

Humboldtine, A new Mineral for New Hampshire

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HUMBOLDTINE Government Pit, Albany, NH
6.5 cm specimen with orange-yellow humboldtine crust



HUMBOLDTINE Government Pit, Albany, NH
7.5 mm FOV. Red arrow points to EDS grain sample point

In 2018 I was contacted by the son of deceased collector Leroy Grant to inquire if I had an interest in acquiring many tubs, crates, and flats that his father had stored in his garage. It took two trips to his Albany, New Hampshire home to retrieve this huge accumulation. Much was still wrapped in the dated newspaper from the original field trips. Leroy loved the hunt, but rarely bothered to clean, trim or label, anything he brought home.

One flat was labeled Government Pit on the side. It contained many typical quartz-microcline specimens that the locality is known for. A handful of these chunks had an orange-yellow crust that I had not previously seen on Government Pit specimens. A January, 2020 EDS analysis (Figure 1) suggested a simple iron oxide. I initially dismissed this crust as a very yellow goethite.

Cleaning and organizing this winter, I came across this box of specimens with the orange-yellow crust. I came close to pitching this lot into my chuck bucket, but thinking that I may not have thoroughly searched the species possibilities, I explored mindat.org for other iron-oxide minerals. I was surprised how many there were, but the appearance of humboldtine, $\text{Fe}^{2+}(\text{C}_2\text{O}_4) \cdot 2\text{H}_2\text{O}$, fit particularly well.

This January, I sent off a sample to MMNE member George Adleman for Raman analysis. George's analysis, (Figure 2), indicated humboldtine was a good fit for this crusty mineral. Humboldtine has not been reported from any other New England state and is reported from only three other continental US localities, (Virginia, Michigan, and California). None of these US localities is represented with a humboldtine photo on mindat. The literature states that humboldtine can be found in granitic environments.

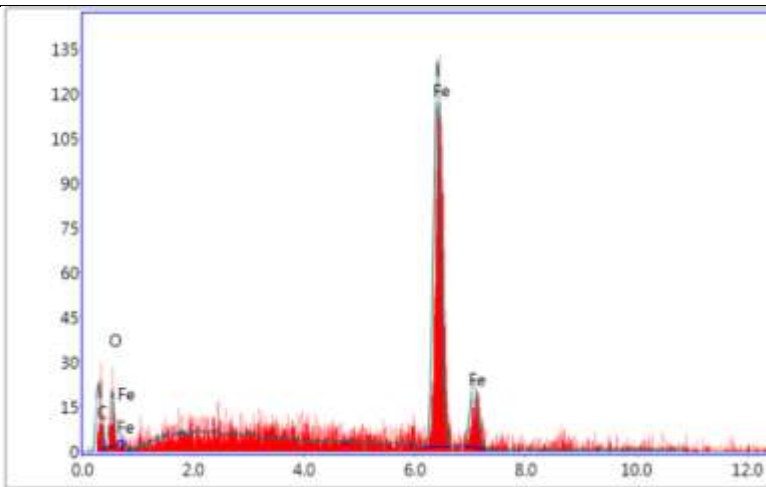


Figure 1. Humboldtine polished grain EDS analysis plot

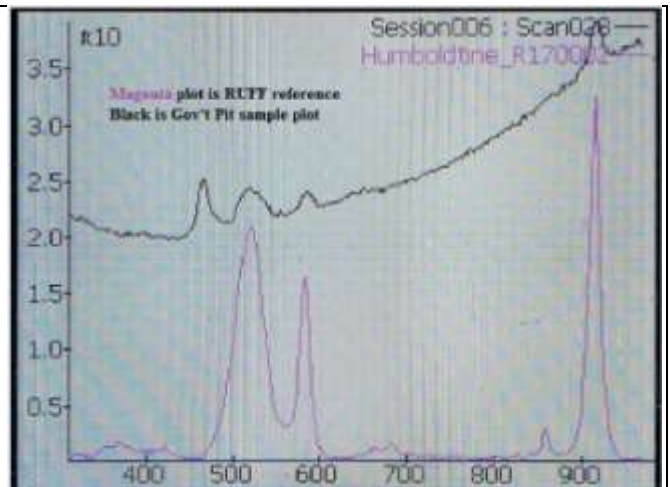


Figure 2. Humboldtine Raman analysis plot.