

My first "microscope", a simple magnifier said to enlarge 50 times, I bought in Sweden where I was sent with many other Finnish children after WW II when a Soviet invasion of Finland was widely feared. I stayed for two and a half years in a small town in Southern Sweden where I among other things got interested in nature, especially water life. I even had the opportunity to occasionally use a real microscope so when my father gave me a small toy microscope when I had returned to Finland I rejected it as I knew the real thing, so the microscope was returned to the shop (where some other parent would buy it and probably kill the interest in microscopy of his/her child).

But I soon started to go to school in the capital Helsinki, where I through a newspaper ad found a beautiful Zeiss microscope of the then common, curvy horseshoe type, shining of brass and black enamel, complete in a cabinet. It was not cheap and my father was not amused, but before I could persuade him the seller suddenly withdrew the offer to my disappointment. I still remember the seller's name and address, a less than 10 min. walk from my present home.

I then began roaming shops buying and selling used things. Microscopes were rare so when I found a horseshoe Hensoldt, with only two objectives (10 and 60x), but four oculars (5-12x) and lacking condenser and mirror I bought it after some negotiation. I found a suitable condenser and mirror, improvised a mechanical stage and later added a 5x objective, a revolver for four objectives (the original one was for two only), a mechanical stage, a measuring kit and a drawing prism, all new and costing more than the microscope (there was no eBay then). The lamp was a home made one with a car bulb and a collector made from the combined objectives of an old, small binocular. It was later replaced with a small Zeiss lamp (incomplete and cheap).

The Hensoldt gave me much enjoyment and I used it for 20 years, later with Wild optics. Optically it was then first-class, but picture taking was awkward. In the beginning I tilted the microscope horizontal and kept a box camera on a wooden block in front of the ocular. Later, when I had acquired an Exakta camera I made a camera stand, but the shutter could not be used because of vibrations so I mounted a central shutter on a swing-out frame in front of the lamp. I still use the stand, now with a Canon EOS 600D camera.

The steps for taking a picture were then: 1) turning the microscope vertical, 2) adjusting and focusing the picture on the Exakta finder (turning the camera if necessary), 3) increasing the light (usually the 6V bulb to 8V) with a foot switch, 4) measuring the exposure time with a sensitive meter (Lunasix, later Calculight) in front of the finder, 5) adjusting the exposure time on the central shutter if necessary, 6) swinging the cocked central shutter in front of the lamp, 7) opening the Exakta shutter (on B or T), 8) exposing with the central shutter, 9) decreasing the light, 10) closing the Exakta shutter, 11) swinging the central shutter to the side and cocking it for the next exposure and 12) advancing the film.

It is obvious that no moving object faster than an amoeba could be pictured this way.

For a short interval I used a borrowed binocular attachment, quite a monster, so I started looking for a reasonably priced bi- or trinocular stand. An Olympus was the best alternative, but before I decided on the matter I was unexpectedly offered a binocular Meopta C 36 Bi microscope complete with optics, mechanical stage, built in lighting, straight tube and cabinet at a very affordable price, an opportunity I could not let pass by. It was a demonstration instrument which the company wanted to get rid of as Meopta would have had slim chances against the competition here in Finland. I transferred the Wild optics from the Hensoldt and a mechanic helped me to improve the lighting system and to make the mechanical stage rotatable.

But the photo process remained mainly unchanged with the exception of the first step that now should go: “changing the binocular tube to the straight tube” and in the second one “turning the stage” instead of the camera. I also started to use a pneumatic foot release for step 7 (an electric one was too violent).

Then, in 2009, I acquired my first digital camera, a Sony DSC-1, which I started to use with the Meopta, at first mounted directly on the straight tube, later on the camera stand. In 2012 I then switched to a Canon A 3200, a nice camera with which I recorded a lot of micro videos, but (as with the Sony) I had to stand when using it so I added a mirror, but it reversed the y-axis, very confusing when following moving objects.

Before the rise of the digital cameras there were several shops here in Helsinki dealing in used cameras. Some of the shops had microscopes too. One owner tried to sell me an Olympus Vanox, a large microscope, totally unknown to me so I resisted. Picture quality does not depend on the microscope size. We did not even discuss the price. He had a somewhat deficient Wild M 20 too (in which I knew every screw), but it did not interest me either as I was happy with the Meopta. But he intended to close down his business so he offered the M 20 at a price that made it interesting. It had a mirror, a mechanical stage, a revolver for four objectives, a straight tube and a camera with an Exakta adapter, but no binocular tube or lighting system. The optics was uninteresting. But the focusing and the stage worked nicely and I had a surplus Meopta binocular tube and the Meopta lighting system could be transferred to the M 20, so I bought it. From the Wild importer I got some leftovers including a revolver for six objectives and a lighting system so the Meopta remained in working condition (with its original optics). On eBay I later found a Wild binocular tube and a filter changer.

