

ROATAN 14 –Other things than the lab

G Joseph Wilhelm, Roatan, Honduras 12 Oct 2024

After witnessing the past few weeks of the horrendous circumstances inflicted upon the people of the southeast United States, it has elicited an inordinate amount of angst from my overworked psyche. If you are spiritual, pray for them. If you are not, wish them good fortune. My wife and I totaled up the hurricanes/typhoons we have endured through. Between travels in the Pacific and life in the Caribbean we racked up 27 that hit us and another 30 or so near misses. North Carolina's damage is some of the worst we have seen. Our empathy runs deep. Due to the hurricanes forming just to the north of us we did receive a moderate amount of wind (40 mph) for a short period. We are going into the rainy season here anyway so the accompanying persistent, but not overwhelming, rain was no concern.

During this time, my somewhat exposed shop was not conducive to serious woodworking productivity. But I am delighted to say, in the last two weeks of September, the only dry area of the shop allowed me to finish the complete disassembly, cleaning, wire brushing, painting, reassembly, lubrication and adjustment of the milling/drill machine. It now resides there.



We went from this pile of mostly unassembled Jet milling machine parts to.....



This 580 lb. monstrous beauty, including the two milling vises you see setting on the stand and milling table!! Kept the original paint scheme. I also made a custom-built roll around stand from scrap wood. My small lathe is next in line for this type of restoration.

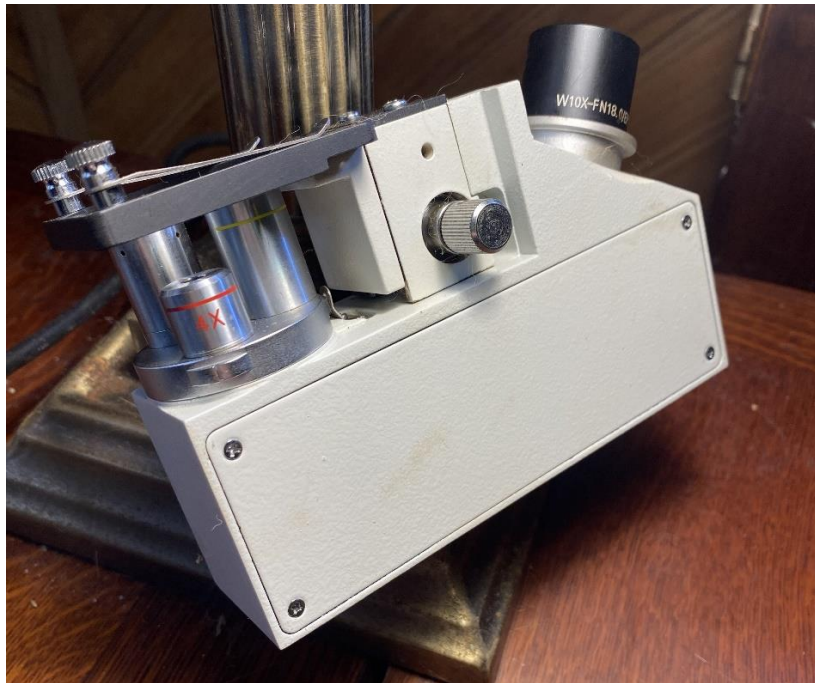
The machine now works like the day it came out of the shop. A whole new world of repair and creativity has opened up. Remember the FM-31 field microscope clone from the last article that needed the replacement focusing knob?



I have a full set of number, letter and fractional machinists' drills.



Used one the same size as the focus shaft to precisely drill out the mounting hole.



This is the replacement focus knob mounted as far out on the shaft end as the set screws would allow. With this set-up, the internal focus cone shaft travel parameters changed enough as to not focus the 40x objective without some extensive machining. I did find that the stage carrier could be lifted manually thru its full range and focus perfectly. A retro focusing mechanism to do this will be in order. If I can machine a replacement Zeiss GFL centering rotating stage from

scratch (See Micscape January 2010 issue), then this should not be a problem. The focus block seems to be the weak point on this scope.

The forced woodworking hiatus has allowed me time to rummage the house and locate microscopy items I am pretty sure I bought.

More damage. As I unpack, I'm finding (Few thankfully!) some items did not fare well in the transit from Florida. Even if carefully packed. Don't know how, but one of my Zeiss GFL suffered a bent rotating stage base.

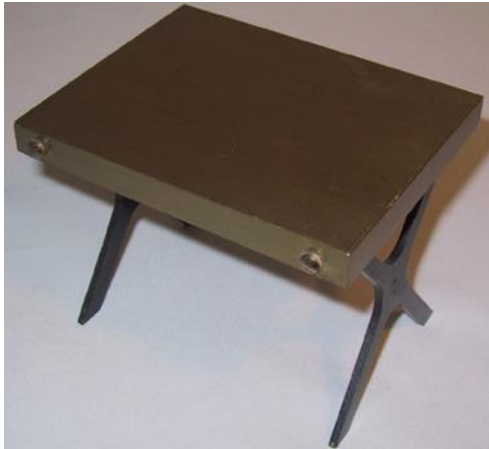


Forward end of the stage base bent down by the centering pin getting caught on something. Note the V notch exposed where the pin goes. Sigh! Another sumtin' to fix.

It has also presented an opportunity to research period correct apparatus that I can build. I brought down my entire shop, a hardware store's worth of fasteners, aluminum and brass stock and about seven sheets of heavy gauge bronze totaling 127 square feet. Everything I want to be period correct, I either have or will have to manufacture.

I found inspiration on an intriguing site for antique microscopes and associated accessories. Dr. Barry J. Sobel has put together an amazing site. <https://microscope-antiques.com/> To quote Dr. Sobel, the site "includes both original articles as well as pages on individual antiques associated with the history of science, and microscopy in particular. It is intended as a reference, and a resource, to those interested in historical science artifacts especially microscopes and microscope accessories." For those like me, interested and appreciative of all things mechanically precise, it's worth a look.

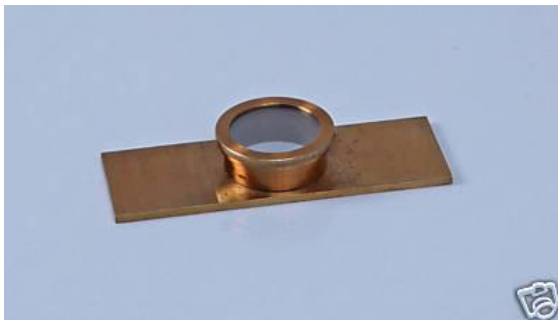
Below are a few items I intend to replicate.



Bronze / brass warming table



Bullseye condenser



Live Box / Compressor



Microtome (This will be tough)



Vacuum chamber-bottom



Vacuum chamber-top

Note: these images were snipped off eBay years ago. Not from Dr. Sobel's site, I haven't gotten permission.

I intended to take you on a tour of the property this month, but it's raining. So next time.

Cheers

Joseph

Comments welcomed, email – gjw8844 AT gmail DOT com

Previous essays are in the Micscape Library.

Published in the October 2024 issue of *Micscape* magazine.