

Roatan-17 Reflections on stuff you probably don't care about

Early on, in this rather unorthodox lifetime of mine, I pictured myself at my current age as being much smarter. I now find myself being outwitted by the simplest of circumstances. While my wife and I are certain we could well manage the worlds travails, our metrics have changed to the point where our morning measure of a "good day" is being able to get one leg thru our underwear without tipping over.

With that image planted firmly in your mind, I will now proceed with this month's microscopy profundities. But first, allow me to address my conspicuous absence from January's issue. It all has to do with the two opening sentences above

During the last half of December, my computer hard drive was filling up every few days just using it to check email and I was constantly being prodded to upgrade to Windows 11. These sorts of things never go well for me. A solution being advised was to "refresh" my hard drive before upgrading, I foolishly did so. The first fortnight of January was then spent undoing the resulting hostile takeover of my email, antivirus and other apps. Whatever Microsoft did, it resulted in many email error messages, some actually telling me the PC Matic (PCM) antivirus web site, and others, did not exist and would not send email to them! Along with removing Adobe, email contacts and my browser favorites, Microsoft also stripped the PCM app from the hard drive and installed McAfee with demands for payment following shortly thereafter. I had to email PCM from another computer to get them to resend the app. Days online and an upgrade to Windows 11 solved most of the issues but I still cannot email PCM directly. While thus engaged in battle with Microsoft, I missed the January deadline. That's my story.

Old business:

My last article enjoined both of my followers to check if they possessed any info on the P.A.C.O. sub-stage accessory and I was rewarded with a resounding "no." To put this to bed, I'll quote my own thoughts from a reply to another bewildered fellow P.A.C.O. owner:

"I'm thinking this device was a flash-in-the-pan of some enterprising microscopist, tinker/inventor from Spain. I seem to remember that the hyperbole about this contrivance was to optically produce the Rheinberg illumination effect without all the color filters and center patches. Great concept. However, to me, while it does produce a somewhat pleasing visual, the exact effects cannot be reproduced because there are no indexing references on the filters. For that reason, I have designated the P.A.C.O. as a "curiosity", just as a filter holder perhaps, until I can find a more legitimate application or further enlightenment presents itself."

New business:

The lab plods on with the seasonal rain finally subsiding but not abating enough to reliably do woodworking outdoors. There are still plenty of boxes of apparatus inside to sort and organize. Since the equipment needs as much attention as the lab, I have devoted my scrutiny to those repositories containing the dissecting/slide preparation and "Macroscopic viewing" paraphernalia. The decisions of what period items should be included for both function *and*

display value in the “station area” for these tasks will hopefully be a balanced mix of the subjective and objective. Before retiring to Honduras, no occasion allowed me the benefit of becoming immersed in these techniques due to job and time constraints. I have never produced a permanent slide or dissected anything and my ability to capture good images is still in its infancy, so, my education begins now. The current collection of assorted blank slides, cover glasses, ringing paints, mounting mediums and sealers is pretty much standard. The dissecting instruments probably form the most complete set I have seen. The associated lab glassware for specimens, measuring, dispensing, preserving, clearing and fixing are all there and have never been used. Every good period microscopy lab would also have one or more low power dissecting stereoscopic instruments as depicted below. The choice of scope deserves further discussion.

I did a detailed a review of a modern stereo trinocular in [gjw-Roatan-3.pdf](#) . Since that article I have become disappointed in this scope for a singular reason, the eyepiece interpupillary distance cannot be reduced sufficiently to accommodate my eyes. I simply can't get them close enough together to comfortably see thru both at the same time. The photographic images were grainy and low contrast, a deficiency that may be overcome as soon as my delivery of patience arrives. It was not a common main objective scope as advertised but instead a Greenough style with a common main auxiliary (Barlow) lens.

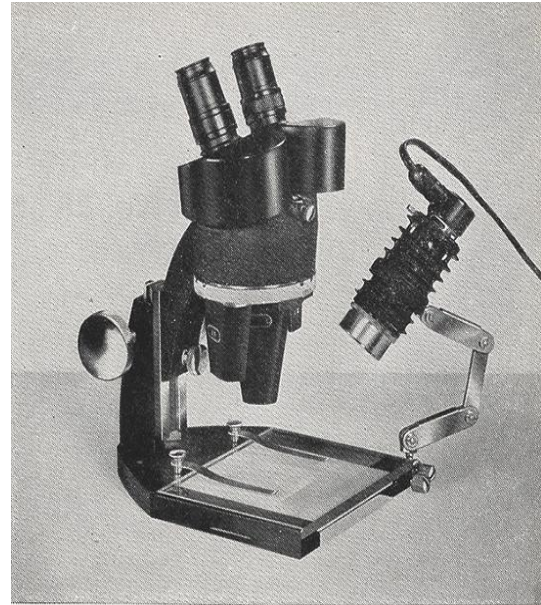


I am not averse to using modern equipment in the lab for those tasks (mostly veterinarian related) that require them, like a modern centrifuge vs. a hand operated model. I would just need to keep them hidden or disguised to preserve the lab epoch effect. Alas, this particular example will be on hidden standby limited to just macrophotography (if possible) until further notice.

So, what scope of my choice fits the 1901 thru 1950 “Edwardian, Art Deco, Interwar and post WWII periods, is versatile enough and gives a good image?

See the Spencer catalog visuals below.

I present to you the black body series 20 Spencer No. 25 (Left) and No. 26 (Right) from late 1930s to early 1950s. I think Spencer went to a gray paint finish in the late 50s early 60s (end of production?). I'm not sure.



No. 353 Lamp mounted on stage of No. 26LG by means of No. 478 Bracket.

Stereoscopic Microscopes

Greenough Microscopes
Binocular Dissecting Microscopes
Wide Field Binocular Microscopes
Low Power Binocular Microscopes

As you see, the terminology varies but add "AO Spencer Stereoscopic Microscope No. 25LF" to complete the designation. In earlier articles, 15 years ago, I showed how to clean the prisms and clean/collimate the objectives (See [Mic-UK: The Novitiate's Odyssey Part 5](#). It sings the praises and describes the procurement of these affordable and available gems and see: [Mic-UK Novitiate's Odyssey Part 6](#). for the collimation.) I wound up buying four of these scopes in various stages of completeness to achieve two models, No. 26LC for dissection and the 25LG (or LF depending on optics) for Macro observations. These scopes are quite modular and versatile. Remove the base from the Model 25 stand and you have a model 26. Single objective or multiple objective turrets can be had. Complete heads with objectives can be easily swapped from stand to stand and they take 23mm oculars. I have included the specifications for the 22 magnification possibilities listed in the AO Spencer Bluebook catalog from that time (if you wish a copy of the catalog just email me). I have no 4X objective or 18X oculars, but I can work around that. There is a slot for white/Black/Color plates under the glass stage. It is capable of transmitted or incident illumination.

Table of Magnifications and Fields of View

OBJECTIVES		EYEPIECES							
Designation	Catalog Number	9X Catalog No. 1184		12X Catalog No. 1185		15X Catalog No. 1186		18X Catalog No. 1187	
		Magnif.	Field	Magnif.	Field	Magnif.	Field	Magnif.	Field
0.7X	294	6.3	26.2mm.	8.4	24.6mm.	10.5	24.0mm.	12.6	16.5mm.
1.0X	295	9.0	19.7mm.	12.0	18.3mm.	15.0	16.8mm.	18.0	12.0mm.
2.0X	296	18.0	9.6mm.	24.0	9.0mm.	30.0	8.4mm.	36.0	6.0mm.
3.0X	297	27.0	6.5mm.	36.0	6.0mm.	45.0	5.6mm.	54.0	4.0mm.
4.0X	298	36.0	4.9mm.	48.0	4.5mm.	60.0	4.2mm.	72.0	3.0mm.
6.0X	299	54.0	3.3mm.	72.0	3.0mm.	90.0	2.8mm.	108.0	2.0mm.
8.0X	300	72.0	2.5mm.	96.0	2.2mm.	120.0	2.1mm.	144.0	1.5mm.

Cat. No.	Description	P
25LA	Spencer Stereoscopic Microscope stand with inclined binocular body, having a single paired objective adapter, but without paired objectives or paired eyepieces. Furnished in a leatherette covered hardwood cabinet.....	
25LB	Same as above but with multiple revolving nosepiece.....	
25LC	Spencer Stereoscopic Microscope with inclined binocular body, having a single paired objective adapter, with 2X paired objectives, 9X paired eyepieces. Magnification 18X. Furnished in a leatherette covered hardwood cabinet.....	
25LF	Spencer Stereoscopic Microscope with inclined binocular body, having a multiple revolving nosepiece, with 1.0X, 2.0X, and 3.0X paired objectives; 9X and 12X paired eyepieces. Magnifications 9X to 36X. Furnished in a leatherette covered hardwood cabinet.....	
25LG	Spencer Stereoscopic Microscope with inclined binocular body, multiple revolving nosepiece, with 1.0X, 3.0X, and 6.0X paired objectives; 9X and 15X paired eyepieces. Magnifications 9X to 90X. Furnished in a leatherette covered hardwood cabinet.....	

Cat. No.	Description
26LA	Spencer Stereoscopic Microscope stand with inclined binocular body, having a single paired objective adapter, but without paired objectives or paired eyepieces. Furnished in a leatherette covered hardwood cabinet.....
26LB	Same as above but with multiple revolving nosepiece.....
26LC	Spencer Stereoscopic Microscope with inclined binocular body, having a single paired objective adapter, 2.0X paired objectives, 9X paired eyepieces. Magnification 18X. Furnished in a leatherette covered hardwood cabinet.....
26LF	Spencer Stereoscopic Microscope with inclined binocular body, having a multiple revolving nosepiece, with 1.0X, 2.0X, and 3.0X paired objectives; 9X and 12X paired eyepieces. Magnifications 9X to 36X. Furnished in a leatherette covered hardwood cabinet.....
26LG	Spencer Stereoscopic Microscope with inclined binocular body, multiple revolving nosepiece, with 1.0X, 3.0X, and 6.0X paired objectives; 9X and 15X paired eyepieces. Magnifications 9X to 90X. Furnished in a leatherette covered hardwood cabinet.....

