Journal of
THE MICROSCOPICAL SOCIETY OF SOUTHERN CALIFORNIA
Volume 7 Number 5 May 2002

WORKSHOP OF THE MICROSCOPICAL SOCIETY OF SOUTHERN CALIFORNIA

by: George G. Vitt, Jr.

Date: Saturday, 4th May 2002, Location: Izzy Lieberman's Residence

Microscopes shown at the May 2002 MSSC Workshop

1. a) Jim Solliday announced the exhibition, *"History of the Light Microscope"*, taking place at the San Francisco Airport, which is being put together with items from various MSSC collections. John Field and Jim Solliday are spear-heading the effort.

b) MSSC member Alan Roberts is organizing a Scientific Instrument Show, phone: (310) 476-6277 for details.

c) The Instrument Society Shows in Maryland and New Jersey are now defunct due to lack of attendance.

d) The MSSC Journal for 2001 will be published as a single issue and devoted to all the workshops for that year, George Vitt having prepared all the text and photos. Leonie Fedel was unanimously congratulated for the fine job she is doing as MSSC Editor. Dave Hirsch has located and used the services of a printer for the MSSC Journal who can print directly from PDF files recorded on either a ZIP drive or CDRom. By so doing, the photo image quality is preserved. This printing service is *"Copy Right"* on Bundy Drive.

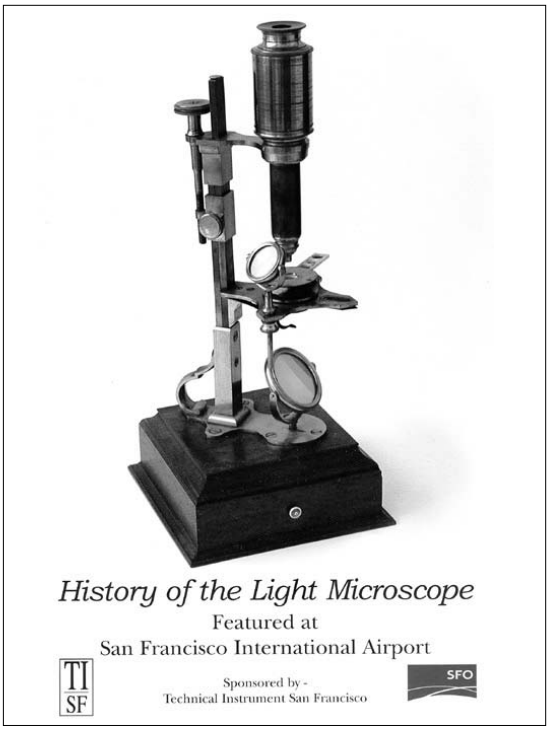
e) There will be a 'Pond Life' meeting on 15th May. Members were reminded to bring microscopes and samples.

f) On the 3rd Saturday of June there will be a Special Workshop at New Roads School on Rheinberg Filter Illumination, conducted by Jim Solliday.

g) We were all delighted to see our good friend Jim Clark at this workshop!

h) John de Haas was congratulated on the fine job he did in conducting the Special Workshop on micromounts which took place on Sat 20th April 2002 (see later article on this workshop).

2. Stuart Warter exhibited one of the highest quality student microcopes - a Pillischer microscope of very fine construction (see photo). This is the "Kosmos" model of the late 19th C., signed *"The Kosmos / Trade Mark / M. Pillischer / London."* Moritz Pillischer worked from 1850 until his death in 1887 when he was succeeded by his nephew, Jacob, who worked until some time after 1900. The precision workmanship and superb finish and attention to detail is exemplified by a feature which is generally unnoticed: the pads at the bottom of the foot are polished to what is essentially optical flatness!



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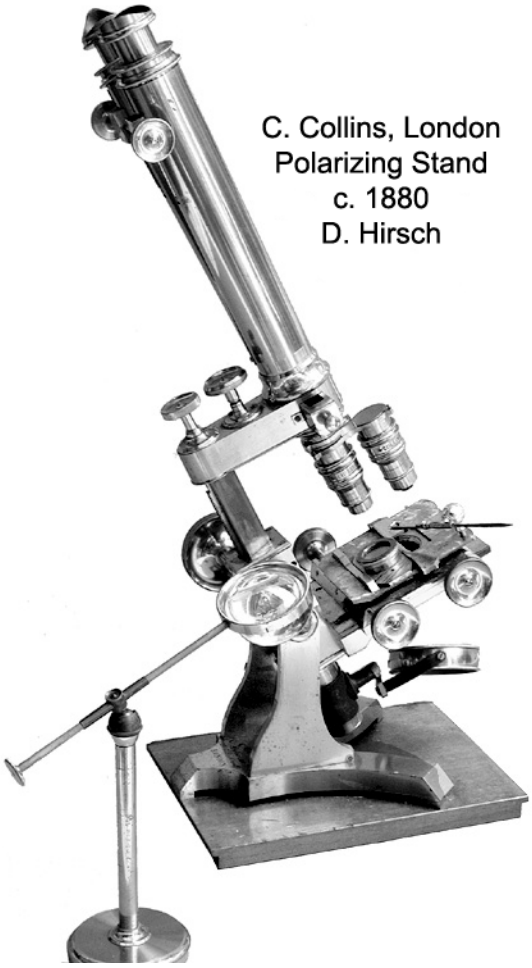
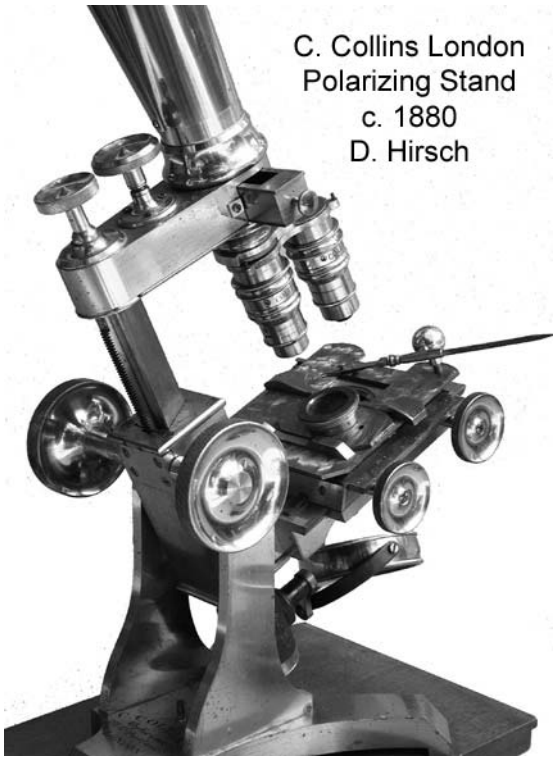


3. Dave Hirsch showed a superb cased Wenham-type binocular polarizing microscope c.1880 by C. Collins, London (see photos). It came with a live box, 4 objectives, oculars with their distinctive 'Collins' eyeshades, camera lucida, substage Nicol prism, and a substage mirror which adjusts radially and up-and-down.



