



MicroNews

San Francisco Microscopical Society

Volume 9, #3 December 2014

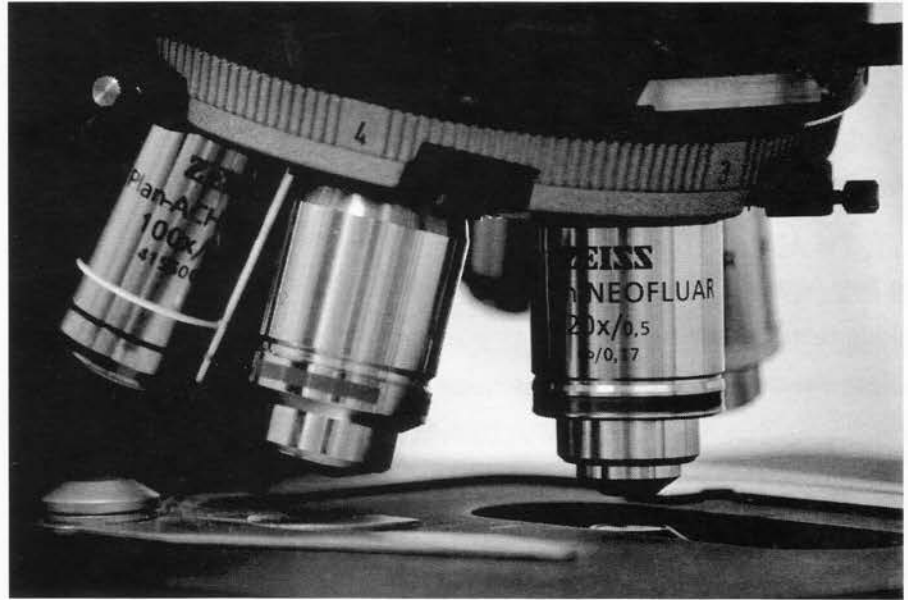
Happiest Holidays!

Season's Greetings, readership!

As you peruse this final issue of the year, I hope you are reminded of the beauty of the microscopic world, and of the importance of organizations dedicated to sharing these sources of scientific wonderment with curious minds of all ages.

The society kindly reminds its members to pay dues for the upcoming year. Your support allows us to reach out to communities all over the Bay Area, and anywhere else our microscopes may travel. The possibilities are truly limitless.

-Sara Sandhu



INSIDE

Micro V. Macro?
Pg. 2

Call for Officers
Pg. 3

Board Report
Pg. 5

first look through the oculars

Do you remember the first time you approached a microscope? Do you remember your eyelashes floating into view as you learned to relax your eyes to focus on the specimen? Former students and professors of the Merritt College Microscopy Program offer a range of recollections, sharing their "wow" moments, when peering into the eyepieces for the very first time.

"The moment I focused my unstained cheek cells under the Olympus CKX41 in phase, I was astonished by the clarity. To think that my very own cheek cells could be so clearly seen without a stain really gave me a deep understanding of how important microscopy is to the science world."

-Kenny Young, Merritt College Microscopy Program, Cohort V

"My first wow moment with a microscope was when I first stared into a plankton sample taken from the Berkeley Marina... Seeing larvae and algae scooting around really blew my socks off! I've been hooked ever since."

-Dr. Arja McCray, Merritt College Biology Department, Department Chair

"My first viewing on the Leica DM500—I thought I was looking at the universe's building blocks in COLOR!"

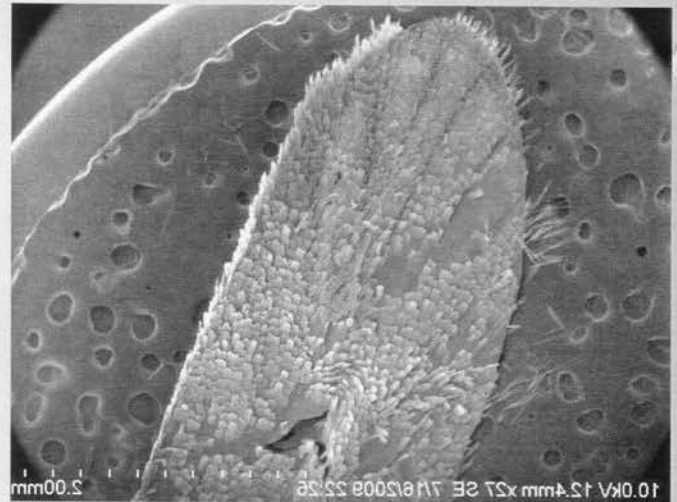
-Austin Thomas III, Merritt College Microscopy Program, Cohort V

Through the Looking Glass

Tracing the history of a common substance such as glass may seem an obvious way to structure a TV program series but that would be misleading since this ubiquitous substance has been shaped and compounded into many combinations and varied forms. A new six-part series of programs on KQED entitled ***How We Got To Now*** was co-created and hosted by the Bay Area resident and author, Steven Johnson. Taking ordinary materials such as glass or properties such as light, these six programs trace the influence of innovations that have brought us benefits we experience in our daily lives.

