Dixie Iron Mine Trip
By Dave Lines, photos by Tom Tucker

Have you ever seen a "bear tree"? A bear tree is where a male bear marks his territory. The bear stands on his hind legs and reaches as high as he can and bites a big hunk or two out of a tree and rips off some bark. The higher up the tree trunk that the bite is, the bigger the bear. The bear bite on the white pine tree that I saw on this trip was well above my head and I am 6 feet 2 inches tall. And this bear tree was *FRESH*. The pine sap was still sticky on the bark and the tree. And when I looked closer, there were little strands of *black fur* clinging to it. Kinda sent a little shiver up the back of my neck.

This encounter just added to the day's interest. Overall, the trip to the Dixie Iron Mine near Vesuvius, Virginia, was fabulous. The weather was perfect --- cool, but not raining. The sky cleared once, but remained cloudy for the most part --- certainly, no where near the dire predictions of an "all day rain" which had scared away our other potential field trippers. We parked on private property (with permission) near Vesuvius at the very end of a road and hiked up for 1-1/2 miles to top along a pretty good, but at times steep, trail. Someone(s) with chainsaw(s) had cleared brush and cut through over 100 fallen trees along the way. The Dixie Iron Mine is near the top of the mountain and was mined for high quality iron ore from 1840's to 1901, according to my fellow rockhound and guide, Tom Tucker, President of the MicroMineralogists

of the National Capitol Area. He was after micros with names like dufrenite, kidwellite, strengite and cacoxenite, but the main thing (for me) was "rockbridgeite" in lapidary quality and sizes. Rockbridgeite is an iron phosphate and was discarded by the miners as it made the iron brittle (ref. a). More recently (ref. a), it was discovered that rockbridgeite would take a high polish that has the deep, rich look of black jade.

Only by accident, did we find the lapidary quality rockbridgeite, and that was when we took a wrong trail that was choked with fallen trees and dead/live brush. Since the whole vicinity is recovering from a forest fire, dead trees are fallen like giant pickup sticks everywhere with dead brush and new mountain laurel growing up in between. Rough travel. At the upper end of this grown up trail, there are a lot of mine dumps and to the right side is a large slanted mine adit where the original iron ore vein looked as though it had been 4 to 6 feet thick. On the hillside more or less opposite this hole (David Lipscomb has a picture of it on his website ref b.), I spotted a few chips of rockbridgeite. Rockbridgeite is black, but may be brown outside from weathering. The key to identification is a *pea green color* when chipped with a rock hammer. This area is about a quarter mile down hill from the upper workings, but since Tom was primarily interested in micros, we worked our way up higher through the woods to the main mining area.

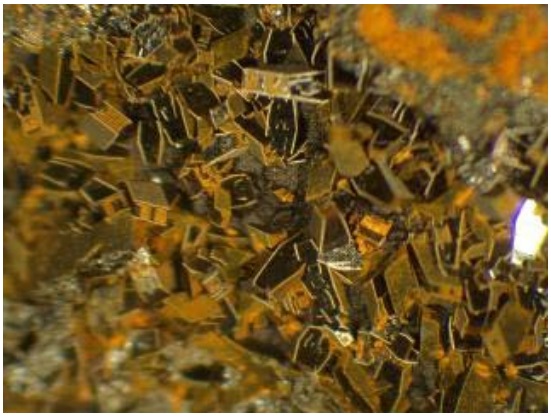
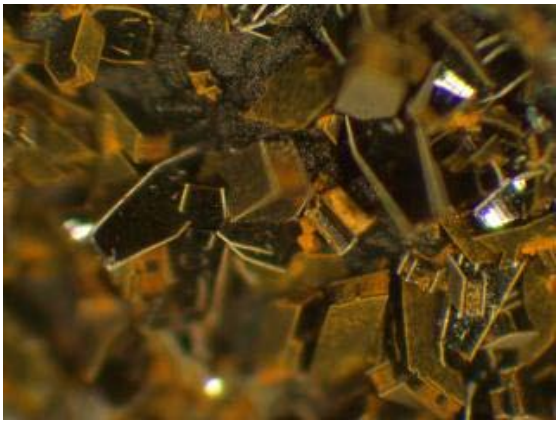
The original overall mining operation had been very extensive judging from the large dumps and long line of collapsed tunnels. The miners basically had followed that same seam of iron ore along the ridge as far and as deep as they could go. At the extreme left side of the mine as you face it looking uphill, there is a huge gaping hole (east shaft) in the mountain that goes wa-a-ay down. Tom said it was 180 feet deep. He is a spelunker, and though he said he had never been in it, he said would make it a state park if it had been a cave. We tossed a rock into the abyss and we could hear it roll and bounce for a long while. Actually, we never heard it hit bottom --- the sounds just became fainter and fainter. A truly dangerous spot, it is definitely a hole to stay well away from.

