

IAMG

NEWSLETTER

NUMBER 4 APRIL 1972

EDITOR: GRAHAM LEA, PO BOX 573, WESTMINSTER
LONDON SW1, ENGLAND.INTERNATIONAL ASSOCIATION FOR
MATHEMATICAL GEOLOGY

President

Prof. A. B. Vistelius, Laboratory of Mathematical Geology, Academy of Sciences,
Leningrad V-164, USSR

Vice Presidents

Prof. W. C. Krumbein, Department of Geology, Northwestern University,
Evanston, Illinois 60201 USA
Prof. G. S. Watson, Department of Statistics, Johns Hopkins University, Balti-
more, Maryland 21218 USA

Secretary General

Prof. R. A. Reymont, Department of Geology, University of Uppsala, S-751 22
Uppsala, Sweden

Treasurers

Dr. Vaclav Nemecek, K Rybnickum 17, Praha, 10-Strasnice, Czechoslovakia
Dr. T. Victor London, Institute of Geological Sciences, 5, Princes Gate,
Kensington, London S.W. 7, England.

Council Members

Dr. F. P. Agterberg, Canadian Geological Survey, 601 Booth Street, Ottawa,
Canada
Dr. D. G. Krige, P.O. Box 7727, Johannesburg, South Africa
Prof. Georges Matheron, Directeur de Recherche, l'Ecole Nationale Supérieure
des Mines de Paris, 60 B^d St. Michel, Paris 5, France
Dr. D. A. Rodionov, Institute of Mineralogy & Geochemistry, Academy of
Sciences, Sadovnicheskaya Naberezhnaya 71, Moscow, USSR
Dr. S. Sengupta, Geological Studies Unit, Indian Statistical Institute, 203
Barrackpore Trunk Road, Calcutta 35, India
Prof. E. H. T. Whitten, Department of Geology, Northwestern University,
Evanston, Illinois 60201 USA

Editor-in-Chief

Prof. D. F. Merriam, Department of Geology, Syracuse University,
Syracuse, New York 13210, USA

4.1 Extra Newsletter

This will be the last Newsletter to appear before the International Geological Congress in Montréal and the election of the new Council, which will take place in conjunction with our Symposia 104 and 105. IAMG has got off to a good start, and we hope that the coming four-year period (1972-1976) will be as successful for quantitative geology as have been 1968-1972.

4.2 Section IV of IGCP gets a new lease of life

An unofficial decision made by UNESCO gremlins had scheduled Section IV for deletion from the important IGCP. The Secretary General mobilized IUGS, the other partner; several months of skirmishing has led to a reversal of this decision (the face-saving phrase is 'a misunderstanding' has occurred). Let us make the most of this respite. Let us also express our heartiest thanks to Professor K Dunham, President of IUGS.

4.3 What is Section IV?

Dan Merriam is one of the people who saw to it, at Budapest 1969, that IGCP was to have a section for quantitatively based studies. Although Section IV has been saved, for the time being at least, we are faced with a new danger. There is an opinion being voiced in geopolitical circles at the moment that if Section IV is to be kept in the scheme of things, then it should be non-scientific -- i.e. function in an advisory capacity for data storage and retrieval. This is certainly not what Merriam outlined at the Budapest and it is certainly not useful to quantitative geologists, other than peripherally.

4.4 International Geological Correlation Project (IGCP)

It is imperative that as many of our members as possible attend Symposium 108 at the IGC in Montréal August next. This is the last real chance for us to make our voices heard in this connexion. If you have any ideas on the subject, please come well prepared to put them forward. Vistelius and Whitten have several good projects in mind. Contact them!

