

ON PROCHLORITE FROM THE DISTRICT OF COLUMBIA.

By GEORGE P. MERRILL.

The presence in the schists of the District of Columbia of a chloritic mineral not apparently resulting from the alteration of the included hornblende or mica was recognized by the writer a year or more ago, but until lately no sufficient amount of the material was found for an exact determination of its mineralogical species. While searching for rutile on Foundry Run, some 1½ miles northwest of the city of Washington, not long since, he was, however, fortunate enough to find a mass of this mineral of sufficient size and purity to admit of satisfactory examination.

The mineral occurs in the form of a compact aggregate of small scales of a beautiful deep green color, the individual laminae of which are from one to two millimeters in diameter and of very irregular outline.

Examined by the microscope it is found to be biaxial, though the axial divergence is not large. Sections across the cleavage show a fan-shaped or radial arrangement of the laminae, which are of a yellowish-green color, becoming green whenever the cleavage lines correspond with the plane of vibration of the light. The polarization colors are dull and of a greenish-gray hue. In hardness it is about 1.5, and its specific gravity, as determined by a Jolly balance, is 2.835. Before the blow-pipe it fuses with difficulty on the thin edges, and becomes slightly magnetic. Chemical analysis by Prof. F. W. Clark, chief chemist of the Geological Survey, resulted as follows:

	Per cent.
Silica	25.45
Alumina	17.88
Magnesia.....	15.04
Iron protoxide.....	24.98
Soda.....	.67
Water	14.43
	98.45

The associated minerals are very dark green hornblende, a yellowish-gray finely granular crystalline mineral which is believed to be zoisite, much iron pyrites, and, in the more quartzose portions of the rock, black tourmaline and rutile.

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