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XVI. Mineralogical notices

W.W. Miller Esq.

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I repeat, that to prove a change of climate it is necessary to show, not merely the existence of vineyards in a few localities, but the extensive growth of the grape for the purpose of making wine. In fact, Plot* tells us, that in the year 1685, Dr. Bathurst, President of Trinity College, made as good claret at Oxford, "in a very mean year for that purpose," as any one could wish to drink; and Pepys says, that in the reign of Charles II. very good wine was made at Walthamstow. As far then as vineyards in particular localities prove anything, the climate of Britain has been constant from the time of Bede to the year 1685. Nor has it degenerated since; for Miller gives a list of places at which wine has been made in the course of the last century; among which are Rotherhithe, Brompton, Kensington, Hammersmith, Walham Green (wine was made at this place for 30 years), Arundel, and Pain's Hill, near Cobham. The wines of many of these places are described as being equal or superior to the French wines of the second class. That made by Mr. Hamilton at Pain's Hill is said to have been fully equal to the best Champagne, and to have sold for fifty guineas a hogshead.

While on the one hand there is no sufficient testimony in favour of the growth of wine on a large scale in ancient times, there is on the other some direct testimony against it. Petrarch, according to Miller, speaks of the people in England as not drinking wine; and Daines Barrington has quoted Lord Bacon†, who says that grapes require a south wall to ripen.

All these considerations make it difficult to admit, with Arago, that the climate of Britain was warmer formerly than at the present time. This idea rests solely on the cultivation of the vine in this island; a fact which cannot be disputed, but does not, I conceive, lead to the inferences that have been drawn from it. The testimony adduced merely indicates a very local and partial cultivation of the plant; such, in fact, as numerous experiments have shown to be practicable in recent times.

R. W. R.

XVI. *Mineralogical Notices.* Communicated by W. H. MILLER, Esq., Professor of Mineralogy in the University of Cambridge.

PLUMBIFEROUS ARRAGONITE.

[From Poggendorff's *Annalen*, B. xlviii.]

A VARIETY of arragonite from Tarnowitz, found by Professor Breithaupt to have a specific gravity of 2.995,

* Camden, Staffordshire.

† Cent. v. Exp. 430. 432.

contains 2.19 per cent. of carbonate of oxide of lead, according to the analysis of Professor Kersten, and 3.859 per cent. according to the analysis of M. Böttger. Hence the proportion of carbonate of oxide of lead appears to be variable, like the proportion of carbonate of strontian in common arragonite, which, according to Stromeyer, varies from 0.5 to 4.01 per cent.

ANALYSES OF PETALITE AND SPODUMENE.

[From Poggendorff's *Annalen*, B. xlix.]

Petalite analysed by M. Robert Hagen in the laboratory of Prof. Heinrich Rose, gave the following results:

	(1.)	Oxygen.	(2.)	Oxygen.
Silica	77.812	40.423	77.067	40.036
Alumina...	17.194	8.030	18.000	8.406
Lithia.....	2.692	1.484	2.660	1.466
So da	2.302	0.588	2.273	0.581

Spodumene gave

		Oxygen.
Silica	66.136	34.357
Alumina.....	27.024	12.621
Protoxide of iron	0.321	0.098
Lithia.....	3.836	2.126
Soda	2.683	0.686

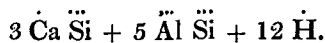
RESULTS OF ANALYSES OF POONALITE AND THULITE. BY
PROF. C. G. GMELIN.

[From Poggendorff's *Annalen*, B. xlix.]

Poonalite.

	Observed.	Oxygen.	Computed.
Silica	45.120	23.44	45.07
Alumina.....	30.446	14.22	31.33
Lime	10.197	2.86	10.43
Soda with a trace of potash	0.657	0.11	
Water	13.386	11.90	13.17

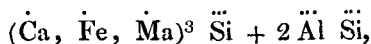
The formula to which the computed quantities refer, is



Thulite.

