

Note on Crystals of Calamine from Wanlockhead, Dumfries-shire.

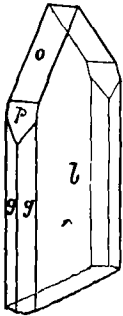
By J. STUART THOMSON.

[Read October 23rd, 1883.]

HYDRATED Silicate of Zinc or Calamine is known to occur in a crystal-line form at Leadhills, Lanarkshire, but it does not appear to have been observed in this form, until recently, in the mines at the adjacent village of Wanlockhead; Greg and Lettsom only mentioning the stalactitic and botryoidal forms of this mineral as being found there. The specimens described in this note were given me by Dr. Wilson, who obtained them from the Bay Mine, Wanlockhead.

The crystals are small and cannot compare with those from some of the continental localities, the largest crystals which came under my notice being not more than from $\frac{1}{16}$ th to $\frac{1}{8}$ th of an inch in length; the form is, however, quite distinct, and the crystals are disposed in characteristic radial groupings. The colour varies from pale yellow to brown. When submitted to chemical tests, the crystals gave the usual reactions for a Silicate of Zinc, viz. they were decomposed by acids with separation of gelatinous Silica, which dissolved in a strong solution of Caustic Potash; the filtrate from the separated Silica gave a white precipitate with Ammonia, which was soluble in an excess of the reagent. When heated in a closed tube, the crystals decrepitated, gave off water and became white.

Dr. Trechmann has kindly furnished the following observations on the crystals:—



“ Only the upper or analogous pole is developed, and the crystals are attached to the matrix by the lower and to one another by the *b* planes, thus forming small fanlike groups.

The observed forms are:—

(Brooke and Miller.)

<i>b</i>	=	<i>a</i>	=	$\infty P \frac{c}{\infty}$	=	(010)
<i>g</i>	=	<i>m</i>	=	∞P	=	(110)
<i>o</i>	=	<i>e</i>	=	$P \frac{g}{\infty}$	=	(101)
<i>p</i>	=	<i>w</i>	=	$3P \frac{g}{\infty}$	=	(301)

A combination of the first three forms was formerly found at Leadhills in small acicular crystals.”*

“ The following angles were measured:—

	<i>C.O.T. measured.</i>	<i>Schrauf.†</i>	<i>Brooke and Miller.</i>
<i>g</i> : <i>b</i>	= 52° 0'	51° 55'	51° 57'
<i>o</i> : <i>o</i>	= 62° 39'	62° 46'	63° 20'
<i>p</i> : <i>p</i>	= 123° 0'	122° 40'	123° 14'

* Greg and Lettsom. Manual of the Mineralogy of Great Britain and Ireland 1858.
 † Schrauf, Sitzungsberichte der Wiener Akademie, Bd. 38, 1859.