Correianevesite $Fe^{2+}Mn^{2+}_2(PO_4)_2 \cdot 3H_2O$

Crystal Data: Orthorhombic. *Point Group*: 2/*m* 2/*m* 2/*m*. As bipyramidal crystals, to 4 mm, displaying {111}.

Physical Properties: *Cleavage*: Poor on {010}. *Fracture*: Laminated, uneven across cleavage. *Tenacity*: n.d. Hardness = 3.5 D(meas.) = 3.25(2) D(calc.) = 3.275

Optical Properties: Transparent. *Color*: Light grayish-brown to reddish-brown, colorless in thin section. *Streak*: White. *Luster*: Vitreous.
Optical Class: Biaxial (+). $\alpha = 1.661(5)$ $\beta = 1.673(5)$ $\gamma = 1.703(5)$ 2V(meas.) = 70(10)° 2V(calc.) = 65.6° *Dispersion*: Strong, $r > v$.

Cell Data: *Space Group*: *Pbna*. $a = 9.4887(2)$ $b = 10.1149(2)$ $c = 8.7062(2)$ Z = 4

X-ray Powder Pattern: Cigana mine, Conselheiro Pena County, Minas Gerais, Brazil.
3.220 (100), 5.08 (43), 2.756 (35), 4.314 (28), 3.125 (25), 2.686 (25), 2.233 (23)

Chemistry:	(1)	(2)
MnO	29.21	34.63
FeO	[21.74]	
Fe_2O_3	[1.54]	17.54
P_2O_5	34.59	34.64
H_2O	12.6	13.19
Total	99.68	100.00

(1) Cigana mine, Conselheiro Pena County, Minas Gerais, Brazil; average of 7 electron microprobe analyses supplemented by IR and Mössbauer spectroscopy, H_2O determined by gas chromatography of ignition products; corresponds to $H_{5.78}Mn_{1.70}Fe^{2+}_{1.25}Fe^{3+}_{0.08}P_{2.015}O_{11}$. (2) $FeMn_2(PO_4)_2 \cdot 3H_2O$.

Mineral Group: Reddingite group.

Occurrence: In cavities in triphylite in a well-zoned, phosphate-rich granite pegmatite.

Association: Triphylite, lithiophilite, frondelite, rockbridgeite, eosphorite, vivianite, fairfieldite, leucophosphite, cyrilovite, phosphosiderite, hureaulite.

Distribution: From outcrops near the Cigana mine, Conselheiro Pena County, Rio Doce valley, Minas Gerais, Brazil.

Name: Honors Professor José Marques Correia Neves (1929-2011), Geosciences Institute, Federal University of Minas Gerais, Brazil, for his study of Brazilian pegmatites, especially in the region of Conselheiro Pena and Araçuai, as well as in Alto Ligonha in Mozambique.

Type Material: Museum of Science and Technology, School of Mines, Federal University of Ouro Preto, Minas Gerais, Brazil (SAA-081A).

References: (1) Chukanov, N.V., R. Scholz, N.V. Zubkova, I.V. Pekov, D.I. Belakovskiy, K.V. Van, L. Lagoeiro, L.M. Graça, K. Krambrock, L.C.A. de Oliveira, L.A.D. Menezes Filho, M.L.S.C. Chaves**,** and D.Y. Pushcharovsky (2014) Correianevesite, $Fe^{2+}Mn^{2+}_2(PO_4)_2 \cdot 3H_2O$, a new reddingite-group mineral from the Cigana mine, Conselheiro Pena, Minas Gerais, Brazil. Amer. Mineral., 99, 811-816.