



MicroNews

San Francisco Microscopical Society

Volume 11, #2 April 2016

**MEETING DATE IS MAY 11
LOCATION TO BE ANNOUNCED**
LOOK FOR E-MAIL

Just to give you a taste of the struggle that it is to get two events organized, the Berkeley Art Museum microscopy display on May 1 and the General Membership Meeting on May 11, we present a few e-mail messages that recently traveled through the "ether" to try to resolve the issues in a timely manner. Since Micro News is unable to give you definitive times and locations for the General Membership meeting, please look to your e-mail for an announcement. **The Berkeley Art Museum event will need your voluntary help so e-mail Peter or Henry to let them know you will share in this public event.**

From: DZ Brazil <dzbrazil@yahoo.com>
To: ribbons <ribbonspublications@gmail.com>; Peter Werner <germpore@sonic.net>; Henry Schott <hschott@aol.com>
Sent: Tue, Apr 19, 2016 7:00 pm Subject: Re: May 1st event

Dear Friends:
Thanks, David (Wilson) (BAMPFA), for this introduction, -- and, Peter and Henry, it's nice to meet you both! Please let me know by email or phone ([510-594-7663](tel:510-594-7663)) what special needs you have for this event -- in particular, what audio-visual or other technical requirements you may have. I will look forward to meeting you in person & I'm excited to be

a part of this program. Meantime I hope this finds you very well. With best wishes -- David (Brazil) (Berkeley Museum of Art)

On 2016-04-24 13:31, hschott@aol.com wrote:

Hi David Brazil:
I have tried to get Peter to set up a meeting but have not heard from him. Perhaps he has contacted you without sending me a copy. It is not clear to me what the May 1 Museum Invitation is. I understand that some people will be getting in free such as Oakland California Museum members. What will be the admission for others? Do you expect a lot of children?
What are the plans for using the small movie theater? I assume that if there is time and space we could make use of it. I believe you have Wi-Fi in there and that any laptop can be hooked up to the projector so that we could tap into YouTube to show some films of organisms photographed through microscopes. My hope is that we can meet during this week (4/25 - 4/29) for last minute arrangements. Suggest some time that is good for you. Peter's time is restricted by his working schedule. I'm retired and somewhat elderly and need to get information out to our membership. I look forward to meeting with you and need to know how to get past the front door if we meet in the museum. (call [510-339-9609](tel:510-339-9609)). Henry Schott

Peter Werner germpore@sonic.net wrote:
On Sun, Apr 24, 2016 at 8:21 PM,

Yes, I have been quite swamped, so my apologies for not getting around to this earlier.
I've found that I lack good contact info for David Wilson. Could I get a phone number? I'd like to set up a meeting for Tuesday (4/26) and plan everything out. I know we really should have planned this out weeks ago, but it's still not too late. I'll send a reminder out to our membership, and to the Merritt folks as well tonight.
Also, **still trying to line up May 11th. William Cochlan** cannot do it on that date. Checking w/ Bay Area Art Conservation Guild and Cultural Heritage Imaging to see if that will work, and will also check with Kayley Hake as well. Peter (Emphasis by Henry)

David Wilson wrote:
Hi all,
I am available Tuesday or Wednesday for a meeting. Let me know what time works, I'm flexible though mornings are best. Ideally we can find a time that works for David Brazil since he will be the point person for the event.
I'll respond shortly with a few additional thoughts/notes but let's try to find a time. all the best. David

INSIDE

Grand Opening of BAMPFA	2
Confocal Microscopy	2
Mushroom Extravaganza	3
Board Meeting Info.	4
Microscop. Challenge	4
Helmut Will	5
Treasurer's Report	5
Book to Consider	6
Tardigrades, Look for	6
2nd Membership Meeting	7
JOIN SFMS	8

DID YOU KNOW?

