

BOOK REVIEWS

JOHNSON, PAUL WILLARD, 1965, *FIELD GUIDE TO THE GEMS AND MINERALS OF MEXICO* (Exclusive of Baja California), Gem-books, Mentone, California, 97 pp., 6 maps, 53 photos, 1 fig., price \$2.00.

The principal mineralogy and gemology of the main mining districts on the mainland of Mexico is briefly described. A useful Spanish-English and English-Spanish glossary of gem, mineral and mining terms is included in the appendix.

P. W. JOHNSON

STRENGTH AND STRUCTURE OF THE EARTH, by R. A. DALY, 1940. Reprinted 1969 by Hafner Publishing Company, New York & London. ix + 434 pp., 85 figs.

It is appropriate that Daly's classic monograph should be reprinted at a time when the notion of an Earth divided into a lithosphere, mesosphere, and asthenosphere, which he popularized some thirty years ago, has emerged from limbo in a new conception of "dynamical geology" involving the evolution of the large-scale structural features of the Earth.

The useful half-life of a contribution to the literature of any field of science depends on the rate at which new data and ideas are generated in that field. In the three decades since Daly wrote this treatise there has been an explosive growth in new data on the basic physical parameters of the earth, and a revolutionary shift in the perspective from which these are viewed. Consequently, much of the material presented in the book has been relegated to the domain of the history of science, and relatively little remains that is still of primary interest in contemporary "dynamical geology". Nevertheless, as a historical document this book is readable, and it does provide a useful background for appraising currently fashionable ideas on the physical behaviour of the Earth. Moreover, the recent resurrection of the concept of a rigid lithosphere resting upon a more fluid asthenosphere suggests that Daly's capacity for perspicacious observation may be of much more than just historical interest.

In spite of what might be implied by the title, the principal subject of the book is the earth's gravity field and isostasy. The perspective is that of a geologist concerned with the rheological behaviour of the Earth, and the treatment, beginning with a historical review, is exhaustive by 1940 standards.

R. A. PRICE

FLUID INCLUSION RESEARCH—PROCEEDINGS OF THE COMMISSION ON ORE-FORMING FLUIDS IN INCLUSIONS (COFFI) volume 1 (1968), 78 pages off-printed, Washington D.C. \$3.00 (available from Edwin Roedder, U.S. Geological Survey, Washington, D.C., 20242).

This is volume one of a series, to appear annually, which will "provide communication between workers in various fields of research on fluid inclusions, using the term in its broad sense to embrace inclusions of any fluid: gas, liquid, melt". This volume includes abstracts of the papers prepared for the "First International Symposium on Thermodynamic Geochemistry of Endogenetic Processes of Ore Formation from Studies of Solution and Melt Inclusions in Minerals" organized by COFFI under the aegis of the International Association of the Genesis of Ore Deposits (IAGOD) which was planned for August 1968 in Prague. The meeting was not held and the abstracts were not published as part of the Geological Congress program.

The volume also includes: for Proceedings of the Second All-Union Conference on Mineralogical Thermometry and Barometry, Novosibirsk, September 1965-volume 1, translated titles and abstracts) and volume 2 (titles), New Methods and Results of Study of Parameters of Ore-Formation ("Nauka" press, Moscow, 1968); Also for Proceedings of the Third All-Union Conference on Mineralogical Thermometry and Barometry, Moscow, September, 1968, translations of selected abstracts and titles from the program volume of 161 abstracts. In selecting the abstracts for translation emphasis was placed on those which were most informative, contained most new data or were apparently not available in other publications.

Those interested in ore-forming fluid investigations are urged to support this new publication which promises to be very useful for disseminating information on progress in this field.

L. G. BERRY

ROCK AND MINERAL ANALYSIS, by John A. Maxwell, Monography 27 of a series "Chemical Analysis", Interscience Publishers (John Wiley & Sons) New York (1968), xvii + 584 pages, 14 figures, many tables, \$24.50 (U.S.).

The author of this book obtained his Ph.D. from the University of Minnesota in 1953 and was trained in the widely respected Rock and Mineral Analyses Laboratory of that University. As Assistant Chief of the Geochemistry, Mineralogy and Economic Geology Division, Geological Survey of Canada he is now responsible for the analytical laboratories, both wet-chemical and instrumental. The book is a detailed and thorough treatment of the many techniques and of the problems to be

faced in this important but difficult field of chemical analysis. It is divided into 12 chapters covering, in part I, Preliminary Considerations: The nature of the analysis; Precision and accuracy; Sampling and sample preparation; The working environment; Decomposition of the sample; in Part II, Methods of Analysis—discussion: silicates; carbonates; others; in Part III Methods of analysis—selected procedures; silicates; carbonates; and in Part IV, Methods of Analysis—special: X-ray emission spectrography; and atomic absorption spectroscopy. Chapters 6 and 9 on silicates constitute the bulk of the book, 185 and 162 pages respectively. These long chapters are broken up into numbered subsections, 6.6 magnesium, 6.6.1 gravimetric methods, 6.6.2 titrimetric methods *etc.* followed by 2 pages of references. The detailed table of contents, and indexes enables the user to locate a section of interest quickly. The style, detailed referencing and the apparent absence of errors leads the reviewer to highly recommend this book as a very carefully prepared compendium on methods used in rock and mineral analysis at the time of writing.

