"CERULEOFIBRITE" IS CONNELLITE

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Recently the writer received from Professor C. Palache some fragments of the connellite which he has described from Bisbee.[1] Its resemblance to "ceruleofibrite," proposed as a new species by the writer,[2] led to a re-examination of the material, with the result that "ceruleofibrite" was found to be identical with connellite, and not a new mineral.

Connellite is a basic copper chlor-sulfate, while the supposedly new mineral was described as a basic copper chlor-arsenate. A new analysis of the writer's material showed the presence of 3.0% SO_3, agreeing with connellite. The determination of 7.5% As_2O_5 was found to be an error due to the impurity of the reagents used and the inaccuracy of the method for the necessarily small sample on hand. The mineral was fused with "C. P." sodium carbonate in order to separate CuO. To the solution of the fusion was added magnesia mixture in an excess of ammonia to precipitate magnesium ammonium arsenate, which was then redissolved and reprecipitated, ignited and weighed. A blank analysis showed that with the small sample used (.1322 gs.) and the fairly large amount of sodium carbonate, enough impurities such as alumina, etc., were precipitated from the carbonate to account for the "arsenate" precipitate.

The writer described "ceruleofibrite" as orthorhombic. This was based upon the microscopic examination of the outline of the needles mounted vertically in wax. This outline was decidedly orthorhombic, with angles of 90° between the faces taken as pinacoids. This was confirmed in the reexamination. Connellite is hexagonal and the only way in which this orthorhombic outline can be accounted for is by an unusual development of first and second order prism faces, with many of them absent.

The mineral was described as biaxial because of the apparently orthorhombic crystallization. No interference figures were observed, for the very narrow needles did not break perpendicular to the *c* axis. Recently, however, several fragments were found which showed the arms characteristic of uniaxial interference figures, although no complete figures were obtained. The mineral is therefore uniaxial, and presumably hexagonal. The lowest index

[1] C. Palache and H. E. Merwin. *Am. J. Sci.*, **28**, 537-40, (1909).

[2] *Am. Mineral.* **7**, 80-3, (1922).

(1.736) agreed with that given in the literature for connellite (1.724-1.735), as did all other optical properties except the highest index. It was noted that when the needles were immersed in a liquid with n 1.738, some needles had the same index as the liquid when turned 20° away from the vibration direction of the polarizer, and some at 35°. The first were thought to be those needles showing β and γ, the second those showing α and γ. From the known values for α, n of the liquid, and the angles turned through, β and γ were calculated as 1.737 and 1.741, respectively. Since the mineral was found to be uniaxial, the value ϵ was calculated as 1.758. An actual determination of ϵ, using a solution of sulfur in methylene iodide, gave 1.756, which agrees with the figure for connellite (1.746-1.758).

All essential differences between "ceruleofibrite" and connellite are now accounted for. The first name should of course be dropped. The unfortunate errors here acknowledged may serve to emphasize that new species should be based only on fairly abundant material, and that all reagents, even though marked "C.P.," should be carefully examined for impurities in work of this kind.

FOURTH ANNUAL MEETING OF THE MINERALOGICAL SOCIETY OF AMERICA

FRANK R. VANHORN, *Secretary*

The Mineralogical Society of America held its fourth annual meeting at Washington, D. C. on December 28 and 29, 1923, in conjunction with the Geological Society of America. Joint sessions with the Geological Society were held in the Interior Building on Friday afternoon, December 28, presided over by President Edgar T. Wherry, and on Saturday morning, December 29, presided over by Dr. David White, President of the Geological Society. At these sessions papers of combined mineralogical and geological interest were presented. The final paper of the session was the presidential address of Dr. Edgar T. Wherry entitled "*At the Surface of a Crystal*," which is printed in full in this number.

The regular meeting of the Society was held Saturday afternoon and was preceded by an interesting illustrated lecture by Samuel G. Gordon on his recent expedition to the Ivigtut and Kangerdluarsuk regions of Greenland. At 2 P. M. President Edgar T. Wherry called the meeting to order and proceeded with the regular order of business. On motion of the Secretary, the reading of the minutes of the last annual meeting was dispensed with in view of the fact that they have been printed on pages 46-56 of Volume 8, Number 3 of THE AMERICAN MINERALOGIST.

ELECTION OF OFFICERS AND FELLOWS FOR 1924

The secretary announced that 101 ballots had been cast for the amendment to the by-laws, and for the officers for 1924, as nominated by the Council. The amendment is therefore declared passed and the officers elected.