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Mineralogical Association of Canada

INTRODUCING THE *ATLAS OF MIGMATITES*

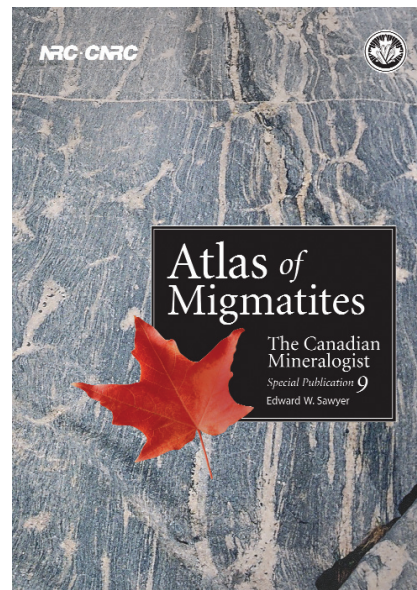
Our upcoming Special Publication 9, *Atlas of Migmatites*, by Edward Sawyer (Université du Québec à Chicoutimi) deals with a very wide-spread group of rocks, especially common in the Archean and Proterozoic crust that makes up a large proportion of Canada. Everyone has learnt a bit about migmatites, but by and large, the subject matter “falls between the cracks” in our university curricula. Typically, an upper-level undergraduate course in metamorphic petrology does set the stage for an understanding of anatectic reactions in terranes that have undergone metamorphism at conditions of upper amphibolite or granulite facies. Students in such a course do learn about the concept of anatexis and dehydration-induced melting, but really not much about the extraordinarily complex array of products of such anatexis, the importance of fractional crystallization of the anatectic liquid, and the fate of assemblages of residual minerals. Furthermore, contact-related anatexis usually is not discussed. On the other hand, students in an upper-level course in igneous petrology do deal with products of partial melting in the crust and can speak at length about the physical properties of silicate magma and the results of its fractional crystallization. But they deal with ready-made plutons. Such students do not develop a good understanding of the steps that precede the formation of a pluton, where small batches of leucosome coalesce and rise through a deforming mass of neosome and restite lithologies.

Professor Edward Sawyer has remedied the situation by writing the first authoritative treatise about the petrology of migmatites since the work of Karl Richard Mehnert (1913–1996), of Berlin, published forty years ago. He has abandoned the purely descriptive approach of Mehnert in favor of an openly genetic approach: a migmatite is a rock that is the product

of partial melting. If melting can be shown not to have taken place, the rock is simply not a migmatite. Furthermore, he has recognized the importance of anatectic reactions not only in amphibolite-facies rocks, but also in the realm of the granulite facies. He has examined key occurrences of migmatites throughout the world and presents in a systematic way the results of his scrutiny on all scales. Thus the reader is shown photographs of key exposures of migmatites in the field and petrographic details in 273 photographs, each with a detailed caption, supplied by the author in 68% of the cases, the remainder being contributed by respected colleagues also active in the characterization of migmatitic assemblages. Field examples are presented from twelve countries, with the author personally involved in field studies in six of those. In the *Atlas of Migmatites*, the author emphasizes the latest contributions in migmatite-related research, either in a regional setting or in a contact aureole.

Society-run, not-for-profit organizations like the Mineralogical Association of Canada find it challenging to undertake such a publication, owing to the high costs of production. In this instance, the Association is most fortunate to have coproduced the volume with the National Research Council Research Press. We also obtained funding from the Canadian Geological Foundation and Natural Resources Canada, part of which paid for the printing of a poster to publicize this book. The volume will be available at the end of May in time for our annual meeting in Quebec City.

Robert F. Martin, Editor
The Canadian Mineralogist



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<http://www.quebec2008.net>

LOSING A GIANT JOHN L. JAMBOR 1936–2008

The Mineralogical Association of Canada lost a long-time supporter and contributor to the life of the Association, and the Canadian geoscience community lost one of its most distinguished scientists.



See obituary on page 80. We extend our most sincere condolences to his family.

John Jambor in 1977 when he received the Queen's Silver Jubilee Medal.

SHORT COURSE – LASER-ABLATION-ICPMS IN THE EARTH SCIENCES: CURRENT PRACTICES AND OUTSTANDING ISSUES

**Goldschmidt 2008, Vancouver, BC, Canada
July 19–20, 2008**

Laser-ablation-inductively coupled plasma mass spectrometry is a powerful technique that is capable of providing micron-scale analyses of trace element concentrations and isotopic ratios in a variety of minerals and other objects of geologic interest. Seven years ago, the Mineralogical Association of Canada sponsored a landmark short course that helped bring the potential of laser-ablation ICPMS to the attention of Earth scientists around the world. Since then the technique has become arguably the fastest-growing analytical method in the Earth sciences, with tremendous advances in the understanding of basic laser-sample interactions and the practices used to obtain the most precise and accurate data possible.

The purpose of the new course, sponsored by the Mineralogical Association of Canada and convened by Paul Sylvester of Memorial University, is to update Earth scientists on this remarkable period of research and to provide a practical guide

to the procedures used by today's leading analysts. Topics to be covered are: ICPMS fundamentals (H. Longerich); laser-produced aerosols (D. Günther); modeling of ablation and transport (D. Bleiner); femtosecond lasers (I. Horn); matrix effects (P. Sylvester); spot versus rastering laser sampling (J. Košler); neodymium and strontium isotope analyses of accessory mineral phases (C. MacFarlane); mass bias corrections for stable and radiogenic isotope analysis (N. Pearson); isotope and element imaging and depth profiling (J. Woodhead); reference glasses for element and isotope analyses (K.P. Jochum); calibration strategies (S. Jackson); fluid inclusion analyses (T. Pettke); melt inclusion analyses (P. Mason); U-series dating of biominerals (S. Eggins); use of ion counters for uranium-lead geochronology (T. Simonetti); use of ion counters for common lead isotope analyses (K. Souders); data reduction strategies and error analysis (M. Horstwood).

For more information, contact Paul Sylvester (pauls@esd.mun.ca) or check the MAC website at www.mineralogicalassociation.ca or www.goldschmidt2008.org/shortCourses

\$10 000 Scholarship

The Mineralogical Association of Canada Foundation

annual scholarship for graduate students involved in an M.Sc. or Ph.D. thesis program in the fields of:

- Mineralogy
- Crystallography
- Geochemistry
- Mineral Deposits
- Petrology

**Deadline to apply:
May 1st, 2008**

Eligibility

- ① Students entering the second year of an M.Sc. program or the second or third year of a Ph.D. program at a Canadian university in September 2008.
- ② Canadian citizens enrolled in the above or equivalent programs at any university.

For more information, contact:

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Application form available at
www.mineralogicalassociation.ca

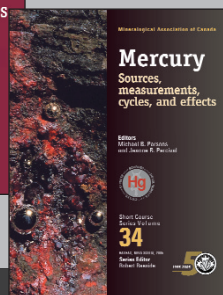
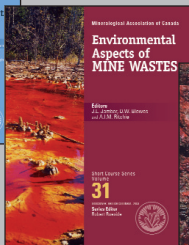


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- SC 27 Modern Approaches to Ore and Environmental Mineralogy – EDITORS: LOUIS J. CABRI AND DAVID J. VAUGHAN (1998)
- Clays for Our Future – PROCEEDINGS OF THE 11TH INTERNATIONAL CLAY CONFERENCE (1997)