ed with tourmaline, apatite, quartz, and scapolite; minerals not found associated with the chondrodite, olivine, spinel and chlorite.

The optical properties are as follows:

$\alpha=1.651$	$2V=75°\pm5°$.	Optic sign, −.	Pleochroism, strong,
$\beta=1.659$	$\rho>v$ weak.	Cleavage, typical of	X = light yellow
$\gamma=1.674$	Extinction angle	amphibole.	green; Y = green; Z
	$c\wedge Z=22°$	Color, black.	= deep blue green

SCAPOLITE. Scapolite occurs only with the black amphibole, and with quartz, tourmaline and apatite. It is a colorless, glassy variety and is moderately altered to an isotropic mineral having an index of refraction of about 1.48. The indices of refraction of the scapolite are: $\epsilon=1.542$ and $\omega=1.560$.

TOURMALINE. Small black crystals of tourmaline occur with the black amphibole and in quartz; $\epsilon=1.632$; and $\omega=1.663$. The pleochroism is strong from a light cinnamon brown, with a tinge of red; to very dark green.

APATITE. Only microscopic crystals of apatite occur. The indices of refraction are 1.632 and 1.637.

SERPENTINES. Insufficient material was available to study these minerals and no properties can be given.

BOOK REVIEWS

GEOLOGICAL MAPS. THE DETERMINATION OF STRUCTURAL DETAIL. Robert M. Chalmers. Oxford University Press, American Branch, *New York.* **1926**. vi+175 pp., with folder and numerous illustrations. Price 12s. 6d. net, postage extra. ($4.25.)

The subtitle expresses well the purpose of this book which has been written primarily for students. After a brief discussion of topography, the author treats in detail the effect of the inter-relationship of topography and structure upon the distribution of outcrops. Numerous problems on the determination of thickness of beds, strike, dip, direction and amount of throw and heave of faults, etc., are presented and solved mathematically. This feature of the book should make it especially valuable to beginning students in geology. All geological maps referred to are of British areas but the manner of treatment is such that this fact does not detract from the value of the book for American students.

CHAS. W. COOK.

ROCKS AND ROCK MINERALS. Louis V. Pirsson, revised by Adolph Knopf. Second edition. 426 pages. $3.50 net. John Wiley & Sons, Inc., *New York.* **1926.**

The first edition of this excellent text on the megascopic determination of rocks appeared in 1908. In the second, the revised edition but minor changes can be noted. No single portion has received any notable contribution of new material. The cuts, figures and analyses are the same as in the previous text, but in places material has been transposed and short paragraphs omitted to make space for a few new rock terms and descriptions to give the book a modern appearance.

The table giving the megascopic classification of igneous rocks is now expanded to include such transitional types as quartz monzonite, monzonite, granodiorite and latite. While the book has been brought up-to-date in certain directions the portion dealing with the formation of pegmatites and the discussion of differentiation are essentially the same as in the earlier edition. Expansions at these points so as at least to include Bowen's theory would have seemed very desirable.

The book in its present form, with slightly larger page and better quality of paper, produces a very favorable impression and no doubt will continue to remain one of the most popular texts in its particular field. W.F.H.

NOTES AND NEWS

LAUMONTITE FROM SOUTHERN OREGON

H. W. McClellan, *Massachusetts Institute of Technology*

A few months ago some samples of supposed gold ore from near Grants Pass, Oregon, were sent in by a prospector, and although they proved of little value for their gold content, they were interesting because of the occurrence of laumontite in them.

The locality from which the specimens came is about 26 miles northeast of Grants Pass, in the foothills of the Cascade Mountains, in a region of serpentine rocks. The so-called ore came from a crushed and faulted zone which had allowed the circulation of solutions, and the laumontite occurs filling small veins and cavities in the serpentine. The country rock itself has been very little altered.

The mineral is pure china white in color, with silky lustre, but under the microscope it appears brownish, due probably to impurities. It does not occur in distinct crystals, but shows an excellent cleavage parallel to the *c*-axis, causing a fibrous character in this direction. The principal cleavage faces developed are parallel to $\{110\}$, and to a lesser degree parallel to $\{100\}$.

A sample of high purity was analyzed by Mr. Earl V. Shannon, of the U. S. National Museum at Washington, whose results are here compared with two analyses taken from Dana's "System of Mineralogy."

	Grants Pass, Ore.	Port George, N. S.	Table Mt., Colo.
SiO_2	50.64	51.43	52.07
Al_2O_3	21.86	21.64	21.30
CaO	12.18	12.07	11.24
MgO	0.74	——	——
K_2O	1.34	——	0.42
Na_2O	0.42	——	0.48
H_2O above 110°C	12.01	15.26	14.58
H_2O below 110°C	1.58		
	100.77	100.40	100.09