NOTES AND NEWS

BROWN TOURMALINE FROM FRONTENAC AND RENFREW COUNTIES, ONTARIO*

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A massive block of a brown mineral was found on the dump of an abandoned mica pit which was sunk on a pegmatite cutting Grenville limestone on lot 5, con. 10, Portland tp., Frontenac Co., Ontario. On breaking this block open striated crystal faces were exposed which adjoined one another in a manner suggesting genicular twinning.

A similar mineral was collected by Drs. E. L. Bruce and J. E. Hawley from Lyndoch tp., Renfrew Co., which occurred in distinct crystals showing a second order prism and first order positive rhombohedron-like faces.

These minerals have been determined as varieties of magnesium and calcium tourmaline. Since these varieties of tourmaline have been reported from only one or two localities in Ontario, the following description is given.

PHYSICAL CHARACTERISTICS. Color, dark brown, except on thin edges where they are a light yellowish brown. Hardness 7, vertical striations are common. Absorption $O > E$. Pleochroism: In a section .06 mm. thick, E = very light brown, almost colorless; O = yellowish brown. The indices determined for light of different wavelengths by the double variation method of Emmons are as follows:

OPTICAL PROPERTIES—Uniaxial, negative

	Frontenac tourmaline	Renfrew tourmaline
N_0	1.6415	1.6382
N_e	1.6170	1.6168
N_0–N_e	0.0245	0.0214
N_F–N_C N_0	0.0072	0.0080
N_F–N_C N_e	0.0093	0.0085

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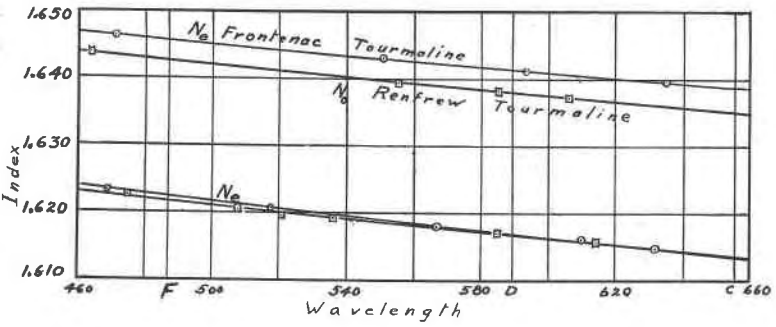

The chemical composition of tourmaline having these optical properties has been taken from charts prepared by A. N. Winchell.[1]

Frontenac tourmaline		Renfrew tourmaline	
81.8%	$H_8Na_2Mg_6B_6Al_{12}Si_{12}O_{62}$	54%	$H_6Ca_2Mg_8B_6Al_{10}Si_{12}O_{62}$
11.1%	$H_8Na_2(Fe, Mn)_6B_6Al_{12}Si_{12}O_{62}$		
6.2%	$H_8Ca_2Mg_8B_6Al_{10}Si_{12}O_{62}$	46%	$H_8Na_2Mg_6B_6Al_{12}Si_{12}O_{62}$
0.9%	$H_8Ca_2(Fe, Mn)_8B_6Al_{10}Si_{12}O_{62}$		

The sodium molecule predominates in the Frontenac tourmaline and it is properly called dravite. The Renfrew tourmaline contains a much greater proportion of the calcium molecule, according to this chart, and is best named uvite.

The chemical constituents of the minerals have been checked with the aid of a quartz wedge spectrograph and a comparison made with the common iron tourmaline of the district, and a specimen of dravite from Dobrawa, near Unterfrouburg in Karnthen, Germany. The major and minor constituents are listed below along with the intensity of the corresponding lines obtained in the spectrum of the minerals. The intensities are given in an arbitrary scale ranging from 1 to 10 and do not represent percentages. The intensities are of value however, in comparing dravite and schorlite and in separating the major from the minor constituents.

	Si	Al	Ca	Mg	Na	B	Fe	Sr	Mn	Ti	Cr	V
Frontenac Co.	10	5	9	10	3	9	4	2	Tr	1	Tr	Tr
Renfrew Co.	10	5	8	10	3	9	4	—	—	—	4	Tr
Dobrawa	10	5	2	10	3	9	4	—	—	Tr	Tr	Tr
Schorlite	10	5	8	6	4	9	9	—	6	2	2	1

[1] A. N. Winchell, Ferrotremolite, Oxyhornblende, and Tourmaline: *Am. Mineral.*, vol. **17**, No. 10, 1932, p. 475.

The spectrographic analyses, without laying any claim to accurate quantitative results, show a considerable proportion of calcium in the two brown tourmalines collected and indicate that the chemical composition of both are very similar, except for the appreciable amount of chromium shown by the crystals from Renfrew Co., and the persistent occurrence of strontium in the Frontenac dravite. Strontianite is associated with the Frontenac specimen but thorough washing in hot HCl failed to remove the strontium, reported above, from the mineral.

The above determinations were made in the Miller Research and Mineralogy laboratories, Queen's University, Kingston, Ont., in connection with an investigation of the minor constituents of some granites, conducted with the aid of a scholarship granted by the National Research Council of Canada.

PROCEEDINGS OF SOCIETIES

PHILADELPHIA MINERALOGICAL SOCIETY

Academy of Natural Sciences of Philadelphia, April 6, 1933.

President Trudell presided at a meeting of the society on April 6th, 43 members and 32 visitors being present. Members elected were: J. Wallace Rowland, Jr., and Martin D. Fetherolf; also the following juniors: Albert H. Klein, John A. Bulat, Joseph F. Szulc, Hamilton S. Disston, Raymond Beatty, R. Keith Anderson, Frank Fink, and Bertram Fitzgerald.

Dr. Waldemar T. Schaller of the United States Geological Survey spoke on "The Mineralogy of a Potash Mine near Carlsbad, New Mexico." Geological details were presented, illustrated with charts, lantern slides, and specimens. He emphasized the enormous reserves of polyhalite, sylvite, and carnallite present in the area.

Mr. Morgan reported finding natrolite, analcite, and other minerals at Millington, N. J., and agate and crystal cavities at Prospect Park. Other trips were described by Mr. Toothaker, Dr. Wills, and Mr. Gudehus.

W. H. FLACK, *Secretary*

NEW MINERAL NAMES

Ashcroftine

MAX H. HEY AND F. A. BANNISTER: Studies on the Zeolites. Part IV. Ashcroftine (kalithomsonite of S. G. Gordon). *Min. Mag.*, **23,** 305–308, 1933, (cf. *Proc. Acad. Nat. Sci., Phila.*, **76,** 261, 1924).

NAME: In honor of Frederick Noel Ashcroft.

CHEMICAL PROPERTIES: A hydrous silicate of alumina, potash, soda, and lime. $NaK(Ca, Mg, Mn)Al_4Si_5O_{18} \cdot 8H_2O$. (cf. kalithomsonite, *Am. Mineral.*, **10,** 132, 1925).