

FEBRUARY 28, 1878.

On Sterlingite and Damourite.—Mr. H. C. LEWIS stated that an optical examination of a number of American damourites had shown that they all had a large optic-axial divergence. This angle was generally 72° – 74° . It is an angle somewhat larger than that of muscovite, and is remarkably constant in different specimens. On the other hand, the original damourite of Delesse has, according to Descloiseaux, an optic-axial divergence of only 10° – 12° . No such angle has been found in any of the American damourites. As it has been shown that damourite ("hydro-mica") is an important element in our rocks, and is of wide distribution and frequent occurrence, it is essential that its characters should be well known.

The damourite of Sterling, Mass., conforming precisely, both as to composition and structure, with the type of American damourite, and which Prof. Cooke has shown to have an optic-axial divergence of $70^{\circ} \pm$, has been named by him, *Sterlingite*. This distinctive name was given solely on account of its larger optic angle. But it appears that this large angle is characteristic of all American damourites, and probably of many European ones.¹ It therefore follows either that all of our damourites should be called *Sterlingite*, or that the name should be dropped; there would otherwise be confusion. Notwithstanding the exceptional optical character of the mineral examined by Descloiseaux, it is thought that identity of chemical composition and of physical properties is sufficient reason for retaining the original name of *Damourite*.

MARCH 25, 1878.

Vanadium in Philadelphia Rocks.—Mr. LEWIS said that he had discovered the presence of Vanadium in hornblendic gneiss near Wayne Station, Germantown. The presence of sphene in that rock suggested the search for vanadium, recent researches having shown that this element frequently accompanies titanium. The following method was employed for its detection. The pulverized rock was slowly heated in a crucible with sodic carbonate and sulphur. After partial fusion the mass was digested in warm water and the filtrate acidified. The precipitate was washed, ignited, and fused with sodic carbonate and sodic nitrate. It was now digested in water, filtered, the filtrate concentrated, and solid ammoniac chloride added. A precipitate fell, which was found by blowpipe and other tests to contain pure vanadium. An exfoliating hydrous mica occurred at this locality, resulting

¹ V. "The optical characters of some Micaceous Minerals," by H. C. Lewis, Proc. Min. and Geol. Section, October 22, 1877.

perhaps from the alteration of hornblende, and which was believed to be a new species, in which there was .38 per centum of oxide of vanadium.

A New Locality for Epsomite.—MR. LEWIS reported having found Epsomite in Sideling Hill Tunnel, E. Broad Top R. R., Huntington Co., Pa. It there occurs in small, colorless, acicular crystals in an olive-colored shale in the lower part of the Vespertine formation (No. X).



1880. "Vanadium in Philadelphia Rocks." *Proceedings of the Academy of Natural Sciences of Philadelphia* 32, 256–257.

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