Scawtite **$Ca_7Si_6O_{18}(CO_3)\cdot 2H_2O$**

Crystal Data: Monoclinic. *Point Group:* $2/m$. As thin crystals, tabular on {100}, forming parallel to slightly divergent aggregates.

Physical Properties: *Cleavage:* {010}, fair; {100}, poor. Hardness = 4.5–5
D(meas.) = 2.71 D(calc.) = 2.74

Optical Properties: Transparent. *Color:* Colorless. *Luster:* Vitreous.
Optical Class: Biaxial (+). *Orientation:* $Y = b$; $Z \wedge c = 30°$. $\alpha = 1.595(1)$ $\beta = 1.605(1)$ $\gamma = 1.622(1)$ 2V(meas.) = 75°5′ 2V(calc.) = 74°

Cell Data: *Space Group:* $I2/m$. $a = 10.118(3)$ $b = 15.187(4)$ $c = 6.626(1)$ $\beta = 100°40(1)'$ Z = 2

X-ray Powder Pattern: Crestmore, California, USA.
3.04 (10), 1.898 (6), 2.495 (5), 2.24 (5), 4.56 (4), 2.79 (4), 6.05 (3)

Chemistry:

	(1)	(2)	(3)
SiO_2	41.95	43.5	43.27
TiO_2	0.01		
Al_2O_3	0.14		
Fe_2O_3	0.07		
MnO	0.01		
MgO	0.16		
CaO	46.93	46.1	47.12
H_2O^+	0.06	0.1	
H_2O^-	4.90	4.3	4.33
CO_2	5.6	4.4	5.28
rem.		1.2	
Total	99.83	99.6	100.00

(1) Crestmore, California, USA; total Fe as Fe_2O_3. (2) Ballycraigy, Ireland; remainder is trivalent metal oxides. (3) $Ca_7Si_6O_{18}(CO_3)\cdot 2H_2O$.

Occurrence: A late-stage hydrothermal mineral veining skarns formed from contact metamorphism of limestone.

Association: Melilite, spurrite, tobermorite, thomsonite, larnite, grossular, bultfonteinite, calcite, analcime, foshagite, hillebrandite.

Distribution: At Scawt Hill and Ballycraigy, near Larne, Co. Antrim, Ireland. On the Zeilberg, near Maroldsweisach, Bavaria, Germany. In the USA, at Crestmore, Riverside Co., California, and near Neihart, Cascade Co., Montana. From Kushiro, Hiroshima Prefecture, and in the Mihara mine and at Fuka, near Bicchu, Okayama Prefecture, Japan. From near Rehia, Tokatoka district, about 150 km north of Auckland, New Zealand.

Name: For the locality where first found, Scawt Hill, Ireland.

Type Material: The Natural History Museum, London, England, 1956,384.

References: (1) Tilley, C.E. (1930) Scawtite, a new mineral from Scawt Hill, Co. Antrim. Mineral. Mag., 22, 222–224. (2) (1935) Amer. Mineral., 20, 403 (abs. ref. 1). (3) Murdoch, J. (1955) Scawtite from Crestmore, California. Amer. Mineral., 40, 505–509. (4) McConnell, J.D.C. (1955) A chemical, optical and X-ray study of scawtite from Ballycraigy, Larne, N. Ireland. Amer. Mineral., 40, 510–514. (5) McConnell, D. and J. Murdoch (1958) The crystal chemistry of scawtite. Amer. Mineral., 43, 498–502. (6) Pluth, J.J. and J.V. Smith (1973) The crystal structure of scawtite, $Ca_7(Si_6O_{18})(CO_3)\cdot 2H_2O$. Acta Cryst., 29, 73–80.