L. G. BERRY

THE AMERICAN MINERALOGICAL JOURNAL, conducted by Archibald Bruce, M.D. 1810–14. Reprinted as *Contributions to the History of Geology*, edit. by George W. White, with introduction by John C. Greene, vol. 1, xvii + 272 pages, Hafner Publishing Co. Inc., New York 1968. \$18.00 (U.S.A.)

This reprint presents the first four parts (all that were published) of volume 1 of the American Mineralogical Journal. These four parts, published in a single volume in 1814, were edited by Archibald Bruce, M.D. In a short paper (pages 26–30) the editor establishes the occurrence of native magnesia from Hoboken, New Jersey, later named brucite in his honour by Beudant in 1824. On page 96 the editor gives the first published description of “red oxide of zinc”, from New Jersey. He concludes “this red oxide of zinc—promises to be a valuable acquisition to the manufacturing interest of the United States”. The journal was the first scientific publication of a specialized nature to be printed in North America. The early parts were well received by the scientists of Europe. This encouraged Bruce, however after losing his professorship of Mineralogy and Materia Medica in the College of Physicians and Surgeons of the State of New York his health began to fail and he passed away in 1818. He had written many times to his friends, particularly Gibbs and Silliman requesting help in continuing the journal. The journal was in effect continued by Professor Silliman as the well known American Journal of Science (1818 to present).

While Bruce's journal was a specialized publication at that time it

actually covers a broad range of subjects related to mineralogy and geology: an economic appraisal of lead mines near Northampton Mass., and confirmation of Davy's electrolytic reduction of soda and potash both by Benjamin Silliman. Gibbs describes the iron works at Franconia New Hampshire, and at Vergennes Vt and his investigation of a mass of soft iron. The volume includes papers on Dutchess County, Rhode Island coal, minerals of Baltimore, and many short notes. Articles from other journals are reprinted, including a report of Cloud's experiments on palladium; a notice about columbium and a report by Wollaston on the identity of columbium and tantalum. Of interest to Canadians is a brief description the St. Maurice iron-works by William Smith of Quebec. Certainly this reprint will be of great interest to historians of science and should be available in all geological libraries.

L. G. BERRY

PUBLICATIONS RECEIVED

ERUPTIVE ROCKS, by S. James Shand, Hafner Publishing Co., New York, 1969 (facsimile reprint of Revised Third Edition, 1947) 488 pages, 4 plates, 51 figures, tables, \$12.50, U.S.

INTRODUCTION TO MINERALOGY, by Carl W. Correns, Springer-Verlag, New York Inc., 1969, Second edition, in cooperation with Josef Zemann (part one) and Sigmund Koritnig (mineral tables). Translated by William D. Johns. \$12.40, U.S.

GENESIS OF STRATIFORM LEAD-ZINC-BARITE-FLUORITE DEPOSITS, a symposium, J. S. Brown, editor. Monograph 3, Economic Geology Publishing Company, Yale University, New Haven. 1967.

MINERALS SCIENCE AND ENGINEERING, National Institute for Metallurgy, Cottesloe, South Africa. Available to persons interested in mineral processing, R1.00 per copy.

EXPLORATION GEOPHYSICS, edited by Mikhail K. Polshkov, translated from Russian by Consultants Bureau, New York 1969, volumes 49, 50, 51, about 150 pages each, \$22.50 U.S. each.

MINERALS ROCKS AND GEMSTONES IN CORNWALL AND DEVON, a collectors guide, by Cedric Rogers, D. Bradford Barton Ltd., Truro, Cornwall, 48 pages, 8s6d = £0.43.

PEBBLES ON CORNWALL'S BEACHES, L. C. Ferris, Tor Mark Press, Truro, Cornwall, 28 pages.

NOTICE TO AUTHORS

THE CANADIAN MINERALOGIST

Articles may be written in English or French. General style and spelling should conform to the usage in current issues of the journal.

Publication of accepted articles will be facilitated if manuscripts and illustrations are checked carefully before they are submitted. Authors will be charged for unnecessary deviations from the usual format and for changes in the proof that are considered excessive or unnecessary.

GENERAL—(1) Manuscripts should be typewritten, double-spaced, on $8\frac{1}{2}$ by 11 in. paper. The use of line numbered (in blue) paper would facilitate editing. *The original copy and one carbon copy are required.* (2) The first sheet of the manuscript should have the title, authors' names, and institution or institutions from which the article is a contribution (with city and province or state), followed by the abstract if necessary (see below). (3) References, tables, and legends for illustrations should be typed on separate sheets, *double-spaced*, and placed after the text. (4) Each sheet of the manuscript should be numbered. (5) Illustrations, line drawings and photographs (singly) should be numbered consecutively from 1 up, in Arabic numerals, in the order to which they are referred in the text. The originals of line drawings with one set of clear copies or two sets of good photographic copies are required. Glossy prints of photographs should be submitted in duplicate. (When photographs are grouped, one set should be mounted in an arrangement suitable for reduction to the page format of $7 \times 4\frac{1}{2}$ in. the duplicate set unmounted.) (6) The authors' names, title of the paper, and figure number should be written in the lower left-hand corner of the sheets on which the illustrations appear. (7) Equations and formulae should be set up clearly and simply. Superscripts and subscripts must be legible and carefully placed; unusual and Greek characters should be clearly identified; and characters to be set in boldface type should be underlined with a wavy line. Numbers referring to equations should be in parentheses and placed flush with the right-hand margin of the text.

