



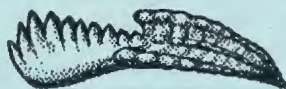
INTERNATIONAL UNION OF  
GEOLOGICAL SCIENCES  
COMMISSION ON STRATIGRAPHY

**-S-D-S-**

**SUBCOMMISSION ON  
DEVONIAN STRATIGRAPHY**

**NEWSLETTER NO. 8**

June 1992



I.U.G.S. Subcommittee on Devonian Stratigraphy

*Newsletter No. 8, 1992*

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The goal is to publish the *Newsletter* each January. Items for inclusion in *Newsletter No. 8* should reach the Editor no later than 1 December 1992. Items may also be submitted to the Secretary, but please allow sufficient time for transmittal to the Editor.

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## EDITORIAL NOTES

- The Editorship of the *Newsletter* has been passed to Prof. Rex E. Crick, University of Texas at Arlington. The *Newsletter* will be published at least each January containing information submitted by interested parties prior to 1 December of the preceding year. Information of a more immediate nature will be circulated in the form of supplements. One significant advantage of a newsletter such as this is that it can act as an informal forum for rapid dissemination of topical information whose peak of importance is short-lived but whose message may be valuable to all or some portion of the membership; e.g., announcement of field plans; requests for cooperation or collaboration, calls for symposium and conference papers, etc.
- The SDS membership list is complete as of June 1992. Because this list is also the mailing list for the *Newsletter*, please check your entry for accuracy. We do not have postal codes for all members and these are needed to assure the best chances for delivery. I have attempted to make the appropriate adjustments for the ever-changing geopolitical picture, but some modifications may be less than accurate - assistance is appreciated.
- News items submitted by the membership and still in the queue were two or more years old and much if not all of the results of works mentioned have since been published in one form or another. Therefore, these reports will not appear in the *Newsletter*.

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## BUSINESS MEETING - GWANGXI, P.R. CHINA (8 SEPT. 1992)

Secretary House circulated information regarding this meeting to the membership in April 1992. Please contact the Secretary for additional information.

Items 5-10 of this circular are repeated here for the general information of the membership.

5. **Postal Ballot on basal Givetian GSSP at Mech Irdane, Morocco.** This was the only candidate section on the voting paper distributed to TMs. The result was as follows. In favour: Yes votes: Bultynck, Chlupac, Dineley, Feist, Garcia-Alcalde, House, Menner, Morzadec, Oliver, Sandberg, Strel, Talent, Yolkin, Ziegler. No replies counted under the rules as Yes votes; Hunicken, Klapper, Pedder, Walliser, Yu. Vote against; Richardson. Abstention; Hou. This gives a total of 19 votes in favour, 1 against and 1 abstention. Under the Rules abstentions are not counted for percentage purposes. Therefore the motion that Mech Irdane be recommended to the ICS and IUGS as the basal Givetian GSSP was carried by 95% in favour.
6. **New Officers.** As a result of elections organised by Dr. W.A. Oliver Jr. and a Nominating Committee, the following will be recommended to ICS as Officers of the SDS for the session following the 1992 Kyoto IGC year. Chairman, Prof. Michael House; Vice-Chairman, Dr. Raimund Feist; Secretary, Dr. Pierre Bultynck.
7. **Circulation.** As will be seen from the Minutes of the Rabat Meeting I [the Secretary] am instructed to enclose with this circulation a sheet (yellow) which has to be returned if members wish to continue receiving the SDS circulation. This results from the absence of funding for secretarial costs available to the SDS. No funds at all were received for 1991 and the position for 1992 is not clear. [Please note that the yellow sheet to be used as indicated above was included with the circular from Secretary House. If you did not receive the circular and wish to continue to receive circulation mailings, please contact the Secretary.]
8. **Newsletter.** Prof. Rex E. Crick (Department of Geology, The University of Texas at Arlington, UTA Box No. 19049, Arlington, Texas 76019-0049. Tel. 817-273-2987. Fax. 817-794-5653. BITNET: B376REC@UTARLG) is arranging the collation and circulation of the next Newsletter which it is hoped will be distributed shortly. Items for the following Newsletter should be sent directly to Rex Crick. [Please note that the Facsimile number which appeared in the circular was not correct. The number listed above is correct.]

9. **New Members.** Members are reminded that nominations for membership should be received by the Secretary in writing before the next Business Meeting. Details of Name, address and field of interested should be indicated.
10. **Publication.** Prof. W. Ziegler has informed the Secretary that he is prepared to consider contributions bearing on the GSSPs for the base of the Famennian and base of the Givetian for publication in the *Courier* of the Senckenberg Institute. Dr. Raimund Feist is collating contributions for the basal Famennian GSSP. Proposed details of contributions for the basal Givetian GSSP should be sent to Prof. Ziegler.

