

XXIV.—*Additional Note on Iron Crystals, and on some Distorted Quartz Crystals.*

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THE Iron Crystals described by Mr. Beardsley in the present volume of the Mineralogical Magazine (p. 223) exhibit the remarkable structure illustrated in figs. 1 to 5, plate VII. Fig. 1 represents the crystals drawn natural size, and fig. 2 is a section of one of them in a plane parallel to a face of the cube—shewing the structure developed by etching. Figs 3 and 4 illustrate other modifications of structure which have been observed in iron crystals, and for which I am indebted to Dr. C. O. Trechmann of Hartlepool, and fig 5 may perhaps indicate the ultimate molecular structure. (See also Wöhler. Pogg. Ann., Vol. 26, 1832, where cubes and octahedrons of iron are described, having cubical cleavage.)

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The Quartz crystals illustrated in plate VII, were found by me on some remarkably pure specimens of crystallized red hematite, from Hodbarrow Mine, in Cumberland, for which I am indebted to Mr. Solomon Birkett, an associate of the Mineralogical Society. Among some specimens sent are some interesting pseudomorphs to which I propose to call attention in a future paper.

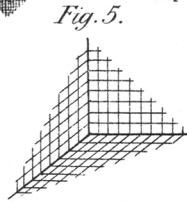
The crystals in question occur in groups—the well-formed individuals being less than  $\frac{1}{4}$ th of an inch diameter. There are also some barytes crystals present. Thinking they were somewhat peculiar, I sent them to Dr. C. O. Trechmann of Hartlepool, who has been kind enough to measure them, and to write to me as follows :—

“ The quartzes are very highly distorted crystals of the ordinary form, prism ( $\infty$  P, *Naum*) and di-hexagonal pyramid (P). I could see no other form. The accompanying sketch (Fig. 6, Pl. VII) shews the general aspect of the crystals—one of which is represented in fig. 7. The crystals are so to say unfinished, *i.e.*, each is an agglomerate of small

crystals in parallel position, which, on addition of further quartz matter, would probably have developed into single regularly formed crystals.

Figs. 8 and 9 represent a single small crystal taken from one of the masses of hematite. Its elucidation was impossible without the aid of the goniometer, but then it at once revealed itself. The figs. are drawn as true to nature as possible, and will give you a good idea of the excessive distortion of the little crystal. I have drawn fig. 8 parallel to fig. 7, and marked the corresponding faces with the same letters. Fig. 9 is a side view of fig. 8."

IRON CRYSTALS (See p. 223).



QUARTZ CRYSTALS.

