts each with finger-like margins (Fig. 5, bottom).

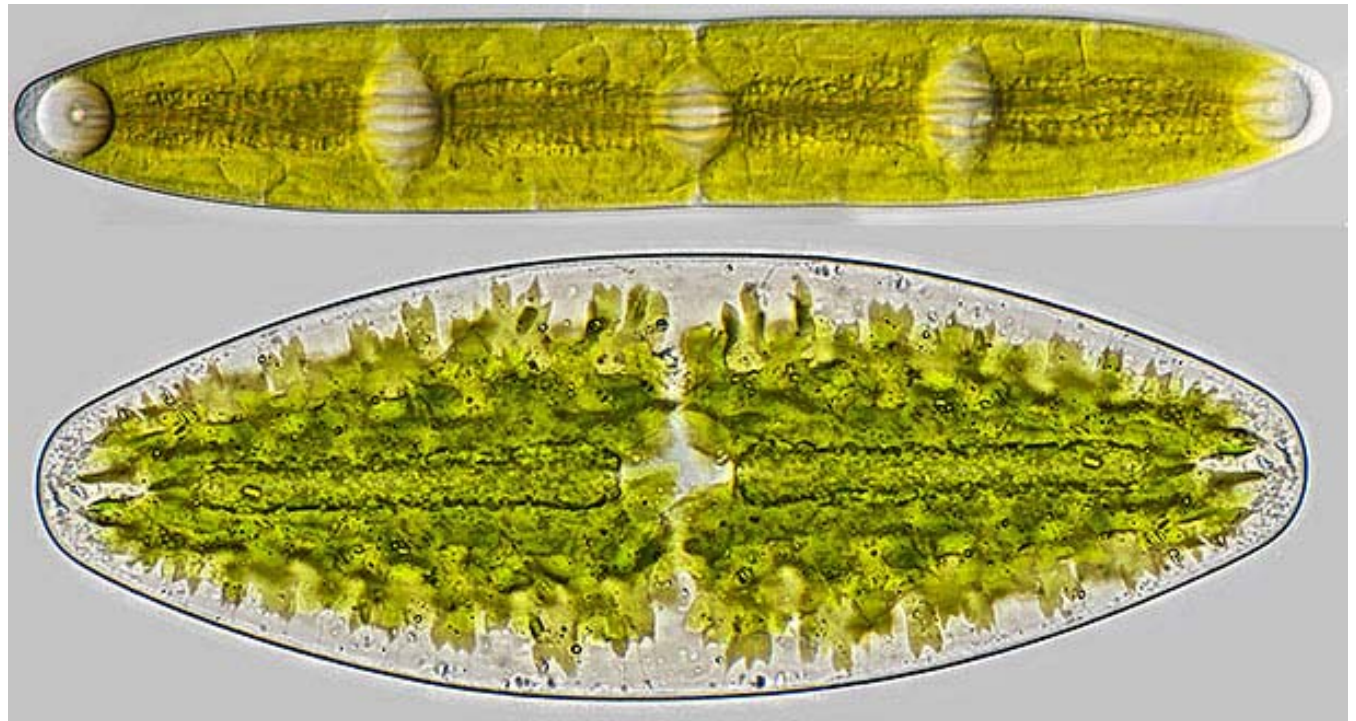


Fig.5. *Closterium navicula* (top), *Netrium* sp. (bottom)

Species in the genus ***Cosmarium*** vary considerably in shape, seemingly double-celled they actually consist of two semi-cells (Fig. 6). The semi-cells appear flat but when seen from the apex or side (difficult to see these aspects) they are oval or elliptical in outline. Various levels of focussing are necessary to see either the external cell wall which may be smooth, granular, or have short conical warts, as seen in the bottom left image of Fig. 6, or the internal structures. The cell nucleus is in the center between the two semi-cells.

