

considered to be of the age of the Hudson-River group, about Merigomish in the eastern part of the province. It is of an ash-grey colour, a somewhat schistose structure and close texture, adheres slightly to the tongue, and feels rather soapy on smooth surfaces; it has a glimmering lustre, and is most readily cut with a knife; its hardness is 1·5, its powder and streak are greyish white. From the circumstance of excellent soft but firm pencils, much prized for writing on slates, being made from it, it receives its local name. Analysis shows it to belong to the clay-slate family; it was at first taken for pyrophyllite, the compact variety of which, used in the United States for making pencils, it much resembles. It also in some respects agrees with agalmatolite, with which the compact pyrophyllite had been confounded before Brush pointed out that they were really distinct (Silliman's Journal, July 1858, p. 69). Its specific gravity is 2·71. In the following analysis, although the finely powdered mineral was fused with about four times its weight of the mixed alkaline carbonates, the alumina was not *perfectly* separated from the silica, but the quantity retained was not large enough to be material. The presence of potash and soda was proved by fusion with chloride and carbonate of barium, and subsequent testing with bichloride of platinum in alcohol. The iron is given as protoxide, because it was found that after fusion an exceedingly small amount of peroxide was present, which might have been formed in the process. The results obtained were—

Silica (retaining a very little $Al^2 O^3$)	60·53
Alumina	23·01
Protoxide of iron	5·30
Potash and trace of soda	4·39
Magnesia	1·42
Water	5·35
	<hr/> 100·00

which have a general accordance with those found in the analyses of clay-slate given by Dana (Mineralogy, 4th edit. p. 510), one of which is as follows, the specimen examined being a bluish-black clay-slate from Rothwaltersdorf:—

Silica	61·72
Alumina	19·55
Protoxide of iron	8·54
Lime	0·55
Potash	4·81
Magnesia	1·08
Water	3·74
	<hr/> 99·99