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EXHIBITING

A VIEW OF THE PROGRESS OF DISCOVERY

IN NATURAL PHILOSOPHY, CHEMISTRY, MINERALOGY, GEOLOGY, BOTANY,  
ZOOLOGY, COMPARATIVE ANATOMY, PRACTICAL MECHANICS, GEOGRAPHY,  
NAVIGATION, STATISTICS, ANTIQUITIES, AND THE FINE AND USEFUL ARTS.

CONDUCTED BY

**DAVID BREWSTER, LL.D.**

F.R.S. LOND. SEC. R. S. EDIN. F.S.S.A.

HONORARY MEMBER OF THE ROYAL IRISH ACADEMY; MEMBER OF THE ROYAL SWEDISH  
ACADEMY OF SCIENCES; AND OF THE ROYAL SOCIETY OF SCIENCES OF DENMARK, &c. &c.

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WILLIAM BLACKWOOD, EDINBURGH:  
AND T. CADELL, LONDON.

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M.DCCC.XXV.

## ART. XXXIII.—PROCEEDINGS OF SOCIETIES.

1. *Proceedings of the Royal Society of Edinburgh.*

*December 6.*—The following gentlemen were elected Ordinary Members:

Dr John Campbell, Physician in Edinburgh.

George Anderson, Esq. Inverness.

At this Meeting Mr HAIDINGER read a paper on the Determination of the Idea of the Species in Mineralogy, according to the principles of Professor Mohs, the particular object of which was mentioned in our last Number.

*December 20.*—At this Meeting there was read Additional Observations on the Natural History and Physical Geography of the Himalayah Mountains. By GEORGE GOVAN, M. D. This paper is inserted in this Number, p. 277.

*January 3.*—At this Meeting Robert Brown, Esq. was elected an Honorary Member of the Society.

There was also read by Dr HIBBERT, a paper on the Dispersion of Stony Fragments remote from their native beds, as displayed in a stratum of loam near Manchester. This paper is printed in this Number, p. 208.

At the same Meeting Mr HAIDINGER read a Description of *Fergusonite*, a new mineral species. For a notice of this mineral, named in compliment to Robert Ferguson, Esq. of Raith, see p. 375.

*January 17.*—At this Meeting Mr P. F. TYTLER read extracts from a Journal of Travels through Persia, by Mr JAMES BAILLIE FRASER.

*February 7.*—The following gentlemen were elected Ordinary Members:

Major Leith Hay of Bannes.

Rev. John Williams, Rector of the Edinburgh Academy.

John Hugh Maclean, Esq. Advocate.

At this Meeting there was read a Description of *Withamite*, a new mineral species found in Glenco. By Dr BREWSTER. This paper is published in this Number, p. 262.

*February 21.*—There was read an Account of a Sepulchral Urn, containing fragments of bones and a boar's tusk, found near the village of Rathen in Aberdeenshire. By JOHN GORDON, Esq. of Cairnbulgh.

The sepulchral urn described in this paper was circular, resembling in shape a ball of about thirteen inches in diameter, cut through about four inches from the top. It was nearly filled with the remains of human bones in small particles, together with a considerable quantity of dry earthy matter. The urn was surrounded by upright stones about a foot and a half in length, on the top of which was placed a flat one, resembling the one on which the urn stood. The boar's tusk was perfectly sound and entire when found; but in about a month it cracked, and broke in one or two places. About fifteen or twenty years ago, several similar urns were dug up; but we have not learned that any boars' tusks were found in them.

2. P — ∞.  $\frac{3Pr + 2}{2}$  (g). —  $\frac{Pr + 1}{2}$ . P + ∞. Fig. 15. Inclination of

*f* on *f* = 86° 4'; of *b* on edge *x* = 101° 6'; of *g* on the same = 151° 51'; of *t* on the same 132° 34'. There occur many secondary faces; the whole has much the appearance of crystals of hemiprismatic Vitriol-salt.

*Cleavage*, parallel to *g*, and to a face replacing the edge *x* of the prism, imperfect. *Fracture* imperfect conchoidal. *Surface*, deeply streaked parallel to the edges of combination with *y*, particularly *b* and *f*, as indicated in the figure; the pyramids are smooth, *t* rough, though even. *Lustre* intermediate between metallic and metallic adamantine. *Colour* iron-black. *Streak* dark cherry-red. *Opake*, except in thin splinters, where it transmits a deep blood-red colour. *Very sectile*. *Hardness* = 2.0 ... 2.5. *Sp. Gr.* = 5.2 ... 5.4.

*Observations*.—The chemical composition of this species, one of those which were formerly comprised under the dark-red silver, has not been as yet exactly ascertained. Before the blow-pipe, it gives results nearly agreeing with those of rhombohedral Ruby-blende, but it contains only about 35.00 ... 40.00 per cent. of silver, besides sulphur and antimony. The only specimen of it, in the possession of Mr Von Weissenbach at Freiberg, is supposed to have been found in the mine called Neue Hoffnung Gottes, at Bräunsdorf, near Freiberg, in Saxony. It consists only of crystals, and is not accompanied by any other mineral.

