

*Serpentine or Ophiolite.*—Serpentine is a mottled rock, the predominant color green, and is a hydrous silicate of magnesia. It is distinctly stratified in some localities, and though formerly regarded as a purely igneous rock, is now generally admitted to be a metamorphic rock; perhaps an altered dolomite. It is elegant as an ornamental rock, though not much used in this country, where it exists in immense quantities.

Serpentines generally contain so many foreign mineral matters as to form with them distinct varieties; as, *garnetiferous, diallagic, hornblendic, and chromiferous serpentines.* *Ophicalce* is a mixture of calcite or dolomite, with serpentine, talc, and chlorite, often brecciated. In the latter form are included the beautiful *verde antique marbles*, such as occurs at Roxbury and Proctorsville, Vermont; Newbury and Middlefield, Massachusetts; and New Haven and Milford, Connecticut. When chromic iron is disseminated through serpentine, giving it a peculiar mottled appearance, it is called *ophyte*, from its resemblance to the skin of a snake.

The following table shows the composition of the most common or important minerals:

	Silica.	Alumina.	Oxide of Iron.	Oxide of Manganese.	Lime.	Magnesia.	Potassa.	Soda.	Total.
Orthoclase .....	65.72	18.57	trace.	trace.	0.84	0.10	14.02	1.25	100.
Albite .....	69.36	19.26	0.43		0.46			10.50	100.
Oligoclase .....	62.61	24.11	0.80		2.74	0.55	0.75	8.89	99.95
Andesine .....	59.60	24.23	1.58		5.77	1.00	1.03	6.53	99.92
Labradorite .....	53.48	26.46	1.60	0.89	9.49	1.74	0.22	4.10	98.40
Muscovite .....	47.50	37.80	3.20	0.90	Water. 2.63		9.6		100.98
Biotite .....	40.00	16.16	7.05				10.83	Water. 3.00	99.03
Phlogopite .....	41.30	15.85	1.77	Fluorine. 3.80	Water. 0.28	21.54	9.70	0.65	101.14
Hornblende (calc.)....	41.00	16.00	15.00		14.00	14.00			
Pyroxene .....	60.05	4.20	4.18	0.79	4.97	25.20			99.99
Calcite .....					56.18	Carbonic acid. 43.87			100.00
Talc .....	62.35		1.34			81.32		Water. 4.43	99.79
Chlorite .....	31.47	17.14	4.55	0.53		34.40		Water. 12.12	98.88
Serpentine (calc.)....	44.02					43.11		Water. 12.87	100.00

Other minerals forming rocks of small extent, or entering so largely into their composition as to modify their character, are the following: gypsum, the hydrous sulphate of lime (of which a crystal is represented in Fig. 51), diallage, common salt, coal, bitumen, garnet, tourmaline, staurotide, epidote, olivine, and pyrites.

A few of these minerals exist in so large masses as to be de-