features. In an ordered phase the hydrogen bonds between OH and neighbouring O atoms have lengths of 2.78 and 2.90 Å, and these correspond (Ghose, 1964) to the absorption maxima at 3225 and 3290 cm^{-1} respectively. When stacking-disorder increases, the hydrogen bonds become elongated by different amounts in the various sheets. The absorption band is thus broadened and its maximum shifted toward higher frequencies.

The present author's investigations give evidence of the existence in nature of a series of hydrozincites varying in stacking-order, and therefore it seems unnecessary to distinguish the Dorchester carbonate as a new mineral. It would rather be more correct to regard the different modifications of hydrozincite as members of a stacking-order series.

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NATURAL AND SYNTHETIC HYDROZINCITES

J. L. JAMBOR
Geological Survey of Canada, Ottawa, Ontario

This writer earlier suggested (Jambor, 1964) that natural hydrozincites could be classified into two categories—hydrozincite proper, and a disordered, possibly dimorphous phase of hydrozincite referred to as the "Dorchester type". Although the writer found no difficulty in classifying the available specimens of natural zinc carbonates as hydrozincite or Dorchester types, it was concluded (1964, p. 107) that "— it is nevertheless clear that examination of additional samples by other workers will provide an immediate practical test as to the feasibility of maintaining the proposed classification". The practical test has not been long in coming.

Feitknecht & Oswald (1966) have shown that synthetic hydrozincites precipitated under carefully controlled conditions in some cases give

x-ray powder diffraction patterns in which the lines gradually shift. In their products, the a-dimensions ranged from 13.60 Å to as large as 14.76 Å, and the cell volumes ranged from 460 to 500 Å^3. They found also that preparations which differ only a little in stoichiometry may show considerable differences in lattice constants. This is in fact the basis upon which the present writer suggested (1964, p. 106) that the Dorchester mineral might be a polymorph of hydrozincite rather than a chemical variant of it. However, the continuous variation in cell dimensions found by Feitknecht & Oswald in synthetic hydrozincites, and the gradual changes in infrared curves of natural hydrozincites as shown by Zabinski in the preceeding note clearly demonstrate that the two-fold grouping into hydrozincite and Dorchester types is no longer valid.

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