

**INTERNATIONAL SUBCOMMISSION ON
STRATIGRAPHIC CLASSIFICATION (ISSC)**

OF

**IUGS INTERNATIONAL COMMISSION ON
STRATIGRAPHY**

CIRCULAR NO. 96

October 29, 1999

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I. ELECTION OF OFFICERS OF ISSC

Following are the results of the election for officers of the ISSC for the term 2000-2004

For Chair: Alberto Riccardi
For Vice Chair: Maria Bianca Cita

The results of the election were transmitted on June 30th, 1999, to Prof. O. Michelson, Secretary General of the International Commission on Stratigraphy, for voting (ratification) by the members of the Commission. The new term of Alberto Riccardi and Maria Bianca Cita as Chair and Vice Chair will start at the time of the meeting of the Subcommission at the 31st International Geological Congress in Rio de Janeiro on August, 2000.

Maria Bianca Cita and I want to express our appreciation to the members of the ISSC for reelecting us as officers of the Subcommission for the next term.

Appendix A to this Circular is a complete list of those members who returned the ballot form of ISSC Circular No. 95, and their choices for officers of the Subcommission.

II. MEETING OF THE ISSC AT THE 31ST INTERNATIONAL GEOLOGICAL CONGRESS IN RIO DE JANEIRO, AUGUST, 2000

As informed in ISSC Circular No. 94, on January 15th, 1999 I applied by letters to the Secretary General of the Congress, with copies to the Secretaries of IUGS and ICS, for time and space for a business meeting of the Subcommission in Rio de Janeiro and inclusion in the Congress General Programme. This request was repeated on July 2nd, 1999. On July 17, 1999, FAGGA EVENTOS, the office in charge of space for meetings within the IGC, acknowledged reception of this request and informed that as soon as possible they will confirm the place, day and time of the meeting.

A. Grigelis has indicated his interest to report during the meeting on "A Lithuanian Stratigraphic Guide: a concept and implementation".

III. SHORT VERSION OF THE GUIDE

I am glad to inform that the "International Stratigraphic Guide. An Abridged Version", with Michael Murphy and Amos Salvador as Editors, is in the page proof stage. It will appear in the December 1999 issue of *Episodes*. Separates with covers will be sold at about \$ 5.00 plus mailing cost per copy.

To accomplish the objective of the preparation of an abridged and cheap version of the *Guide* it will be necessary to give its publication as much publicity as possible. Then we hope that the ISSC members will help in providing as much publicity as possible: advertisements and reviews in the geological journals of their respective countries.

Of the GSA edition of the Guide, last August there were only 259 copies left and it will be reprinted again when it seems necessary.

IV. SEQUENCE STRATIGRAPHY

Since ISSC Circular No. 95, the Coordinator of the WG on Sequence Stratigraphy, Amos Salvador, has circulated Memo 15 (May 24, 1999) and Memo 16 (July 30, 1999).

As a result of three years and a half of work (cf. ISSC Circulars No. 92 & 93) the WG has finally produced a document and alternative recommendations to be considered by the ISSC membership. As informed previously the WG is formed by M-P. Aubry, W. Berggren, R.M. Carter, N. Christie-Blick, A. Hallam, J. Hardenbol, K.G. Miller D.E. Owen, H.W. Posamentier, A. Salvador, P.R. Vail, J.A. Van Couvering, J.C. Van Wagoner, J.S. Watkins and P. Weimer.

Out of fifteen members, eight endorsed the complete document whilst six sent a set of alternative recommendations and one did not uphold either.

The proposal, entitled "Review of the concept and recommended terminology for Unconformity-related units" was endorsed by A. Hallam, D.E. Owen, H.W. Posamentier, A. Salvador, P.R. Vail, J.C. Van Wagoner, J.S. Watkins and P. Weimer and is included as Appendix B to the present circular.

The document "Alternative recommendations for the terminology of Unconformity-related units", was supported by N. Christie-Blick, W. Berggren and M-P. Aubry, K.G. Miller, J.A. Van Couvering and R.M. Carter, and is included as Appendix C to this circular.

The WG has gone a long way in defining what is a "correlative conformity" of an unconformity bounding a sequence, and has also agreed in some important matters, as is the preference of the term "sequence" over those of allostratigraphy ("allogroup", "alloformation", "allomember") and Unconformity Bounded Units ("synthem").

Differences in opinion within the WG centered in the scope of the term "sequence". According to N. Christie-Blick "while much of what [the majority] proposes is uncontroversial, 7 members found themselves unable to get behind the main recommendation regarding the definition of the term sequence".

Thus, in the main proposal "sequence" is defined in a generalized way, encompassing units bounded below and above by unconformities that could be extended basinward - as an option not always achievable and, therefore, not essential in the definition - following the correlative conformities. As a result "sequence" becomes the basic unit of a single, simple and flexible scheme for the classification and nomenclature of all unconformity-related stratigraphic units.

