SYSTEM OF MINERALOGY:

INCLUDING AN EXTENDED



TREATISE ON CRYSTALLOGRAPHY:

WITH AN APPENDIX, CONTAINING THE

APPLICATION OF MATHEMATICS

TO

CRYSTALLOGRAPHIC INVESTIGATION,

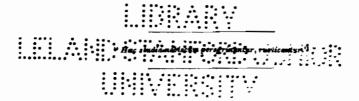
AND A

MINERALOGICAL BIBLIOGRAPHY.

WITH TWO HUNDRED AND FIFTY WOOD CUTS, AND FOUR COPPER PLATES, CONTAINING ONE HUNDRED AND FIFTY ADDITIONAL FIGURES.

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NEW HAVEN:

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1837. € H

Oss. It was discovered by Giesecké, at Kikertaursak, near Cape Farewell, in Greenland, disseminated in quartz. It was named in compliment to Robert Ferguson, Esq., of Raith.

YTTRO-COLUMBITE. COLUMBUS BERZELU.

Yttro-Tantalite. Tantale Oxide Yttrifere, H. Discolumbate of Yttria, Triscolumbate and Tetracolumbate of Yttria, Thomson.

433. There are three varieties of this species, which require a separate notice; the black, the yellow, and the brown or dark vttro-columbite.

The black exhibits indistinct traces of crystallization. H.=5.5. G.=5.395. Lustre submetallic. Streak gray. Color black.

Opaque.

The yellow never exhibits a crystalline form, but occurs in laminæ in the fissures of feldspar. H.=5. G.=5.882, Ekeberg. Lustre resinous on the surface, vitreous in the fracture. Streak

white. Color yellowish-brown—greenish. Opaque.

The brown occurs with the yellow, in thin plates, or rarely grains, presenting no trace of crystallization. H.=4.5-5. Lustre vitreous, inclining to resinous. Streak white. Color black, with a very light shade of brown, slightly yellow when in thin plates by transmitted light.

These varieties contain, according to Berzelius, (Afhandlingar, iv. 268, 272,)

Columbic Acid Yttria	Black. 57:00 20:25		Yellow. 60:124 29:780		Brown. · 51·815 38·515	
Tungstic Acid	8·25 T	With Tin	1.044	With Tin	2.592	
Lime	6.25		0.500		3.260	
Peroxyd of Iron	3.50		1.155		0.555	
Oxyd of Uranium	0 509	5.75.	6.622=	-99∙225 .	1.111=9	i 848.

Each of these varieties is infusible alone before the blowpipe, but they decrepitate and assume a light color. The black variety froths, and fuses with carbonate of soda. They dissolve in borax, but are not acted upon by acids.

Oss. These varieties of yttro-columbite occur in Sweden at Ytterby, in red feld-spar, and at Broddbo and Finbo, near Fahlun, imbedded in quartz and albite, and associated with garnet, mica, and the pyrophysalite variety of topaz. We are indebted to Berzelius for the discovery and description of these several varieties.

COLUMBITE. COLUMBUS RECTANGULUS.

Prismatic Tantalum-Ore, J. and M. Tantalit of the Germans. Tantale Oxide, H. Columbite, Hatchett.

434. Primary form: a right rectangular prism. Secondary forms: