

at Fosso Tavolato (No. 4) and that an acmitic diopside, much like that of Viola and Kraus, occurs elsewhere at the Alban Volcano (No. 5).

It seems to be clear that there is a very considerable variety in the characters of the augites at the Alban Volcano, which is the more remarkable in view of the fact that this volcano, of all those along the Bolsena-Vesuvius line, shows the greatest uniformity among its lavas.

AN ALLEGED OCCURRENCE OF THE $\alpha\text{CaO.SiO}_2\text{-3CaO.2SiO}_2$ EUTECTIC

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In March, 1923, a brownish mass, 5x3x2 cm., was sent to the writer for identification, which upon optical investigation proved to be a mixture of the compounds $\alpha\text{CaO.SiO}_2$ (pseudowollastonite), and 3CaO.2SiO_2 . A thoro study of the material was made, followed by a visit to the supposed locality, near Spartanburg, S. C.

The mass showed the following properties: color, ivory-yellow to brown; luster, vitreous to greasy; translucent; hardness, about 5.5; specific gravity, 2.86. One surface showed distinct, but very brittle crystalline plates. The mass gelatinizes in HCl.

A thin section revealed the mass to be a eutectic mixture, and an analysis by Dr. J. Edward Whitfield established its identity with the binary eutectic obtained by Rankin and Wright¹ at 1455°C. in their investigation of the system $\text{CaO-Al}_2\text{O}_3\text{-SiO}_2$ at the Geophysical Laboratory. An analysis of the Spartanburg material as well as the binary eutectic are given below for comparison.

	A	B
SiO ₂	44.34	45.5
Al ₂ O ₃	2.28	—
Fe ₂ O ₃	0.40	—
CaO	52.05	54.5
MgO	0.56	—
	<u>99.63</u>	<u>100.0</u>

A. Analysis of Spartanburg material, by Dr. Whitfield.

B. Binary eutectic, $\alpha\text{CaO.SiO}_2\text{-3CaO.2SiO}_2$.

¹ *Am. J. Sci.*, 39, 1-79, 1915.

The two compounds showed the following optical properties, which are essentially identical with those recorded by Rankin and Wright:

			α	β	γ
$\alpha\text{CaO.SiO}_2$	Monoclinic	+	1.612		1.654
3CaO.2SiO_2	Monoclinic	+	1.642	1.643	1.650

The 3CaO.2SiO_2 compound is monoclinic, shows a perfect cleavage parallel to (100), and an extinction angle in the plane of symmetry ($X\wedge c$) of 15° .

The specimen was brought in by a student and given to Prof. W. G. Blake of the high school. He in turn took it to Prof. D. A. Dupre of Wofford College, who sent it to Mr. George L. English, from whom the writer received it.

The student upon questioning gave evasive answers, but stated that he had found it on Cedar Springs branch, about 3 miles southeast of Spartanburg, S. C. Examination of the branch, and the hillsides on each side revealed only schists and gneisses.

Spartanburg is situated on the Carolina, Clinchfield and Ohio Railroad, which is stated to be ballasted in part by slag, near the city. Situated also on this railroad, 185 miles to the north, is Kingsport, Tenn., with a large cement plant, (the most probable source of the material). It seems to the writer that the student found the specimen along the railroad, and realizing its artificial character by the associated material, took it to his instructor with the idea of puzzling him (a not uncommon trick of students).

PROCEEDINGS OF SOCIETIES

JOINT MEETING OF THE NEW YORK MINERALOGICAL CLUB AND THE NEW YORK MICROSCOPICAL SOCIETY

A joint meeting of the New York Mineralogical Club and the New York Microscopical Society was held in the west Assembly Room of the American Museum of Natural History on Wednesday evening, February 14, at 8.00 P.M. The President of the New York Mineralogical Club presided. There was an attendance of 45 members of the two organizations.

The reading of the minutes of the last meeting was dispensed with and the Chair introduced Mr. Thomas P. Clendenin of Columbia University who delivered a highly interesting address on "*Minerals Under the Microscope.*"

Through the courtesy of Mr. Dwight L. Elmendorf of the Microscopical Society a special projection stand devised and operated by Mr. Elmendorf was used, which projected upon the screen with striking clearness the illustrative slides used by the speaker giving remarkably brilliant effects under polarized light and showing very sharp figures with convergent light. The speaker in describing the petro-