4. Larry Albright had for sale a micro-manipulator used in the semiconductor industry. He showed the book *"Hydra"*, a reprint of the 1744 edition with the memoirs of Abraham Trembley, by Silvia G. Lenhoff and Howard M. Lenhoff; Boxwood Press, 183 Ocean View Blvd., Pacific Grove, CA 93950; 1986. Larry also showed the book, *"Lindsay's Chemical Cross Reference"*, Lindsay Pub.,

Inc., Bradley, IL 60915, 1989. This contains all the archaic chemical terms (such as *'flowers of sulphur'*) and gives the modern chemical equivalent.

5. Jim Clark showed an interesting illustration from the June 1923 Scientific American, *"Engraving Spy Messages on the Head of a Nail"* (see photo). He had received this from Larry Albright.

6. Jim Solliday had collected the entire line of microscopes that had been manufactured by Gundlach. He exhibited four turn of the century microscopes that were all made by the *Gundlach-Manhattan Optical Company (see photos)*. This exhibit represented the complete line of microscopes produced by this firm for the year of c.1905. Also displayed was a catalogue illustrating the complete line, each illustration in the catalogue was represented on the exhibition table. This group of microscopes came in models that ranged from simple student to professional laboratory types.

(a) The first instrument was a student type and was listed as the *Simplex Model*. The initials of the *Gundlach-Manhattan Optical Co.* are found on the eyepiece. This example was probably made in 1902 or 1903. The limb is fixed in the vertical position and mounted on a small horseshoe foot. The objective is of the divisible type and equals 2/3" & 1" magnifications. The coarse focus is provided by a sliding tube where as a tilting stage plate provides the fine adjustment. There is a micrometer screw operated from beneath the stage and acts to slightly raise or lower it.

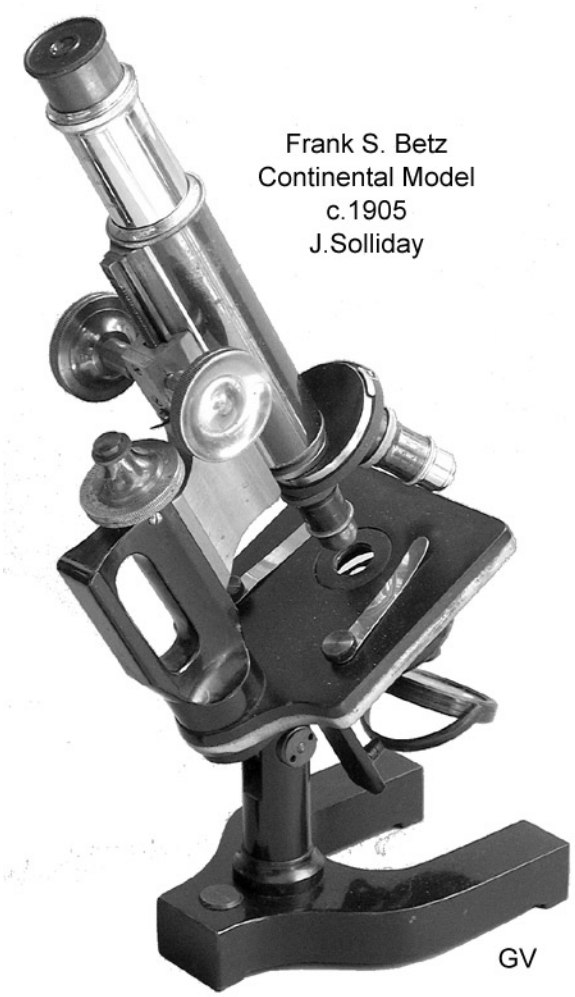
(b) The next instrument was a *Portable Box-Mounted Microscope* made by the *Gundlach-Manhattan Optical Co.* The signature is found on the bodytube. Except for its boxfoot this stand is otherwise pat-

terned after the Gundlach *Simplex* Model. This is a regular-sized microscope conforming to RMS standards. The microscope is made entirely of brass with oxidized arm and stage. The case, which is covered with a durable imitation leather and velvet lined, forms the base of the microscope. The coarse adjustment is secured with a sliding drawtube, and the fine movement is a tilting stage arrangement. The optical elements consist of a 7x eyepiece and a 2/3" & 1/6" divisible objective. Higher powers may be used, however, there is no substage apparatus to assist in the illumination other than a one-sided mirror. The dimensions are: Tube length: 160mm., Stage 2" X 2", Mirror: $1^{1}/_{8}$", Case: $3^{5}/_{8}$" X $4^{1}/_{8}$" X $10^{3}/_{5}$".

(c) The third instrument is the G.M.O.C. AH model which is a student stand that features a true fine adjustment. This is a bigger microscope than the first two models and stands on a large horseshoe foot. It also uses a sliding tube for the coarse focus but includes a very nice micrometer screw for the fine adjustment. The most distinctive feature is a large "D" or what is sometimes called a jug handle.

(d) The fourth and final model is the Gundlach Model EH. This represents the largest and best microscope in the *Gundlach-Manhattan Optical Co.* production line. The signature is that of *Betz,* No.2100. Frank S. Betz Co. was a well-known retailer and factored in microscopes from a number of makers. All the Gundlach-Manhattan Optical Company models were sold by the firm of Betz in the first decade of the 20th Century. Betz signed all the stands he factored in with his own name thus causing some confusion. This stand is described as being "well-proportioned, with no detail of its construction escaping careful consideration". The micrometer screw for the fine adjustment is located at the top of the "D" handled limb, it provides direct control of the movement without any reciprocating parts. The milled head has a limited motion, so it cannot be turned too far in either direction. The coarse is by

diagonal rack and pinion, moving the usual 160mm tube with adjustable graduated nickel drawtube. The stage is entirely covered with hard rubber and furnished with German silver spring clips. The substage is equipped with an Abbe-type condenser, adjusted by quick acting substage screw (Continental style). The mirror is both plane and concave and can be moved diagonally from a spring joint. It has a Continental horseshoe foot, pillar and inclination joint. The aperture of the stage is fitted with an iris diaphragm acting very close to the top of the table. Optics include a triple nosepiece holding a 2/3" Betz, 1/6", 1/12" oil Imm. Signed *"Frank S. Betz Co."* A second 1/12" Immersion is stored in the case. All objectives were made by the Gundlach-Manhattan Optical Co. There are three oculars, 10x, 7x and 3x, signed *G.M.O.Co.* A blue filter and darkfield stop are stored in a hardwood case with lock and key.



In 1878, Gundlach was terminated from the firm of Bausch & Lomb. In 1879, he moved to Hartford, Conn. where he established a partnership with Mr. L.R. Sexton. In 1884, he moved to Rochester and established the *Gundlach Optical Company*. By 1895, the firm was known as, Gundlach Photo-Optical Comp. By 1902, the firm was obtained by the Manhattan Optical Comp. Rochester, N.Y. (Bracegirdle). Gundlach ultimately moved back to Germany. Finally, in 1910, there was a firm known as the Gundlach Manufacturing Corporation, 739 Clinton Ave. So. Rochester, New York. This is the Company name as it appeared on a catalogue issued ca.1910. A 52.pp Catalogue, it shows 2 microscopes, 9 cameras, lenses, tripods, enlargers and binoculars.

