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### *Serpierite from Ecton, Staffordshire*

SERPPIERITE  $(\text{Cu,Zn,Ca})_5(\text{SO}_4)_2(\text{OH})_6 \cdot 3\text{H}_2\text{O}$ , is a rare supergene mineral, known from few localities, British occurrences being confined to Ross Island, Killarney, Co. Kerry, Ireland (Russell, 1927), and the Lake District in England (Kingsbury and Hartley, 1957). We now report the occurrence of serpierite in small quantities in Clayton adit, Ecton Hill, Wetton, Staffordshire (Portal at Nat. Grid. Ref. SK096581).

The serpierite forms minute tufts of sky-blue needles on limestone, associated with gypsum and decomposing chalcopyrite. The serpierite underlies gypsum, some of which is copper stained, and crystallizes in small cracks in limestone underneath the gypsum, adjacent to a richly mineralized pocket in the adit, near the old underground engine-house. This pocket has yielded excellent specimens of aurichalcite (Braithwaite and Ryback, 1963; cf. Braithwaite and Greenland, 1963) in a friable baryte gangue, with smithsonite, hemimorphite, gypsum, and decomposing chalcopyrite in and on colourless fluorite cubes.

The identity of the serpierite was confirmed by comparison of its infra-red absorption spectrum and its X-ray diffractometer trace with those of authentic specimens of serpierite from Kamareza, Laurion (Laurium), Greece.

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