BUG DAY

WAS

Saturday, April 16, 2016

10 AM to 2 PM

AT MISSION ARTS

745 Treat Ave,
San Francisco

www.randallmuseum.org

GRAND OPENING BERKELEY ART MUSEUM

The acronym, BAMPFA, is well known to Berkeley residents and to UC students. SFMS was one of the numerous organizations invited to participate on January 31st in the opening of the new facility located at 2155 Center Street at the corner with Oxford, across the street from the west end of the UCB campus. The building has been repurposed from a university printing plant built in 1939 to be the **Berkeley Art Museum** as well as the **Pacific Film Archive** with two theaters and large gallery spaces totaling 82,670 square feet. The opening celebration was a new opportunity for the Society to reach



the Berkeley public and to share in this celebration. While our display was limited since we had only three or four microscopes, the number of people who found us in the library space was impressive. We had plenty of space to put up our poster boards one of which had the excellent micrographs taken by Bill Gurske and can be seen on the left side of the above illustration. Bill Heib, Myron Chan, Peter Werner, Henry Schott and a student from Merritt, helped oversee the microscopy display.

There were many groups present in the museum that

day and since there was no entrance fee, parents brought their children who loved looking into a microscope no matter what their age. Unfortunately, this presents a problem since they are unable to manage the instrument or understand that this is not a TV-like display of moving characters that tell a story. Video micrographs would be a good substitute for this age group as would be large lenses and similar magnifiers.

Come and Share On Sunday, May 1, 2016

SFMS Micro-Exhibit at BAMPFA

2155 Center Street, Berkeley

(You must call or e-mail to be preregistered.)

The Society would benefit from investing in a program to upgrade how we interact with the public. One possibility is to provide a special program for children up to the age of 11 that better fits their needs and then have a second

program of displays that actually addresses some specific adult interests.



Three microscopes set up at the mycological display in Marin. Note Merritt College Logo & literature display at corner of table.

Peter Werner and Myron Chan at the Merritt College meeting on March 9, 2016, in the microscopy facility.



CONFOCAL SCANNING MICROSCOPY

Out-of-focus light was the problem. The solution that Marvin Minsky developed in 1955, and patented in 1957, was to introduce into the detection pathway a pinhole to effectively block out this unwanted light while imaging central nervous system tissue.

Marvin Lee Minsky (August 9, 1927 – January 24, 2016)

BAMS Sponsors A Mushroom Extravaganza

Point Reyes National Seashore is in Marin County and was established forty-one years ago. The Bear Valley Visitor Center, not far from a small village called Olinda, became on January 3rd, 2016, a mycological exhibition hall for the many mushrooms that grow on the Marin Headlands. Organized and sponsored by the Bay Area Mycological Society, the several volunteers combed the park area on Saturday for specimens that then decorated four tables laden with closely packed but artistically displayed mushrooms, arranged next to the entrance on the covered porch. Since all the specimens were labeled, and some of the specimens were very attractive, people flocked around the tables despite the cold and drizzly weather.

The visitor center has interesting displays covering many topics relevant to the area. A tree, topped by an eagle nest containing a stuffed male and female, probably escapes the attention of most visitors since they sit so high near the rafters. Next to the main counter, President Peter Werner had set up three microscopes from Merritt College. The stereoscopic dissecting microscope showed the gill structure of a mushroom and was the easiest to use since it could be



The visitors center is not set up for a temporary display so our table drew power for the microscopes from the main information desk where the park rangers sat.

Below, two visitors took time to view the material on display and study the printed information..



zoomed to 35x. The other two microscopes held slides of spores and their associated structures at 1,000X.

The source of the spores, the actual mushroom, was placed next to each microscope as was a brief description. Our literature and some old copies of Micro News were on hand for any interested individuals.

It would have been good to have a special flyer to pass out giving detailed instructions on the upcoming General Membership Meeting at Merritt College but no one had thought of that in a timely manner.

