

BOOK REVIEW

THE GENESIS OF THE DIAMOND. ALPHEUS F. WILLIAMS. 2 Vols., XV+636 pages, with 221 plates, many of them in colors. Ernest Benn, Limited, *London*, 1932.

The author is the son of the late Gardner F. Williams, for many years the general manager of the DeBeers Consolidated Mines, Limited, and known throughout the world for his "The Diamond Mines of South Africa" published in 1902. As the successor of his father in the management of the DeBeers Company, A. F. Williams has had an unusual opportunity to continue the study of the geological occurrences and of the various physical properties of the diamond, especially as it is found in the kimberlite of Africa. The results of these studies and observations are recorded in these two volumes, which may well be considered as supplementing and bringing up-to-date the monumental and classic work of his father.

Volume one includes a brief description of present day diamond mining practice and an exhaustive discussion, covering ten chapters, of the occurrence of kimberlite and of the various characteristics of that important diamond bearing rock. What the author calls the "cognate inclusions" of the diamond are described in great detail in the first chapter of Volume two. The other chapters of the second volume are devoted to a consideration of the properties and interesting features of the diamond itself, and to the occurrences of the gem in the alluvial gravels of the Union of South Africa.

Although there are evidences of considerable repetition and at times one feels that the material is perhaps presented in too much detail, the two volumes must be recognized as very substantial contributions to our knowledge of the diamond. The illustrations and the typography are excellent.

EDWARD H. KRAUS

PROCEEDINGS OF SOCIETIES

PHILADELPHIA MINERALOGICAL SOCIETY

Academy of Natural Sciences of Philadelphia, December 1, 1932

A stated meeting was held on the above date with the president, Mr. Trudell, in the chair, Forty-two members and forty-two visitors were present. The following were elected members: Messrs. Charles G. Cadwallader, Arthur Dornblum, William L. Grierson, James W. Knorr, Jr., and Karl Waage.

A symposium on "Cutting and Polishing Stones" was held under the direction of Mr. Stephen Varni. Mr. Varni outlined the types of cutting used in various stones. Mr. H. E. MacNelly gave details on the methods he used in cutting and polishing cabochons. Mr. Arthur Knapp exhibited his remarkably efficient slicing, cutting, and polishing apparatus built from hardware obtained from the 5, 10 and 25 cent stores. Particularly effective was his automatic control, made from parts of a meat-grinder, which permitted accurate faceting of stones. He exhibited a series of cut stones. Mr. Carl Supp, a Brooklyn High School student, exhibited a collection of cabochon stones that he had cut and polished on a set of laps which cost less than \$5.00. He described his procedure briefly.

W. H. FLACK, *Secretary*

Academy of Natural Sciences of Philadelphia, January 5, 1933

A stated meeting of the society was held on the above date, with President Trudell in the chair. Forty-three members and thirty-six visitors were present.

Dr. Joseph L. Gillson, recently returned from India, addressed the society on (1) The Gem Deposits of Ceylon, and (2) Geological Features of the Ilmenite Deposits of Travancore: illustrated with moving pictures and specimens.

The Ceylon gem deposits are sixty miles southeast of Colombo. All of the stones (sapphires, amethysts, etc.) are found in stream placers. After the gem gravel is washed in nearby streams, the stones are picked by hand. They are then roughly cut by natives on violin-bow powered iron discs, and marketed at native bazaars in Ratnapura.

Dr. Gillson's investigations disproved the assertion that the ilmenite sand deposits along the coast of Travancore were being constantly renewed by currents from off-shore. The deposit consists of a 6000 foot black sand beach averaging 70% ilmenite and 12% garnet. The origin of the deposit was discussed, and details of the seasonal shift of the sands were described. Primitive methods by native workers are used in gathering the ilmenite.

W. H. FLACK, *Secretary*

NEW YORK MINERALOGICAL CLUB

Minutes of the Meeting of February 17th, 1932.

A regular meeting of the New York Mineralogical Club was held at The American Museum of Natural History on the evening of February 17th, 1932, with an attendance of 65. President Allen was in the Chair.

A motion was passed to send twenty-five dollars through Prof. E. S. Dana to aid Austrian mineralogists.

Dr. Waldemar T. Schaller of the U. S. Geological Survey was the speaker of the evening, his subject being "Some Fascinations of Mineralogy." Dr. Schaller touched on researches with which he is personally acquainted—minerals of the copper silicate series; polymorphous minerals; color of minerals; and the age relations of minerals. He also discussed the crystal cavities in the trap rock of Paterson, N. J. These are accounted for as due to glauberite crystals formed in Triassic mud in shallow lakes which were covered by molten lava. The sequence was: extrusion of lava, production of glauberite, followed by formation of quartz masses, datolite, zeolites, calcite, and babbingtonite. Following a period of questioning and discussion, a rising vote of thanks was given Dr. Schaller.

ALFRED C. HAWKINS, *Secretary pro tem.*

Minutes of the Meeting of March 16th, 1932.

A regular meeting of the New York Mineralogical Club was held at The American Museum of Natural History on the evening of March 16th, 1932, with an attendance of 52. President Allen occupied the Chair.

Mr. Fred W. Schmeltz of New York City was elected to membership.

Mr. Morton reported for the Committee on the Mineralogy Manual, appointed at the January meeting, that Mr. Peter Zodac was working on a similar project, and he would confer with the latter.

The following were named to serve on the Nominating Committee for the annual

election of officers in April: Dr. Whitlock, Professor Findlay, Professor Butler, Professor Kerr, Mr. Manchester, and Mr. C. Fluhr.