In 1895, Frank S. Betz and Company established themselves at, 35 and 37 Randolph St. Chicago. He also opened outlets in Indiana, Dallas and New York City at, 348-352 W. 34th St., and 6 & 8 W. 48th St. N.Y. Betz was a premier supplier of medical equipment throughout the U.S. and continued in business into the mid-20th Century. He recognized the advantage of providing all types of instruments and supplies for the physician and hospital. He not only imported items but also undertook limited manufacturing of his own. He is known to have sold instruments from a number of microscope makers including the Gundlach Manhattan Optical Co. The name of F. Betz and Co. can also be found engraved on objectives of German origin. In 1930, a catalogue dedicated to the *Latest Model Microscope* was issued. By the mid 1920's, the firm was serving 100,000 physicians and maintained $200,000 worth of stock.

7. Ken Gregory showed a 1917 Spencer No.5 stand with two Apo objectives! (See photo). It features an aluminum body tube, 150mm rotating graduated stage, X-Y mechanical stage and a double iris substage condenser, with decenterable lower iris for oblique illumination. Ken says the following: *"Several months ago, I won the bidding on a Spencer Model 5 microscope, s/n 33351, c.1917. It was a wreck. No part of the mechanical stage could move.*

Nickel plating was scaled off. Most of the black enamel was chipped or gone." The microscope is presented in its reconditioned form by Ken Gregory. The 1922 Spencer catalog describes the Model 5 thus: *"A single tube instrument of the highest type designed to meet the most exacting demands of technicians and trained investigators. Body tube of aluminum, 50 mm. In diameter. ... Stage of revolving type, 150 mm. In diameter, with centering screws. Equipped with large mechanical stage. Complete rack and pinion substage with upper and lower iris diaphragms."* (Lower is decentrable). The microscope was complete except for a mirror. The objectives were: 16 mm. Spencer apochromat; 4 mm. Spencer apo with adjustable collar; 2mm. Spencer apochromat. No eyepiece, but a lens without collar was down inside the eyepiece tube, which had kept dirt out of the inside of the objectives.

8. Pierrino Mascarino showed his newly acquired microscope adapter for coupling his Nikon 995 digicam to a microscope eyetube (see photo). This adapter consists of a wide field modified orthoscopic eyepiece (Kellner-type) inside a brass tube which is threaded on its upper end to screw into the 29mm dia. filter thread of the Nikon lens, the lower end being of the diameter to slip into a standard eyetube. Pierrino also brought his Nikon 995 and an Olympus trinocular stand so that the combination could be tested and demonstrated.

9. Larry McDavid gave a detailed and enlightening account of his recent visit to the *Museum of Jurassic Technology*, which he recommends visiting. He called it "eccentric and eclectic", describing it as an exhibit of many collections of private individuals. Ellen Cohen elaborated on Larry's report by giving us a picture of the place and its unusual physical layout and exhibits. She recommended that visitors bring a flashlight!

10. Gaylord Moss described the talk that Robert Fischer had presented to the Optical Society of America at their recent meeting. Robert is the founder and CEO of Optics One, Inc., of Westlake Village, CA, who are designers and builders of advanced optical systems and have devel-

oped their own software for such work. He was formerly Chief Scientist for the Hughes Missile Systems Group (Canoga Park, CA) and is a long-time friend and co-Worker of George Vitt. It was suggested that George should contact Robert and invite him to give a presentation to the MSSC.

11. Alan de Haas showed two fascinating books. The first was a 1902 catalog of optical instruments by Otto Toepfer & Son., Potsdam. George Vitt borrowed this book and scanned many of the fine illustrations (see photos overleaf). The second book was from the U.S. Geological Survey with a set of superb color lithographs of protozoa in the section *"Fresh Water Rhizopods of North America",* by Joseph Leidy, MD, Washington DC, USGPO, 1879. (See photos overleaf). Alan also showed a cased darkfield condenser by Busch. Alan also bought in a number of 'goodies' for members. Alan has become notorious for bringing in superb and very rare and unusual stuff!

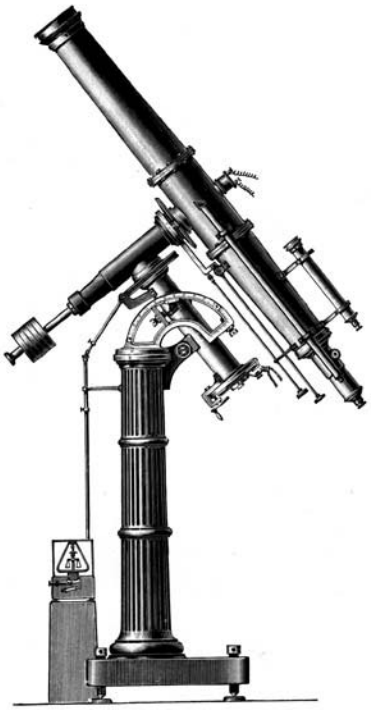
12. George Vitt described the procedure he has been using recently to color calibrate inkjet printers. This procedure will be published in a forthcoming MSSC Journal in order to assist those interested in taking realistic and exact colour photomicrographs.

Members carting off "goodies" donated by Alan de Haas

We give our thanks for the heartwarming hospitality given us by our hosts, Mr. & Mrs. Lieberman.

Members inspecting "goodies" donated by Alan de Haas

***1902 catalog of optical instruments by Otto Toepfer & Son., Potsdam.* shown by Alan de Haas**



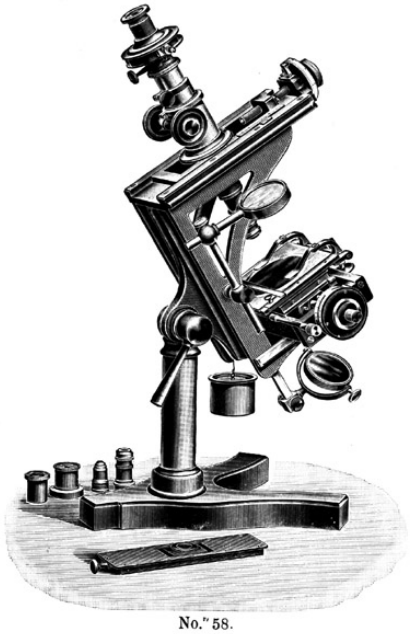
No. 1.
Refractor von 6" Oeffnung.

Refractoren bis 12" Oeffnung; bis 6" auf Wunsch mit verstellbarer Polaxe.
— Preise nach Grösse und Ausrüstung. —

Refractoren.