There were two PowerPoint presentations in the adjacent auditorium. We could not get in to see

them because of the limited space and our unwillingness to leave the microscopes unattended. Since the auditorium was crowded to capacity I only caught a minute or two of the second presentation that focused on the spread of Amanita, the death cap, that was introduced into California in the 1930s.

We thank Merritt College for providing the microscopes.



SFMS BOARD MEETING BETTING ON FUTURE

The five members of the SFMS Board of Directors were scheduled to meet on Saturday, March 12, 2016, at noon at 20 Drake Lane in Oakland but Mary Ann, the Secretary was excused and VP Hill did not have transportation. Africa Williams was eventually rescued from BART and contributed to the lengthy discussion. At the request of President Werner, Henry Schott will take meeting minutes and distribute them to members for corrections and approval. The meeting got under way at 1:19 P.M.

President Peter Werner reported that SFMS successfully participated in the following events: (A) Micro-Bioblitz at Place for Sustainable Living in Berkeley, (B) Opening event at the Berkeley Art Museum (UC) and (C) Evening of Microbe Appreciation. These events were well attended by the public. We need to develop strategies to better promote our participation. The second General Membership Meeting was held on Wednesday, March 9, at Merritt College and was devoted to exploring microorganisms. Ariel Waldman, who learned about the Society through the Society's Facebook page, became our first new member this year.

Peter requested that members submit micro photos that can be incorporated into the web site currently under construction. His suggestion, presented only for discussion, that he be authorized to purchase pictures on line was explored but ultimately not approved. Peter is working closely with Terry Beaujesour who is developing the new web site. After the meeting he copied from Henry Schott's computer all the past issues of Micro News so that they may be archived on the web site.

Treasurer's Report by Myron Chan, Treasurer is reported elsewhere in these pages.

The treasurer announced that the Randall Museum Annual **Bug Day** will be held on Saturday, April 16, 2016 at the Mission Art Center, (745 Treat Avenue, SF) the tem-

porary Randall Museum center, while the actual museum site is undergoing reconstruction. SFMS's president, Peter Werner, plans to attend and present a \$5,000.- check from the Society to the Friends of Randall Museum, a nonprofit, to help with the refurbishing of the building. The Randall Museum will reopen in January 2017.

Old business: The President requested that material be provided to him from members for inclusion in the new web site including pictures and other useful and relevant information.

Henry Schott assured the board that progress was being made on purchase of prepared microscope slides and on the two items, a banner and table cover. Peter Werner purchased a stage micrometer for SFMS for \$45.-

New Business: Mary Ann Scott's absence and inability to produce minutes for the past two board meeting will require some board action in the near future.

The next **General Membership Meeting** is Wednesday, May 11. Peter Werner is looking at two potential speakers and will seek to have one of them make a presentation. The first is William P. Cochlan, Ph.D., Oceanography, of the SFSU Department of Biology who is a biological oceanographer/marine microbial ecologist who addresses the fundamental question: What environmental factors control phytoplankton growth, their physiology and reproduction? Dr. Cochlan's lab is at the Romberg Tiburon Center for Environmental Studies, (RTC). If he is not available, an alternative would be someone from the **Cultural Heritage Imaging (CHI)** (a nonprofit, Helping Humanity Save History) We should try to have a joint meeting with the Bay Area Art Conservation Guild (BAACG) **Future General Meetings:**

Peter suggested the Forensic Entomologist, Robert B. Kimsey Ph.D. - UC Davis Department of Entomology with a joint meeting with The California Association of

MICROSCOPY CHALLENGE

Your microscope has been sitting in the closet long enough. It is time to see if you can meet this challenge. You have looked at algae and seem spirogyra and you have seen the protozoa. Plant and animal tissues are "old-hat" to you and sand grains from Hawaii have been inspected and appreciated. Now you are ready for something new. How about something unworldly? How about something from outer-space? Moon rocks would be interesting but NASA does not hand them out for the asking so you will have to do your own searching for this extra-terrestrial material. Suggested by Jennifer Hackett in the April, 2016, Scientific American, with a strong magnet in hand you can collect debris at the outlet of your downspouts from the gutters of your

Criminalists.