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## MINUTES - BUSINESS MEETING, RABAT, MOROCCO (4 DEC. 1991)

### SUBCOMMISSION ON DEVONIAN STRATIGRAPHY

Minutes of a Meeting held at the Direction de la Géologie, Ministère de l'Energie et des Mines, Rabat-Agdal, Morocco, 4th December 1991

**PRESENT. Titular Members:** - R. Feist, J. Garcia-Alcalde, M.R. House, P. Morzadec, W.A. Oliver Jr., A.E.H. Pedder, J.B. Richardson, O.H. Walliser, E.A. Yolkin W. Ziegler, *Corresponding Members:* - A.-R. Ashouri, M. Bensaïd, R.T. Becker, D. Brice, P. Sartenaer, K. Weddige, R. Werner. *Guests:* - R. Crick, M. Dahmanni, A. El Hassani, H. Lelièvre, N. Aquesbi, N. Lazreq, J. Phudri, M. Troyois-Massoni

#### 1. INTRODUCTION

- a. The Chairman, TM Pedder, opened the meeting at 9:30 am by welcoming guests and expressing thanks to CM Bensaïd, M. Dahmanni, A. El Hassani and their colleagues for their hospitality and for their organization of the meeting and to TM Walliser and his associates for leading the excellent field trips in the Zagora and Erfoud areas which had preceded the meetings.
- b. With 10 TMs, 7 CMs and 8 guests the meeting was declared quorate.
- c. Apologies for absence were recorded from TMs Bultynck, Chulpac, Dineley, Hou, Klapper and Yu, and from Alberti, Bai, Bliiek, Elliott, Hladil, Holland, Johnson, Lardeux, McGregor, Norris, Pan, Rzhonsnitskaya, Tournier, Sandberg, Schönlaub, Uyeno, Wang, Wright and Zagora.
- d. Documents submitted to the of relevance to the meeting are lettered A-C (List appended to the Minutes).

#### 2. MINUTES OF THE MEETING IN FRANKFURT 1990

The Minutes of the Frankfurt Meeting were approved.

#### 3. CHAIRMAN'S BUSINESS

- a. TM Ziegler, as Vice Chairman of the Commission on Stratigraphy, reported on the reduced allocation, from \$30K to below \$15K, in the subvention to the Commission and the corresponding reduction in funding to subcommissions. The Commission would meet in January 1992 and would consider a reduction in the number of subcommissions and working groups. Generally boundary Working Groups would be assigned to the Subcommission for the period above the boundary. The Subcommission on Geochronology and Quantitative Stratigraphy would be merged as a Subcommission on Numerical Stratigraphy. The work of the Subcommission on Nomenclature and its work, and classification matters, would be handled by the Subcommission on Non-Biological Stratigraphy.
- b. The chairman reported that a letter had been received in Zagora from CM Rzhonsnitskaya to say that SDS boundaries would be used in the Kuznetsk Basin and the Urals. TM Yolkin spoke on work on the Frasnian/Famennian boundary in the USSR and current progress and proposals on the classification of local stratotypes in the USSR.

#### 4. REVIEW OF SDS WORK SINCE THE FRANKFURT MEETING

a. The Chairman reported that final documentation was still needed before the decision of the SDS regarding the base of the Emsian could be forwarded to the Commission on Stratigraphy. TM Yolkin agreed to assist in the speedy preparation of this.

b. It was reported that the preliminary postal voting on the preferred GSSP section for the Frasnian/Famennian boundary led to the decision that Coumiac should be chosen for the motion. The Final Postal Ballot was then held among Titular Members following the Rules. This resulted in the following voting pattern: Coumiac, 14 votes (11 Yes votes and 3 no replies); Steinbruch Schmidt, 6 votes; there were no abstentions. Voting was as follows. For Coumiac: Chlupac, Dineley, Feist, Garcia-Alcalde, Hou, House, Morzadec, Oliver, Pedder, Richardson, Talent; no replies counted under the rules as yes votes: Hünicken, Klapper, Yu. For Steinbruch Schmidt: Bultynck, Sandberg, Street, Walliser, Yolkin, Ziegler. This gives a 70% vote in favour of Coumiac. It was agreed that documents on Coumiac as the basal Famennian GSSP should be forwarded to the Commission on Stratigraphy. TM Ziegler commented that no conodont worker had voted for Coumiac, but TM House pointed out that Klapper had voted for Coumiac in the initial vote and correctly interpreted the rules that his action would be held to be a vote for Coumiac in the Final Postal Ballot: Coumiac obtained the majority vote of the Subcommittee.