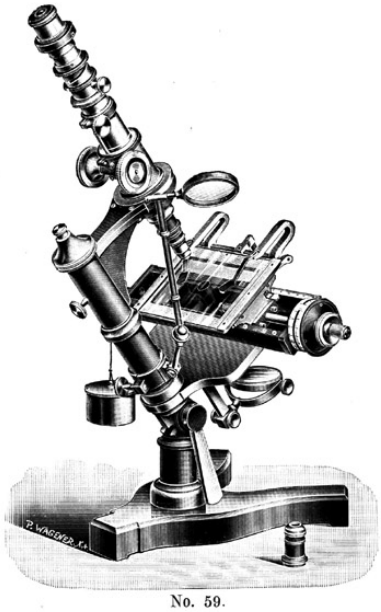
OTTO TOEPFER & SOHN, POTSDAM. Preisliste No. 25.

Messmicroscope.



No. 58.
Modell II

Microscop durch Schlittenführung senkrecht zur Messschraube verschiebbar; nutzbare Länge der Messschraube 50 mm; Ganghöhe 0,5 mm; Ablesung $^1/_{2000}$ mm;
mit Zubehör Mk. 1200,—



No. 59.
Modell III

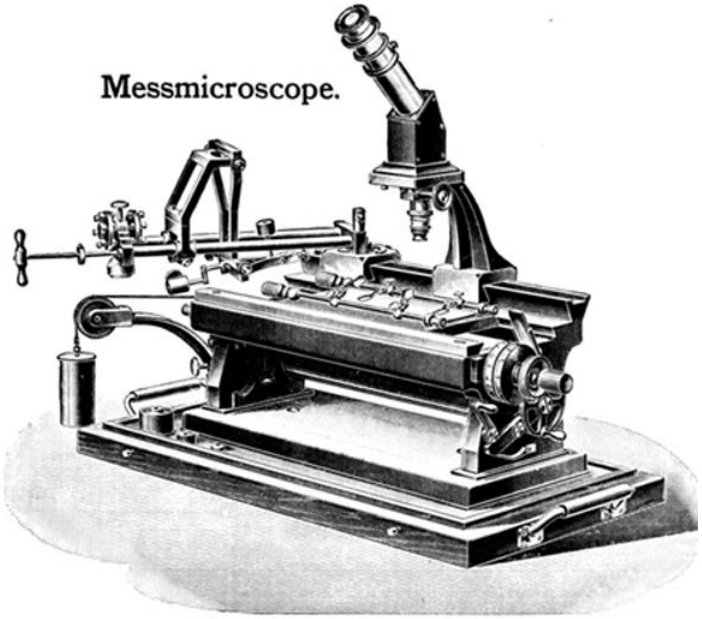
Microscop nicht auf Schlittenführung montirt; Uebliche Microscopform; Verhältnisse des Messapparates wie bei Modell II;
mit Zubehör Mk. 1000,—

No. 60.
Modell IV

wie Modell III, nur kleiner, für schmale Platten;
mit Zubehör Mk. 800,—

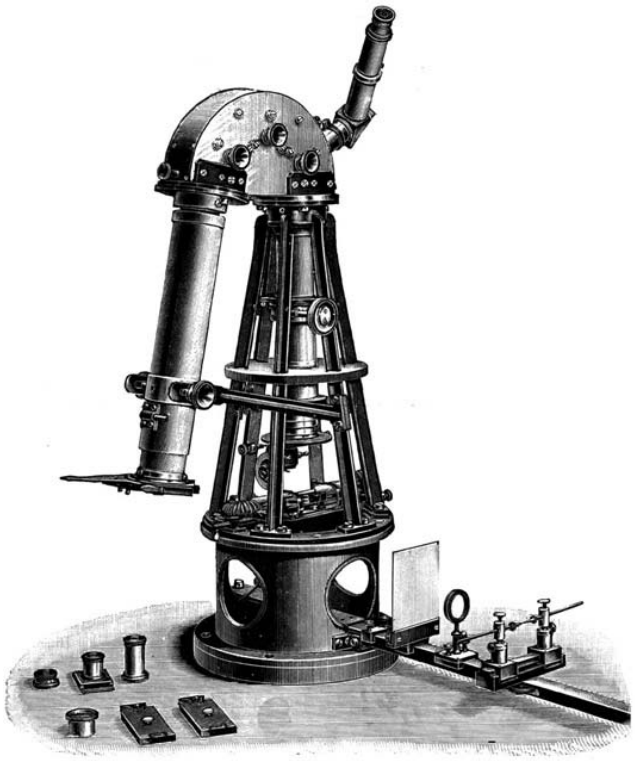
Diese Instrumente sind besonders zur Ausmessung von photographischen Spectralaufnahmen construirt.
Messschrauben auf Wunsch von beliebiger Länge und Steigung.

Werkstätten für wissenschaftliche Instrumente.



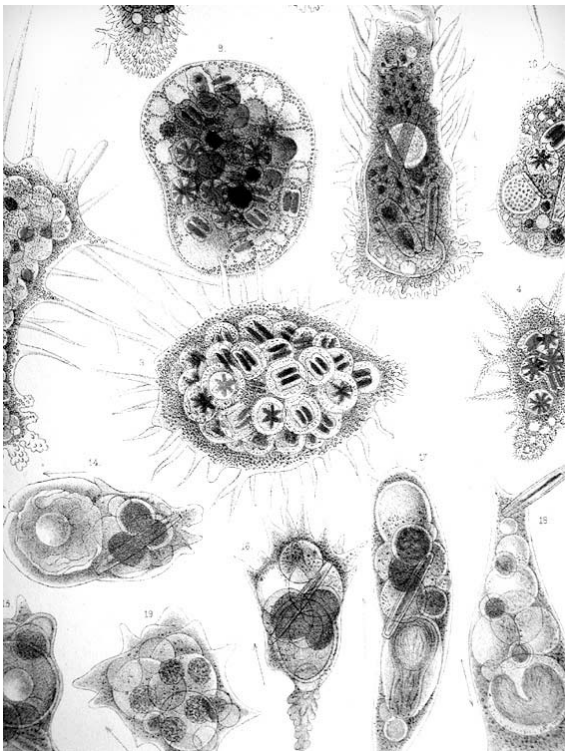
No. 56.

Grosser Messapparat, Modell I,
nutzbare Länge der Messschraube 150 mm,
Ganghöhe der Messschraube 0,5 mm,
Ablesung $^1/_{2000}$ mm;
mit Zubehör Mk. 1600,—

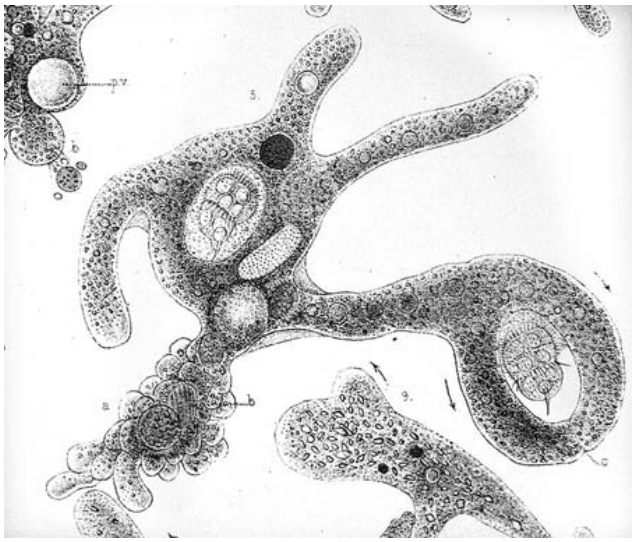


No. 17.