On Wednesday, October 22, 2014, at 10 PM, I tuned in to the second program of the series, "Glass. The innovation of glass helped shape the world of art, science and global communication". The role of glass in science is wide-ranging and we all can think of numerous examples where glass has had a central role in advancing knowledge. True to our interest, the idea of lenses and their use in microscopy was portrayed in the program by an interview with one of our members, Dr. Steven Ruzin, Academic Coordinator, Biological Imaging Facility UC Berkeley. Surrounded by examples of early microscopes from the Golub collection housed at the University, Dr. Ruzin was asked about the influence of microscopes. Some lovely videos of pond life were then used to illustrate microscopic life.

From the introduction and importance of early microscopy, the program quickly moved on to telescopes and astronomy. Now, there was no discussion of the early and more primitive instruments but ra-



Scanning electron micrograph of a moth wing. Imaged with Hitachi's Tabletop SEM, by Dr. Gisele Giorgi.



Artist's conception of the Milky Way galaxy. Credit: Nick Risinger

ther we were shown some of the wonders of modern optical astronomy, including the giant mirrors used to capture and analyze light from distant galaxies. There is a tendency among program producers to focus on the spectacular photographs showing star clusters in the milky way galaxy or to focus on images of galaxies that modern instruments have captured. NASA in particular has promoted these images making the

Have you served as an elected officer?

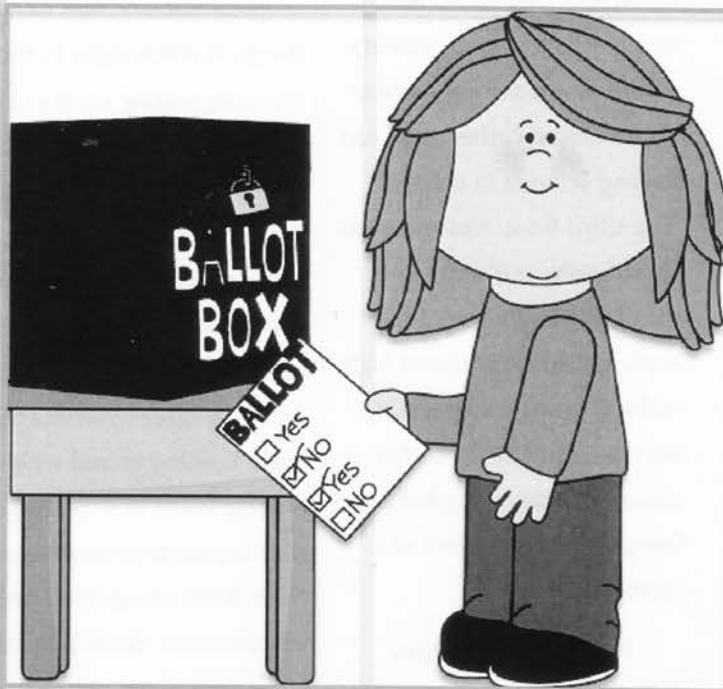
While November is the time for national and local elections, SFMS holds its elections at the first meeting in January of each year and if you have never been an officer in the Society, 2015 presents an opportunity to do something positive and useful.

Are you unsure that this responsibility of serving on the board is more than you can fulfill? You will have the support of four other board members and several past officers who are ready to help you.

Unsure as to how much time you will need to spend? The board meets two to four times a year,

depending on the business and planning needs.

ings will be covered. Add your elected office status to



Concerned that participating as an officer will cost you money? Your expenses for attending board meet-

your resume and build a better Curriculum Vita.

How do I get nominated? You must self-nominate by writing a email to Peter Werner pgwerner@sonic.net or germpore@sonic.net stating your desire to be of service on the board of SFMS. Peter serves on other boards so be sure to mention SFMS. Pay your 2015 calendar year dues of \$12.- to SFMS Treasurer, 435 Melrose Ave., San Francisco, CA 94127. You are needed so do it now while the feeling of wanting to participate is strong.

