A

SYSTEM

OF

MINERALOGY.

DESCRIPTIVE MINERALOGY,

COMPRISING THE

MOST RECENT DISCOVERIES.

BY

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"*Hæc studia nobiscum peregrinantur....rusticantur.*"

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677. MENDOZITE. Soda Alum. Natronalaun, Natrumalaun, *Germ.* Natronalun *Huot*, ii. 448, 1841. Solfatarite pt. *Shep.*, Min., ii. 187, 1835 (not in Min. of 1857). Mendozite *Dana.*

In white fibrous masses.

H.=3, and G.=1·88, Thomson. Externally white or pulverulent. Some resemblance to fibrous gypsum, but harder.

Comp.—$\dot{N}a\,\ddot{S}+\dot{A}l\ddot{S}^3+22\,\dot{H}$=Sulphate of soda 16·1, sulphate of alumina 39·0, water 44·9=100; or, Sulphuric acid 36·3, alumina 11·7, soda 7·1, water 44·9=100. Analysis by Thomson (Ann. Lyc. N. Y., 1828):

St. Juan near Mendoza $\ddot{S}$ 37·70 $\dot{A}l$ 12·00 $\dot{N}a$ 7·96 $\dot{H}$ 41·96=99·62.

Pyr., etc.—Resembles ordinary alum.

Obs.—Occurs near Mendoza, east of the Andes.

Thomson found for the composition of a soda alum from Southern Peru which he called Subsesquisulphate of Alumina (Phil. Mag., III. xxii. 188), $\ddot{S}$ 32·95, $\dot{A}l$ 22·55, $\dot{N}a$ and $\ddot{S}$ 6·50, $\dot{H}$ 39·20 =101·20. G.=1·584.

Shepard states in Am. J. Sci., xvi. 203, 1829, that the alum of the island of Milo is a soda alum related to Thomson's; but in vol. xxii. 387, ib., he admits a doubt, on the ground of Hartwall's analysis of a Milo alum, which makes it *Alunogen* (q. v.). Shepard's name solfatarite (which he has since rejected) was based upon its occurring in solfataras, and not in the Naples solfatara, to which no allusion is made in his edition of 1835; and under it he gave three analyses of alunogen, with the one of *soda-alum* by Thomson. The Mendoza mineral is not from a solfatara.

678. PICKERINGITE. *Hayes*, Am. J. Sci., xlvi. 360, 1844. Magnesia Alum *ib.* Magnesialaun, Talkerde-Alaun, *Germ.*

Monoclinic? In fine acicular crystals; long fibrous masses; and in efflorescences.

H.=1. Lustre silky. Color white, yellowish. Becomes pulverulent and white on exposure. Taste bitter—astringent.

Comp.—$\dot{M}g\,\ddot{S}+\dot{A}l\ddot{S}^3+22\,\dot{H}$=Sulphuric acid 37·3, alumina 12·0, magnesia 4·6, water 46·1. Analyses: 1, A. A. Hayes (l. c.); 2, How (J. Ch. Soc., II. i. 200):

	$\ddot{S}$	$\dot{A}l$	$\dot{F}e$,	$\dot{M}n$	$\dot{M}g$	$\dot{C}a$	$\dot{K}$	$\dot{H}$
1. Iquique	36·32	12·13	0·43	4·68	0·13	—	—	45·45, H Cl 0·60=99·74 Hayes.
2. Newport, N. S.	36·38	10·64	0·58	4·79	—	0·23		45·06, $\dot{C}o$ 0·06, $\dot{N}i$ 0·14, slate 0·72=99·57 H.

In two other trials How found for $\ddot{S}$ 36·36, 36·59, and for $\dot{H}$ 46·16, 46·07.

Pyr., etc.—In the matrass yields water, and acts like other alums. Tastes like ordinary alum.

Obs.—From near Iquique, in Peru; also from N. Scotia, in Newport, on the bank of the Meander, as an efflorescence on the slate or shale (Silurian) of a sheltered cliff, where it results from the action on the shale of decomposing pyrite—and probably a kind containing traces of cobalt and nickel. How observes that the fibres in this mineral are oblique in crystallization, and that it contains only 22 $\dot{H}$; and that it is therefore not a true alum.

679. APJOHNITE. Manganese Alum *Apjohn*, Phil. Mag., xii. 103, 1838. Manganalaun. Apjohnit *Glocker*, Syn., 298, 1847.

In fibrous or asbestiform masses, white, and with a silky lustre.

Comp.—$\dot{M}n\,\ddot{S}+\dot{A}l\ddot{S}^3+24\,\dot{H}$=Sulphate of manganese 16·3, sulphate of potash 37·0, water 46·7=100. How suggests the formula $\dot{M}n\,\ddot{S}+\dot{A}l\ddot{S}^3+22\,\dot{H}$, which would correspond to 44·54 p. c. of water and 35·96 $\ddot{S}$, supposing some loss of the sulphuric acid in the heating to determine the water.

Analysis: Apjohn (Phil. Mag., l. c.):

$\ddot{S}$ 32·79 $\dot{A}l$ 10·65 $\dot{M}n$ 7·33 (=$\dot{M}n$ 6·60) $\dot{H}$ 48·15 $\dot{M}g\,\ddot{S}$ 1·08=100.