Dr. J. F. Schairer of the Geophysical Laboratory, Carnegie Institution, Washington, D. C., addressed the Club on "The Synthesis of Rock Minerals." He briefly traced the history of experimental mineralogy and described methods of synthesizing minerals. He showed views of the laboratories and described a number of projects recently carried out. The mineralogical and petrological significance of an incongruent melting point was stressed. Details of crystallization of certain mixtures were presented to indicate how equilibrium diagrams explain mineral associations in rocks and throw much light on the problem of magmatic differentiation. Slides were shown to illustrate the subject.

After the usual questioning and discussion, the Club gave a rising vote of thanks to Dr. Schairer for his excellent lecture.

The Nominating Committee presented the following names to serve as officers for the year 1932-33:

President:	Dr. Alfred C. Hawkins
Vice President:	Mr. George E. Ashby
2nd Vice Pres.	Dr. Horace R. Blank
Secretary:	Dr. Daniel T. O'Connell
Treasurer:	Mr. Gilman S. Stanton

Dr. Myron H. Clarke distributed a number of excellent specimens of concretions from a locality near Basking Ridge, N. J.

DANIEL T. O'CONNELL, *Secretary*

NEW YORK MINERALOGICAL CLUB

Minutes of the Meeting of April 20th, 1932.

A regular meeting of the New York Mineralogical Club was held at The American Museum of Natural History on the evening of April 20th, 1932, with an attendance of 64. President Allen was in the Chair.

Miss Gertrude Coller, and Miss Helen Forsberg of the Bronx; Mr. Scott Ellis of Short Hills, N. J.; and Mr. Arthur E. Woods of Orange, N. J., were elected to membership.

The following officers for the Year 1932-33 were elected unanimously:

President:	Alfred C. Hawkins
1st Vice Pres.:	George E. Ashby
2nd Vice Pres.:	Horace R. Blank
Secretary:	Daniel T. O'Connell
Treasurer:	Gilman S. Stanton

President Hawkins appointed the following standing committees for the ensuing year:

Membership Committee: Messrs. Ashby and Grenzig and Miss Catherine Schroder.

Excursion Committee: Messrs. Manchester and Hoadley

Treasurer Stanton's report was approved as read. President Hawkins appointed Mr. Radu and Dr. Blank as auditors. The balance in the Club treasury on April 20th, 1932 was \$538.88. Attention was called to the fact that Mr. Stanton had just been elected Treasurer of the Club for the thirtieth time.

Dr. C. A. Hartnagel, Assistant State Geologist, spoke on "The Minerals and

Mineral Industries of New York State." The lecture was illustrated by lantern slides. A rising vote of thanks was given by the Club for this very interesting lecture.

DANIEL T. O'CONNELL, *Secretary*

Minutes of the Meeting of May 18th, 1932

A regular meeting of the New York Mineralogical Club was held at The American Museum of Natural History on the evening of May 18th, 1932, with an attendance of 68.

The resignation of Dr. Albert D. Bardes was accepted with regret.

Communications were read by the Secretary from: *Newark Mineralogical Society* expressing their intentions of joining with our Club on its Memorial Day Excursion. *Samuel G. Gordon of the Philadelphia Academy of Sciences*, requesting a list of members of the Club having mineral collections for the catalogue of the Mineralogical Society of America.

Mr. Manchester of the Excursion Committee reported that all arrangements for the Club's excursion to the Bedford Quarries on Decoration Day, May 30th, had been made and stated that it would be a pleasure to have the Newark Mineralogical Society with us.

Dr. Horace R. Blank, Assistant Geologist of the Board of Water Supply of the City of New York, gave the address of the evening on "The Minerals of New York City's New Water Tunnel." He exhibited a large collection of the minerals collected under his supervision from the shafts and tunnel of City Water Tunnel No. 2 which extends from Hill View Reservoir to Erie Basin, near Brooklyn; comprising specimens from all the rock formations of New York City.

In the discussion which followed, Dr. Blank and Mr. Fluhr were publicly commended by Mr. Merriman, Chief Engineer of the Board of Water Supply, for the most detailed geological record ever made of such a project.

DANIEL T. O'CONNELL, *Secretary*

NEW MINERAL NAMES

Vandenbrandeite

ALFRED SCHOEP: La vandenbrandeite, un nouveau minéral uranifère (Vandenbrandite, a new uranium mineral). *Ann. Mus. Congo Belge. A. Min. Géol. Paléon., Ser. I, Minéral.* 1, No. 3, 25-31, 1932.

NAME: In honor of P. Van den Brande, who discovered the mineral deposit.

CHEMICAL PROPERTIES: A hydrous uranate of copper: $2 \text{CuO} \cdot 2 \text{UO}_3 \cdot 5 \text{H}_2\text{O}$. Analysis (mean): UO_3 65.45, CuO 15.78, H_2O 9.25, PbO 4.69, SiO_2 1.66, Fe_2O_3 1.55, P_2O_5 0.21. Total 98.59. Difficultly soluble in cold acids but easily soluble in hot acid with liberation of a gas. Ammonia gives a blue solution and a bright yellow precipitate. Fuses near 1000° to a black mass, yielding a crystalline bead upon cooling.

CRYSTALLOGRAPHIC PROPERTIES: Triclinic. Forms, (100), (110), (001), (110). Cleavage (001) perfect, another cleavage in the zone (100), (110).

PHYSICAL AND OPTICAL PROPERTIES: Color dark green, sometimes almost black; streak green. Hd. 4. Sp. Gr. 4.96.

The cleavage fragments (001) are dark green in color and contain numerous inclusions, not pleochroic and are almost perpendicular to an optic axis. Dispersion strong. On the cleavage (100):(110), the mineral shows interference colors of gray,