The hillside wash contains many angular pieces of gneiss that have been washed from the small hill of gneiss that lies to the north and that has reached its present position by a strike fault along the north side of the hill. Within the bed of umber there are a few layers and pockets of yellow ocher, some of which are as much as 14 inches thick. The umber bed further contains many small pieces of vein quartz, fragments of iron ore, and limonite geodes filled with drab clay. These impurities are more abundant in the upper portion.

The umber and associated materials represent the decomposition and replacement products of the Hardyston quartzite, which extends along the south flank of the hill, as shown by the float rock. The umber deposit also contains some pieces of the quartzite that have resisted decomposition.

The umber was shipped to Easton, where it was washed and ground. The finished material commanded a price of $18 to $20 a ton.

A short distance east of these workings a shaft was sunk several years ago, and several tons of umber lie near the caved shaft. Though the color is good the large amount of grit is objectionable.

Black shales.—In the vicinity of Nazareth some very black carbonaceous shales were used for many years in the manufacture of black paint. Rogers says:

In the neighborhood of Nazareth, which is on the line dividing the Slate from the Limestone formation, a material is procured, which answers the ordinary purpose of black paint. This appears to be simply a more than usually carbonaceous, black and soft variety of the slate, occurring near the base of the formation a little above its contact with the Limestone.

A traveler in that region in 1799 reports the use of the same material, so it would seem that these slates were quarried for paint for many years.

On our return to Nazareth we saw two men searching for coal. They had penetrated to the depth of twelve feet, and were flushed with sanguine expectations of success.

They were prompted to this search by the opinion of a person who had passed this way not long before and was acquainted with the coal mines of Europe.

The steward had taken from the side of the hill, near this place, a saponaceous black earth, which he had ground and mixed with oil and used as paint. It appears as well and as durable as any other colour. He has by experiments altered the first appearance of black, and made samples of other colours with it.

A little of the refuse slate from the slate quarries has been ground and used for paint.


Ogden, J. C., Excursion into Bethlehem and Nazareth, in Pennsylvania, in the Year 1799, Philadelphia, 1805.