



# Association of Applied Geochemists

[www.appliedgeochemists.org](http://www.appliedgeochemists.org)

## FROM THE PRESIDENT



Paul Morris

In AAG's March 2011 edition of its quarterly magazine *EXPLORE* (all copies of *EXPLORE* can be downloaded for free from AAG's website at [www.appliedgeochemists.org](http://www.appliedgeochemists.org)), I discussed the geographic diversity of the association's membership, which is currently drawn from over 50 countries. This membership is drawn from government, academia and industry, and includes some of the foremost practitioners in the development and application of geochemical techniques. Many of these are current AAG officers, and some have held one or more such positions in AAG for significant periods during its 40-year history. Despite the commitment shown by a number of members, the future health of the association can only be guaranteed if we continue to add younger members, who will eventually take on leadership roles in the association. Although this is now happening, there is an ongoing need to attract and retain student members who have an interest in applied geochemistry. We are concerned that the membership includes only a small number of students. Like other professional organisations, AAG offers financial incentives to attract and support students, such as subsidised membership and financial help to a number of students to attend its biennial International Applied Geochemistry Symposium (IAGS). However, in order to foster applied geochemistry and boost AAG's student membership, a new initiative by AAG's Education Committee is being developed and is nearing completion. By means of this initiative, AAG will connect applied geochemistry students with analytical laboratories that will provide geochemical analyses to support the student's research work. The initiative is seen as being of benefit to all parties. Those interested in following up on this approach – and other planned areas of support for applied geochemistry students – are advised to keep a watch on *EXPLORE*. I am sure that students who participate in these AAG programs will realise the collateral benefits of belonging to the oldest applied geochemistry professional body, and some will take up the opportunity to steer it in the future.

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## NEWS FROM AAG REGIONAL COUNCILLORS

### *EuroGeoSurveys Geochemistry Expert Group Activities*

The EuroGeoSurveys Geochemistry Expert Group (EGS-GEG) has at present 53 official EGS members, and, including associate members from outside organisations, more than 70 scientists participate in the activities of the group. The group closely cooperates with colleagues from the USGS (David Smith) and Geoscience Australia (Patrice de Caritat), where comparable continental-scale geochemical mapping programmes are being carried out.

The mission of EGS-GEG is to provide high-quality geochemical data for near-surface materials, to develop harmonised databases for multi-purpose use and to provide independent expert advice to the European Commission. To achieve this mission, systematic geochemical data for the whole of Europe are being generated by harmonised methods of sampling of near-surface materials (soil, stream or floodplain sediment, water), sample preparation, chemical analysis, quality control, data processing and presentation. The systematic geochemical information is published in the form of geochemical atlases, which are freely available and can be used for (1) state of the environment reports, (2) mineral exploration, (3) agriculture, (4) forestry, (5) animal husbandry, (6) medical geology, (7) determination of natural background values for environmental risk assessment, and other purposes.

EGS-GEG succeeded the FOREGS Geochemistry Group, which at the end of its activities had produced the *Geochemical Atlas of Europe*. The EGS-GEG is currently carrying out two large projects, the Geochemistry of European Agricultural and Grazing Land Soil (GEMAS) and Urban Geochemistry (URGE), which will keep the group busy for the next three years. The EGS-GEG has just completed a project on European groundwater geochemistry using bottled water as the sampling medium. The results of this project have been published in an atlas (Reimann and Birke 2010), whereas several more detailed national interpretations have been published in a special issue of the *Journal of Geochemical Exploration* (volume 107, issue 3, pages 217-422). The latter volume includes 15 contributions from national teams in Croatia, Serbia, Slovenia (2), Greece (2), Slovakia, Hungary, Italy (2), Fennoscandia, Germany (2), Portugal and Estonia.

Other activities of EGS-GEG for the period 2010–2013 include (1) publication of a book on urban geochemistry studies in April 2011 (Johnson et al. 2011), (2) data elaboration and publication of GEMAS project results, and (3) publication of new results from the *Geochemical Atlas of Europe* project. It is noted that because of industry restrictions the GEMAS atlas will be published in 2013.

The URGE project is being carried out by a sub-group of the GEG led by Rolf Tore Ottesen of the Geological Survey of Norway. The aim of URGE is to carry out urban geochemical mapping of 10–12 European cities using a common sampling and analytical protocol, ensuring that results are directly comparable across the continent. The sampling is being carried out during 2011, all analytical results will be available in 2012, and “final reporting” will occur around the end of 2014.

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## RECENT ARTICLE PUBLISHED IN *EXPLORE*

**STEPHEN AMOR (2011) Responses in lake sediments and waters to occurrences of rare earths and rare metals in the Canadian Shield. *EXPLORE* 151 (September 2011)**

A number of deposits of rare earth elements (REE) and rare metals (RM) in the Canadian Shield are compared in terms of their geochemical response in lake sediments and waters. The geochemical data were drawn from the Geological Survey of Canada's National Geochemical Reconnaissance (NGR) lake-sampling program and from programs carried out by the geological surveys of Ontario and Quebec. Most of these data are available for free download. Mineral-occurrence data were derived from online mineral deposit databases for the provinces and territories and from company websites.

Responses vary from strong and focused, through regional and not directly associated with known deposits, to none at any scale. For occurrences that do have a geochemical signature, fluoride in lake water (Fw) and Mo in lake sediment frequently show an anomalous response, as do the REE (and certain RM). Therefore, Fw and Mo constitute useful pathfinders for these occurrences, particularly where analyses of REE and RM have not been carried out on the sediments. Occurrences of Li show little or no response, even in Li itself, although there is no lake-sampling coverage over certain important Li camps.

There are many untested anomalies in the Canadian Shield suggestive of the presence of REE/RM mineralization, particularly in northeastern Saskatchewan, northern Manitoba, southeastern Nunavut and Labrador. Many are situated in ground that is currently unstaked. However, in the presence of other favourable indicators, the absence of a REE/RM anomaly in lake sediments and waters is not a reason to write off an area's prospectivity.

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