


THE  
ANNALS  
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AND TWENTY-FOURTH FROM THE COMMENCEMENT.



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1824.

Huron; gryphæa (lias), from Lakes Superior and Simcoe, arca (lias), Lake Simcoe, and sanguinolaria, River Humber, Lake Ontario.”—(American Journal of Science.)

12. *Analyses of Chrysoberyls from Haddam, in Connecticut, U. S. and Brazil.* By Mr. H. Seybert.

The Haddam chrysoberyl occurs in a coarse-grained granite, in which the predominating ingredient is albite, and is associated with greyish-quartz, manganesian garnet, and beryl. The mineral was extremely refractory when fused with caustic potash, an effect ascribed by Mr. Seybert to the glucina being mixed with a very small portion of titanium. He succeeded in effecting its decomposition by repeatedly fusing it with caustic potash, and when the alkali had no further action, calcining the residuum several times with nitrate of barytes. His results give its composition as follows:

Moisture .....	0.40
Oxide of titanium .....	1.00
Glucina .....	15.80
Silica .....	4.00
Alumina .....	73.60
Protoxide of iron .....	3.38
	98.18
Loss .....	1.82
	100.00

Mr. Seybert found the chrysoberyl from Brazil to consist of

Water .....	0.666
Oxide of titanium .....	2.666
Glucina .....	16.000
Silica .....	5.999
Alumina .....	68.666
Protoxide of iron .....	4.733
Loss .....	1.270
	100.000

(American Journal of Science.)

13. *Description and Analysis of Sillimanite, a new Mineral from Saybrook, in Connecticut, U. S.* By Mr. G. T. Bowen.

This mineral has been mistaken for anthophyllite, and is so called in the last edition of Cleaveland's Mineralogy. Its colour is dark grey, passing into clove brown. It occurs in a vein of quartz, penetrating gneiss, crystallized in rhomboidal prisms, whose angles are about  $106^{\circ} 30'$  and  $73^{\circ} 10'$ ; the inclination of the base to the axis of the prism being about  $113^{\circ}$ . It

has but one cleavage which is parallel to the longer diagonal of the prism. The sides and angles of the crystals are frequently rounded.

Its hardness exceeds that of quartz: even topaz may be scratched by some of the specimens. It is translucent on the edges, and in small fragments; it is brittle, and easily reduced to powder.

Its fracture, in the direction of the longer diagonal, is lamellar, and displays a brilliant lustre; the cross fracture is uneven and splintery.

It does not become electric either by heat or friction, nor give any indications of magnetism.

Its specific gravity is 3.41.

Before the blowpipe, it is infusible *per se*, and also when heated with borax.

The nitric, muriatic, and sulphuric acids, have no action on its powder.

From Mr. Bowen's analysis, sillimanite is composed of

Water . . . . .	0.510
Silica . . . . .	42.666
Alumina . . . . .	54.111
Oxide of iron . . . . .	1.999
Loss . . . . .	0.714

100.000

(American Journal of Science.)

#### MISCELLANEOUS.

#### 14. *Extraordinary Extent of the Baise and Flannel Manufacture at Rochdale.*

“In the town of Rochdale and the adjacent villages, there are manufactured every week, of flannels and baizes, about 20,000 pieces, of 46 yards each, making 47,840,000 yards per annum. It is supposed that 17,840,000 yards are exported; the remaining 30 millions of yards are consumed in the United Kingdom, being an average of  $1\frac{1}{2}$  yard for each individual. Some good flannels are manufactured in Wales; a few coarse ones at Keswick; and some other towns and villages in the kingdom. A few are manufactured on the Continent, and works for that purpose are now erecting in America; but the whole of the flannels manufactured on the globe, besides those manufactured in Rochdale and its immediate vicinity, are not equal in quantity to those made there. The price of flannels is *5d.* to *3s.* per yard; and the average may be stated at from *13d.* to *14d.* per yard; so that the annual value of the manufacture may be stated at about 3,000,000*l.* sterling. The wool costs fully one-half of the wholesale selling price; the oil, labour, and finishing, &c. constitute nearly the other half.”—(Edin. Phil. Jour.)