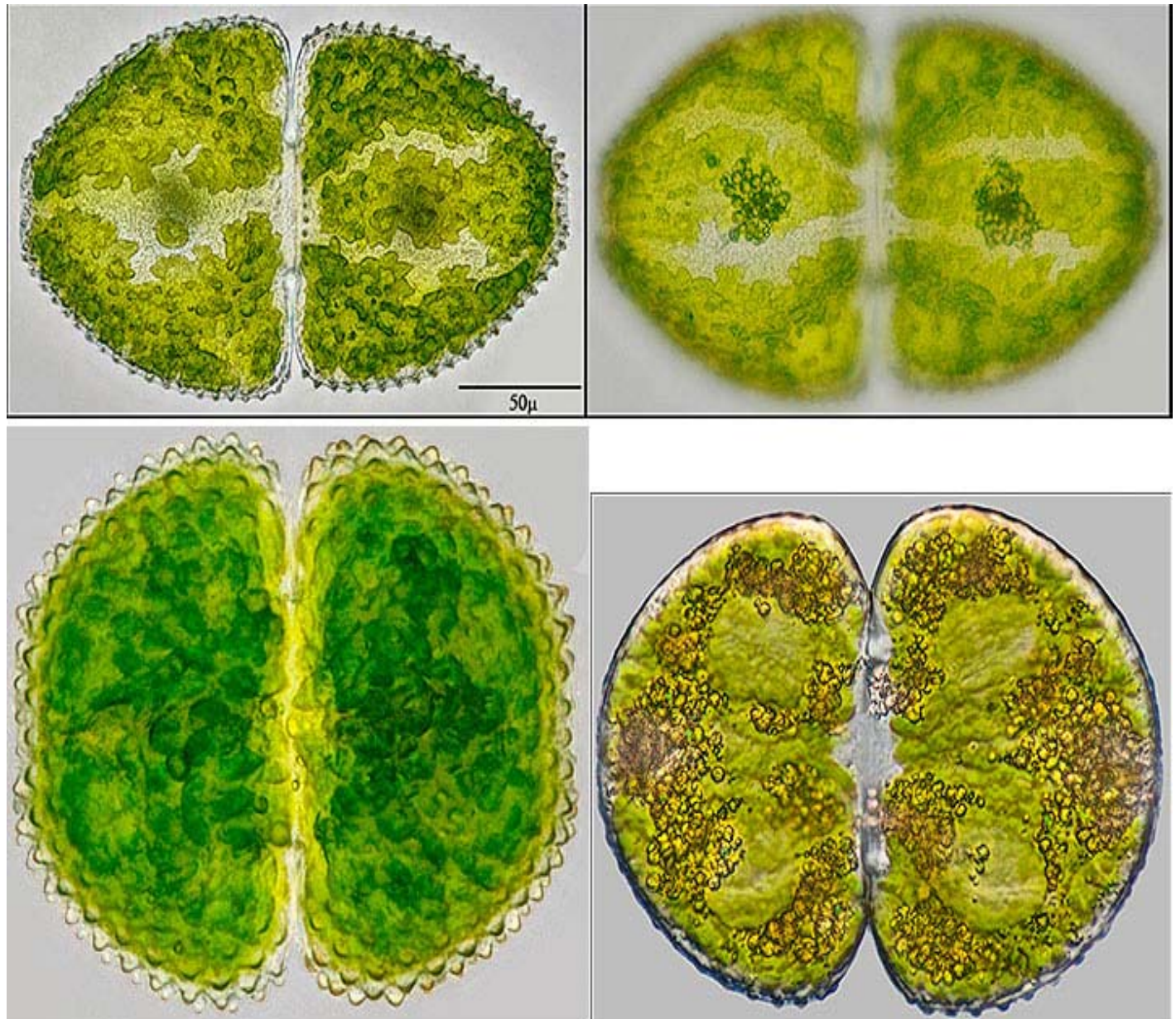
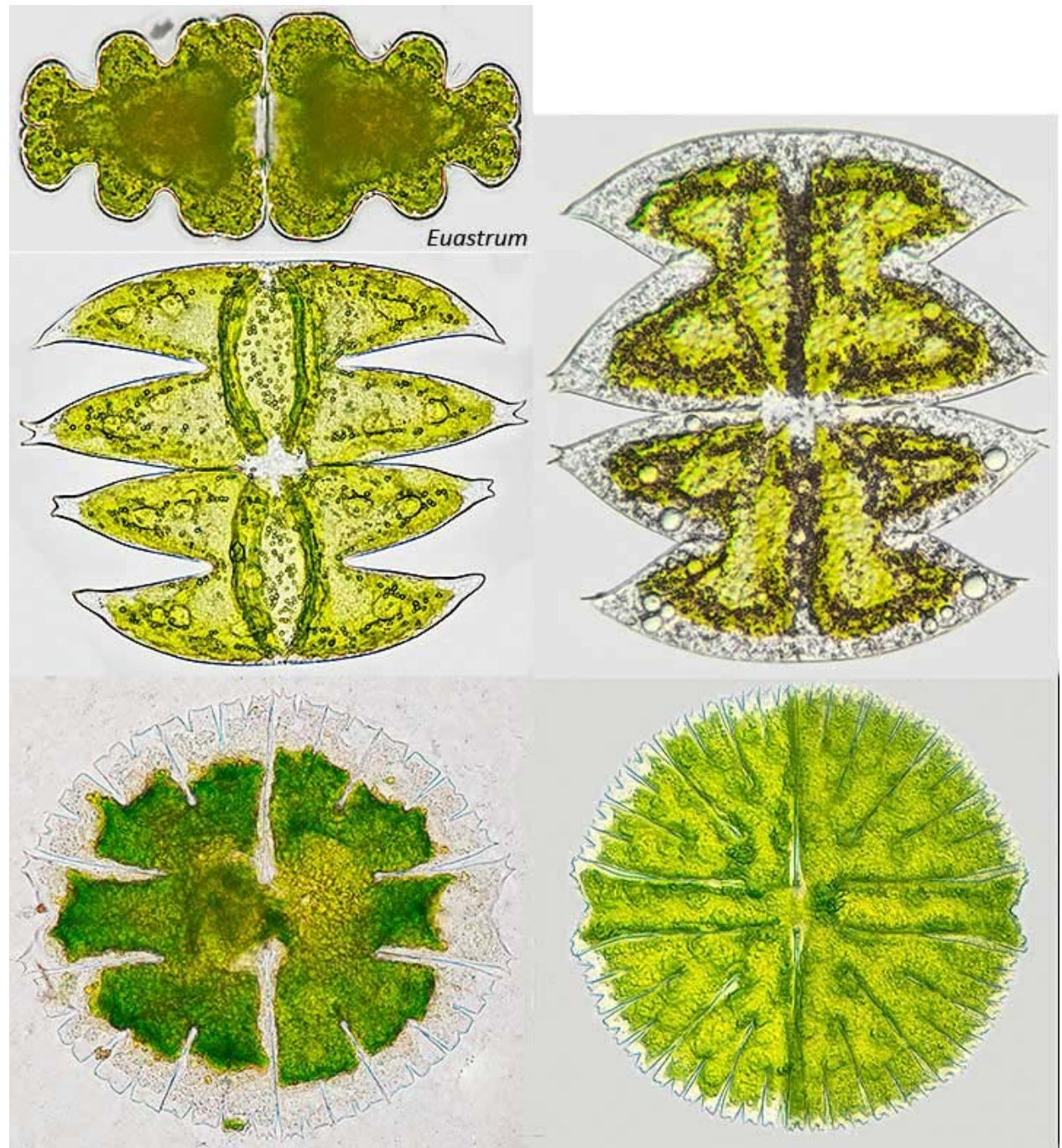


Fig. 6. *Cosmarium* spp. showing some of the variety of forms

Species in the genus ***Euastrum*** are somewhat similar to those in ***Cosmarium*** but have a more irregular outline and a small notch at each end (polar notch) (Fig. 7, top left). The out-of-focus central area of each semi-cell in Fig. 7 top left are characteristic swellings on the faces of the semi-cells.