ABSTRACT—An abstract of not more than about 200 words, indicating the scope of the work and the principal findings, is required, except in Notes or shorter communications.

REFERENCES—References should be listed *alphabetically by authors' names*, unnumbered, and in the form used in current issues of this journal. In references to papers in periodicals, the authors' names should be followed by the year of publication, title of article, name of journal, volume, and initial page number. The names of periodicals should be abbreviated in the form given in the 1961 edition of the *List of Periodicals Abstracted by Chemical Abstracts*. All citations should be checked with the original articles and each one referred to in the text by the authors' names and the year of publication.

TABLES—Tables should be numbered in Arabic numerals and each table referred to in the text. Titles should always be given but should be brief; column headings should be brief and descriptive matter in the tables confined to a minimum. Vertical rules should not be used. Numerous small tables should be avoided.

LINE DRAWINGS—Drawings should be carefully made with India ink on white drawing paper, blue tracing linen, or co-ordinate paper ruled in blue only; any co-ordinate lines that are to appear in the reproduction should be ruled in black ink. Paper ruled in green, yellow, or red should not be used. All lines must be of sufficient thickness to reproduce well. Decimal points, periods, and stippled dots must be solid black circles large enough to be reduced if necessary. Letters and numerals should be neatly made, preferably with a stencil (*do NOT use typewriting*) and be of such size that the smallest lettering will be not less than 1 mm high when the figure is reduced to a suitable size. Many drawings are made too large; originals should not be more than 2 or 3 times the size of the desired reproduction. Whenever possible two or more drawings should be grouped to reduce the number of cuts required. In such groups of drawings, full use of the space available should be made; the ratio of height to width should conform to that of a journal page (7 by $4\frac{1}{2}$ in.), but allowance must be made for the captions. If large drawings are made, glossy photographic prints (8 by 10 in. or less) are acceptable, convenient, and facilitate handling the manuscript prior to printing.

PHOTOGRAPHS—Prints should be made on glossy paper, with strong contrasts. They should be trimmed, so that essential features only are shown, and mounted carefully, with rubber cement, on white cardboard. To reduce the number of cuts required, two or more photographs should be mounted together with not more than $\frac{1}{8}$ in. between them.

MANUSCRIPTS—may be submitted to Professor L. G. Berry, Editor, Miller Hall, Queen's University, Kingston, Ontario, at any time.

Fifty reprints without covers will be provided each author free; additional copies will be furnished at cost if ordered at the time the galley proof is returned.

The journal is issued twice a year and is sent to all members of the Mineralogical Association of Canada. The annual fee for ordinary and associate members is \$7.00; for corporate members, including libraries \$12.00; for student members \$3.00. Membership in the Association is subject to the approval of the executive committee.

Volumes 1 to 4: These issues appeared as "Contributions to Canadian Mineralogy," and were published as 26 non-consecutive numbers of the Geological Series of the University of Toronto Studies. Those numbers that are still available are for sale at \$1.50 each from The Walker Mineralogical Club, 100 Queen's Park, Toronto, Canada. The 26 issues that constitute Volumes 1 to 4 may also be obtained on microfilm from the same address.

Volume 5: These issues appeared as "Contributions to Canadian Mineralogy" in the *American Mineralogist*. The seven numbers, one per year from 1949 to 1955, were regular issues of that publication, and will be found in library files of that journal. Additional copies may be ordered from The Mineralogical Society of America.

In 1957 The Mineralogical Association of Canada commenced publication of *The Canadian Mineralogist* with Volume 6, Part 1. All back issues are available from the Secretary of the Association, and are priced at \$5.00 each for individuals, and \$7.00 each for institutions.

All inquiries regarding membership, notices of change of address, and remittances should be sent to Secretary, Mineralogical Association of Canada, c/o Mines Branch, 555 Booth Street, Ottawa 4 Canada.

AMERICAN CRYSTALLOGRAPHIC ASSOCIATION SUMMER MEETING 1970

This meeting will be held at Carleton University, Ottawa, Canada from August 16 to 22, 1970. Mineralogists are expressly invited to submit papers for the technical sessions. A field trip will be organized by Dr. D. D. Hogarth of the University of Ottawa.

Abstracts should be mailed by June 15th, to Dr. M. Przybylska, Biochemistry Laboratory, National Research Council, Ottawa 7, Canada, general enquiries about the meeting should be addressed to Dr. L. D. Calvert, Division of Chemistry, N.R.C., Ottawa 7, Canada.

MINERALOGICAL ASSOCIATION OF CANADA

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