The following tasks are delegated to the positions and persons listed: P. Werner: Nailing down speakers and meeting places (venues). Peter and Africa: Prepare a list where we post our announcements. A. Williams: Write copy of announcements on events identified by Peter. A. Williams: Develop the agenda for board meetings by:

1. Calling for agenda items from board members two weeks prior to meeting, 2. Distributing electronically the agenda one week prior to meeting.

H. Schott: Editor of Micro News, Minutes of Board Meetings, purchase some items.

Additional discussion: May 1, 2016, Berkeley Art Museum event. Peter will arrange a meeting with David Wilson of the museum for April 1 or 8, 2016 to discuss ar-

roof and recover micrometeorites the size of -let us say- very small particles that have accumulated on your roof according to Richard Garriott, civilian astronaut and meteorite hunter. Not everything that your magnet picks up will be space-dust but under magnification you will be able to locate spherical objects that have a crust of glass created by fusion during passage through the atmosphere. To be attracted to the magnet, the star-dust must contain iron or iron-nickel enough to be "magnetic".

If you succeed in finding such micrometeorites and can photograph them, send your images to HSchott@aol.com for publication in Micro News and to Project Stardust, an independent investigation that encourages citizens to share their finds. HS

rangements. Peter will contact Cliff Cockerham recently hired by Merritt to develop a mentor outreach program for Jr. & High School students and teachers(?). Africa will report on Oakland USD's Science Days, Oakland Museum Science Night, and she pointed out that we could enlist people at the Counter Culture Lab who have lots of energy.

Next Board Meeting: Saturday, May 21, 2016 at 20 Drake Lane

What Will Bring You To A MEMBERSHIP MEETING ?

Send us your ideas of what you would like to see happen at our meetings? Help us find interesting speakers and activities. Participate and share.

HELMUT WILL

No one better exemplifies the dedication to



the San Francisco Microscopical Society than does Helmut who joined when he was a young man in the 1960's. He is the active member that I can describe as serving the Society the greatest number of years—by far.

I got to know Helmut in the mid 1990's when he had already been ac-

tive for 30 years. He was the Treasurer and he assiduously collected dues by handing out envelopes at meetings reminding you that your \$10.- were due. He did not let you skip a year so if you had not paid by November, you owed \$20.-, ten for the current year and ten for the next.

Helmut came from Germany where as a young child in 1945 he recalls seeing German soldiers retreating from his village in the morning on foot and the Americans riding on tanks and trucks in the afternoon, handing out candy bars.

Educated in the rigorous German schools, he was apprenticed for three years at Leitz and a further two years in what

today would be the Research and Development area. Leitz is famous for its excellent optical systems used in microscopes, cameras, and various instruments.

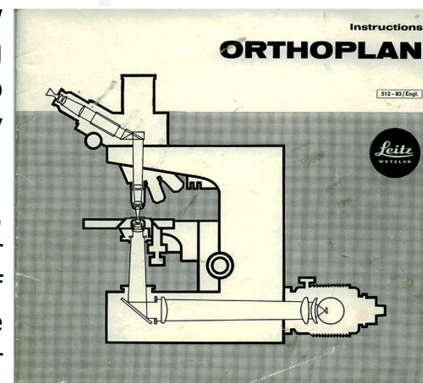
When he learned that Leitz was preparing to open offices in the U.S., he applied to go to their new locations and spent one year in New York before coming to California to work in the Bay Area.

In the 1960s, Don Longanecker was president of SFMS. He was the Staff Photographer at UCSF and needed a Leitz Orthoplan microscope to process microscope slides and thus he met Helmut in the course of business. Don encouraged Helmut to join the Society which he did, meeting other members and sharing his skills and understanding of microscopical technique.

