NEW DATA: DISCREDITED SPECIES

Redifinition of Varulite and Arrojadite
(Soda-triphylite = Headdenite) = Arrojadite

Brian Mason: Minerals of the Varuträsk pegmatite, XXIII. Some iron-manganese phosphate minerals and their alteration products, with special reference to material from Varuträsk, *Geol. För. Förh.*, **63**, 117–175 (1941).

Recalculation of the seven available analyses of varulite and arrojadite lead to the formula $(Na_2, Ca)(Mn, Fe)_2(PO_4)_2$. The analyzed material, except for one sample, shows partial oxidation to ferric iron, with accompanying loss of sodium. The name varulite applies to material with Mn > Fe; the name arrojadite to material with Fe > Mn. Arrojadite was first analyzed in 1891 by Headden, who did not name it. The name soda-triphylite proposed for this material (Ziegler, 1914) is rejected on the ground of its being false in signification (natrophilite = soda-triphylite). The name arrojadite (Guimaraes, 1925) has priority over the name headdenite (Quensel, 1937).

Michael Fleischer

Redefinition of Sicklerite
Pseudoheterosite = Sicklerite

Brian Mason, *op. cit.*

The oxidation of lithiophilite-triphylite is shown to proceed in two stages:—

$$\underset{\text{lithiophilite-triphylite}}{Li_2O \cdot 2(Mn_{1-x}, Fe_x) \cdot P_2O_5} \rightarrow (1-x)[\underset{\text{sicklerite}}{Li_2O \cdot 2MnO \cdot P_2O_5}] \cdot x[Fe_2O_3 \cdot P_2O_5] + xLi_2O$$

$$\rightarrow \underset{\text{heterosite-purpurite}}{[(Mn, Fe)_2O_3 \cdot P_2O_5]} + (1-x)Li_2O.$$

Sicklerite may have either iron or manganese predominating, depending on the composition of the primary mineral. The names ferrisicklerite (Fe-sicklerite) and manganese-sicklerite (Mn-sicklerite) are suggested. Fourteen localities for sicklerite are listed. Pseudoheterosite (Lacroix, 1910) is shown to be ferri-sicklerite. Lacroix's name has priority over sicklerite (Schaller, 1912), but his description was incomplete and partially erroneous, and the name should be dropped. M. F.

(Pseudotriplite, Melanchlor, Neopurpurite) = Heterosite
(Na-purpurite, Na-heterosite) = Purpurite + Alluaudite

Brian Mason, *op. cit.*

The names heterosite (Vauquelin, 1825) and purpurite (Graton and Schaller, 1905) are accepted for the Fe-rich and Mn-rich, respectively, members of the series $(Fe, Mn)PO_4$. The water content (2–7%) is lost at 200° C. with no change in x-ray photographs, and is therefore regarded as nonessential. Pseudotriplite (Fuchs, 1835) and neopurpurite (de Jesus, 1933) are shown to be heterosite; melanchlor (Fuchs 1839) is a complex mixture containing sicklerite, heterosite and other minerals. Na-heterosite and Na-purpurite (Quensel, 1937) are shown by x-ray study to be mixtures of alluaudite and purpurite. These names should be dropped.

Pseudopalaite = Palaite (= Hureaulite?)

Brian Mason, *op. cit.*

An *x*-ray photograph of pseudopalaite (de Jesus, 1933) from the type locality in Portugal was identical with that given by palaite (Schaller, 1912) from Pala, Cal. Type hureaulite was not available for *x*-ray study, but comparison of physical and chemical properties suggests that hureaulite and palaite are identical. The name hureaulite (1854) has priority.

M. F.

Redefinition of Alluaudite
Lemnäsite = Alluaudite

Brian Mason, *op. cit.*

It is shown that the oxidation of the Na minerals varulite-arrojadite and natrophilite takes place in two stages, the first stage involving oxidation of Fe only, giving alluaudite; the second stage being the oxidation of Mn, giving heterosite-purpurite. Alluaudite is therefore the sodium analogue of sicklerite, and its formula is

$$(1-x)[Na_2O \cdot 2MnO \cdot P_2O_5] \cdot x[Fe_2O_3 \cdot P_2O_5].$$

X-ray study shows that lemnäsite (Pehrman, 1939) from Lemnäs, Finland, is identical with with type alluaudite (Damour, 1848) from Chanteloube, France.

M. F.