Astro-Spectrograph
mit 3 einfachen Prismen und verstellbarer Camera;
mit Zubehör Mk. 3000,—



"Fresh Water Rhizopods of North America",
by Joseph Leidy, MD, Washington DC, USGPO, 1879 shown by Alan de Haas



THOUGHTS ON MICROSCOPES

Compiled by George G. Vitt, Jr.

The following text appears as the Appendix in the book, "Industrial Microscopy in Practice" by W. Burrells, FountainPress, London, 1961. It contains some interesting observations and facts on microscope design, construction, and finishing. The description of how lacquer was prepared and applied in the old days may be of particular interest to the microscopist/restorer of today.

Microscope construction has changed greatly during the last forty years and this century has seen the passing of the large brass English microscope with which all the foundation stones of modern biology and natural history were laid. It is of little practical use to attempt to employ the productions of Powell and Lealand, and Ross and others, for modern laboratory work, because the methods of microscopy and the design of associated apparatus have changed so much. The old ten-inch tube English microscope was made that way because the distance of distinct vision in the normal human being is ten inches and it was thought reasonable to standardize on this. It has the advantages that the stage is in focus for the unused eye, less eyepiece power is required for a given amount of magnification allowing more light and a longer eye-point, and flatter objective fields were possible. Later, the invention of the Wenham and Powell prisms established the long tube for many years because only the ten-inch breeches tubes have sufficient length to allow the eyes to converge comfortably on the objective.

The first of these brass instruments which microscopists consider to be proper working examples appeared about 1860 and had focussing adjustment by means of a stem driven up and down within a heavy sheath by means of a rack and pinion. The sheath had the stage and the inclination axles bolted to it while the stem carried at its top a horizontal bar which held the body about four inches forward of the sheath, over the stage. All this structure was of massive brass and gun-metal, all possible parts were cast to save expensive machining, the surface was finished with a draw file and rotten-stone and water, giving a fine velvet-bright finish obtainable in no other way.

All microscopes were built by hand at the bench and drawings were not used, it was the practice to give the workmen the castings and leave them to clean them up and drill holes (with spade drills) where they estimated they should be. The parts of different examples, of say the Ross No. I microscope, cannot be interchanged for this reason. Some specialization was permitted, for example one man made all Powell and Lealand stages and another made all Ross fine adjustments. Brass was commonly used for bearing surfaces and because brass on brass will not stick or jump when used as a bearing, a peculiar smooth greasy movement was obtained on these old instruments.

The days of the great engineer scientists were also days of carefully constructed apparatus and beautiful finish. A worker would not possess an ugly microscope if he could possibly afford an elegant English one— and all English work in this trade was then elegant and carefully finished as if each craftsman were making the instrument for his own sideboard. All-bright metal work was the rule and the lacquer put on one hundred years ago is often found quite sound and the brasswork still beautiful today. Andrew Ross made his lacquer by extracting from shellac with acetone (known then as pyro-acetic ether), the hard resinous components, leaving behind the waxy, soft components which, if included, would soften the lacquer. The soaking out was done cold and took about seven days to complete. The acetone was then allowed to evaporate until the solution was about as thick as present-day thin varnish. It was then diluted as required with methylated spirit and applied to the job with a brush. This lacquering business was, and is, tricky. The brass must be raised to a little above room temperature so that when a spirit mixture is applied to it,

moisture does not condense on the surface. The lacquer is then applied quickly with a brush or the job is dipped. The art of putting a second coat of lacquer over the first is dependent upon the complete baking dry of the first coat at about 60 deg C., but even then it must be applied sparingly and quickly after the job has cooled to room temperature. In this way - with smoothing with rotten-stone, polishing with whitening, and careful lacquering - were the beautiful results achieved and, except where the art is practiced by a few amateurs, it will never be seen again. Side by side were the ugliest objects and the finest made by the Victorians, but in the sphere of optics the advances were great and the ugliness non-existent.

During the period 1860 onwards until the invention of the petrol engine, small and large microscopical societies flourished in all our main towns and it was never below the famous men of the time to belong to these. Great advances in technique were made simply by people playing with things and telling their friends about the results. In the era post petrol-engine, the societies could not withstand the attack on people's interests and later the wireless set nearly finished off all individual effort in the field of natural history. It is true that wireless sets and petrol engines may replace natural history with natural curiosity, but it is doubtful if either has advanced the happiness of people as a whole so much as the discoveries of the early microscopists, most of whom were amateurs.

Today, there are professional societies of all kinds set up to 'advance' science and the bank balances of the far-seeing few who started them with a few friends and turned them into water-tight professional institutions after they had obtained sufficient members. But almost none of them pays any attention to practical laboratory arts and it is to the great credit of the Quekett Club and Royal Microscopical Society in London, The Microscopical Society of Southern California, and the American Microscopical Society in the USA, that they still hold together as vigorous groups and teach the practical arts of microscopy to all comers without demanding qualifications before they start.

The One That Got Away!

by Dave Hirsch

Collecting microscopes is much like l'amour; each 'event' ends in conquest, defeat or stalemate, accompanied by fond or not so fond memories. By way of comparison, every microscope you acquire has a story to go with it. Was it a swap, an uneventful sale, heavy-handed haggling, or a bequest? No matter the size of your collection, it is likely that there is a story to tell about each and every microscope. Therein lies a great source of satisfaction to the collector, but not all stories have a happy ending.

There you sit, snug and smug in your easy chair, surrounded by a King's ransom in microscopes. Every Marshall, Cuff, Jones, Powell and Lealand and Culpeper reposes in haughty grandeur, literally looking down their noses at lesser Zeiss and R.J. Beck instruments, which stand in obeisance before the Masters.

You are a romantic, sentimental dude. Reminiscent of the "Vacant Chair" in that sad old American Civil War ballad, you leave an empty space here and there among your collected prizes. Each vacant spot represents "the one that got away". It could have been the repository for an instrument which, for some reason or other, you decided to get rid of, only to regret your action soon afterward. The space might have been left in rueful memory of that fine microscope you should have bought on the spot, but pondered far too long. Consequently, you try to limit the number of empty spaces on the shelves, lest you bestow upon yourself an inferiority complex.