Helmut's professional career continued when in 1973 he started working for Olympus. I recall Helmut leading us on a field trip to the Olympus company to view an instrument that could look through a solid object, like a penny, with sound waves and render the

reversed image of the metal-air interface. He is now retired.

In the Society, Helmut frequently was called upon to give knowledgeable presentations and to serve on the Board of Directors as Vice President and for many years as Treasurer. His steward-



ship lasted 16 years and resulted in a steady accumulation of funds both from Life Memberships and from donations that increased the treasury by several thousand dollars. He also located microscopes that several members bought and that the Society purchased for use at meetings and as loan instruments to members.

Ever ready to help where needed, Helmut has volunteered at the many public events where the Society has set up a booth such as

TREASURER'S REPORT

The SFMS Treasurer, Myron Chan, provided the 2015 Fiscal Year Report for the membership at the last board meeting which was held on Saturday, March 12, 2016.

Income

Life Membership	144.00
Dues 2014-2015	240.00
Donations	<u>8.00</u>
TOTAL	\$392.00

Expenditures

Postage	137.44
Printing	71.85
Miscellaneous	363.68
Supplies	51.35
Travel	533.65
Web site development	3,828.00
Micro News Publishing	126.60
Purchase of Software	32.85
Purchase of Micro Slides	<u>128.13</u>
TOTAL	\$5,273.55

Balance

Balance from reserves	\$-4,881.55
Income	<u>-392.00</u>
TOTAL	\$-5,273.55

The board accepted the report.

BOOKS TO CONSIDER

This is not a book review and it is only a report to let you know what is available. You can do one simple activity if you want to get ahead of the curve, so to speak, turn to

ter Werner who is particularly interested in world of fungi or mycology. He ordered the "Methods" from the publisher in England, the other is available from Amazon.

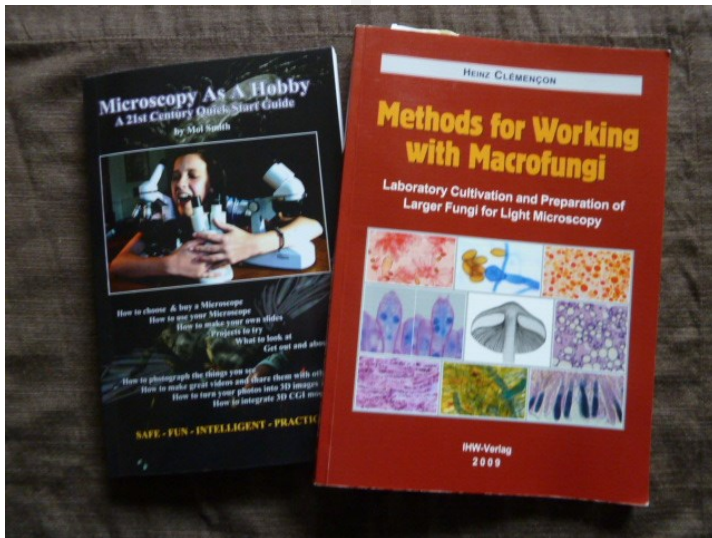
2014. pp 142. It includes advice on how to make your own slides, projects to try and what to look at.

Methods for Working with Macrofungi includes laboratory cultivation and preparing large fungi for light microscopy. The author is Dr. Heinz Cléménçon who is on the faculty for Biology and Medicine, University of Lausanne, Switzerland. If you are interested in making cultures and perma-

nent slides these 88 pages will provide many useful ideas.

