yellowish stains similar in colour to that of uranophane and other secondary uranium minerals, and undoubtedly constituting the same material referred to in Logan, are on file in the National Mineral Collection of Canada. One specimen (No. 1923) is marked "magnetite with uranochre" and was collected in 1873 by B. J. Harrington. The other (No. 1651) is marked "uraconite on magnetite"; the collector and date of this latter specimen are unknown, but from the catalogue number, the specimen is evidently of the same vintage as the former.

Although liberally stained yellow, the two specimens are not radioactive. The suspected uranite, uranochre and uraconite proves to be ferrimolybdite, $Fe_2(MoO_4)_3 \cdot 8H_2O$, which occurs as felted crusts and films on the specimen surfaces and as microscopic grains scattered throughout the magnetite. Identification of the surficial material was confirmed by *x*-ray diffraction. Semi-quantitative electron microprobe analysis of the disseminated grains in a polished section of specimen No. 1651, compared against Mo metal and synthetic magnetite as standards, gave approximately 35-40 wt.% Mo and 20 wt.% Fe_2O_3; this compares favourably with the ideal composition of ferrimolybdite, which has 39.1% Mo and 21.7% Fe_2O_3. Six other specimens from the Seymour mine and eight from other contemporary iron mines in the area, available from Geological Survey collections, were also checked, but none was found to be radioactive. Molybdenite, the usual parent mineral of ferrimolybdite, was not observed in any of the specimens, nor in the polished section. However, the mode of occurrence of the ferrimolybdite suggests that molybdenite may have originally occurred, at least in part, as disseminations in the magnetite.

Uraconite was also reported with magnetite from lot 20, concession I of Snowdon township, Haliburton County, Ontario (Harrington 1874). A specimen (No. 1951) available from this location contained yellow jarosite and goethite, and was not radioactive.

The determinative techniques available today may be expected to continue to reveal similar inaccuracies in mineral identification in older literature. In the instance described, the minerals in question were quickly shown to be non-uraniferous by a simple test for radioactivity, a phenomenon which itself was unknown when these suspected uranium minerals were first reported in 1863.

We are grateful to Dr. A. G. Plant for the electron microprobe analysis and to Mr. G. J. Pringle for the *x*-ray diffraction identification.

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PUBLICATIONS RECEIVED

APPLIED MINERALOGY — VOL. 3: ARC PLASMA TECHNOLOGY IN MATERIALS SCIENCE; D.A. Gerdeman and N.L. Hecht, 206 pp. Springer-Verlag, New York. $23.80U.S.

————VOL. 5: APATITE; D. McConnell, 111 p. Springer-Verlag, New York. $17.40 U.S.

GEOLOGY OF EASTERN NORTH AMERICA; J.D. Schöpf. An annotated translation of Beyträge zur Mineralogischen Kenntniss des Östlichen Theils von Nord-America und seiner Gebürge, 1787, by E.M. Spieker. Collier-Macmillan Canada Ltd. $17.95.

HANDBOOK OF GEOCHEMISTRY, VOL. II, pt. 3. Hard cover binder. Springer-Verlag, New York. $81.80 U.S.

MICROSCOPIC INDENTIFICATION OF CRYSTALS; R.E. Stoiber and S.A. Morse, 278 pp. The Ronald Press Company, 79 Madison Ave., New York 10016. $10.50 U.S.

SYMPOSIUM ON THE BUSHVELD IGNEOUS COMPLEX AND OTHER LAYERED INTRUSIONS; 763 pp. Geol. Soc. South Africa, Special Publication No. 1. Pub. by Geol. Soc.

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THE CRYSTALLINE STATE; Peter Gay; 348 pp. Hafner Publishing Co., Inc., New York. $14.95 U.S.

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ATLAS OF THE TEXTURAL PATTERNS OF GRANITES, GNEISSES AND ASSOCIATED ROCK TYPES; S.S. Augustithis, 378 pp. Elsevier Scientific Publishing Company, New York. $55.00 U.S.

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BOOK REVIEW

SYMPOSIUM ON THE BUSHVELD IGNEOUS COMPLEX AND OTHER LAYERED INTRUSIONS. Pretoria, July 7-14, 1969, Geological Society of South Africa, Special Publication No. 1, 1970, xii + 763 p., Johannesburg; price: R 12 for members of the Geological Society of South Africa; R 20 for non-members.

In olden times, we used to have the "Festschrift" in honour of somebody. In recent years, published proceedings of symposia of one kind or another have increasingly become a familiar phenomenon. The volume under review is, in a way, a combination of these two styles of publication: it is, in fact, a Commemorative Volume in honour of Johannes Willemse.

During his whole professional life, Professor Willemse had been actively engaged in investigations in the Bushveld Complex and it was he who had in the first place been instrumental to having the Symposium take shape. It is thus fitting that the volume be dedicated to his memory. And it is deeply to be regretted that he did not live to take part at the Symposium. For one thing, it is permitted to assume that, had he been around, there would have been an attempt at a synoptic view of the different genetic interpretations, an attempt at correlation of diverging and overlapping nomenclature, an attempt at bringing the different calculations and graphical representations based on chemical data in a way "on one denominator" and make them more easily comparable. This would no doubt have enhanced the value and importance of this Symposium.

The publication has been edited by D. J. L. Visser and G. von Gruenewaldt. It constitutes a sizable (page size 8 × 10.5″, 2″ thick) and heavy (approx. 6 lb) book with numerous illustrations (well reproduced maps and line drawings and very acceptable half tones). The language of most of the papers — whether translated from Afrikaans or otherwise — is somewhat indigestible and spiced with abstruse punctuation and there are rather more than the usual number of misprints. This detracts somewhat of the enjoyment the book is bound to give us but it is worthwhile in spite of these minor irritants as its contents are substantial and stimulating. An extensive subject index helps in the use of the book.

The volume contains 38 papers, 19 of which deal with various aspects of the Bushveld Igneous Complex or refer to local studies concerning the Bushveld Complex; 9 are on other South African ultramafic intrusions and 10 papers deal with ultramafic intrusions in other parts of the world (Muskox; Doré Lake; Dufek Intrusion, Antarctica; Giles Complex, Central Australia; Aberdeenshire; Turkey). Skaergaard and Stillwater, though frequently mentioned, do not constitute the subject of any one paper.

There are four contributions from Canada: —T.N. Irvine, Ottawa, Crystallization sequences in the Muskox intrusion and other layered intrusions (p. 441-476); —G.O. Allard, Quebec, The Doré Lake Complex, Chibougamau, Quebec, a metamorphosed Bushveld-type layered intrusion (p. 477-491); —A.J. Naldrett *et al.*, Toronto, Phase layering and cryptic variation in the Sudbury Nickel Irruptive (p. 532-546); —C.J. Hughes, St. John's Nfld., Major rythmic layering in ultramafic rocks of the Great Dyke of Rhodesia, with particular reference to the Sebakwe area (p. 594-609).

Most of the other papers also deal with local or regional petrology or with the special mineralogy of some of their constituents and with