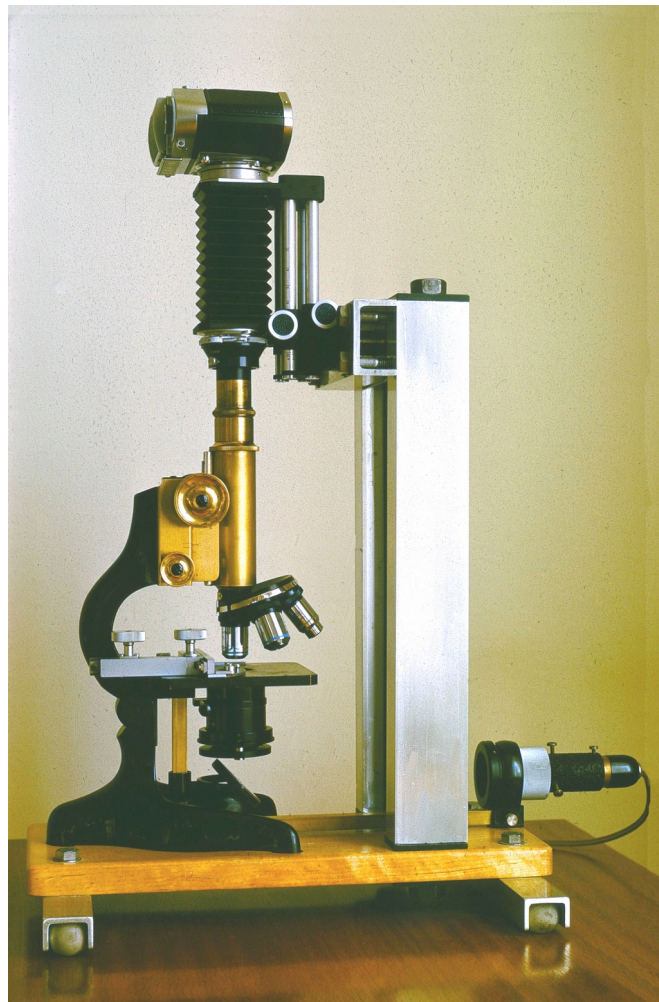
But the M 20 remained unused for several years. I intended to make the stage rotatable, a quite complicated affair so I put it off until 2015, when I started the switching from the Meopta to the M 20. -- To avoid repetition I refer to my earlier articles on the M 20, in the November 2012 and September 2018 issues of Micscape.



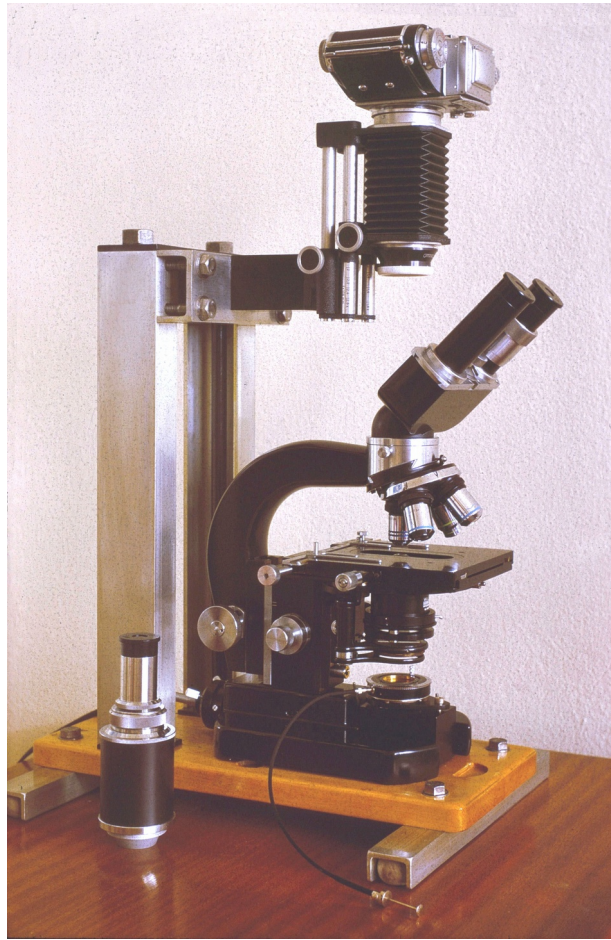
The beginning (1946).



The Hensoldt with home-made lamp (1955). Microscopes of different makers were often surprisingly alike.