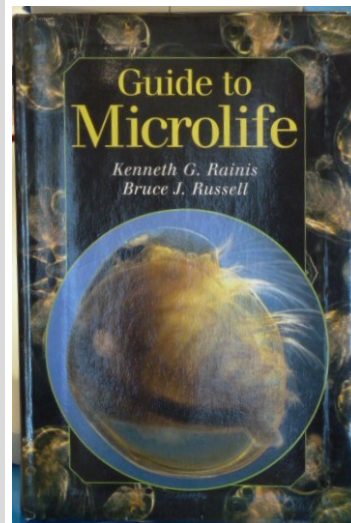
Guide to Microlife by Rainis and Russel is a handy way to learn about the small creatures you will find in pond water or in the soil. Published twenty years ago, it is not the kind of book that needs frequent updating. To get a good feel for how this book can be of use, read the pages available on Amazon.com.

World in a Drop of Water: Exploring with a Microscope by A. Silverstein is a Dover publication based on the original published in 1969. It will guide you to the more common organisms and provide you with some understanding of life in water. HS



Amazon and look up microscopy. But that is not as much fun as seeing it here first. The two book illustrated were brought by Pe-

Mol Smith is the author of **Microscopy As A Hobby: A 21st Century Quick Start Guide**, published by Onview.net



TARDIGRADES GET THEM UNDER YOUR MICROSCOPE

by Ariel Waldman

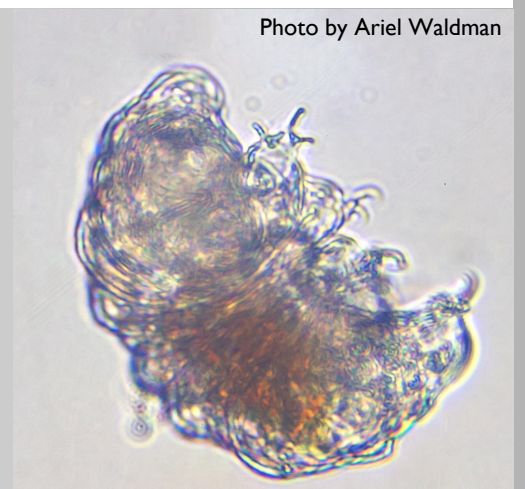
Tardigrades are ubiquitous, small (~0.1 to 1.0 mm) invertebrates that have received notoriety for their ability to survive the vacuum of space and reanimate after several years of being frozen. Specimens were collected in moss samples from San Francisco and captured using an inverted long

working-distance compound microscope (AmScope IN200TB). Gather some moss or

even dirt and it will contain these creatures that go by the common name of water bears.



Photo by Ariel Waldman



SITTING PRITTY: WHAT HAPPENED AT THE MARCH 9TH
GENERAL MEMBERSHIP MEETING



Ariel Waldman and Peter Werner discuss how to mount a Rheinberg illumination on a condenser. Ariel joined the Society at the meeting.

The second of five annual meetings of the San Francisco Microscopical Society was held at Merritt College in the new Barbara Lee Center for Science and Allied Health building at 12500 Campus Drive in Oakland. We met on the first floor, what could be called the basement by some, where the microscopy and cell culture programs are located. Besides the two officers, Peter Werner and Myron Chan, four others attended and viewed organisms. We also learned how to make ordinary condensers into Rheinberg illumination microscopes by the use of a color darkfield stop to illuminate the sample with two different colors of light. It is a modification of dark-field microscopy. Peter had a number of fresh and salt water samples and others also brought in samples from moss to water collected at Montclair Park duck pond.

Ariel Waldman tried to locate tardigrades in the moss that she had brought and that she successfully photographed on her own microscope at home. She shared with us the video she had on her phone of these interesting water-bears. Generally, they are one millimeter in size, have four pairs of stumpy unjointed legs ending in two or more claws. There are about 280 species according to my Storer's Zoology text. At the end of the meeting, she joined and became the first new member in 2016.

