Celleriite $\square(Mn^{2+}_2Al)Al_6(Si_6O_{18})(BO_3)_3(OH)_3(OH)$

Crystal Data: Hexagonal. *Point Group*: 3*m*. As growth sectors to 3 mm, within an overgrowth at the analogous pole of elbaite-fluorelbaite-rossmanite crystals (Elba); as an intermediate growth sector of elbaite, princivalleite, and fluor-elbaite.

Physical Properties: *Cleavage*: None. *Tenacity*: Brittle. *Fracture*: Conchoidal. Hardness = ~7 D(meas.) = n.d. D(calc.) = 3.13 and 3.14 Nonfluorescent.

Optical Properties: Transparent. *Color*: Violet to gray-blue, dark brownish green. *Streak*: White. *Luster*: Vitreous.
Optical Class: Uniaxial (-). ω = 1.643(1) ε = 1.628(1); or ω = 1.656(2) ε = 1.627(2)
Pleochroism: *O* = pale violet, *E* = light gray-blue; or *O* = pale green, *E* = colorless.

Cell Data: *Space Group*: *R*3*m*. *a* = 15.9518(4) *c* = 7.1579(2); *a* = 15.9332(3) *c* = 7.13086(15) Z = 3

X-Ray Diffraction Pattern: Rosina pegmatite, San Piero in Campo, Elba Island, Italy.
2.5733 (100), 3.9826 (88), 4.2104 (60), 3.4532 (55), 2.9425 (55), 6.3449 (45), 2.0356 (38)

Chemistry:	(1)	(2)		(1)	(2)
SiO_2	36.62	35.51	Na_2O	1.34	1.56
TiO_2	0.09		Li_2O	0.42	0.26
B_2O_3	[10.62]	[11.61]	F	0.05	0.34
Al_2O_3	37.08	38.57	H_2O	[3.34]	[3.10]
FeOtot	1.19	3.92	–O = F	0.02	0.14
MnO	10.01	6.56	FeO	1.14	3.66
ZnO		0.30	Fe_2O_3	0.05	0.29
MgO	0.06		Total	100.79	101.62

(1) Rosina pegmatite, San Piero in Campo, Elba Island, Italy; average electron microprobe supplemented by μ-LIBS, LA-ICP-MS and Mössbauer spectroscopy, B_2O_3 and H_2O calculated from stoichiometry; corresponds to $^{X}(\square_{0.58}Na_{0.42})_{\Sigma=1.00}{}^{Y}(Mn^{2+}{}_{1.39}Fe^{2+}{}_{0.16}Mg_{0.01}Al_{1.14}Fe^{3+}{}_{0.01}Li_{0.28}Ti_{0.01})_{\Sigma=3.00}{}^{Z}Al_6[^{T}(Si_{5.99}Al_{0.01})_{\Sigma=6.00}O_{18}](BO_3)_3(OH)_3{}^{W}[(OH)_{0.65}F_{0.03}O_{0.32}]_{\Sigma=1.00}$. (2) Pikárec pegmatite, western Moravia, Czech Republic; average electron microprobe supplemented by μ-LIBS, LA-ICP-MS and Mössbauer spectroscopy, B_2O_3 and H_2O calculated from stoichiometry; corresponds to $^{X}(\square_{0.51}Na_{0.49})_{\Sigma=1.00}{}^{Y}(Mn^{2+}{}_{0.90}Fe^{2+}{}_{0.50}Al_{1.36}Fe^{3+}{}_{0.04}Li_{0.17}Zn_{0.04})_{\Sigma=3.00}{}^{Z}Al_6[^{T}(Si_{5.75}B_{0.25})_{\Sigma=6.00}O_{18}](BO_3)_3(OH)_3{}^{W}[(OH)_{0.35}F_{0.17}O_{0.48}]_{\Sigma=1.00}$.

Mineral Group: Tourmaline supergroup, X-site vacant group.

Occurrence: In granitic LCT-type pegmatite. during the latest stage of evolution of pegmatite cavities after an event of a pocket rupture (Elba); in elbaite-subtype granitic pegmatite (Pikárec).

Association: Quartz, albite, K-feldspar, lepidolite, pollucite, petalite, elbaite, fluor-elbaite, rossmanite, beryl, cassiterite, columbite-(Mn), "laumontite," "stilbite," "heulandite" (Elba); albite (variety cleavelandite), quartz, K-feldspar, elbaite, fluor-elbaite, princivalleite (Pikárec).

Distribution: From the Rosina pegmatite, San Piero in Campo, Elba Island, Italy, and the Pikárec pegmatite, 1.5 km south of Křižanov, western Moravia, Czech Republic.

Name: Honors Luigi G. *Celleri* (1828-1900), from San Piero in Campo, Italy, for contributions to the discovery of pegmatites during the second half of the 19th Century. He also gathered hundreds of magnificent specimens of tourmaline and associated minerals with scientific and collectible interest.

Type Material: Earth Science Museum, Sapienza University, Rome, Italy (33287/403); Natural History Museum, Milan, Italy (M38847); Moravian Museum, Brno, Czech Republic (A11375); and the Natural History Museum of Los Angeles County, Los Angeles, California, USA (75055).

References: (1) Bosi, F., F. Pezzotta, A. Altieri, G.B. Andreozzi, P. Ballirano, G. Tempesta, J. Cempírek, R. Škoda, J. Fili , R. Čopjaková, M. Novák, A.R. Kampf, E.D. Scribner, L.A. Groat, and R.J. Evans (2022) Celleriite, $\square(Mn^{2+}_2Al)Al_6(Si_6O_{18})(BO_3)_3(OH)_3(OH)$, a new mineral species of the tourmaline supergroup. Amer. Mineral., 107, 31-42.