Silica	42.808
Alumina.....	31.144
Lime	18.726
Soda with a trace of potash	1.891
Protoxide of iron	2.288
Protoxide of manganese ...	1.635
Water.....	0.640—99.132

The above results agree with the formula



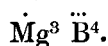
and show that the mineral is chemically the same as Epidote.

RESULTS OF ANALYSIS OF BORACITE FROM LÜNEBURG. BY
M. C. RAMMELSBURG.

[From Poggendorff's *Annalen*, vol. xlix.]

	Transparent Crystals.	Opake Crystals.	
S. G.	2·955 at temp. 12°·5 C.	S. G. 2·938 at temp. 11°·5 C.	
			According to Arfvedson.*
Magnesia	30·748	31·124	30·3
Boracic acid	69·252	68·876	69·7

The quantities of oxygen contained in the magnesia and boracic acid are 12·03 and 47·26 respectively. Hence the composition of boracite is expressed by the formula



RESULTS OF ANALYSES OF NOSEAN, HAUYNE, LAZULITE AND
ARTIFICIAL ULTRAMARINE, PERFORMED BY M. F. VARREN-
TRAPP IN THE LABORATORY OF PROF. HEINRICH ROSE.

[From Poggendorff's *Annalen*, vol. xlix.]

Nosean from the Lake of Laach.

		Oxygen.
Alumina	32·566	15·20
Soda	17·837	4·56
Lime	1·115	0·31
Silica	35·993	18·70
Sulphuric acid	9·170	5·49
Iron	0·041	
Chlorine	0·653	
Water	1·847	99·222

Hauyne from Nieder-Mendig.

		Oxygen.
Soda	9·118	2·33
Lime	12·552	3·52
Alumina	27·415	12·80
Silica	35·012	18·28
Sulphuric acid	12·602	7·23
Sulphur	0·239	
Iron	0·172	
Chlorine	0·581	
Water	0·619	98·340

[* The details of Arfvedson's analysis will be found in *Phil. Mag. First Series*, vol. lxii. p. 358.—EDIT.]

M. Scheerer's *Observations on Elæolith and Nepheline*. 105

Lazulite.		Artificial Ultramarine.	
Soda	9.09	Soda	21.476
Lime	3.52	Potash	1.752
Alumina	31.76	Lime	0.021
Silica	45.50	Alumina	23.304
Sulphuric acid	5.89	Silica	45.604
Sulphur	0.95	Sulphuric acid	3.830
Iron	0.86	Sulphur	1.688
Chlorine	0.42	Iron	1.063
Water	0.12	Chlorine	a trace
	98.11		

TWO ANALYSES OF GMELINITE FROM GLENARM, SP. GR. 2.06
AT 12° C. BY M. CARL RAMMELSBURG.

[From Poggendorff's *Annalen*, B. xlix.]

	Oxygen.		Oxygen.
Silica	46.398	24.10	46.564
Alumina	21.085	9.84	20.186
Lime	3.672	1.03	3.895
Soda	7.295	1.86	7.094
Potash	1.604	0.27	1.873
Water	20.412	18.14	20.412
			18.14

Hence the quantities of oxygen contained in the alkaline bases, including the lime, the alumina, the water and the silica, are as the numbers 1, 3, 6, 8, as in most Chabasies. The chemical distinction between the two minerals appears to consist in the relative quantities of lime and soda contained in them, most lime being contained in Chabasie. Gmelinite forms a jelly with hydrochloric acid, Chabasie does not.

XVII. *Observations on Elæolith and Nepheline*. By THEODORE SCHEERER.*

IN the 46th volume of Poggendorff's *Annalen*, p. 291, I communicated a notice on an elæolith which is found near Brevig in Norway. I considered myself justified, from the results of the analyses made with it, in advancing a new formula for this mineral, which seems to be more in harmony with its composition than the one hitherto employed. I had

* Communicated by the Author.