PYRITE CRYSTALS FROM BALD MOUNTAIN, COLORADO

HERBERT P. WHITLOCK

American Museum of Natural History

The pyrite crystals which furnish the basis for this note occurred on a small hand specimen which was collected about 1910 from a prospect on Bald Mountain, Boulder County, Colorado, by Mr. R. W. Jones. They differ in habit from those described by Schaller,[1] altho somewhat resembling the crystals of Type I figured by Kraus and Scott.[2]

The eight crystals studied average about 2 mm. in diameter and are symmetrical in development, conforming closely to the habit shown in Fig. 1. Several rare forms were noted, including two new to the species. The forms comprise $a(100)$, $d(110)$, $o(111)$, $\mathfrak{b}(810)$, $O(730)$, $e(210)$, $i(430)$, $\zeta(650)$, $m(311)$, $q(211)$, $u(221)$, and the new diploids $S'(874)$, and $r'(10.5.4)$

The following measurements, made on a Fuess No. 2 goniometer, served to identify the forms:

TABLE 1. ANGLES OF PYRITE FROM BALD MT., COLO.

Letters	Symbols	Number of Measurements	Measured	Calculated
$a : \mathfrak{b}$	001 : 810	10	7° 11′	7° 7½′
$: O$	: 730	7	23 0½	23 11
$: e$	: 210	25	26 36	26 34
$: i$	: 430	16	36 57	36 52
$: \mathfrak{s}$	: 650	17	39 47	39 48
$: d$	: 110	13	45 1½	45 0
$e : r'$	102 : 5.4.10	10	19 41	19 40½
$: q$	: 112	35	24 14	24 5½
$: S'$	: 478	13	37 58	38 2
$: u'$	: 122	27	41 49½	41 48½
$a : m$	100 : 311	6	25 1	25 14½
$: q$	: 211	8	35 23	35 16
$: p$	: 111	10	54 45½	54 44
$: u$	: 221	8	70 40	70 31½
$: d$	: 110	5	89 57½	90 0

The forms grouped about the planes of the octahedron are in many instances reduced to very thin bevels and, altho yielding definite reflections of the goniometer signal, are only visible

[1] *U. S. Geol. Survey Bull.* **262**, 133, 1905.

[2] *Z. Kryst. Min.*, **44**, 151, 1907.

under a low power objective. Fig. 2 shows an enlarged projection of this portion of one of the crystals, with the position of the new forms (874) and (10.5.4) indicated.

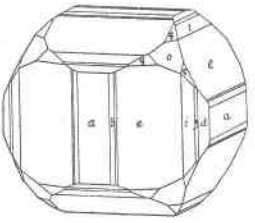

FIG. 1.

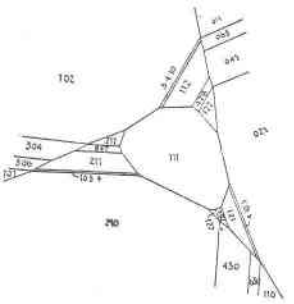

FIG. 2.

Pyrite, Bald Mountain, Colorado.

LIMONITE PSEUDOMORPHOUS AFTER PYRITE FROM YORK COUNTY, PA.

EDWIN F. HOLDEN

State College, Pa.

Cubical crystals of pyrite partly or wholly altered to limonite are to be found in many parts of York County. In fields and along roads between York and Wrightsville they are especially abundant, altho mostly of rather small size, under a centimeter in diameter. On Schump's Hill, south of York, they reach much greater sizes; the best locality is along a road running west from the York-Baltimore turnpike just south of the York Water Company's reservoir, about 2½ km. from the center of the city. They vary from 3 mm. to 10 cm. on a side, and even 15 cm. ones have been reported. The writer once saw one picked up which measured 12 by 8 by 5 centimeters This was somewhat distorted, but the moderate-sizes ones are often highly perfect, with smooth or faintly striated faces with equal sides. It is easy to obtain a series of evenly graduated specimens from 5 cm. down to a few mm. on a side.

The matrix from which these crystals weather is a slaty schist, interbedded in the Cambrian limestone. In fresh expo-