The irregular cell border is even more extreme in species in the genus ***Micrasterias*** where each of the two semi-cells is deeply notched (Fig. 7)

Fig. 7. *Euastrum* (top left), and 4 specimens of *Micrasterias*



Staurostrum is a genus of unicellular algae where each cell is divided into two semi-cells each of which bears arms in three or more planes. In the specimen shown the semi-cells have radiating arms in several planes which are smooth-sided and terminate in spiny tips (Fig. 8). I cannot imagine the function of such a structure, would appear very susceptible to damage.

All of the previous species of algae are mainly sedentary and found on surfaces. They can move slowly, not sure how! In contrast,

Euglena spp. are active swimmers using a long whip-like flagellum emerging from the front of the organism. When swimming the alga rotates along its longitudinal axis and moves along a spiral path. Structurally, *Euglena* species are complex. The outer body wall is a pellicle of microtubes (Fig. 9 pell) and a body filled with green photosynthetic chloroplasts (ch) which can synthesize a form of starch that is stored as paramylum bodies (pb). There is a central nucleus (nu) and several contractile vacuoles (cv) that discharge excess water. At the anterior end is a gullet (gu) with which the alga can ingest tiny food particles. Adjacent to the gullet is a red eyespot (ey) which is sensitive to light.

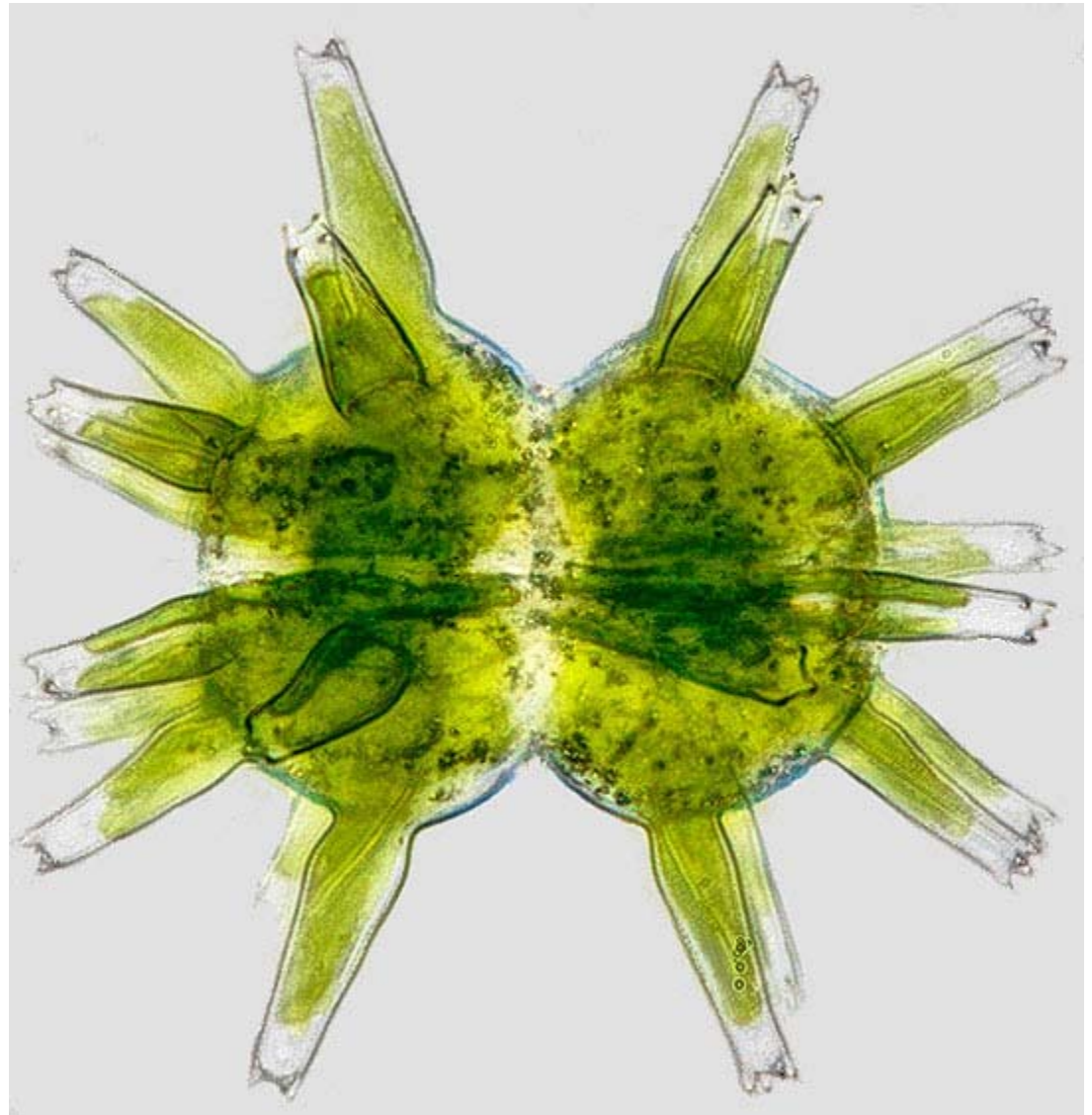


Fig. 8. *Staurostrum*

A simple way to concentrate pond water containing *Euglena* is to surround the container with dark paper and leave a small opening next to a bright light, within hours all the euglenoids, and often other single-celled algae, will congregate to that side of the container.

In short, *Euglena* behaves like a plant and an animal: it photosynthesizes, it moves, it ingests food.

