

Crystal Data: Monoclinic. *Point Group:* 2/m. As pseudohexagonal crystals to 0.25 mm.

Physical Properties: *Cleavage:* None. *Tenacity:* n.d. *Fracture:* n.d. *Hardness* = n.d.
 $D(\text{meas.}) = \text{n.d.}$ $D(\text{calc.}) = 2.634$

Optical Properties: Transparent. *Color:* Colorless (pale violet due to a violet ring-like zone in the center). *Streak:* n.d. *Luster:* Vitreous.

Optical Class: n.d.

Cell Data: *Space Group:* $P2_1/n$. $a = 5.533(1)$ $b = 10.409(2)$ $c = 9.306(2)$ $\beta = 91.94(3)^\circ$ $Z = 4$

X-Ray Diffraction Pattern: Varenche mine, Saint Barthélemy valley, Nus, Val d'Aosta, Italy.
4.873 (100), 5.576 (47), 3.719 (45), 5.73 (35), 3.907 (31), 3.229 (27), 2.684 (26)

Chemistry: (1) Varenche mine, Saint Barthélemy valley, Nus, Val d'Aosta, Italy. Analysis not given. Said to correspond to $(\text{Sc}_{0.807}\text{Al}_{0.193})(\text{As}_{0.767}\text{P}_{0.233})\text{O}_4 \cdot 2\text{H}_2\text{O}$.

Mineral Group: Metavariscite group.

Occurrence: In a small void in a metamorphosed manganese deposit.

Association: Braunite, quartz, manganese oxides, corroded arseniopleite.

Distribution: From dumps of the Varenche mine, Saint Barthélemy valley, Nus, Val d'Aosta, Italy.

Name: Honors Enrico *Bonacina* (b. 1928), dean of micromineral photography in Italy.

Type Material: Museum of the Earth Sciences Department, University of Milan, Italy (MCMGPG-H2018-001 holotype), the Natural History Museum, Vienna, Austria (O 571), and the Laboratory of Mineralogy, University of Liege, Belgium (21180).

References: (1) Kolitsch, U., M. Weil, V.M. Kovruigin, and S.V. Krivovichev (2020) Crystal chemistry of the variscite and metavariscite groups: Crystal structures of synthetic $\text{CrAsO}_4 \cdot 2\text{H}_2\text{O}$, $\text{TiPO}_4 \cdot 2\text{H}_2\text{O}$, $\text{MnSeO}_4 \cdot 2\text{H}_2\text{O}$, $\text{CdSeO}_4 \cdot 2\text{H}_2\text{O}$ and natural bonacinaite, $\text{ScAsO}_4 \cdot 2\text{H}_2\text{O}$. *Mineral. Mag.*, 84, 568-583. (2) Hålenius, U., F. Hatert, M. Pasero, and S.J. Mills (2018) IMA Commission on New Minerals, Nomenclature and Classification (CNMNC) Newsletter 45. New minerals and nomenclature modifications approved in 2018. *Mineral. Mag.*, 82, 1225-1232.