MicroNews

San Francisco Microscopical Society Volume 7, #1 January 2012

SFMS Board Meeting
January 2, 2012, Monday

It may have been a holiday for you but the five board members got together and hammered out the final draft of the Articles of Incorporation and voted on accepting them as the Revised Version to be submitted to the State if the membership approves. The board recommends that you vote YES to approve since we need at least 50%+ to submit the A.I. to the state.

Please send to: HSchott@aol.com short accounts of what you have observed through your microscope.

INSIDE

General Meeting: Randall Museum, Wednesday 1/11/12, 7:30 PM,

Getting There First is Not Winning the Race

We do not know who first realized that curved transparent material could result in magnification and that as a consequence of that magnification more could be seen than with the naked eye. We know that lenses were developed by the Chinese and fitted into eye glasses successfully before the Europeans or the Arabs did the same thing. Glass was molded and shaped into small containers in Roman times and some Romans must have noted that if round bottles were filled with water they would act as a magnifier. If they thought about it, if they wrote about it, no record of their thoughts or descriptions came down to us. If they made observations through magnifiers that led to discoveries we are today unaware of these finds. To be a discoverer requires results that are passed down to us through history, usually through a written record.

The first sewing needle may have been a fishbone. The first hammer was most likely a stone. The first weapon was probably a club. In each case, we can make a good argument why we have chosen the item but we have no proof and no record of the inventor. Inventions need be useful in their time and if we are to know the name of the inventor there must be a recorder, a historian, who can inform us.

Zacharias **Janssen** was born in 1580 probably in Middleburg, Holland to Hans Janssen and his wife. Hans was a Dutch maker of spectacles and his son would have become his apprentice as soon as he was able to concentrate on the task at hand, perhaps at the age of six or seven if not earlier. We can assume that by the time he was 17, he would have become a skilled lens grinder and spectacle maker but would have remained in the household as an assistant to his father who had the advantage of having a reputation and a locally well-known established business. It is in the 1590's that Zacharias is credited with inventing the compound microscope. If we assume that his life

C. elegans again. They Steal Headlines

Small creatures are of interest because, -- because, ah~ well, because they are small! If you want to send them up into space in order to study cell behavior, particularly how gravity might affect any number of biological processes including reproduction, small is good, especially since it is going to be cheaper and in most cases quicker than large. If you are familiar with Caenorhabditis elegans you will recall that their one millimeter length will not make them conspicuous. About seven thousand of their twenty thousand genes code like human genes. That is useful and makes them a good model animal. The female worms are hermaphroditic producing their own sperm and since they grow quickly and reproduce in three to four days, you will soon have more worms than you care to count.

Five years ago, the Discovery space shuttle launched into orbit carrying 400 soil-dwelling worms without a biologist in attendance. The experiment was carried out in a remotely controlled automated system that permitted earth bound scientists to observe the worms, gather data and make adjustments remotely. These were the first worms to

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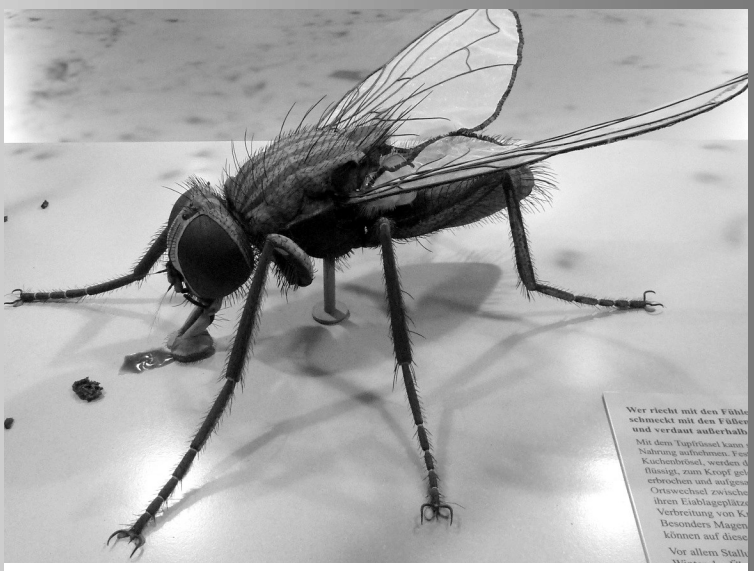
San Francisco Microscopical Society



Model of a house fly enlarged 1,000x

December 9, 2011, Minutes of Board Meeting are not Boring,

The SFMS board met for over two hours on December 9, 2011, in order to work on the details of the proposed Restatement of Articles of Incorporation. The meeting started at 3:15 and ended after five. Only Secretary Debbi Brusco was unable to attend. This is an unofficial report on that meeting.

As you may have noticed, it is taking some considerable time to come to a resolution as to exact wording of the articles since there is no perfect model. The board members contributed to the discussion and decided that we were primarily an "educational and charitable" organization. The "charitable" term seems to be required to indicate that we are a non-profit organization.

Bill used his computer and phone to contact members of the Lichen Society in order to find the attorney who had helped them with their effort to become a non-profit organization. The attorney had in the meantime retired and recommended someone else. (Conversations with this attorney in the subsequent week indicated that it would be quite expensive to retain these services.)

Since the membership has to vote on the Restated Articles of Incorporation an e-mail needs to be prepared. Henry agreed to prepare a model and circulate it to the board for discussion. It is absolutely essential that over 50% of the members vote for the adoption of the Restated Article of Incorporation as required by law. In order to ensure wide participation, the vote will be conducted by e-mail. Board members will call the local membership to make them aware of: a.) the importance of voting on the Restated Articles of Incorporation, b.) the need of members to serve on the board of directors, and c.) attending the January meeting is important because *the society needs to know that YOU are supportive of what the board is doing* and the types of meetings it organizes.

Many of the current documents and "documents of interest" are now stored in the cloud and available to all board members. This should make it easier to look at material of current interest instead of having it stored on each of our computers. Peter will look into Google Doc to see if there is a better way to access these documents.

The board is also looking into the purchase of a projector and a laptop for use at meetings. It has been quite a hassle to get the slide shows onto someone's computer when a speaker brings only a memory stick to hold a presentation.

We also discussed the January meeting that will be held in the Buckley Room of the Randall Museum. The board decided that the meeting would begin with a POT LUCK, a sharing of food and a

(Continued from page 1) C. elegans

produce 12 new generations in space. The worms feed on bacteria so providing food starts with giving food to bacteria who reproduce faster and grow exponentially. How easy it would be to feed the seven billion people if we could do that for them. If you want to go and read the original document published in the Journal of the Royal Society, *Interface*, look up the November 2011 article by Nathaniel Szewczyk of the University of Nottingham, senior author of the study.

Gregory Nelson, a professor of radiation medicine at Loma Linda University was the first to send these worms into orbit in 1991. We know that gravity plays a role in altering the development of some animals. Both frog or chicken embryos develop a body axis established by gravity. If improperly formed, the axis can lead to deformities Nelson said. "This is the first time that any organism has been allowed to propagate [without gravity] over so many generations." HS

Based on PBS News Hour November 30, 2011

SAN FRANCISCO MICROSCOPICAL SOCIETY

Stamp

SFMS

FROM:

4/29/2011 Bug Day at the Randall. Public access to microscopes at SFMS display table. With name tags are Robert Griffin, far left, Peter Werner, center, Myron Chan, right, and Mike Kan, with back to camera. Unknown parent look-

NEXT ISSUE: Vienna Natural History Museum. You have seen the pictures, - now read the story behind the pictures in April, 2012. H. Schott, Editor.