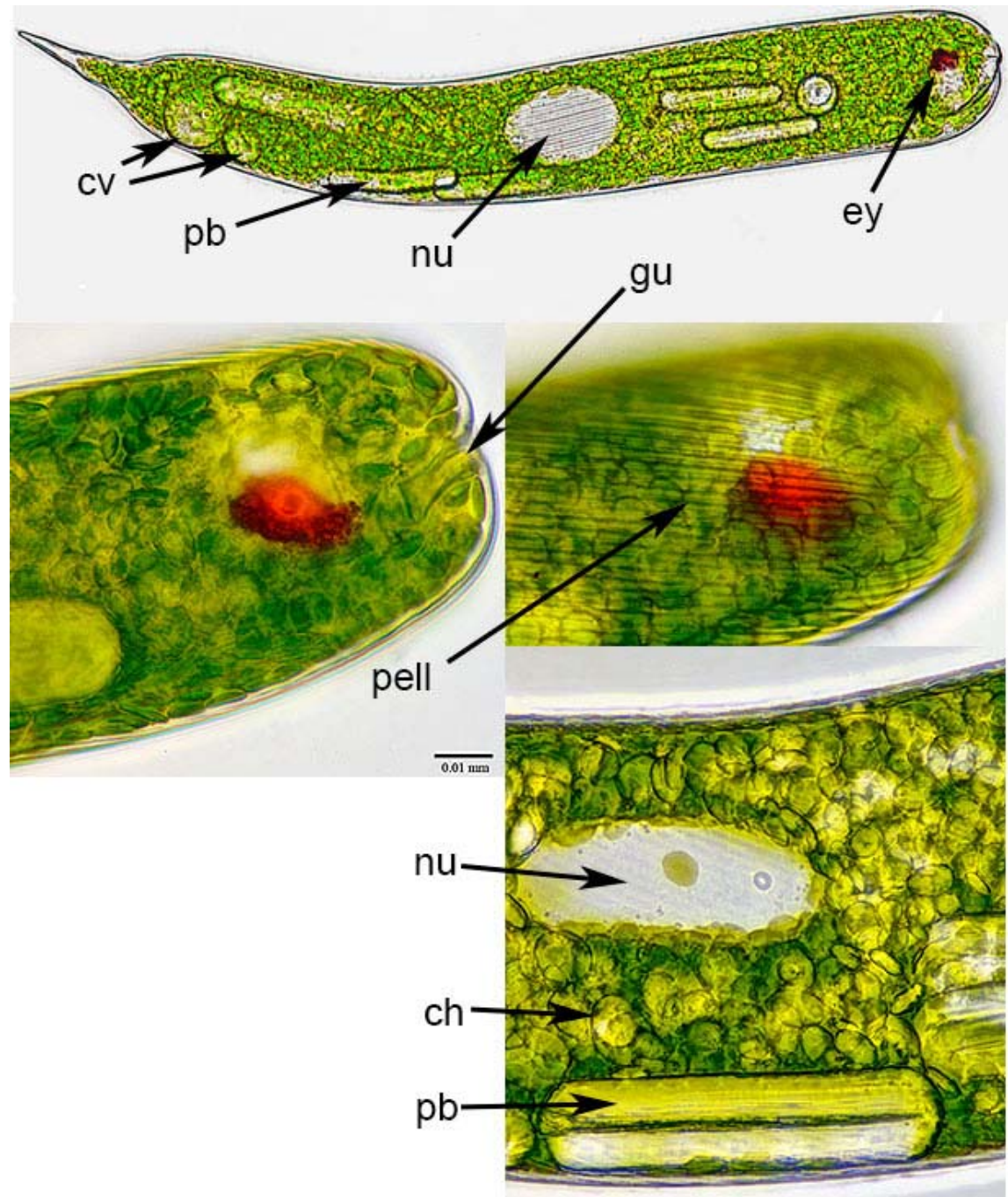


Fig. 9. *Euglena*

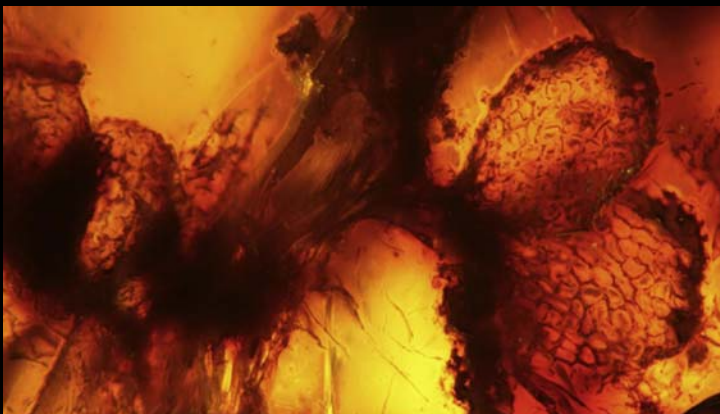
- cv contractile vacuoles
- pb paramylum body
- nu nucleus
- ey eye
- gu gullet
- pell pellicle
- ch chloroplast

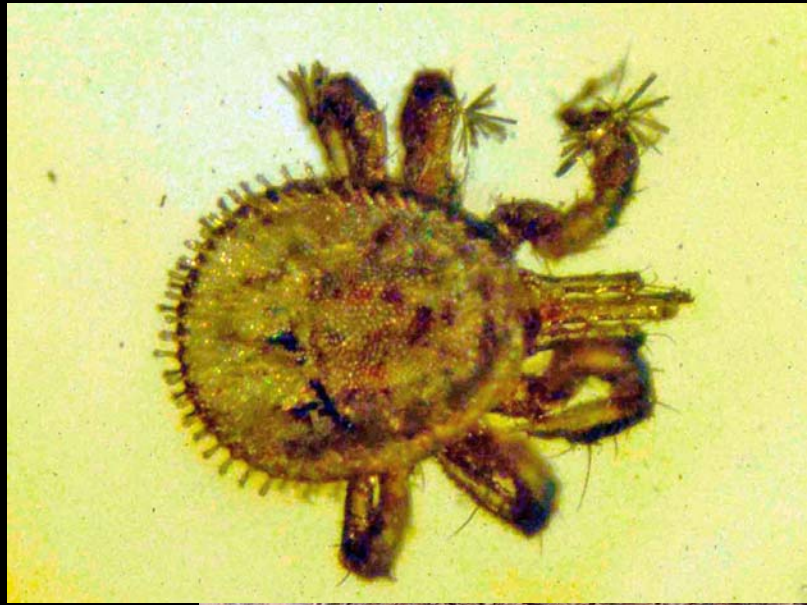
There are many other genera and species of these single-celled algae, often called Desmids, that can be found in all types of aquatic habitats including sphagnum bogs and wet moss.

