Buying specimens on the web

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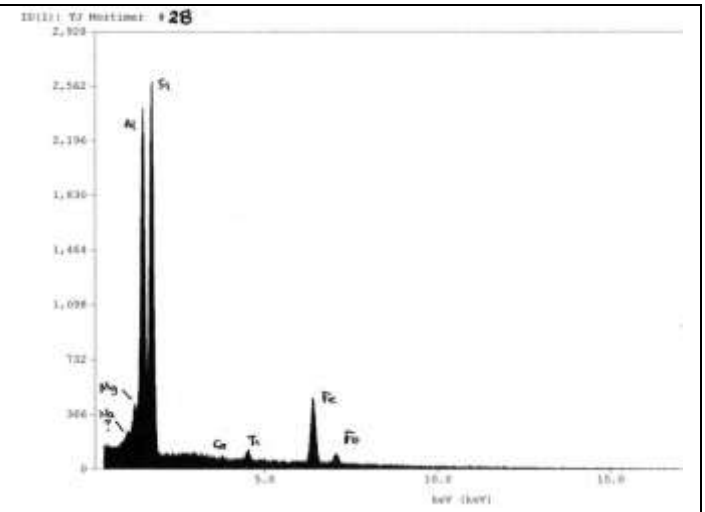
Buying specimens on the web is not one of my top choices for acquiring species to fill out my New Hampshire collection. However, as my "NH missing species" list continues to shrink, web purchases have become attractive, especially in instances where the locality may no longer exist or be accessible. My experience with internet purchases during the last few years has taught me to be cautious in these transactions. In this note I will relate the outcome of three purchases. In each case the purchase was made from a well known mineral dealer. I have elected not to identify the names of the three mineral dealers involved, but I would wager that 90% of the readers would recognize their names.

Species: Arrojadite
Locality: G.F. Smith Mine, Newport, NH
Specimen Description: 1 to 2 mm dark-brown, hexagonal prisms in mica-feldspar matrix.
History: My late friend Vince Valade spotted this small cabinet specimen on a dealer site in 2002. He asked if I was interested in splitting the specimen and the cost. I agreed. Arrojadite is listed by Morrill and other references as occurring at the G.F. Smith Mine. Permission to field collect at this site has been severely restricted for many years.

Examining my piece of the specimen under the microscope, the dark crystals appeared quite similar to small tourmalines, perhaps the schorl-dravite species group. Most of the small crystals were broken or fractured. I looked at Vince's piece as well and observed nothing different from my own. Not being familiar with all the morphology variants of arrojadite, I accepted the dealer's identification with a tad of skepticism and cataloged it into my collection. Two years ago I started a concerted effort to obtain analytic confirmation of my NH species that had questionable identification. The analysis on this "arrojadite" justified my skepticism. The EDS plot below showed the micro crystals to be a tourmaline, about at the midpoint of the schorl-dravite series.

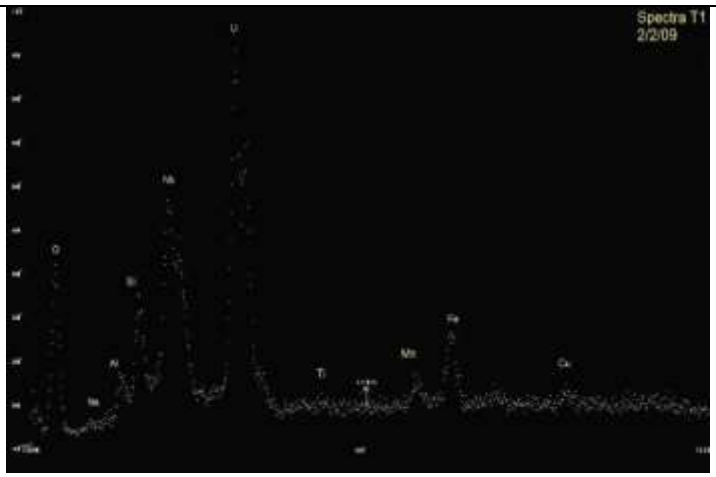
Schorl-Dravite GF Smith Mine, Newport, NH (purchased as Arrojadite)



EDS plot of GF Smith specimen black crystal. Arrojadite is a phosphate: $(KNa)Fe^{2+}(CaNa_2)(Fe^{+2})_{13}Al(PO_4)_{11}(PO_3OH)(OH)_2$ No phosphorous is present in the above analysis.

Species: Hiddenbergite
Locality: "Keene", NH
Specimen Description: Tennis-ball size specimen with one cm stubby black crystals in light-colored matrix.
History: I spotted this specimen on a weekly update of a well known New York dealer. Hedenbergite, a pyroxene, is reported from New Hampshire, but a Keene locality was unknown to me. I "paypal-ed" the $40. (with shipping) and my specimen arrived a week later. The specimen appeared to be as advertised. However, two weeks later a similar specimen appeared for sale on the same site. This time the listed locality was Keene, **NY**! My specimen contained a white tape label from a previous owner. Close examination of the state initials revealed that it was likely NY instead of NH. A quick check verified that there was such a town as Keene, NY. An e-mail to the dealer confirmed the error. He willingly returned my purchase price with the return of the specimen.

Species: Ixiolite
Locality: "Old Allan Mica Mine", Alstead, NH
Specimen Description: A black, sub-metalic, massive, thumbnail specimen.
History: This specimen came from a California dealer specializing in rare mineral species. Ixiolite, $(Ta,Nb,Sn,Fe,Mn)_4O_8$, has not been previously reported from New Hampshire (at least as far as I could uncover). Phillip Morrill does list an "Allan Mine" in Alstead, NH. *Pegmatite Investigations,* (pgs. 107 – 110) documents an Allen Mine in Alstead, NH, (note, spelled with an "e"). Communication with the selling dealer stated that the specimen "came from the collection of Joseph F. Lech, Jr.", (has any reader heard of this collector?) The EDS analysis of this specimen showed a substantial presence of uranium (plot below). The analyst stated he felt the best fit was betafite, $U^{4+}(Nb,Ti)_2O_6OH$. He also indicated that "under the (electron) beam, very heavy elements like uranium throw off high energy electrons which interact with the metals of the SEM chamber. The Al, Si, and Cu peaks are probably from the metals inside the SEM chamber." The specimen was "definitely not Ixiolite."
Now a New Hampshire betafite would be most satisfying. At this point, I am not ready to leap to that claim as, 1) betafite has not previously been reported from NH, 2) not knowing about the original field collector/owner, there is a possibility of locality miss-identification, and 3) an XRD analysis is needed to resolve the EDS analyst's "best fit" uncertainty.

 "**IXIOLITE**" Old Allan Mine, Alstead, NH	 EDS plot of Allan Mine "IXIOLITE