Crystal Data: Triclinic. *Point Group*: $\bar{1}$. As foliated to granular crystals to 0.5 mm.

Physical Properties: *Cleavage*: Perfect on {012}. *Tenacity*: Brittle. *Fracture*: Uneven. Hardness = 5.5 D(meas.) = n.d. D(calc.) = 3.63

Optical Properties: Transparent to translucent. *Color*: Dull green. *Streak*: Dull green. *Luster*: Vitreous.
Optical Class: Biaxial (+). α = 1.709(1) β = 1.713(1) γ = 1.727(1) 2V(meas.) = 54° 2V(calc.) = 57° *Pleochroism:* Pale greenish yellow to brownish yellow. *Orientation*: *n.d.* *Dispersion*: Moderate, $r > v$.

Cell Data: Space Group: $P\bar{1}$. a = 7.505(3) b = 9.987(3) c = 12.060(4) α = 70.526(5)° β = 84.224(7)° γ = 68.460(4)° Z = 2

X-ray Powder Pattern: Kamo Mountain, Ino, Kochi Prefecture, Japan.
2.657 (100), 3.334 (92), 3.320 (89), 2.712 (70), 2.216 (60), 4.671 (54), 2.180 (48)

Chemistry:	(1)
SiO_2	40.44
Al_2O_3	4.15
FeO	[2.05]
Fe_2O_3	[4.70]
MnO	43.50
MgO	1.26
CaO	0.20
H_2O	[3.09]
Total	99.19

(1) Kamo Mountain, Ino, Kochi Prefecture, Japan; average of 5 electron microprobe analyses supplemented by IR spectroscopy, FeO, Fe_2O_3, and H_2O from stoichiometry; corresponds to $(Mn^{2+}_{5.36}Mg_{0.27}Fe^{2+}_{0.25}Fe^{3+}_{0.11})_{\Sigma=6.00}(Al_{0.60}Fe^{3+}_{0.40})_{\Sigma=1.00}(Si_{5.89}Al_{0.11})_{\Sigma=6.00}O_{18}(OH)_3$.

Occurrence: In veinlets cutting metamorphosed iron- and manganese-rich marine sediments.

Association: Stilpnomelane, rhodonite, piemontite, quartz.

Distribution: From Kamo Mountain, Ino, Kochi Prefecture, Japan.

Name: Honors the Japanese mineralogist Michiaki Bunno (b. 1942), retired chief curator for the Geological Museum of the Geological Survey of Japan, for his contributions to the museum and to the discovery of a number of new minerals.

Type Material: National Museum of Nature and Science, Tokyo, Japan (44106 and 44324).

References: (1) Nishio-Hamane, D., K. Momma, R. Miyawaki, and T. Minakawa (2016) Bunnoite, a new hydrous manganese aluminosilicate from Kamo Mountain, Kochi prefecture, Japan. Mineralogy and Petrology, 110(6), 917-926. (2) (2017) Amer. Mineral., 102, 917 (abs. ref. 1).