It's now time to take a brief look at some of the multicellular algae, the filamentous algae, and the aquatic protozoa.....

to be continued.

Some Images from the March 1st 2015 Paul C. Nascimbene Presentation of
Paleoentomological Field Research by The American Museum of Natural History.







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.

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. His daughter, Diane 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.

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

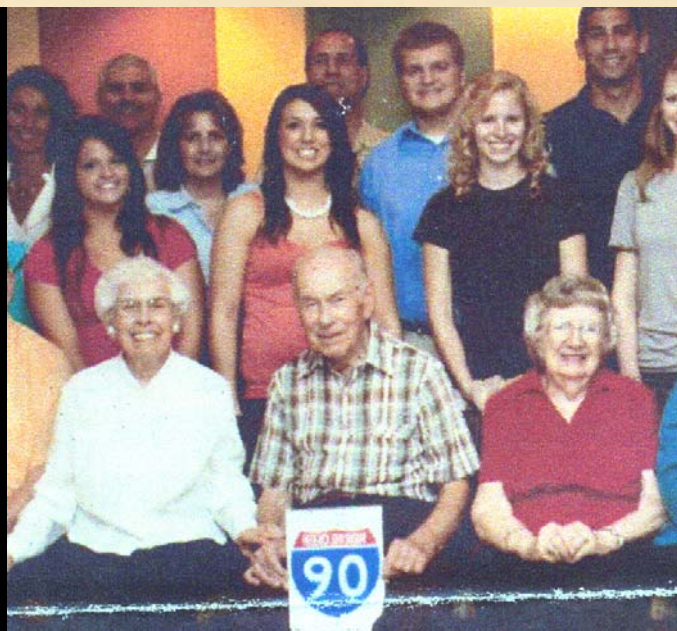


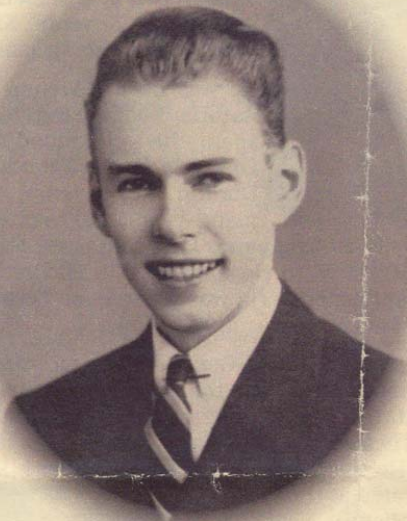
Frederick J. Smokay, 95, "Solivita", Poinciana, Florida, died March 29, 2014. He was married to Loretta on October 5, 1941 and they were married for 71 years. She predeceased him in January 2012.

He was born November 4, 1918 in Astoria, Long Island, New York and spent his childhood in Jamaica Long Island. He attended the Dunton Presbyterian Church for many years and was employed by the Bankers Trust Company, 16, Wall Street, New York City, from January 1937 to November 1978 and retired after 41 years of employment. He was a Sergeant Technician in the U.S. Army Medical Corps., in World War II.

He studied at the Lawson General Hospital, Atlanta, Georgia and did laboratory work for three years in various U.S. camps and for one year in the 154th General Hospital, European Theatre of Operations, Swindon, England, until his discharge. He was a member of the New York Microscopical Society, located at the Museum of Natural History, New York City. He was a past member in both the Charlotte County Art Guild in Punta Gorda and the National Model Railroad Association in Tennessee. Both water color painting and model railroading became his lifelong hobby.

He is survived by a sister, Helen Koster, daughter, Diane Carman, son, Wayne Smokay, seven grandchildren and one great grandchild.





In Loving Memory
Fred J. Smokay

"The Lord's loving kindness indeed never
cease, for his compassions never fail. They are
new every morning;
Great is Your faithfulness."

Lam. 3:22,23

MEL, PLEASE GIVE THE MEMBERS OF
THE NEW YORK MICROSCOPICAL SOCIETY
MY BEST WISHES FOR A CHRISTMAS THAT
WILL BE REMEMBERED ALL YEAR.

I DID SEE A 91ST BIRTHDAY IN
GOOD HEALTH BUT WHO KNOWS WHERE MY
COURSE WILL CHANGE. GOD BLESS ALL!

F. Smokay

P.S. THANK YOU MANY TIMES OVER
FOR THE MONTHLY NEWSLETTER



JANUARY 2012

DEAR MEL,

THANK YOU FOR SENDING THE
NEWSLETTER, YES I DID FORGET MY USUAL
GREETING OF CHRISTMAS AS I DID IN LAST
YEARS GREETING. I GUESS MY AGE JUST LETS
THE IMPORTANT CHRISTMAS GREETINGS FAIL.
ANYWAY I HOPE YOU AND ALL THE MEMBERS
ARE ACTIVE AND HEALTHY. PLEASE GIVE THEM
MY GREETING FOR A HEALTHY ACTION FOR
IMPORTANT MEETINGS WITH THE SOCIETY.
I AM KEEPING HEALTHY AS MUCH AS POSSIBLE.
PLEASE GIVE MY CHRISTMAS GREETING TO THE
MEMBERS.