In the "Alternative recommendations" it is stressed that in order to clarify stratigraphic relationships it is important to use a terminology distinguishing the different senses in which the terms sequence and sequence boundary are used. Following that idea a twofold scheme of classification and nomenclature is proposed, one for the unconformity bounded or unconformity related units - as defined in the main proposal - and another for units formed by genetically related strata bounded by unconformities and correlative surfaces. For the terminology to be applied two options are open, depending of the scope given to the term "sequence". If this term is used for unconformity related units, then sequences of seismic and sequence stratigraphy should be recognized with a modifier, i.e. depositional sequences. In the other option "sequence" maintains its restricted meaning, whilst the other units may be referred as "unconformity-related units".

Comments and suggestions concerning the attached documents (App. B & C) and the general subject of unconformity related units would be appreciated from the members of the Subcommission. In particular, expressions of opinion on the following specific points would be most helpful:

1. Unconformity-bounded and sequence stratigraphic units as "objective" and "subjective" units.
2. Desirability to unify the terminology of unconformity-bounded and sequence stratigraphic units.

3. Abandonment of the terminology of UBUs and allostratigraphy.
4. Formal adoption of “sequence” as main term for unconformity-related units.
5. Recognition of correlative conformities of bounding unconformities as an option and not a necessity for the definition of a sequence.
6. Generalized vs. restricted definition of “sequence”.
7. Single vs. twofold scheme of classification and nomenclature.

V. GLOSSARY OF STRATIGRAPHIC TERMS

In ISSC Circulars No. 92, 93 and 94 it was mentioned the project to produce a glossary of stratigraphic terms in several languages (for previous information see ISSC Circulars 57, 63, 64 and the Glossary of Stratigraphic Terms included in the last edition of the International Stratigraphic Guide). As it was informed several positive comments were received and Professor Ivo Chlupác has kindly agreed to take a leading role on the subject.

Prof. Chlupác has proposed the following guidelines for the preparation of the Glossary:

1. The Glossary should contain only those terms which are commonly used in stratigraphical praxis of different nations and geologic schools. Therefore, Prof. Chlupác has reviewed the Glossary of stratigraphic terms included in the 2nd edition of the International Stratigraphic Guide and selected those terms he regard as practically useful.
2. This list is included as Appendix D to the present circular for review of the whole membership with a request for supplements and improvements.
3. After this, the final list should be mailed to the ISSC organizational members who are representing the national stratigraphic committees to fill the appropriate translations in their own languages.
4. After the return of translations, the Glossary should be published by the ISSC or elsewhere.

As noted by Prof. Chlupác the nomenclature of sequence stratigraphic, cyclostratigraphic and event stratigraphic units is not elaborated yet but the chairmen of the Working Groups in question could possibly include the important and recommended terms.

Comments and suggestions will be much appreciated.

VI. ISC NEWS

GSSP

The ISSC Bureau distributed a ballot on the GSSPs defining the base of:

- the Messinian Stage (uppermost Miocene) at the base of reddish layer no. 15 in the Oued Akrech section, near Rabat, Atlantic side of Morocco.
- the Aalenian Stage (Middle Jurassic) at the base of the calcareous bed n. 107 of the Fuentalsaz section at Nuevalos, in the Castilian Branch of the Iberian Range, Central Spain.

GEOLOGICAL MAP OF THE WORLD AND GLOBAL STRATIGRAPHIC CHART

A draft and questionnaire on the Global Stratigraphic Chart, prepared by ISC Chairman, J. Remane, was included as Appendix C to ISSC Circular No. 92. Comments from ISSC members (see ISSC Circular 93) were forwarded to the ISC Chairman. I have also received copy of a letter sent to J. Remane by A.I. Zhamoida, Chairman of the Russian Interdepartmental Stratigraphic Committee. According to A.I. Zhamoida, this letter contains the general opinion of the majority of Russia's stratigraphers and some useful concrete suggestions and he requested its publication in an ISSC circular. Therefore, it is here attached as Appendix E.

VII. PUBLICATIONS ON STRATIGRAPHIC CLASSIFICATION, ETC.

Following is a list of publications on stratigraphic matters kindly sent to me by some ISSC members:

Gladenkov, Yu.B., 1997. Tendencies of Stratigraphic Development toward the XXI Century. In: Nishimura, S. and Tsuchi, R. (Eds.), Proceedings of the Sixth International Congress on Pacific Neogene Stratigraphy and IGCP-355, pp. 174-185. Kyongju, Korea.

The Austrian and the German Stratigraphic Commissions have just published a short version, in German, of the Stratigraphic Code. The complete reference is: Steininger, F.F. and Piller, F.F. (Eds.), 1999. Empfehlungen (Richtlinien) zur Handhabung der stratigraphischen Nomenklatur. Courier Forschungsinstitut Senckenberg, 209: 19 p., Frankfurt am Main.