4.5 Sections § 104 and 105 at Montréal, IGC

Ed Klovan has done an excellent job of organization for our two symposia. The programmes are:

Symposium 104

- A B Vistelius: Ideal granites and their metasomatic transformation: stochastic model, statistical identification, natural rocks.
- M A Romanova: Influence of greisen on markovian properties of sequences of grains in granitic rocks.
- W Schwarzscher: The mechanism of bed formation in a limestone-shale environment.
- F E Wickman: Volcanic eruptions as random events.
- J S Smart: Statistical geometric similarity in drainage basins.
- M F Dacey: Length and gradient properties of stochastic streams.
- R A Reymont: Analysis of volcanic earthquakes of Asamayama (Japan).
- P Switzer: Applications of random process models to the description of spatial distributions of qualitative geological variables.
- F W Preston and J C Davis: Porous materials as a realization of stochastic process.
- W C Krumbein: Stochastic process models in geology.

Symposium 105

- R F Lind & G S Koch Jr: Some consequences of applying lognormal theory to non-lognormal frequency distributions.
- R B McCammon: An optimal strategy for geographic sampling of sedimentary environments.
- W E Price Jr: A random-walk simulation of alluvial fan deposition.
- H J Pincus: Spatial frequency analysis of deformation fabrics.
- N W Schleiger: A statistical method of analysis and for the mapping of Flysch type facies.
- H de La Roche, P Isnard, P. Leymarie and J L Mallet: Utilisation du calcul automatique dans les études geochemiques regionales.
- E Mundry: Nonlinear regression models in geology.
- M Canceill, O Deloroziere: Bouillin and J. Margat -- Application de l'analyse factorielle a la caracterisation des facteurs geologiques de l'ecoulement en France.
- G Drapeau: Factor analysis--How it copes with complex sedimentological problems.
- E Walger: Comparison of different methods of multivariate analysis on data of Persian Gulf sediments.
- W W Hay: Probability and the uses of fossils.

The eminent mathematical statistician, Professor Bharucha-Reid, will be commenting on these papers.

4.6 IGC Montréal -- IPU section for Biometrics

The following papers are being presented in Section 7, Theme D, under the auspices of the Biometrics Subcommittee of IPU (Chairman R A Reyment).

G W Lynts: Factor-Vector analysis models in ecology and paleoecology.

R A Reyment: Application of multivariate morphometrics in Paleontology.

A J Rowell and D J McBride: Faunal variation in the Elvinia zone of the Upper Cambrian of North America -- a numerical approach.

4.7 Secretary General at Syracuse

The Secretary General will be spending his sabbatical leave at the Department of Geology (Chairman: Professor D F Merriam), University of Syracuse, N Y, starting 1.8.1972.

4.8 The Newsletter

The Newsletter is popular among our members, but it is unable to propagate itself. Contributions, to be sent to Graham Lea, Box 573, Westminster, London SW1 are hereby solicited.

Remember: if you have a problem in mathematical geology and need help with it, the columns of the Newsletter are good way of making the necessary contacts.

4.9 The Wollaston Prize: Geological Society of Great Britain

This year the Wollaston Prize was awarded to the eminent mathematical geologist, Professor Hans Ramberg (Uppsala, Sweden).

4.10 NATO Advanced Study Institutes

Two Nato advanced study institutes of particular interest to mathematical geologists have been arranged this year.

The first, entitled 'Continental Drift, Sea-Floor Spreading and Plate Tectonics: Implications for the Earth Sciences', took place at the Department of Physics, University of Newcastle, England, in April.

The second, 'Discriminant Analysis and Applications' is to take place at Athens, Greece, in June.

4.11 Heidelberg Sedimentological Congress

The proceedings of the section sponsored by IAMG are due to appear this spring. Editor: D F Merriam. Printed by Plenum, New York.

4.12 Nominating Committee

The Nominating Committee, under the non-voting chairmanship of Professor A B Vistelius (USSR) is currently preparing a slate of candidates for the elections in August at the IGC.

4.13 Large-Scale Projects

The Secretary General is interested in keeping track of large-scale projects in quantitative geology. People engaged in projects of this nature are invited to write to Professor R A Reyment, Paleontological Institute, Box 558, S-751 22 Uppsala 1, Sweden.

4.14 Subscriptions for 1972

We remind those of our members who have poor memories that subscriptions for the current year are well and truly due. Whilst on this subject, we note that there has been a heartening increase in membership in our association.