BEST REGARDS,
Fred

P.S. I THOUGHT YOU MITE
ENJOY A CHRISTMAS CHUCKLE

TO THE NEW YORK
MICROSCOPICAL SOCIETY
..... MEMBERS
"HAPPY THANKSGIVING"
WITH BEST REGARDS,
Frederick Smokay



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
\$\$\$

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>

SCONYC Executive Board		Conference Committee	
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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.
☐ Catholic Science Council ☐ New York Biology Teachers Assoc. ☐ New York State Marine Education Assoc.
☐ Chemistry Teachers Club of NY ☐ STANYS (NYC Section) ☐ Physics Club of New York
☐ Educators for Gateway ☐ STANYS (other section) ☐ Science Supervisors Association
☐ Elementary School Science Assoc. ☐ 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.
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****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? _____

Main Identity

From: "Eastern Analytical Symposium & Exposition" <newsletter@eas.org>
To: <pollingmel@optonline.net>
Sent: Monday, March 02, 2015 11:20 AM
Subject: EAS Call for Papers Is Now Open! New Deadlines for 2015



EAS

CALL FOR PAPERS

On-line submission is now open!

**Join us November 16-18, 2015
in Somerset, NJ**

We invite you to be part of EAS by contributing a paper for oral or poster consideration. EAS seeks contributions from scientists in **ALL** areas of analysis, which make its program uniquely strong. Submit at: www.eas.org/asubmit

**Introducing new submission deadlines for
2015!**

Oral Submission

New deadline! EAS is accepting oral abstracts from March 1 - **June 15th!** Visit our website for the list of areas of interest and submission details.



[Learn More...](#)

Poster Submission

You asked. We listened! EAS is keeping the abstract submission site for posters open until **September 30th!**



[Learn More...](#)

EAS February Retort is now available

Check out the preliminary list of short courses, invited sessions and other programs being planned for November. [**Click here**](#)

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Newsletter

Of the

New York Microscopical Society

130 North Mountain Avenue, Montclair, New Jersey 07042-1841



March 2007

N.Y.M.S. (973) 744-0043

Volume 1 Number 3

NYMS Events at Evergreens



Meeting Announcement

2007 Spring Lecture Series

Tracking Thymocyte Migration *in situ*: Two-photon Microscopy and Advanced Computational Methods

Kevin Frischmann, Head of Technical Support, US and Canada, Bitplane Inc

Thursday, April 5th, 2007, 7:30 pm
American Museum of Natural History, Linder Theater,
New York, NY

Much like confocal microscopy, two-photon imaging provides the capability to acquire three-dimensional (3D) fluorescence images which are entirely in sharp focus. Because the images are digitized in three dimensions during acquisition, they can be inspected and measured in software in three dimensions, providing great flexibility and improved accuracy for exploration and analysis. Where two-photon imaging goes beyond confocal microscopy is in the ability to reduce phototoxicity to live cells, and to

image deep into the specimen, allowing for extended time-lapse imaging and intact tissue imaging. Because the natural environment of living cells is structured in three dimensional space, and can change over time, it is ideal to study them using imaging techniques that support four dimensions, and a life-sustaining environment. Such 3D time-lapse, or "4D" images generate huge amounts of data, which require advanced software to visualize, and to extract the information of interest. This presentation will focus on how software is used to solve such challenges, highlighting an application where analysis of the migration patterns of thymocytes within an intact thymic lobe revealed behavior that was previously unknown.

Kevin Frischmann is the Head of Technical Support for Bitplane Inc., a provider of software for multidimensional microscopy. He earned his B.S. in Biology from Montclair State University, and is currently based in NJ.

NYMS Members and their guests are welcome to join the speaker for dinner (\$25.00 all inclusive) at 5:45 p.m. at Rain Restaurant (<http://rainrestaurant.com/>), 100 West 82nd St. at Columbus Ave. Please reserve your place(s) with Angela Klaus by noon on April 3rd. Angela can be contacted by email (avklaus2@yahoo.com) or by phone (201-988-6251).

Have You Sent in Your Dues for 2006-2007?

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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).

Annual \$30
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.

SCIENCE COUNCIL OF NEW YORK CITY - SCONYC

For 30 years, the Science Council of New York City has been in the forefront of offering quality professional development for the science educator. No Child Left Behind legislation still dominates teacher certification and professional development. Annual Yearly Progress will kick in with a third assessment, which in NYS might include science. These assessments are now found at all levels, elementary (ELS), intermediate (ILS) and commencement (Regents) necessitating that all science educators learn new and/or different techniques to teach science content, inquiry and pedagogical skills. Using

Watt W. Webb is this year's (2007) Awardee. The Award presentation will be on November 15 at the EAS meeting.

Watt W. Webb
Professor of Applied Physics
S.B. Eckert Professor in Engineering
Cornell University, Ithaca, NY

Professor Watt W. Webb's undergraduate studies at MIT in Business and Engineering Administration for his SB degree in 1947 led him to engineering research and development at Union Carbide Corporation Research Laboratories until 1952, then back to MIT for his ScD in Metallurgy awarded in 1955, then returning to Union Carbide for solid-state and chemical physics and as coordinator of fundamental research and then assistant director of research until he joined the Cornell University faculty of Engineering



Physics in 1961, introducing experimental research in superconductivity and in continuous phase transitions. He served as director of the School of Applied and Engineering Physics from 1983 to 1989 and is presently a member of the graduate faculties of eight fields, which indicates his interdisciplinary research focus. He has

directed the NIH Developmental Resource for Biophysical Imaging Opto-Electronics for the last 20 years. He is on the board of directors and executive committee of the Cornell *situ* measurements of the dynamics of fluorescence flicker by FCS, photobleaching, phototoxicity, and induced fluorescence are being used to discern dynamics of biological processes and molecular mechanisms of disease. Multiphoton excitation in laser scanning fluorescence microscopy provides for high resolution, high signal-to-noise imaging in living cells and deep in turbid tissues *in vivo* and significantly reduces photo-damage and minimizes image degradation due to scattering and autofluorescence. His laboratory at Cornell University continues to extend the frontiers of these technologies, now for example extending MPM and FCS to imaging molecular

the NSTA model, we are requesting workshops to align to these STRANDS: Science Content, Inquiry Skills or General Pedagogical Skills for Science Teaching. In addition, we have added a fourth one, directed to the science supervisor, Science Supervision. Please consider presenting at the 30th ANNUAL SCONYC CONFERENCE on Saturday, April 21, 2007 at Stuyvesant High School.

