Wopmayite

\[
\text{Ca}_6\text{Na}_3\text{Mn}(\text{PO}_4)_3(\text{PO}_3\text{OH})_4
\]

**Crystal Data:** Hexagonal.  *Point Group:* 3m.  As corroded {101} rhombohedra to ~150 μm.


**Cell Data:** *Space Group:* R\textit{3}c.  \(a = 10.3926(2)\)  \(c = 37.1694(9)\)  \(Z = 6\)

**X-ray Powder Pattern:** Tanco mine, Bernic Lake, Manitoba, Canada.

2.858 (100), 3.186 (88), 2.589 (68), 5.166 (33), 6.421 (32), 8.017 (31), 3.425 (29)

**Chemistry:**

\[
\begin{align*}
\text{P}_2\text{O}_5 & : 46.40 \\
\text{Al}_2\text{O}_3 & : 0.38 \\
\text{Fe}_2\text{O}_3 & : [0.80] \\
\text{FeO} & : 0.96 \\
\text{MnO} & : 3.74 \\
\text{MgO} & : 0.41 \\
\text{CaO} & : 37.65 \\
\text{SrO} & : 0.91 \\
\text{Na}_2\text{O} & : 5.43 \\
\text{H}_2\text{O} & : [2.00] \\
\text{Total} & : 98.68
\end{align*}
\]

(1)  Tanco mine, Bernic Lake, Manitoba, Canada; average of 14 electron microprobe analyses supplemented by IR and Raman spectroscopy, Fe\textsubscript{2}O\textsubscript{3} and H\textsubscript{2}O calculated from structure analysis; corresponding to \((\text{Ca}_{7.19}\text{Na}_{1.88}\text{Sr}_{0.09})_{\Sigma=9.16}(\text{Mn}_{0.56}\text{Mg}_{0.11}\text{Fe}^{2+}_{0.14}\text{Fe}^{3+}_{0.11}\text{Al}_{0.08})_{\Sigma=1.00}(\text{PO}_4)_{4.03}(\text{PO}_3\text{OH})_{2.37}.

**Occurrence:** A secondary mineral in a phosphate-carbonate assemblage formed after the dissolution of primary lithiophosphate by hydrothermal solutions. From a spodumene-rich boulder found in the dumps of a zoned petalite-subgroup pegmatite.

**Association:** Rhodochrosite, quartz, whitlockite, apatite, fairfieldite, crandallite, calcite, overite, groatite, metswitzerite, sphalerite, bismuthinite.

**Distribution:** At the Tanco mine, Bernic Lake, Manitoba, Canada.

**Name:** Honors Wilfrid Reid “Wop” May (1896-1952) who was born in Carberry, Manitoba, Canada. “Wop” May was a pioneering aviator who created the role of the bush pilot, and opened the Canadian North to mineral exploration and mining.

**Type Material:** Department of Natural History, Royal Ontario Museum, Toronto, Canada (M40501).

**References:**