Ariel has worked for NASA at Ames Research in graphic arts and has developed an interest in microscopy. Her new

book co-authored with Brian Standeford, was released on April 5, 2016, *What's It Like in Space?: Stories from Astronauts Who've Been There*. She has a web site that will charm you with the copies of her blogs and the lovely pictures of her recent marriage. (ariel@arielwaldman.com) . While she contributed several pictures (see previous page) for which the editor is very thankful, it was equally delightful to see that she was receiving national recognition in the April issue of the Smithsonian Magazine where her picture and some questions about space (What does space smell like?) are answered.

We also are pleased to welcome into the Society Frank Hubinsky who responded to the "welcome" e-mail sent to him:

Hello Henry,

Thank you for the full introduction to the group. I first became aware of society through the postings of Peter Werner to the BAMS list. And then at the Pt. Reyes Fungus Fair this past January I also had a discussion with a gentleman there, and got to see a few scopes. I'm just another nature addict, that needs to get his fix on a regular basis. Now that I am retired, I can spend a lot more time getting closer and deeper into nature. In that vein, I am expecting to get a scope in the not too distant future and what better place could I get good advice in that regard than the society.*

I would love to help out at the May 1st event, but on that day I will be riding my bike in the 'Five-Borough Bike Tour' in New York City. Fifty miles through all five boroughs. Maybe the next event.

I do a bit of traveling, but I expect to return to the bay area May 3, so hopefully I can make the May general meeting at least.

Yes, you can publish my address, phone, and e-mail. I believe you have all of that from the application.

Thank you again,

Frank Hubinsky

**Bay Area Mycological Society*

READY TO SELL OR GIFT YOUR SCOPE?

If you have a microscope for sale, trade or for the society to give away, NOW is the time to let me know so I can mention it in the next Micro News.

SFMS

Volume 11, #2 April 2016

Stamp

FROM: Micro News

San Francisco Microscopical Society
20 DRAKE LANE
OAKLAND CA 94611-2613

MEMBERSHIP INFORMATION

To join the Society or pay your dues:

fill in the form available 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 2016

Life membership is \$144.00

WWW.SFMICROSOC.ORG**GENERAL MEMBERSHIP MEETING: May 11.**

**Information will be sent to your e-mail address or you can call
510-339-9609 on May 5 or May 6 only.**

TO:**The S. F. Microscopical Society**

SFMS dates back to 1870-72 when it was founded but as a result of the 1906 earthquake it was disbanded and not revived until the 1950s. It has been active over the past sixty years and has served the wider community of the nine counties during that time. For the past fifteen or more years, our base has been at the Randall Museum in SF but this year the Randall is being rebuilt and thus we have often met at Merritt College in Oakland. Merritt has a new building for the sciences in which the first floor is devoted to light microscopy and cell culture.

We have five officers that comprise the board of directors: Peter Werner, President, Bill Hill, Vice President, Myron Chan, Treasurer, Africa Williams, Corresponding Secretary, and Mary Ann Scott, Recording Secretary. Henry Schott is the editor of the Micro News and is not an elected officer. Elections are held at the January General Membership meeting. Board meetings are announced and open to all members. General Membership Meetings are held five times a year, usually meeting on the second Wednesday, 7:00 to 9:00 PM. of September, November, January, March & May. The location is announced by e-mail.

The Society's newsletter is the **Micro News**, published four times each year and mailed to members.

In the eight-page newsletter is information about the activities of the board and of upcoming meetings as well as any items that the editor or the officers want to share with the members. Members are encouraged to share what they find interesting in microscopy by providing pictures and text. Sometimes it is difficult to get out the newsletter so please help by sharing any material of interest.

**TO JOIN THE SOCIETY, PLEASE PROVIDE
THE FOLLOWING INFORMATION:**

Full Name
Mailing address and zipp code
Phone number
e-mail address
Year of birth

Membership is for the calendar year. Enclose a check for \$12.- (or multiple thereof for each subsequent year, i.e. \$24.- for two years) . Life membership is \$144.-.

Make the check payable to:

S. F. Microscopical Society

Mail to:

SFMS Treasurer
435 Melrose Ave