Please note: The deadline for workshop proposals is March 15, 2007.

Proposals received after the deadline might not be considered.

From Blanca Ching, Claudia Toback : NYBTA Programs
[mailto:nybtaprograms@hotmail.com]

Center for Technology, Enterprise, and Commercialization, is affiliated with the university's Biophysics Program, the Cornell Center for Materials Research, the Nanobiotechnology Center and serves on the Executive Committee of the Neuroscience Focus Area. He has been a visiting scholar at Stanford University, a Guggenheim fellow, and a scholar in residence at the NIH Fogarty International Center for Advanced Study. He is a fellow of the American Physical Society (APS) and the American Association for the Advancement of Science, a founding fellow of the American Institute of Medical and Biological Engineers, and an elected member of the National Academy of Engineering, the National Academy of Science, and the American Academy of Arts and Sciences. He won the APS Biological Physics Prize in 1990, the Ernst Abbe Lecture Award of the Royal Microscopical Society (UK) and Carl Zeiss (Germany) in 1997, the Michelson-Morley Award in 1999, the Rank Prize for Opto-electronics in 2000, the Jablonski Award Lecturer in 2001, was the National Lecturer of the Biophysical Society in 2002, the MIT Lord Lecturer in 2004, the Rohm and Haas Lecturer in 2005, and the Leonardo Lecturer for the Università Vita-Salute San Raffaele in Milano, Italy in 2006 and has been selected for the Ernst Abbe award of the New York Microscopy Society in 2007. He has served as chairman of the Division of Biological Physics of APS and associate editor of Physical Review Letters. He has published over 310 papers in solid state and chemical physics and in biological physics; with 22 U.S. patents plus many foreign patents. He is active as a consultant and in various national advisory committees and professional societies.

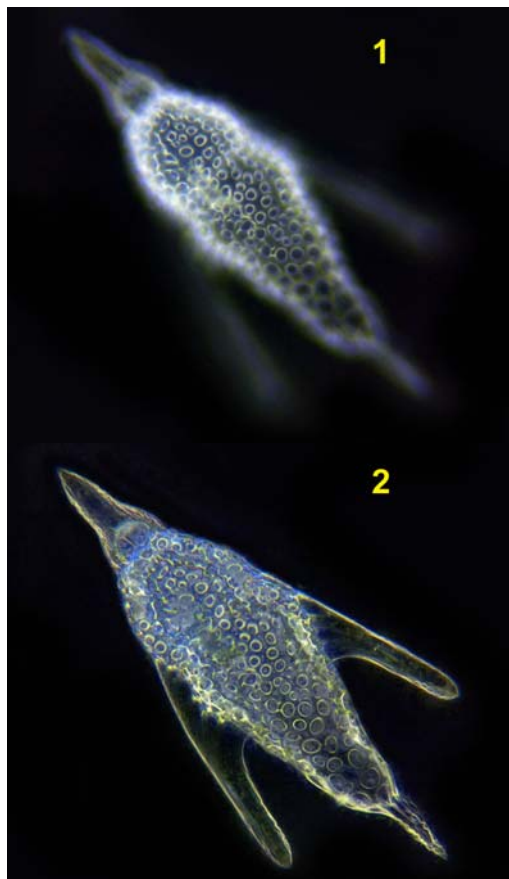
Professor Webb pioneered the techniques of Fluorescence Correlation Spectroscopy (FCS) in 1972 and Multiphoton Microscopy (MPM) in 1990. FCS enables single-molecule detection in solutions at nanomolar concentrations and provides temporal resolution of the dynamic processes of individual molecules signaled by their fluorescence. FCS reveals molecular mobility, conformational fluctuations and chemical reactions in solutions and allows the detection of extremely sparse molecules and particles. *In*

processes within the cellular nucleus for gene expression *in vivo*. Recently initiated is the development of technology for introduction of MPM into Medical Endoscopy for *in vivo*, *in situ* real time diagnostics.

Article donated by Dr. John A. Reffner, Ph.D.

Variable Focus Digital Image Stacking

Images 1 (single image) and 2 (stack of 7 images) are of a radiolarian at 200x, taken with an Olympus BHT microscope fitted with an Olympus C-5060W digital camera. The 7 original images were stacked using CombineZM. By Mel Pollinger





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



February 2007 Mystery photo

Congratulations to Wiebke Hinsch for the correct answer:
Substage mirror (on old circa 1950 child's microscope).

Interested in Micro-Minerals/Fossils?

We hope you visited the Clifton Mineral Show, March 10-11, at the Pope John Paul II Elementary School at 775 Valley Road (North of rt 3 at Rt 46), Clifton, NJ. Sat & Sun 10-5.

Got something you want published in the Newsletter?

- Technical article
- Images
- For sale
- Wanted to buy
- Any microscopy-related item

Write, call or send an email message to:
201-791-9826 or
pollingmel@verizon.net
or
Mel Pollinger
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, gray scale images: Do nothing. Color may continue.
2. Email with full color images, pdf file: Needs your active email address.

Our thanks to Ron Smeltzer for the dues reminder.