VIII. MEMBERSHIP MATTERS

A. Final approval for membership of Prof. F. Steininger. After being approved by the Membership Committee, and with the endorsement of the membership of the ISSC, the name of Prof. F. Steininger of Germany, was submitted to the Executive of ICS for final approval as individual member of the ISSC. It was subsequently approved by the ICS Chairman, Prof. J. Remane.

B. Lithuanian Commission on Stratigraphy. The following Short Report on the activities of the Lithuanian Commission on Stratigraphy was sent by Prof. Algimantas Grigelis on July 2nd, 1999:

i. Lithuanian Stratigraphic Guide. The WG On Lithuanian Stratigraphic Guide is working since November, 1998. Algimantas Grigelis, Chairman of WG, has completed the concept of stratigraphic principles to be adopted to the Lithuanian stratigraphy. The Guide is based on the International Stratigraphic Guide, 1994 and on its Short Version, 1998 (manuscript) kindly presented by Amos Salvador for these purposes. The content of the Guide is as follows: 1 Introduction; 2 Principles of Stratigraphy; 3 Stratigraphic Guide; 4 Glossary of Stratigraphic Terms; 5 Bibliography. An Abridged Version of the International Stratigraphic Guide is expected to include as a supplement in this publication.

Lithuanian Stratigraphic Guide will be voted by Lithuanian Commission on Stratigraphy and published until 31st IGC in Brasil, August 2000. Languages of the publication -Lithuanian and English. The project is financially supported by the Geological Survey of Lithuania. The Guide should be presented on the ISSC Meeting at the 31st IGC.

ii. Lithuanian Glossary of Stratigraphic Terms. A Glossary is already produced in Lithuanian language as a part of the Lithuanian Stratigraphic Guide. The authors are: A. Grigelis (Editor), T. Jankauskas, O. Kondratiene, J. Paskevicius, J. Satkunas. Equivalent terms are given in Lithuanian and in English.

iii. New Publications on Stratigraphic Terminology. There is a new issue of extraordinary importance for Lithuanian and whole East Europe stratigraphy:

Sidaraviciene, N. (Compiler) et al., 1999. Lithuanian Stratigraphic Units. Vilnius: Geological Survey of Lithuania and Lithuanian Institute of Geology. 367 p. In Lithuanian, English and Russian. The edition is available upon request from Geological Survey, Konarskio 35, 2600 Vilnius, Lithuania [Distributor: <laima.augulyte@lgt.lt>].

**APPENDIX A (TO ISSC CIRCULAR NO. 96)
VOTES FOR CHAIRMAN AND VICE CHAIRMAN OF
ISSC FOR TERM 2000-2004**

<i>MEMBER</i>	VOTE FOR CHAIR	VOTE FOR VICE CHAIR
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Individual Members:

Burollet	Riccardi	Cita
Carter	Riccardi	Cita
Cita	Riccardi	Salvador
Chlupac	Riccardi	Embry
Dermitzakis	Riccardi	Cita
Drooger	Riccardi	Cita
Gladenkov	Riccardi	Cita
Grigelis	Riccardi	Cita
Holland	Riccardi	Cita
Murphy	Riccardi	Cita
Murray	Riccardi	Berggren
Pomerol	Riccardi	Cita
Riccardi	Salvador	Cita
Salvador	Riccardi	Cita
Sapunov	Riccardi	Cita
Takayanagi	Riccardi	Cita
Winter	Riccardi	Cita

Ex officio Members

IS Carboniferous S (Roberts)	Riccardi	Cita
IS Jurassic S (Pavia)	Riccardi	Cita
IS Cretaceous (Rawson)	Riccardi	Cita
IS Terminal Proterozoic (Knoll)	Riccardi	Cita

Organizational Members

Argentina (Riccardi)	Riccardi	Cita
Australia (Brakel)	Riccardi	Cita
Austria (Steininger)	Riccardi	Cita
Bulgary (Tchoumatchenko)	Riccardi	Cita
Germany (Steininger)	Riccardi	Cita
Italy (Cita)	Riccardi	Salvador
Japan (Amano)	Riccardi	—
Korea (Chang)	Riccardi	Cita
New Zealand (Cooper)	Riccardi	Cita
Russia (Zhamoida)	Riccardi	Cita
South Africa (Johnson)	Riccardi	Cita

Spain (Reguant)
United Kingdom (Rawson)

Riccardi
Riccardi

Cita
Cita

APPENDIX B (TO ISSC CIRCULAR NO. 96)

APPENDIX C (TO ISSC CIRCULAR NO. 96)

**APPENDIX D (TO CIRCULAR NO. 96)
LIST OF STRATIGRAPHIC TERMS**

**APPENDIX E (TO CIRCULAR NO. 96)
GLOBAL STRATIGRAPHIC CHART: letter from
A.I. ZHAMOIDA to J. REMANE**