

New life for an old microscope.

One of my New Year's resolutions was to try my hand at photographing biological specimens. My active microscopes are both polarizing and not entirely suitable to the task. I decided to resuscitate my circa 1946 Bausch and Lomb monocular scope.

The three objectives were replaced with Plan obj.. A mechanical stage was fixed to the specimen stage.

For me the critical upgrade is the camera. Initially I just moved the Canon 5D MkII from the Labomed to the B&L. This worked but it meant realigning the camera on the Labomed after each switch.

I am a fan of Canon cameras and I have an EOS M that was rarely used and decided to give it a try. The Canon EOS M has an 18.0 Megapixel CMOS (APS-C) sensor with an ISO 100-12800.

I also had an OMAX Canon 2.5x adapter on the shelf and it fit the M-EOS adapter nicely.

My first disappointment with this setup became apparent when I started the Canon EOS Utilities and discovered the EOS M Live View was not supported. Download from the camera was available with the EOS utility or read the SD card directly from a file manager. |

The next disappointment came when I examined the photos taken with the OMAX 2.5x adapter. There appeared to be an excessive amount of chromatic aberration.

Also on the shelf was a Nikon 2.5x photo eyepiece and some telescope extension tubes. The microscope with the extension tubes and camera looks a bit like a future Leaning Tower of Pisa. But it appears stable and the photos do not show the chromatic aberration of the OMAX adapter.

Because Live View on the computer is not available, focusing must be done on the camera LCD screen. To aid the focusing process, I place an 8x loupe the LCD screen. Not as convenient as Live View, but certainly doable.

The Bausch and Lomb microscope is once again a very useful microscope.

Canon EOS M with OMAX 2.5x adapter (Left) and Nikon 2.5x Photo eyepiece (Right).

BandL_camera_mounts.jpg



Close up of the EOS-M and adapters. (Top OMAX, bottom Nikon).

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The view from the top of the tower with close focusing 8x loupe.

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