Crystal Data: Orthorhombic. *Point Group*: 2/*m* 2/*m* 2/*m*. As sub-parallel aggregates of tabular crystals to 2 mm or in radial arrangements, in ellipsoidal nodules to 20 cm.

Physical Properties: Cleavage: One very good and one good orthogonal to it. *Tenacity*: Brittle. *Fracture*: Irregular. Hardness = 5 D(meas.) = 3.52(1) D(calc.) = 3.529(1) Nonfluorescent.

Optical Properties: Translucent. *Color*: Dark brown with greenish hues (nearly black) in massive aggregates to dark olive-green in translucent slices. *Streak*: Dark brownish green. *Luster*: Vitreous. *Optical Class*: Biaxial (-). α = 1.732(3) β = 1.739(3) γ = 1.754(3) 2V(meas.) = 60(1)° 2V(calc.) = 69.28° *Dispersion*: Strong, $v > r$. *Orientation*: $X = a$, $Y = c$, $Z = b$. *Pleochroism*: $X = Y$ = olive, Z = yellowish brown. *Absorption*: $X = Y > Z$.

Cell Data: *Space Group*: *Pcab*. a = 12.608(6) b = 12.918(6) c = 11.737(4) Z = 4

X-ray Powder Pattern: Calculated pattern.
2.745 (100), 2.856 (65), 2.927 (49), 2.706 (30), 2.097 (29), 2.769 (26), 2.821 (25)

Chemistry:

	(1)	(2)
Na_2O	1.58	2.98
FeO	[5.29]	6.91
Fe_2O_3	[11.45]	7.67
CaO	10.52	10.78
MgO	0.77	
MnO	24.00	27.27
P_2O_5	41.55	40.93
SrO	0.72	
ZnO	0.19	
H_2O	[3.50]	3.46
Total	99.57	100.00

(1) Ceferino Namuncurá pegmatite, Pocho Department, Córdoba Province, Argentina; average electron microprobe analysis, H_2O calculated from structure, Fe^{3+}/Fe^{2+} for charge balance; corresponds to $(Na_{0.53}\square_{0.47})_{\Sigma=1.00}(Ca_{1.93}Sr_{0.07})_{\Sigma=2.00}(Fe^{3+}_{1.48}Fe^{2+}_{0.76}Mn_{3.48}Mg_{0.20}Zn_{0.02})_{\Sigma=5.94}$ $P_{6.02}O_{24}(H_2O)_2$. (2) $NaCa_2Mn_2[Fe^{3+}Fe^{2+}]Mn_2(PO_4)_6(H_2O)_2$.

Mineral Group: Wicksite group.

Occurrence: In the intermediate zone of a muscovite-rare element-class pegmatite. Formed by reaction of phosphate minerals with Na-bearing hydrothermal fluids.

Association: Varulite, robertsite, fluorapatite, phosphosiderite, Sr-rich metaswitzerite, quartz.

Distribution: From the Ceferino Namuncurá pegmatite, ~40 km northwest of Mina Clavero city, Pocho Department, Córdoba Province, Argentina.

Name: Honors Argentinian mineralogist Dr. Raúl *Lira* (b. 1956), for his contributions to the knowledge of mineralogy and petrology in Argentina.

Type Material: "Dr. A. Stelzner" Mineralogy and Geology Museum, Córdoba, Argentina (MS003457).

References: (1) Biglia, M.E., M.A. Cooper, E.S. Grew, M.G. Yates, J.A. Sfragulla, A.B. Guereschi, M.F. Márquez-Zavalía, and M.A. Galliski (2021) Liraite, ideally $NaCa_2Mn_2[Fe^{3+}Fe^{2+}]Mn_2(PO_4)_6(H_2O)_2$, a new phosphate mineral of the wicksite group from the Ceferino Namuncurá pegmatite, Córdoba, Argentina. Can. Mineral., 59, 751-761.