Crystal Data: Triclinic. *Point Group*: $\bar{1}$. As porous fragile crusts, to 4 mm. Crystals tabular on {010} to 0.7 mm in fan-shaped clusters. As oxidation pseudomorphs after vauxite.
Twinning: 'Swallow-tail' on {010}.

Physical Properties: *Cleavage*: None. *Fracture*: Irregular. *Tenacity*: Brittle.
Hardness = ~ 3.5 (by analogy to vauxite.) D(meas.) = n.d. D(calc.) = 2.40

Optical Properties: Transparent to translucent. *Color*: Golden brown; pale yellow in transmitted light. *Streak*: Pale yellow-brown. *Luster*: Vitreous.
Optical Class: Biaxial (-). $\alpha = 1.589(1)$ $\beta = 1.593(1)$ $\gamma = 1.596(1)$ 2V(meas.) = 60(4)° to 76(5)° 2V(calc.) = 82° *Dispersion*: Distinct and inclined, $r < v$. *Orientation*: $X \wedge b = 14°$, $Y \wedge c = 4°$, $Z \wedge a = 0°$.

Cell Data: Space Group: $P\bar{1}$. $a = 9.198(2)$ $b = 11.607(3)$ $c = 6.112(2)$ $\alpha = 98.237(9)°$ $\beta = 91.900(13)°$ $\gamma = 108.658(9)°$ Z = 2

X-ray Powder Pattern: Llallagua tin deposit, Potosí, Bolivia.
10.834 (100), 8,242 (65), 2.898 (32), 5:491 (30), 6.018 (28), 4.338 (26), 8.682 (24)

Chemistry:

	(1)	(2)
MnO	0.20	
Al_2O_3	22.43	23.13
Fe_2O_3	16.62	18.11
P_2O_5	32.32	32.20
H_2O	[26.07]	26.56
Total	97.64	100.00

(1) Llallagua tin deposit, Potosí, Bolivia; average of 17 electron microprobe analyses supplemented by IR spectroscopy, H_2O calculated; corresponds to $Fe^{3+}_{0.94}Mn_{0.01}Al_{1.98}P_{2.05}O_8(OH)_3 \cdot 5H_2O$.
(2) $Fe^{3+}Al_2(PO_4)_2(OH)_3 \cdot 5H_2O$.

Occurrence: Formed by oxidation of primary fluorapatite and other phosphates in a hydrothermal tin deposit.

Association: Sigloite, crandallite.

Distribution: From the Llallagua tin deposit, Potosí, Bolivia.

Name: Emphasizes that the mineral is an oxidized equivalent (ferric analog) of vauxite. The latter honors George Vaux Jr (1863-1927), American lawyer and mineral collector.

Type Material: Natural History Museum, University of Oslo, Norway (43567) and the Canadian Museum of Nature, Ottawa, Ontario, Canada (CMNMC 86850).

References: (1) Raade, G., J.D. Grice, and R. Rowe (2016) Ferrivauxite, a new phosphate mineral from Llallagua, Bolivia. Mineral. Mag., 80(2), 311-324. (2) (2017) Amer. Mineral., 102, 468 (abs. ref. 1).