No experience serving on a board? This is how you get that experience and learn new leadership skills.

-H. Schott

(continued from pg. 2)

Space Program a favorite among children and the public. Modern optical microscopes or even the more sophisticated electron and x-ray microscopes do not have either the scale or the shiny domes and mirrors of telescopes but are far more

important to the every-day experiences and health needs of people everywhere. Why is it that the beautiful images that these microscopes are able to produce are not receiving the attention of the public? Why is it that images of distant planets are more likely to be found in science

textbooks than the images of bacteria or viruses? Are planets, stars and galaxies going to have a greater impact on the lives of our citizens than insects, protozoa, bacteria, or viruses? We are aware that images have an immediate and profound impact on the prepared mind. We all can recognize

the Ebola virus image, a single image endlessly copied recently as if it were the only image of this virus in existence. Microscopes have been able to generate great images that would fascinate young and old alike

(continued on pg. 4)

Discovery Days at AT&T Park

"The real voyage of discovery consists not in seeking new landscapes, but in having new eyes."

-Marcel Proust

Discovery Days at AT&T Park in San Francisco on Saturday, November 1, 2014 was a great achievement as well as fantastic day for children of all ages. Some 200 exhibits and activities, special workshops and presenters from Bay Area's science institutions were present. The weather was kind in that the predicted showers did not materialize and much of the time, the sun was shining. At least some half-dozen sun-telescopes were set up in the outfield near first base.

All the major educational institutions had booth set up where kids could do some actual science activity. There was a strong emphasis on **doing** rather than just **seeing** science in action. The third floor was devoted to robotics and was mobbed most of the time with middle-school and high-school students operating various types of machines capable of throwing balls or hanging donut-shaped objects on a rack.

In the midst of many other booths at a long table were a set of modern microscopes provided by the Merritt College Microscopy Program.

Former president **Peter Werner**, now vice president and board member of the San Francisco Microscopical Society, had been at the park since eight in the morning setting up the display and preparing the specimens when my wife and our young 13-year old charge stopped by to see what we could through the excellent instruments. Youngsters trying to discern what they were looking at and when objects were in focus eagerly occupied microscope stations. Both compound and stereoscopic dissecting microscopes were set up with specimens. Rugged as the microscopes are, the younger children tend to turn knobs or clutch eyepieces

with their fierce gripping fingers throwing them out of focus. There was a clear need for low stepping stools by each microscope to help shorter persons reach the eyepieces. The number of people coming by was impressive. It would take a van to bring all the material that would make a great display but Peter manages to fill his car and have everything needed at the booth.

What might be an ideal microscope set-up? In keeping with the spirit of DOING rather than just SEEING it would be great if young people could collect a sample,

(continued on pg. 5)

(continued from pg. 3)

when properly presented and explained. Have we done enough to bring to the attention of the media the great value of the knowledge revealed by microscopes? It may take some new techniques in illustration, such as a progression of images from the unaided view to a stepwise increasingly magnified view of the same object, to help

people become accustomed to see both the beauty and the utility of information that microscopy can provide.

-H Schott



Young microscopist at Discovery Days

Board Report & Suggestions from Henry Schott

NEXT GENERAL MEMBERSHIP MEETING: Wednesday, January 16, 2015 at 7:30. Please read more about the meetings in this article. There is no November meeting scheduled this year.

While the secretary, Mary Ann Scott will issue the official minutes of the SFMS Board Meeting held on November 23, 2014, these notes give you some idea of the discussion and proceedings held at her home. You are aware that all members are entitled to attend as observers and the chair may recognize comments from non-board members but otherwise please allow the board to proceed with its business without interruption.

The meeting began informally with a lunch composed of items brought by the board members. It was quite a feast. It also set the mood that was quite jovial. Since currently the board lacks a president, the four members assembled

by 1:50 P.M. Present were: Peter Werner, Vice President and Program Chair; Myron [pay-you-dues] Chan, Treasurer; Mary Ann Scott, Recording Secretary; Bill Hill, Communication Secretary. Life member Henry [yours-truly] Schott was present and wrote this piece.

