

A

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:

PUBLISHED BY DURRIE & PECK AND HERRICK & NOYES.

HITCHCOCK & STAFFORD, PRINTERS.

1837.

E. H.

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

YTTRO-COLUMBITE. COLUMBUS BERZELII.

Yttrio-Tantalite. Tantalé Oxyde Yurifère, *H.* Dis columbate 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* yttro-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 laminae 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,)

	Black.		Yellow.		Brown.
Columbic Acid	57.00		60.124		51.815
Yttria	20.25		29.780		38.515
Tungstic Acid	8.25	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	0.50—95.75.		6.622—99.225.		1.111—97.848.

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 feldspar, and at Broddbo and Finbo, near Fablun, imbedded in quartz and albite, and associated with garnet, mica, and the pyrophyllite 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. Tantalé Oxyde, *H.* Columbite, *Hatchett.*

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