The model/accessory listing for the No. 26 is exactly the same as the No. 25 without the base.

(By the way, the excellent R. Jordan Kreindler series on Greenough style microscopes [rik-Stereomicroscopes-3.pdf](#) is a wonderful overview illustrating multiple manufacturer's versions of stereoscopic scopes.)

With clean optics, proper set-up and lighting these scopes give an exceptional range of magnifications and images that don't fatigue the eyes. A recent search on eBay (conducted with forbearance and patience mind you) yielded quality offerings for under \$100.



Here is what I pulled from storage, two No. 25L and two No. 26L. As originally procured nearly 20 years ago, these scopes collectively set me back about \$250 but also provided me with a nearly complete set of oculars and objectives. The serial numbers are either on the focusing rack or the head prism cover. On #4 both are present, indicating they are from different scopes (I told you they are modular).

Referring to my handy-dandy spencer serial number chart reveals the following starting at the left:

(Serial Number)	Approx Mfg. Date
#1 (288280)	1948
#2 (243324)	1946
#3 (166823)	1940
#4 (356180) – (203178)	1953 head and 1944 base



The inclining base, head and stage can be separated individually with a half turn of a thumb screw. I timed it, any head can be switched out with any other head in about 10 seconds, no fuss no muss. It's the same for the inclining base under the stage. Spencer was on par with the finest microscopes of the day.



Hmmm.... this may allow for packing into a small case for field use. We'll see.



#s 1,2, & 4 are a painted proprietary aluminum alloy. I have found #3 to be made of painted solid brass, the metal of choice pre-WWII. The plans to remove the paint and polish the brass are in motion. I have seven large (3ft x 6ft) sheets of heavy gauge bronze to work with to create a visually spectacular polished bronze base/stand to compliment the scope and stage. My to-do dance card is filling up quickly.

Oh! Here's a diversion. My wife just came in with her hair on fire (figuratively in this case, but it has been literally in others). Seems we have a couple Costa Rican intruders on the deck. Grabbing our weapons, we stepped outside to confront them. This was the first time we have ever had to deal with something like this since arriving but have been down here long enough to know these prowlers generally limit their violation of a domicile to the ground floor, but not in this case. They refused to back down from the deck and they had friends downstairs in the shop. Left with no alternative, we loaded our cartridges and blazed away. The battle is now legend, they proved tough to kill.

Devon & Lavanson Austin, expats living in Costa Rica, give an account of a similar attack. "The Costa Rica army ants, also known as "cleaner ants", are called Limpiadores by the Costa Ricans. They are almost blind and rely on their sense of smell. When they visit a house, they clean it from scorpions, ants, and cockroaches. They are known to clean out the vermin in every nook and cranny as thoroughly as any exterminator, and then they leave. This can take anywhere from half an hour to several hours, but they always leave before nightfall." Their full account is here: [The Aspiring Expats: Attack of the Cleaner Ants! - Our Life in Costa Rica Yr #2](#)

Their bite is painful, but they are not as aggressive as fire ants. In about 15 minutes they had formed a nearly solid black carpet on the deck and shop floor. Columns 8 inches wide were marching up the deck pilings. With the back yard bug control cartridges loaded on two garden hoses, we opened fire. Bri and I were outnumbered by four million ants, but we held our ground.



The ants were “swamped” by our counter offensive. We had the situation under control. An hour later, when everything had dried, we surveyed the still moving bodies. Tough little bugs!



Taken with a cellphone thru the Spencer 25L.

While the Costa Rican terminology is “Limpiadores”, the more common English lexicon is “(place explicative of choice here) ants!!!”

Whew! Where was I? It's been about 22 consecutive hours since the last rainfall. Hope springs eternal!

This forced hiatus from the carpentry and focusing on the "bigger-than-I-thought plethora of used equipment that needs tweaking, familiarization with, repair, cleaning and/or modification" has been well spent time. Some forgotten instruments and minutia I collected have surfaced and allowed me to correct the shelving and cabinet sizes and design for a quick-now vs. a longer-later modification. The lighting contrivances I've rediscovered will deserve an entire article of their own.

So ends the squawking for this month my friends, happy trails, auf wiedersehen for now.

All of you (except my ex-wives) are welcome to critique, criticize or otherwise comment on the above ramblings. Contact me at: gjw8844@gmail.com

Cheers!
Joseph Wilhelm

Earlier essays can be read in the Micscape Library.

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