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

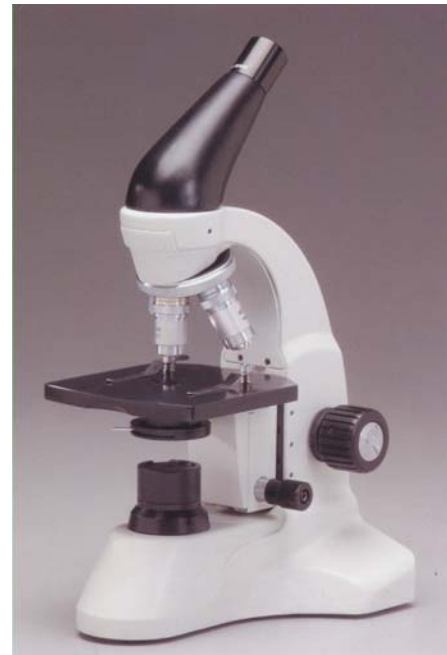
NYMS Glossary of Microscopical Terms	\$20.00
NYMS Patch	\$5.00
Microscope Cleaning Kit	\$35.00
NYMS Lapel Pin	\$10.00



Model 131: Tungsten
Model 131-FLU: Fluorescent



Model 185: 20x



Model 125-LED Cordless



New York Microscopical Society

Please Print

Please send with payment directly to:
New York Microscopical Society
c/o Mel Pollinger, Treasurer
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I hereby apply for membership in the New York Microscopical Society

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

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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 ☐

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

Scientific Publications

Membership in Scientific Societies

Date of birth (optional if over 18)

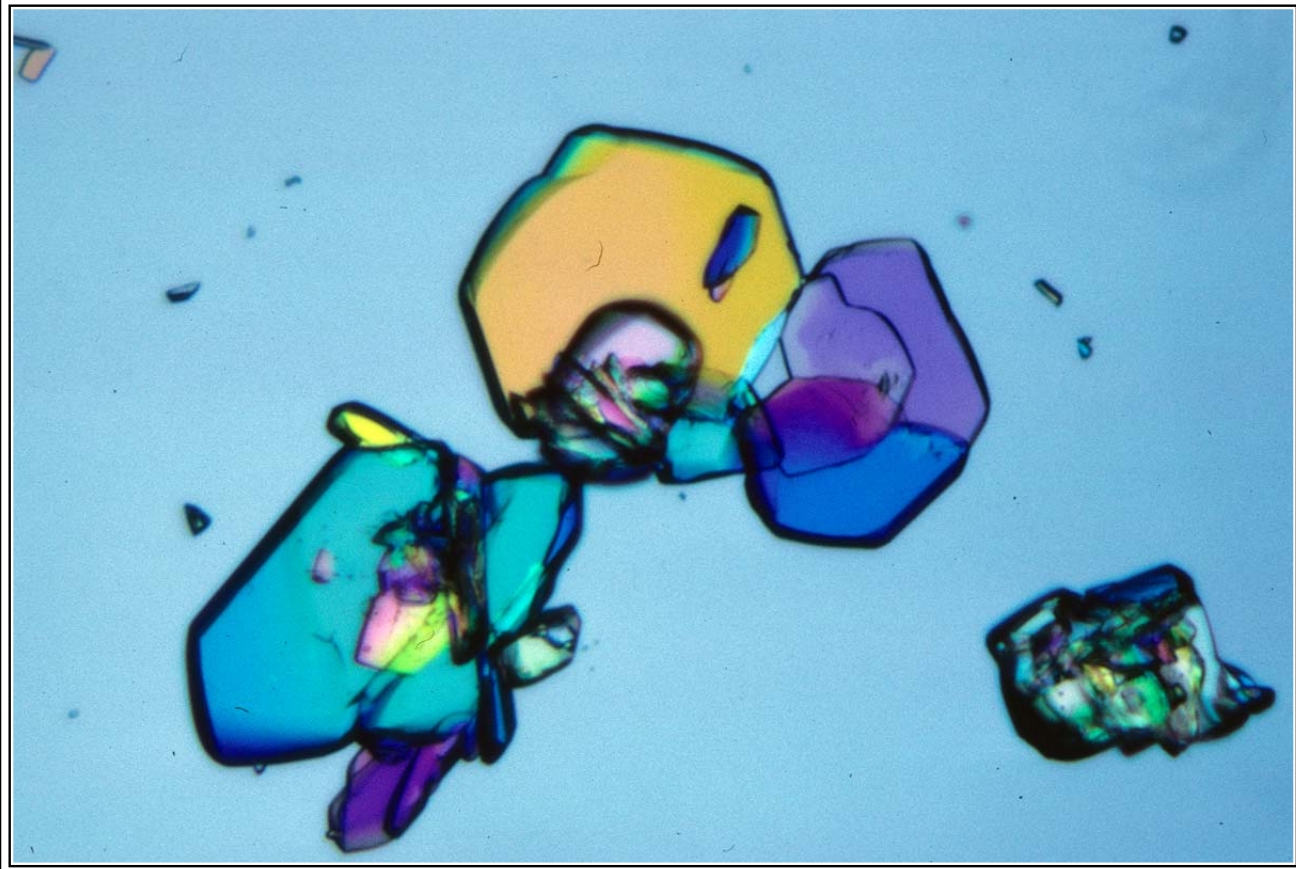
I have enclosed a check for \$..... to cover my application fees for membership {Annual \$30, Supporting \$60, Life \$300 (payable within the year), Corporate \$175 (includes one advertisement in NYMS News), Junior \$5 (under 18 years old)}. Student (over 18) \$20

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



Cephadroxil monohydrate, 100x (P1261515): Prep. & image by Mel Pollinger



Crustacea: Copepoda: *Cyclops*
sp. female with egg sacs. March 8
2010, freshwater lake, Image by
A.W. Thomas