A Spencer "Student" Microscope

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My most recent acquisition in my collection of Spencer microscopes is a "student" microscope (as opposed to a "research" or "medical" microscope) that I purchased from a Seattle, Washington Goodwill store for \$11.99 (plus about \$40 shipping) at www.shopgoodwill.com.



As you can see, it is a very basic model, with stage clips rather than a mechanical stage.



When I researched the serial number 143450, I found that it must have been manufactured between April 1937 and September 1938. It's also interesting that the serial number is on the front of the tube rather than at the top of the arm as in most Spencer microscopes.

This one appears to be from a lot ordered by the University of Washington's botany program. As a means of preventing loss of their equipment, the university had Spencer engrave markings on some of the components, such as on the foot of the microscope frame.



In addition, the university glued and varnished an inventory tracking label on the bottom of the foot.

I doubt this microscope was stolen.

Considering its age it was most likely sold at a property disposal sale.



The turret is a standard Spencer three-position type with RMS threads. Each of the click stops is marked with the focal length in millimeters of the respective objective. This again suggests that this scope was part of a custom lot put together specifically for the botany school and that the markings stamped on the click stops match the focal lengths of the objectives ordered for the microscopes.

The markings on the click stops are:

**1.8** for the 5x 1.8mm objective**16** for the 10x 16mm objective**4** for the 44x 4mm objective



The condenser appears to be a standard Spencer Abbe N.A. 1.25 model that was employed for quite some time.

This microscope was manufactured from 1937 to 1938. I have another Spencer microscope from 1944 that has this same condenser.



The microscope features three objectives – a 5X, a 10X and a 44X.



The markings on the objectives are as follows:

AO 5X NA. 20 MADE IN U.S.A.

SPENCER LENS CO. BUFFALO N.Y.::: U. OF W. BOT 189 16MM.N.A. 0.25 10X 361434

SPENCER LENS CO. BUFFALO N.Y.::: U. OF. W. BOT 195 44X:::4MM::NUM.APER.0.66::

The "U. OF W. BOT" markings on the 10X and 44X appear to have been engraved specifically for this contracted lot of microscopes. Whereas all of the other markings on the objectives are infilled with black paint, the "U. OF W. BOT" markings were engraved through the chrome plating of the objective barrels and appear as brass with no paint.

In addition, the front assembly of the 44X is not spring-loaded as objectives of 40X and up are today.

So, how well do these objectives perform? Quite frankly, not very well. To get any decent sharpness and contrast out of them I had to stop down the condenser severely, resulting in a dim image. Also, all of them have pronounced curvature of field. Any session a student would have to spend with one of these microscopes must have been very taxing indeed. Since these microscopes were to be used for botany studies, I made my test photos with a cross section of *Tilia* stem, shooting with an Olympus E-300 DSLR.

5X



10X





## Comments for Michael Reese Much can be sent to <u>Amoeba1@rcn.com</u>

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