Chaired by Peter, the meeting got under way by 2:30 without an agenda. General Membership Meetings are planned for January, March and May 2015. The January General Membership meeting will be a workshop on microscopes and give some insight on lichens. Mikki McGee, a life member, will guide the hands-on session. Mikki McGee is very active in the Lichen Society and thus will welcome their members making this a joint meeting. At this time we are uncertain as to the venue. If it is held at San Francisco State, 1600 Holloway at 19th Ave in Hensill Hall, Room 401, it will be held on Friday, January 16, 2015 at 7:00 PM.

Since the University is not holding classes, it may alternatively be held on Wednesday, January 14th. There is a third possibility and that is that we will meet at the Randall Museum, 199 Museum Way, SF, in the Buckley Room on Wednesday, January 14th at 7:30 PM. If you are confused, so am I and we will have to wait for future clarification from the board. If you are worried about parking there is plenty on 19th Ave. particularly on Friday evening starting at six and when the university is not in session. Please mark your calendar tentatively for the two possible dates.

The January General Membership Meeting is when we hold elections and this only takes a few minutes since we have few candidates for office. We clearly need a President who will be a guide and be the tie breaker at board meetings. This is not a difficult job and is a good item to have on your resume when applying for a job. You

do have to be a member (obviously) to be elected to any office but you do not have to be 'experienced'! Former presidents and board members will act as advisors and help you get started. To run for office, be present at the January meeting and tell Peter or any attending board member your interest in participating in the election before the meeting starts or get a member to nominate you from the floor. **YOU ARE NEEDED.** Volunteer some time to the organization.

The March 11, 2015, General Membership Meeting starting at the usual hour of 7:30 PM, will be held at the Randall Museum with Peter explaining how to operate a dark-field microscope and how to convert your microscope to have this property. If you will bring your microscope to the meeting, Peter will help you see how it can operate as a dark-field instrument. Peter plans to have a follow-up hands-on workshop, probably at Merritt College on March 14, Saturday, or 15th, Sunday, (time to be arranged) where members can make the changes to their microscopes to convert them to have the dark-field capability. Please mark your calendar.

The Wednesday, May 13th General Membership Meeting will feature Dr. Gregory Antipa who will be present and Introduction to Protistology. This meeting is currently scheduled at the Randall Museum, Buckley Room, and will start at 7:30 PM. Please mark your calendar.

(continued from pg. 4)

such as from a jar or from their mouth, place it on a slide, briefly stain it, and then view it at two or three magnifications. Then, if possible, get an e-mail sent to their computer of the image, perhaps with a short explanation of what is viewed.

To keep the youngsters moving through the process of DOING, one display issued white lab coats and had the "scientists" start at one end of three tables and work their way to the other end where they concluded their experiment and handed in their lab coat. It helped keep order and prevented others from crashing the line. It looked like it was working even though it was quite labor intensive. This

same technique was used at a museum I visited in Tacoma, Washington where only the young people with lab coats could enter the science classroom for a 35 minute session thus controlling both the age-appropriate participants and the parents who brought them to the museum.

-H. Schott

Stamp



SFMS

Volume 9, #3 December 2014

FROM: Micro News

San Francisco Microscopical Society
2214 Redwood Road
Hercules, CA 94547-1143

MEMBERSHIP INFORMATION

To join the Society,
fill in the form available on our web site at
www.sfmicrosoc.org

Mail it to : SFMS Treasurer
435 Melrose Ave
San Francisco, CA 94127

Make check out to SFMS.
Dues are \$12. per calendar year. Pay now for 2015
Life membership is \$144.00

We are on the Web

WWW.SFMICROSOC.ORG

TO:

**Give a Gift!
Be a P A L**

It is December and Christmas is quickly approaching. Perhaps you have someone special you might consider giving gifts to this holiday season. If you are generous, you may have a list and have checked it twice (just to make sure that they have been good and are really nice). Here is someone your list does not mention. He is busy with records and keeps track of all expenses. He knows if you are in good standing for 2014, and if you paid up already through 2015. He'll send you a notice if you're in arrears. So save him the trouble and send in your dues! It's a gift to SFMS and a bargain to you. But where does the P A L come into this story?

Pay A Little now and make the treasurer happy!
Just \$12 dollars a year, what a bargain you say?
It covers the postage and makes you a member!
Or buy a life membership for only \$144.- and never
Be bothered with dues in the future.

*(OK – so it does not rhyme go out and hire a poet.
H. Schott is responsible for the above
but do not let that keep you from paying your dues now.)*

Make checks out to SFMS. Mail to: SFMS Treasurer,
435 Melrose Ave, San Francisco, CA 94127