A finely crystallised specimen from Hungary is in the possession of Mr Brooke, which seems to have some properties analogous to the hemiprismatic Ruby-blende. Yet its combinations appear to be tetartoprismatic, and may therefore belong to another species. (Mohs, vol. ii. p. 606. *Transl.* vol. iii. p. 42.) Professor Mohs remarks, in regard to the light and dark-coloured varieties of Red Silver, that the difference between these varieties, though originally founded on the different tints of colour and streak of the two minerals, and on their lustre, which is dependent upon them, is deeper rooted in the essence of these bodies than it would appear at first sight. Though the forms do not seem to be very different, and the peculiarities in the series of crystallizations be common to both, the specific gravity of the two substances is considerably different, being circumscribed, as far as our present information goes, within the limits of 5.8 ... 5.9 for the dark-red, and of 5.4 ... 5.6 for the light-red variety. A dark-red cleavable variety from the Hartz gave 5.831, a light-red one, also cleavable, from Annaberg, 5.524, and a crystallised one from the Churprinz mine, near Freiberg, having the colour of the dark-red variety, 5.422. This subject deserves the particular attention of mineralogists, though as yet it is impossible to settle any thing in regard to the determination of the species.

### 30. *Fergusonite*, a New Mineral Species.

Hemipyramidal, with parallel faces. P = 100° 28', 128° 27' Approx. (a = √4.5.)

Combination.  $P - \infty (r)$ .  $P (s)$ .  $\frac{(P-1)^5}{2}(z)$ .  $\frac{[(P+\infty)^5]}{2}(r)$ .

Fig. 17. Inclination of  $z$  on  $z' = 159^\circ 2'$ .

*Cleavage*, traces parallel to  $P$ . *Fracture* perfect conchoidal. *Surface* rather uneven. *Lustre* imperfect metallic, inclining to resinous. *Colour* dark brownish-black, in thin splinters pale. *Streak* very pale brown, like peritomous titanium-ore. *Opake*, in thin splinters translucent. *Brittle*. *Hardness* = 5.5 ... 6.0. *Sp. Gr.* = 5.838, Allan; = 5.800, Turner. *Not magnetic*.

*Observations*.—Before the blow-pipe, it loses its colour, and becomes pale greenish-yellow, but is alone infusible. It is entirely dissolved in salt of phosphorus, but some particles remain a long time unaltered. The pale greenish globule becomes opake by flaming, or on cooling, when very much saturated. Before the whole portion has been dissolved, it assumes a pale rose colour in the reducing flame. It has been considered as an Ytthro-tantalite, which is not contradicted by the experiments before the blow-pipe. It is described under that denomination in the German *Grundriss* of Mohs. Mr Haidinger has given it the name of Fergusonite, at the suggestion of Mr Allan, in compliment to Robert Ferguson, Esq. of Raith.

It was discovered by Sir Charles Giesecke, imbedded in rhombohedral Quartz at Kikertaursak, near Cape Farewell, in Greenland. The specimens to which the preceding description refers are in the cabinet of Mr Allan. Crystals of it had been described by Mr Phillips, and examined before the blow-pipe by Mr Children, under the name of Allanite; from which, however, it is sufficiently distinguished by the tetartopristmatic form of the latter.—(Mohs, vol. ii. p. 688. *Transl.* vol. iii. p. 98. *Trans. Roy. Soc. Edinb.* vol. x. part 2, p. 271.)

### 31. *Picrosmine, a New Mineral Species.*

Prismatic.  $P = 151^\circ 3'$ ,  $120^\circ 0'$ ,  $67^\circ 59'$ . Approx.  $(a : b : c = 1 : \sqrt{11.00} : \sqrt{2.75})$

Simple forms and combinations not known; the character of the latter prismatic, as it appears from cleavage. *Cleavage*,  $\overline{Pr} + \infty (M)$  perfect;  $\overline{Pr} + \infty (T)$  less,  $\overline{Pr} (i) = 117^\circ 49'$  still less distinct. Least of all  $P + \infty (s) = 126^\circ 52'$ . The product of all the faces of cleavage is represented by Fig. 16. *Fracture* uneven, scarcely perceptible. *Lustre* pearly, distinct upon  $\overline{Pr} + \infty$ , inclining to vitreous upon the other faces. *Colour* greenish-white, passing into greenish-grey and mountain-green, sometimes also oil-, leek-, and blackish-green. *Streak* white, dull. *Translucent* on the edges ... opaque. *Very sectile*. *Hardness* = 2.5 ... 3.0. *Sp. Gr.* = 2.660 of a cleavable compound variety, 2.596 of a columnar variety.

*Compound Varieties*. Massive: composition granular, strongly coherent. If the composition becomes impalpable, the fracture is earthy. The particles of columnar compositions are very thin; fracture splintery.

*Observations*. Its chemical composition is unknown. Before the blow-pipe it is infusible, but gives out water, becomes first black, then white and opaque, and acquires a degree of hardness nearly = 5.0. It is soluble