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tion, the analyses given by him of orthoclase, present a parallelism with the exception of the absence of potash and the presence of manganese, the typical composition of this mineral being:—

Silica	64.60
Alumina	18.50
Potash	16.90

It would appear probable that the manganese has replaced nearly all the potash. The addition of moisture and free silica, and the replacement of part of the alumina and potash by the small quantities of iron, lime and magnesia would give a compound almost identical with that before you. All the analyses of orthoclase given on pages 356 to 361, of Dana's Mineralogy, have silica contents of from 64 to 75 per centum, and contain iron, magnesia, lime, soda, etc., in varying amounts up to about four per cent.

The same may be said of the possibility of the manganese having replaced the soda in an albite, the typical composition of which is:—

Silica	68.6
Alumina	19.6
Soda	11.8

In this case also the other foreign oxides would have replaced part of the soda and alumina.

It appears that feldspars are altered by the action of waters containing carbonic acid, or alkalis, or rendered acid by the decomposition of sulphurets. The completion of a course of decomposition of feldspar by the agency of water containing carbonic acid is the formation of a kaolin, or hydrous silicate of alumina; but there are many intervening steps modified by circumstances. Thus the presence of lime, iron, etc., leads to changes in composition, forming one or more links in the process. In the case before us it would appear that the mineral most convenient or most applicable has replaced the potash or soda, and marks an important change in the ultimate decomposition of the rock.

The following analyses given by Dana, of minerals resembling most closely in their silica and alumina contents the sample from Whitehead, may be of interest:—

	Silica.	Alumina.	Iron Ses. Oxide.	Magnesia.	Lime.	Soda.	Potash.	Water.
1. Albite	71.60	14.75	1.41	trace	1.06	10.06	.32	.....
2. do	70.68	19.80	.11	.....	.23	9.06	.....	.....
3. Sanadin	67.42	15.88	2.83	.15	2.77	.43	10.55	.....
4. Microlin	66.9	17.8	.5	.....	.6	C.5	8.3	.....
5. Felsite	71.17	13.6	1.40	.1	.4	.....	3.19	3.5
6. Pumice	70.00	16.00	.50	.....	2.50	.....	6.50	3.0

Professor Lawson has kindly handed me an analysis of "Rhomboidal Feldspar" occurring near Rome, by Jameson. This is apparently a Lepidomelane with most of the iron replaced by manganese and lime.

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