The Hensoldt with Wild optics, Novoflex bellows and modified Zeiss lamp (1965). The Exa1 was unfit for microscopy work and is only representing the Exakta here.



The Meopta with Wild optics, Novoflex bellows and Exakta camera (1969).



The Meopta with Canon A 3200 camera and camera focusing lens (2012).



Wild M 20 with rotatable stage, Canon A3200 camera and camera mirror and focusing lens. (2015).

The Russians.

In the 1990s, when Estonia had become independent, it became very popular with Finnish boating people and I too started going there, especially after Estonia joined the Schengen agreement, which allowed free movement between its countries. Suddenly our nearest foreign country (as perceived from Helsinki) opened up and I made yearly trips to Tallinn, sometimes with my daughter and investigated the city on foot and the surroundings on bike.

There were several shops in Tallinn selling Russian microscopes, cameras and binoculars at very reasonable prices and I used the opportunity to invest in microscopes, both for myself and for lending to pupils interested in biology at my daughter's school (this latter, over-optimistic idea did not realize. Nowadays schoolchildren are only interested in discos and videogames).

I bought four Lomo MBS-9 stereomicroscopes, complete with optics, lighting, transformer, base for transmitted light and "passport", two for myself and two for the imagined pupils (the MBS-10 is similar, but with a disturbing play in the eye distance adjustment).

I use one occasionally, sometimes on my small lathe. Another one I have given to my son, who uses it for electronics/PCB work. For it I made a large stand using a large aluminium plate and parts from a scrapped studio light. Unfortunately I have no picture of it, but it resembles the original Lomo large stand.

Then two simple Lomo Biolam monocular microscopes with basic optics and mirror for the pupils and another, binocular one with mechanical stage, optics (including two fine apos:10/0,30 and 20/0,65), and cabinet, but with no lighting. The whole microscope was firmly seized up by the Russian tank grease, but I optimistically thought I could fix it. Now I think of it less optimistically. I have had plans for turning it into an inverted microscope, but they will probably never be realized and it is certainly easier to buy one on eBay.

On one of my forays to the shops I happened to find a treasure, a Russian copy of a Zeiss travel microscope, in a wooden box. It was not especially expensive and I was told it was the only one on sale so I was happy. The mechanical stage was missing, but I use the old one from the Hensoldt.

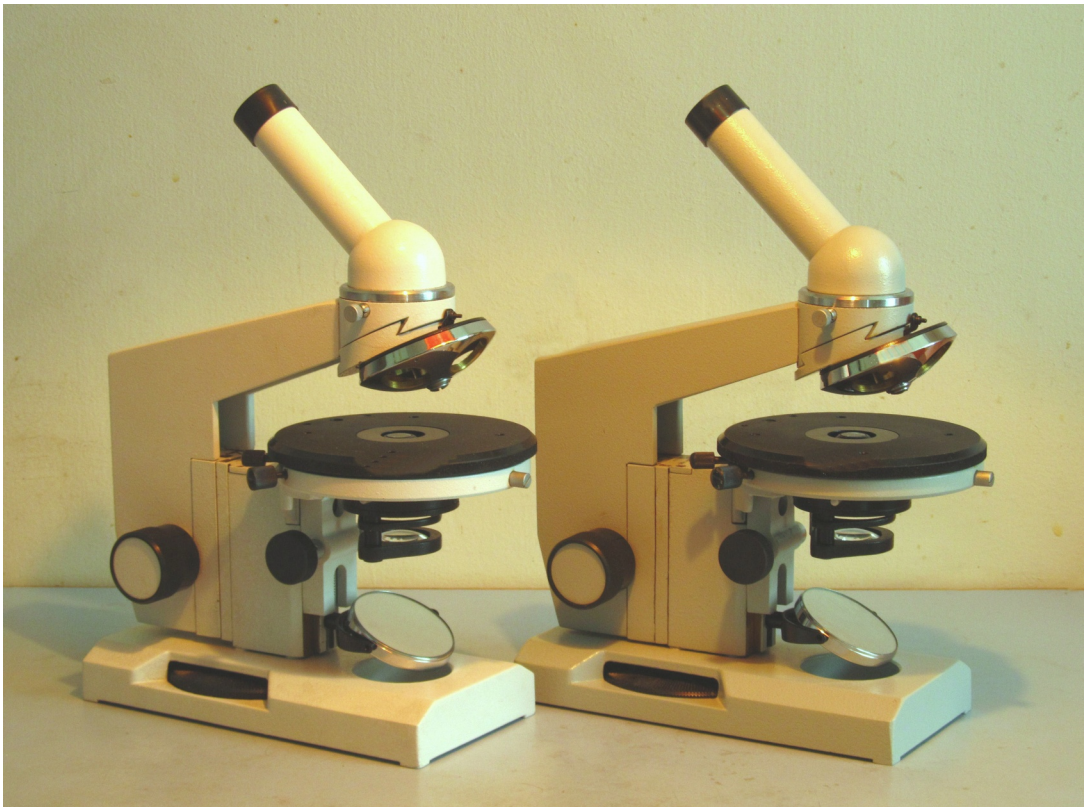
What else? A small microscope with basic optics in poor condition at junk price. I fixed the broken fine focusing and extracted the ocular from the rusty tube and intended to give it away, but no candidate has emerged.

