

## NEW MINERALS: DOUBTFUL SPECIES

CLASS: PHOSPHATES, ETC.

**Lehnerite**

F. Müllbauer: Die Phosphatpegmatite von Hagendorf i. Bayern. (The phosphate pegmatites of Hagendorf, Bavaria.) *Zeit. Kryst.*, **61**, 331, (1925).

NAME: Named after the mineral collector *Lehner*.

CHEMICAL PROPERTIES: A hydrous basic phosphate of iron. Formula:  $7\text{FeO} \cdot 2\text{P}_2\text{O}_5 \cdot 6\text{H}_2\text{O}$ . Analysis:  $\text{P}_2\text{O}_5$  34.20,  $\text{FeO}$  46.35,  $\text{MnO}$  2.95,  $\text{MgO}$  2.43,  $\text{H}_2\text{O}$  14.07. Sum 100. (Analysis after deduction of insoluble material and alumina.)

CRYSTALLOGRAPHICAL PROPERTIES: Monoclinic, prismatic, with forms (001), (110), (101), (109), ( $\bar{1}05$ ), (122), ( $\bar{4}32$ ).  $a:b:c=0.8965:1:2.4939$ .  $\beta=110^\circ 23'$ .

PHYSICAL AND OPTICAL PROPERTIES: Color apple green. Biaxial, positive. Plane of the optic axes is parallel to (010).  $Bx_a$  makes about  $28^\circ$  with the normal to  $c$ . Cleavage parallel to the base, perfect.

OCCURRENCE: In small crystals or grains and veins between triploidite crystals, in apatite, or in cracks in triplite or triphylite at Hagendorf, Bavaria.

DISCUSSION: This mineral is very near to ludlamite in composition. The optical and crystallographic data, however, are not sufficiently detailed to determine with certainty the relation of this mineral to ludlamite. W.F.F.

**Wentzelite**

*Op. Cit.*, p. 333.

NAME: Named in honor of Father Hieronymus *Wentzel*, discoverer of the Ploystein phosphate locality.

CHEMICAL COMPOSITION: A hydrous phosphate of manganese. Formula:  $3\text{MnO} \cdot \text{P}_2\text{O}_5 \cdot 5\text{H}_2\text{O}$ . Analysis:  $\text{P}_2\text{O}_5$  39.37,  $\text{FeO}$ , 6.01,  $\text{MnO}$  21.13,  $\text{MgO}$  6.83,  $\text{H}_2\text{O}$  23.66.

CRYSTALLOGRAPHICAL PROPERTIES: Monoclinic, prismatic. Forms (100), (001), (110), ( $\bar{1}01$ ), ( $\bar{1}13$ ).  $a:b:c=2.3239:1:2.8513$ .

PHYSICAL AND OPTICAL PROPERTIES: Color light rose to flesh red. Biaxial, optically negative, plane of the optic axes normal to the plane of symmetry.  $Bx_a=b$ .

OCCURRENCE: Found as minute rosettes in cavities in kraurite.

DISCUSSION: While this mineral is apparently a new normal phosphate of manganese further optical studies are necessary to establish it as a distinct species. W.F.F.

**Baldaufite**

*Op. Cit.*, p. 334.

NAME: Named after *Baldauf*, the collector of the single identified specimen.

CHEMICAL COMPOSITION: A hydrous phosphate of iron. Formula:  $3\text{FeO} \cdot \text{P}_2\text{O}_5 \cdot 3\text{H}_2\text{O}$ . Analysis:  $\text{P}_2\text{O}_5$  38.94,  $\text{FeO}$  27.16,  $\text{MnO}$  9.39,  $\text{CaO}$  6.73,  $\text{MgO}$  2.74,  $\text{H}_2\text{O}$  15.04.

CRYSTALLOGRAPHICAL PROPERTIES: Monoclinic, prismatic. Forms (100), (001), (110), ( $\bar{1}01$ ). Habit similar to wentzelite.  $a:b:c=2.21:1:1.84$ .  $\beta=133^\circ 18'$ .

PHYSICAL AND OPTICAL PROPERTIES: Optically negative. Plane of the optic axes normal to the plane of symmetry.  $Bx_a=b$ .

OCCURRENCE: Forms a small druse in a crack in quartz associated with kraurite.

DISCUSSION: This mineral is identical in both habit and angles with wentzelite and hence probably isomorphous with that mineral. The mineral, however, needs detailed optical examination before it is acceptable as a new species. W.F.F.