

Advances in Micro-mineral Photography

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At the November 2022 MMNE meeting, member Joe Mulvey brought a very large lot of Bill Henderson micro specimens for the club to disposition. The material filled two ten foot tables. There were some mounted specimens, but most were un-mounted, in locality labeled boxes. Joe was fortunate to acquire and care-take this valuable resource. Most members will recall that Bill Henderson (1932 – 2014) was a frequent contributor to *Mineralogical Record* (“Mineralogical Notes”) and *Rocks & Minerals* magazines, as well as a frequent speaker at mineral symposiums. He was inducted into the Micromounters Hall of Fame in 1997.

Included in the material that Joe brought was a large tub of Bill Henderson’s slides. I estimate over 800. These were the slides Bill used for his talks and many were the source images for his articles. New England localities and specimens are very well represented. NH pegmatites and Conway granite localities occupy several Kodak slide carousels. Maine pegmatites, notably the Estes Quarry, were popular with Bill. Finally, about a third are of Mont St. Halaire micros. Fortunately most all slides have notations as to locality and species.

I have spent a few hours viewing these slides, mostly of the NH miarolitics group. My initial intent on accepting a loan this slide hoard was to digitize them to .jpps. I tried three different conversion methods: a recently purchased slide copier, photographing the screen projected image, and a home-built rig with my Canon SL3 camera. No method yielded a satisfactory mineral photo. This, for me, is largely due to the quality of micro-mineral photos that I routinely produce. The effort to copy even the New Hampshire photos would be very substantial. The species and locality information of each slide would need to be entered into the .jpg file meta-data field. I concluded my time is better applied to new specimen photos.

It is interesting to compare the best micro-mineral photography achievable in the late 1980’s to early 1990’s with what can be done today. While reviewing Bill’s NH slides, I recognized several specimens that Gene Bearss had loaned me to photo in 2015. (Gene had apparently also loaned some of his best to Bill.) Aware that the Maine Mineralogical and Geological Museum (MMGM) had acquired Gene’s micro collection, I inquired if I might borrow a few specific ones for comparison with a new photo with my current set-up. Museum curator, Carl Francis agreed to a loan. MMGM trustee Don Dallaire was able to locate one of my requested specimens, a Government Pit columbite-Mn.¹

Don delivered the specimen to my home in mid-December. Below is a side-by-side comparison of a .jpg copy of Bill Henderson’s slide and my recent stacked image photo, a 1.2 mm columbite-Mn crystal.



The improvement is quite dramatic when the two photos are viewed on a PC monitor. I had to crop the image on the Henderson photo to about 20% of the original to produce this comparison. I judge this to be about the best NH columbite-Mn specimen that I have seen. Good specimens make good photos.

Given the limitations of Bill’s equipment, Bill’s photos are well composed and illuminated. Even more remarkable, is that he could not see the result until after the slide was developed. One may speculate as to how many shots he took to ensure a good one. Today we have the luxury of an instant view on our PC monitor.

Being unwilling to take responsibility for the Henderson slide collection, I have initiated some inquiries for a long-term custodianship. With Bill’s membership on the Micromounters Hall of Fame, they have indicated a

willingness to accept it, conditional upon removing the slides from the carousels and repackaging them to minimal volume. The MMHoF presently has the Lou Perlof slide collection.

Don Dallaire also investigated the willingness of the MMGM to take possession, of the Maine specimen photos at a minimum. I loaned the tub to Don for review by the Maine museum staff. They declined acceptance of the slides. In March 2023 the slides were boxed and mailed to Mike Seeds for perpetual care by the Micromounters Hall of Fame.

The New England Micromounters is grateful to the MMHoF for their stewardship of items from our hobby's historical past.

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1. Even with species and locality, it is often difficult to locate a particular specimen when a collection has multiple similar examples. Each must be examined under a scope for a match with the desired specimen.