Some spaces have a gold star in place. That is to remind you of the one that not only got away, but was lost forever because, at the time, you had rashly overdosed on 'stupid pills'. Your blood pressure creeps upward as an example comes to mind. There you are, at Lipka's Arcade in Portobello Road, London, gazing in wide-eyed fascination at a pristine Nachet Prismatic Dissecting microscope, circa 1850. Gradually, you ease into a "Gotta have it" purchasing mode. Before you take out your travelers checks, you sense the presence of a macabre looking gentleman. He points a bony finger at the Nachet and in sepulchral tones utters a single word: "Rubbish!"

He points out things which you had apparently overlooked in your zeal to buy, such as: seemingly mismatched parts, replacement screws and other things which could indicate an instrument of low quality. Your wallet never leaves your pocket, and feeling a bit dejected, you exit the Arcade and resume your scientific safari. Soon, your gut begins to growl, signaling that lunchtime is nigh. You step into the closest pub for a Plowman's lunch and a pint of bitters. At a nearby table, sits a familiar looking fellow; the ghoulish gent who badmouthed that Nachet stand back in Lipka's Arcade. You are about to hail him, when you spot something on his table which causes your blood to boil.

There it is; HIS new acquisition, an object which will never grace your instrument room. You guessed it; he sits there, lovingly admiring that 1850 Nachet prismatic dissecting microscope; the one he so artfully did you out of. My man, you've been had. How many collectors such as yourself, fell for that same sleazy 'strategic debasement' trick?

Another ploy that you should be aware of, involves an object that you are examining in a shop or elsewhere. A stranger comes up to you and says, "It's been sold", when actually, it wasn't. Most people would utter an apologetic "Oh, sorry" and walk away without asking the dealer if, indeed, it was sold. It takes a lot of chutzpah (Gaelic, for nerve), for someone to pull the "it's been sold" trick, but some people are that way.

Do you recall the Bausch & Lomb 'jug handle' microscope that you spotted on a Friday afternoon in, of all places, a Salvation Army thrift shop? The stand is being offered at a ridiculously low price, but you don't buy it. That evening, you have second thoughts. Early Saturday morning, you return to the shop. You didn't get to the shop early enough because once more, Murphy's Law goes into effect. A scholarly looking gent got there first, and is giving YOUR microscope a thorough examination. Very discreetly, you maintain your distance and casually rummage through a pile of junk as the man paws, pokes, unscrews, sniffs and twists just about every part of the instrument. He chucks his chin several times, a thought promoting process perhaps, but he has still not made up his mind. He then makes a BIG mistake.

He places the microscope on the counter and strolls away, deep in thought. One would assume that he is about to spend a million bucks, rather than the paltry $45 asking price. You have him under close surveillance, and when he reaches the end of the aisle, you pounce, pick up the microscope (with a case and accessories, of course) and head for the cashier. Being a noble person, you do not cackle with derisive glee. Mission accomplished! You exit the thrift shop and dash home with your treasure. For a change, somebody else will be telling about "the one that got away".

Have you ever encountered a shill? This is a person acting as a decoy, trying to promote a sale. You are examining a Society of Arts microscope at a Boston antique show and are aware that you have an audience of one; somebody who is taking more than an ordinary interest in the microscope which you are holding. You let your hand brush lightly against the pocket containing your wallet, not being sure what this fellow has in mind. He initiates the conversation by saying: "That's a nice looking microscope you have there. If you don't want it, I will buy it". The competitor for that instrument appears to be breathing down your

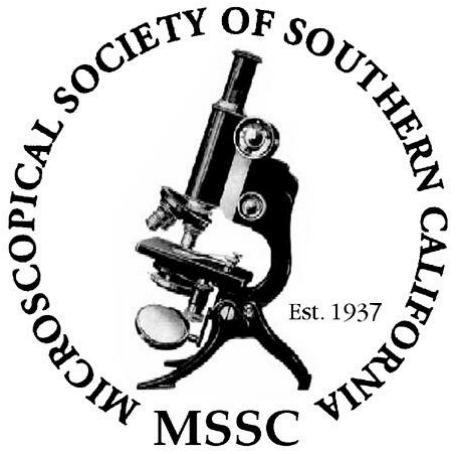
neck, so a quick decision is in order. Hesitate, and you could lose a good microscope. *"OK, I will take it"*, you say to the dealer. Your decision to buy was hastened by your assumption that the other person wanted the microscope. For shame! - you were so emotionally involved, you forgot to haggle! Actually, he and the dealer were partners, working as a team. You were influenced by a shill. Luckily, the microscope proved to be a good buy.

As a parting shot, here is a poignant story about the microscope which didn't get away, but should have. Picture a musty little shop on one of Brighton's back streets. The stocky proprietress with orange hair, extols the myriad virtues of a 'genuine' Culpeper in an obelisk-shaped wood case. Bone slides, a fishplate, forceps and several other accessories complete the ensemble. The microscope and case look old and dusty, and the latter-day temptress quotes a ridiculously low price for the package. You figure that price-wise, she made a mistake. Then, the larceny that resides in the best of us to some degree, takes effect. You ask for, and get, the "price to the trade". You pay the agreed on price of £350 for your new toy, and beat a hasty departure from her shop, clutching your treasure.

You display your Culpeper for 'show and tell' at the next Microscopical Society meeting. Eagerly, you wait for the *"ooh's and ahh's"* and sundry kudos from your fellow members, while savoring the thought of telling how you outfoxed the shopkeeper. After the meeting, one of the members who had examined the instrument, discretely takes you aside and says: "I'm sorry to disillusion you, but your 'Culpeper' is a reproduction being made in large quantities, along with many other fake scientific instruments in home shops, usually in Third World countries. It's true that in today's market, an original is worth several thousands of dollars, but your microscope would sell for a whole lot less than a hundred bucks". Your heart sinks when you think of the healthy bundle of cash you parted with. Meanwhile, back in Brighton, the fiery haired lady takes a drag on her fag and unpacks another "Culpeper". She places it in her shop window, where sunlight, dampness, dust and flyspecks gradually change the crudely made fake into a "genuine" antique, baited to trap another gullible and supposedly astute collector.

To be an "astute collector", you must make an ongoing study of microscopes and the provenance of instruments. Provenance deals with the origin or source of something. As with so many artifacts, the origin of most microscopes may, or may not be, properly documented. In addition, the history of the microscope, once it leaves the shop of the instrument maker, is often sketchy and poorly documented. Unless original, authenticated paperwork is supplied with the instrument, do not expect to get a comprehensive rundown on that "strange looking" microscope you picked up in the flea market.