Tom showed me the area he planned to get micros from, but it only contained rockbridgeite in very thin seams. So after spending some time with Tom, I left and went straight (west) in the general direction of the collapsed tunnels and down through the laurel thickets to re-locate the first area we found. Enroute, in the middle of a jungle of laurel, is where I saw that "bear tree".

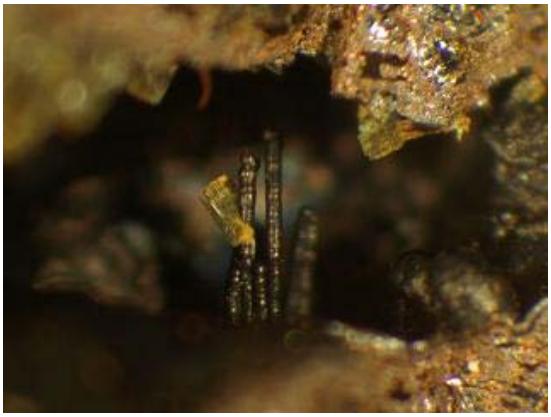
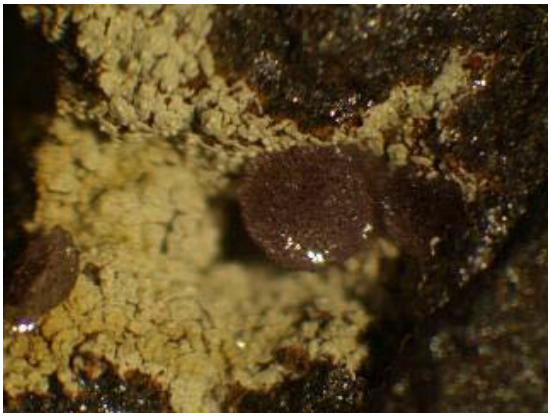
At the lower location, I spent about 3 hours digging through dumps with a potato fork in search of rockbridgeite. At first, I picked up everything, including chips (for possible tumbling), but eventually kept only the larger pieces. Also, I collected a few pieces of brecciated jasper, which looks like a conglomerate of rounded and broken light tan and gray colored rock surrounded by dark mustard colored jasper. Very interesting pattern. Dave Lipscomb noted that some of it is lapidary quality and has specimens and polished pieces on his website for sale. After spending about 15 minutes refilling and covering the area where I had dug, I was ready to start heading back --- Tom said he was going to stay until dark. Altogether, I picked up more material than I could carry back --- and also saw some on the way back, but I just couldn't carry anymore. Found a couple of chunks of rockbridgeite that may be large enough for a small sphere. I spent two (2) hours hiking back down the mountain to reach the vehicles. Could only carry my bucket a few yards at a time before I had to set it down. Iron ore is HEAVY!!!

After I unloaded my rocks back at the car, I returned to the mountain to search for some of the other material that can be found there. Trace fossils of "scolithos" worm tubes in very fine grained quartzite --- some very nice for lapidary --- predominately pink, white or tan with contrasting black worm tubes. This material is abundant about one mile from the vehicles. Unlimited quantity --- a mountain worth --- and sizes from small to huge. The "catch" was hauling it back to the vehicle. Another item there worth collecting is cryptomelane (manganese nodules) at the Kelly Bank Mine on lower part of trail. The mine was fully reclaimed several years ago and is now covered in heavy brush, but with persistence , I found several decent specimens. One was 6 inches across, but it was a totally hit or miss affair.

As for recommending this trip to others, I am not sure how many folks in our club would *enjoy* this trip. The mountain is steep and it is a long hike each way. It definitely takes someone who is in good physical condition. But on the other hand, good quality lapidary material --- rockbridgeite, brecciated jasper and scolithos in quartzite --- can be found. As for me, I want to go back.

"Micro" PostScript by Tom Tucker: All of the mineral species noted here are various complex iron phosphates. Originally, the dark green radiating masses found here and in near-by mines was thought to be DUFRENITE. In 1949, with the advancement of better analytical techniques, much of the material was determined to be a new species, and was named ROCKBRIDGEITE, for the locality on South Mountain, near Midvale, Rockbridge County, Virginia, just a few miles south of the Dixie Mine. The original species, DUFRENITE, is found in excellent crystals at the Dixie Mine, but I have found ROCKBRIDGEITE only in massive seams and micro-sized spheres. But as Dave Lipscomb has demonstrated, the massive ROCKBRIDGEITE material does take a beautiful polish and is thus an unusual lapidary material.

It might also be noted that the Dixie Mine actually crosses the county line and is partly located in Augusta County. The mine is rapidly being reclaimed by nature, with large portions of the fractured hanging wall falling into the open surface cut and the underground workings. A comparison of the photo of the "west shaft" included here, with the picture posted on Dave Lipscomb's website (Ref. b) shows some of these recent changes.

References: a. "Mineral Collecting Sites in Virginia", D. Allen Penick, Jr. and Palmer C. Sweet, Virginia Minerals, Vol. 38, No.2, May 1992

b. www.varockhound.com/va/rockbridge/dixie iron mine.shtml