A simple stereo microscope with fixed magnification of 8,75x (17,50x with 20x oculars) for my daughter, but it has remained unused. For children there are nowadays better alternatives, with movable optics and the picture on a screen.

All these Russian microscopes with the possible exception of the junk one were unused, some of them still in the original package.



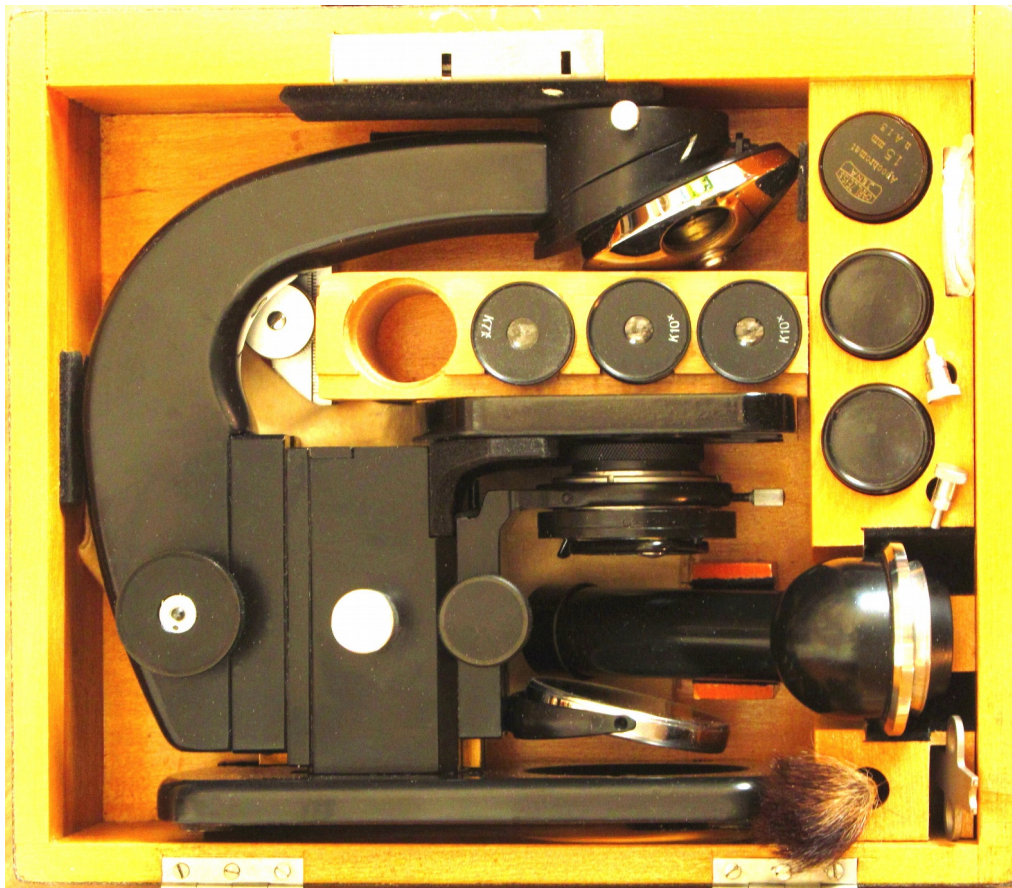
Lomo Stereo microscope MBS 9 (1998).



The two monocular Biolam microscopes, now firmly seized up too (1998). The objectives and oculars are kept separately.



The seized up binocular Biolam microscope (1998).



The travel microscope MBI-4 in its box (ca 1998).



The junk microscope (ca 1998).





The fixed 8,75x stereo microscope BM-51-2 (1998).

I have bought all my microscopes for some purpose, resisting the temptation to start a collection, which would have been both financially ruining and space-demanding. This applies to cameras too.. There once was a Russian Sport on sale here, but I said NO! to myself and did not even check the price. Later I heard it had been sold to Japan.



In a Tallinn shop (1998)

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