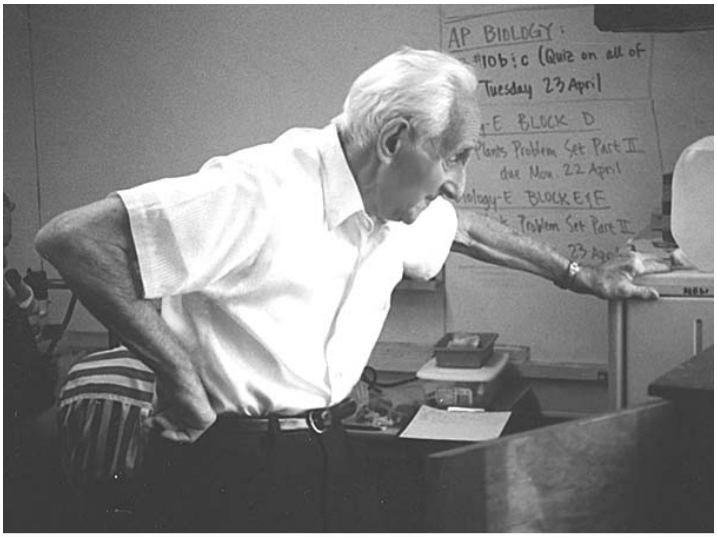
Once you develop a proper "microscopical attitude", you will be less apt to let a good buy in microscopes slip through your fingers. Conversely, your ability to ascertain the value of an instrument will be enhanced. The advantages of belonging to a microscopical society then become apparent for among your fellow members are those concerned with, and well versed in, the provenance and other historical aspects of microscopes and microscopy. You have questions, we have answers! Pose your questions to the attention of the MSSC membership at meetings, workshops, through our Journal or via the Internet. Good hunting and do not take any wooden "Nicols"!



MSSC Practical Workshop - Micromounts

delivered by John de Haas, written up by Pete Teti

9:00am 20th April 2002
at New Roads School



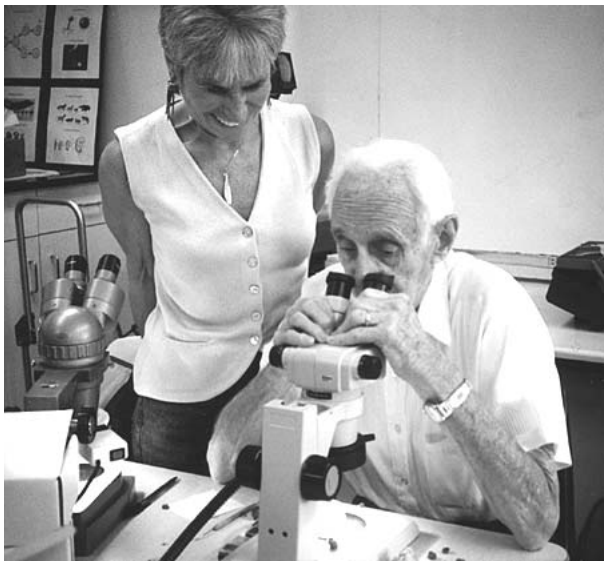
John de Haas heads Micromount workshop

Attended by:
Ellen Cohen (MSSC member)
Tom Boulger (MSSC member)
Peter Fischer (MSSC member)
John Fedel (MSSC member)
Larry McDavid (MSSC member)
Pete Teti (MSSC member)
Joe Wise (Director of New Roads School)
Nitin Bhatla, Hector Arando and Sosyaia Suleman (students of New Roads School)

This workshop was attended by thirteen mircomount enthusiasts. John de Haas instructed the group on how to observe, recognize and mount crystallized minerals which are embedded in rocks.

John guided members through the process of working with a stereomicroscope and supplied participants with numerous rocks to mount and investigate. He also bought along some of his prized mounted crystals specimens for members to view under the microscope.

Those who attended this meeting thank John de Haas for sharing his time and crystallography expertise with us.



MSSC's Annual Pond Life Meeting

Reported by Leonie Fedel, Lone Pine photos by Jim Solliday and John Fedel, Meeting photos by George Vitt

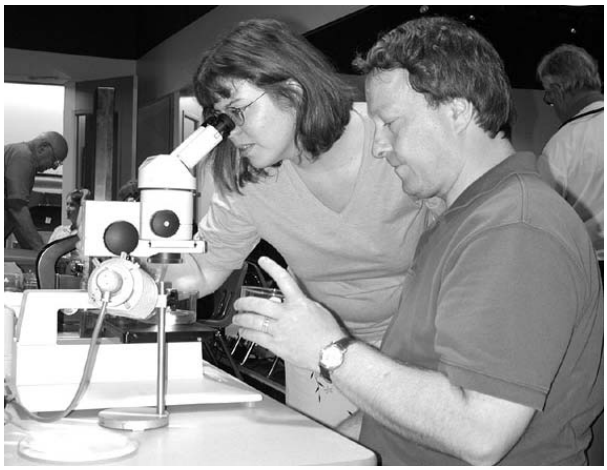
7:00pm 15th May 2002 at New Roads School

This was the Society's annual Pond Life Meeting and one of the most enjoyable events of the year. As you can see, the meeting was extremely well attended with many members bringing own their microscopes and pond water samples to show to others.

The meeting was split into two parts. First, Jim Solliday delivered a presentation on the recent field trip to Owens Valley (11-13th May 2002) undertaken by four MSSC members (Jim Solliday, Leonie and John Fedel and Victor Silveria). He explained how we met up with the expert microscope slide-maker, Lee Gonzales (who lives in Lone Pine) who kindly showed us around all the best local collecting sites and instructed us in collecting methods. Jim's presentation clearly showed the beautiful and spectacular landscape of Owens Valley where we camped and highlighted each collection site in turn. It also showed how the pond water samples were inspected on-camp (so to speak!) using the portable generator to power the micro-

scopes' illuminators, camera and video display. Several slides also showed how Vic looked after us and we would like to extend great thanks for his culinary skills. A few of the photos taken during the trip are included here. Following Jim's presentation, members set up their microscopes and showed off their collections to each other. Pond water samples from the Owens Valley field trip were on hand for members who were unable to bring their own sample to the meeting.

Lastly, Dave Hirsch spoke briefly in his role as Treasurer. The current membership of the Society stands at 54 and we have a balance of $4,000.



Owens Valley Field Trip

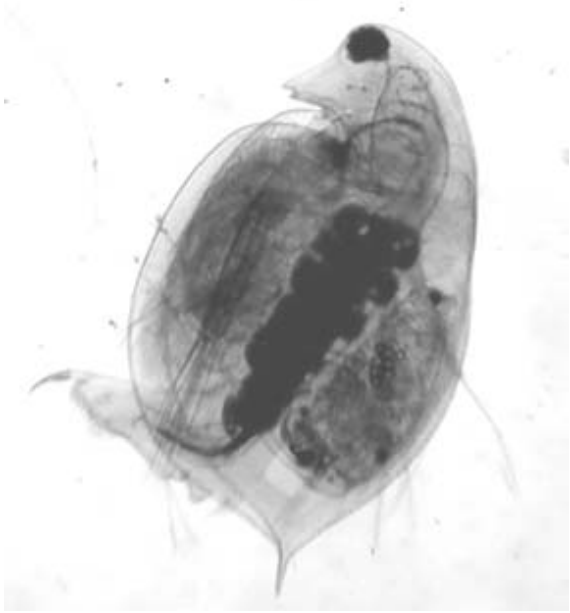
Lee Gonzales collecting at Barlett Spring

John Fedel collecting at Cottonwood

Leonie Fedel collecting at Dirty Socks

The 'Lab' Tent

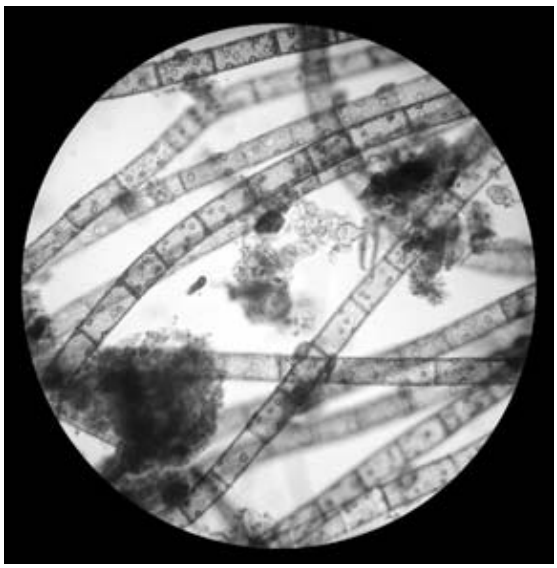
Victor Silveria, Jim Solliday and Lee Gonzales collecting at 'the Frog Pond'



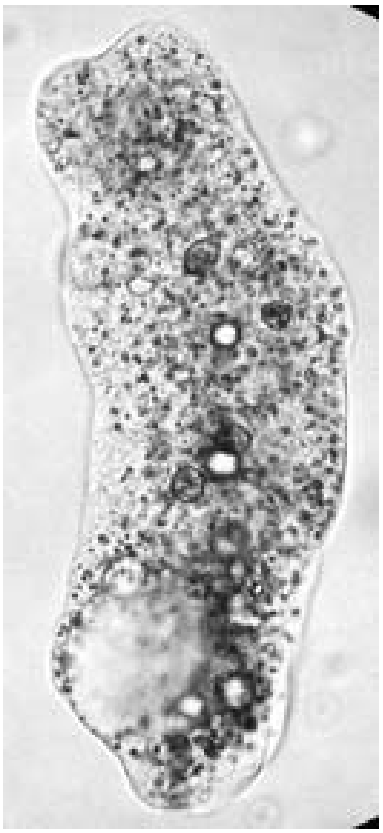
Daphnia

Desmid

Fly larvae



Algea filliments



Protozoa-amoeba

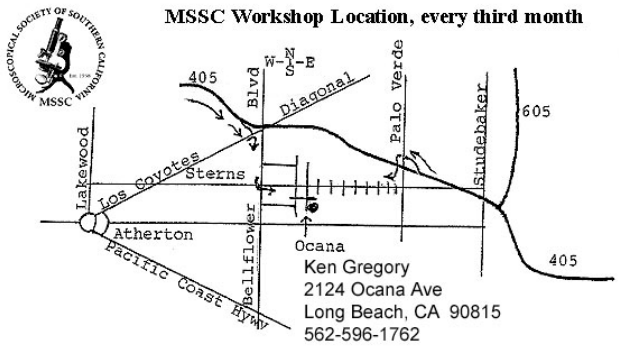
Protozoa-Sirostum

Saturday Workshop Announcement

9:00am 1st June 2002

At the home of Ken Gregory

2124 Ocana Av
Long Beach CA 90815
562-596-1762



From the 405 South, take the Bellflower Blvd exit which ends on the Diagonal. Jog left, then right onto Bellflower Blvd. Go to Sterns, turn left, thru the Mall, turn right on Ocana Ave. (2nd Street).
From 405 East or 605, exit at Palo Verde, turn left on Palo Verde, then right on Sterns, then left on Ocana Ave.

This workshop will be held at Ken Gregory's. Activities will start at 9:00 am. As usual this is a chance for good friends and fellow microscopists to talk about our favorite subject. You are invited to bring any manner of items related to microscopy to share it with the fellowship. If you have something you would like to sell, please feel free to bring it and set it up at the sales table. All are encouraged to participate and join in the fun.

Lunch after the workshop will be at the local Coco's. If you have any questions please send me a message. I look forward to seeing all of you at the workshop...

Jim Solliday (MSSC President).

Practical Workshop Announcement - Rheinberg Differential Color Illumination

9:00-12:00am 15th June 2002
at New Roads School

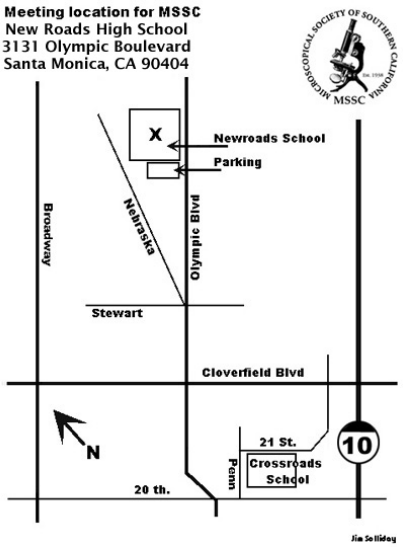
This is the third workshop in the series (cancelled last month and to be held this month instead). Jim Solliday will be teaching the practical technique of Rheinberg Differential Color Illumination. Space for these workshops is limited so enrollment will be on a first come, first-served basis. Contact Pete Teti for further details and to sign up for this or future workshops.

Tel (323) 660-9259 or email tetip@earthlink.net.

MSSC Meeting Announcement

7:00pm 19th June 2002
at New Roads School

For those of you who like to eat dinner we will be meeting at the usual Coco's restaurant at about 5:30pm (near Ocean and Bundy, Santa Monica).



EDITOR'S NOTE

Thank you to those members who have been submitting articles for publication, without your contributions the Journal would not be what it is. I would also like to thank our president Jim Solliday for organizing the field trip to Owens Valley this month. I thoroughly enjoyed this event and it provided me with an improved understanding and appreciation of the activities of the Society.

Please send any articles, photos, member profiles, notifications of forthcoming events and website summaries for inclusion in forthcoming journals to me at:

Leonie Fedel
10945 Rose Avenue #209
Los Angeles CA 90034
(310) 839-9881
mssc@attbi.com

The preferred route is via email, with text and graphics as attachments. Text in the following formats: plain/rich text format/word documents graphics in the form of jpgs. If you need any help in converting information to these formats, please contact the Editor, who would be happy to help.

Leonie Fedel (Editor)

Want to advertise in the Journal?

We are also happy to include advertisements within the Journal either from individual members wanting to sell an item to other members, or from companies wishing to promote their products and services to the MSSC membership. If you wish to place such an advert, please contact our Treasurer, Dave Hirsch for further details and charges.

Dave Hirsch
11815 Indianapolis St. LA, CA 90066
(310) 397-8357
dave.hirsch@verizon.net