#### 5. CURRENT TASKS

a. *Base of the Givetian*. The Chairman commented that this boundary had been the main purpose for the field work undertaken before the meeting and that he had asked certain members to introduce discussion by commenting on the merits of contender section.

**Ou Driss**. CM Weddige spoke on the 1987/1989 Bultynck proposal and the documentation of the section which Bultynck had published. He took the view that the Bou Tchrafine section was too condensed and the thicker Ou Driss section had the advantage of combined neritic and pelagic faunas as had been listed in the *Guidebook* (Document A). TM Feist had recognized *Cornuproetus* in the *Hemiansatus* level. Corals had been found in the boundary layers but were not yet identified. Goniatites of the Agoniatites vanuxemi Group had been identified in the field by CM Becker. For conodonts the section has the advantage of a more gradual documentation; *hemiansatus praecursor* occurs in three samples below the entry of *hemiansatus*. Hence there is a better and thicker sequence above the last *kockelianus* in Bed 12. The relevant parts of the section were fifteen times thicker than at Mech Irdane.

**Bou Tchrafine**. TM Garcia-Alcalde in reviewing the case for this section explained that the goniatite and the conodont faunas were good but the distinct shale/silt interval, as in other areas of Morocco, the Asturias and the Ardennes, illustrated the "event" by which the level may be correlated, even if the cause is as yet uncertain. Because of the facies change it is difficult to know whether the entry *hemiansatus* corresponds to the real entry in time. Since *hemiansatus* appears to start earlier in Mech Irdane there is a some uncertainty on its significance at Bou Tchrafine. But nowakiids close to *otomari* occur in shaly intervals near to the entry of *hemiansatus*. A well-developed Milankovitch Band microrhythmicity was noted.

**Mech Irdane**. TM Walliser was of the opinion that Ou Driss was an acceptable stratotype section. Mech Irdane lacked abundant neritic groups, especially brachiopods, but Mech Irdane clearly had the better pelagic and hemipelagic fauna. Mech Irdane had the advantage that there were several layers between the top of the *kockelianus* Zone and the beginning of non limestone sedimentation. There were few gaps in the deciding conodont lineages. The section was very fossiliferous for goniatites, trilobites (proetids according to TM Feist), some rugose corals, fish scales, many foraminiferans, ostracods and nautiloids. There were good sections of the Eifelian below and Givetian above.

CM Weddige drew attention to *corrections* needed in the *Guidebook* (Document A) for the Mech Irdane section: on p. 28, goniatite ranges should go up to the top of Bed 119 and *Polygnathus trigonicus* should only be shown ranging up to Bed 113.

In the discussion that followed TM Feist commented that with regard to trilobites Ou Driss appeared to be the shallower because cornuproetids are absent from deeper water levels. The large proetids with big eyes suggest that Mech Irdane lay at a deeper position. CM Becker remarked that goniatites of the *Agoniatites costulatus* Group entered below the event beds at Mech Irdane at Bed 112 (as found by Dr. Lelièvre) and at Bou Tchratine. *Tornoceras* is the significant newcomer above and at Mech Irdane Bed 130 other goniatites enter. TM House remarked that in New York State the type material of *Agon. costulatus* is from the Cherry Valley Limestone usually assigned to the *kockelianus* Zone, thus early occurrences in Morocco below the event level were to be expected and he spoke of the new abundant and varied faunas located at Mech Irdane and Bou Tchratine by TM Walliser. TM Garcia-Alcalde commented that nowakiids had been found at Mech Irdane but a longer time was needed to produce a richer fauna. CM Weddige viewed Mech Irdane as good for both goniatites and conodonts but it was not so good for workers on benthonic groups, but expected this information can be obtained by correlation.

It was proposed by TM Oliver and seconded by TM Ziegler "That the base of the Givetian should be defined at the base of BED 123 in the Mech Irdane section as outlined in Document A, p. 28 and that the guide level for the base of the Givetian be the entry of *hemiansatus* as defined by Document A, Plate 4, Fig. 2a,b."

In discussion it was stated by TM Ziegler that TM Bultynck had agreed with the assignments quoted. CM Sartenaer asked how close was the mentioned specimen to the type of the species and CM Weddige replied that it was very close.

The motion was put to the vote:-

TM's in favour: 10 votes (Feist, Garcia-Alcalde, House, Morzadec, Oliver, Pedder, J.B. Richardson, Walliser, Yolkin, Ziegler). TM's against: nil.

CMs in favour: six votes (Ashouri, Bensaïd, (Dahmanni voting by proxy), Becker, Brice, Weddige, Werner). CMs against: nil. CMs abstaining: 1 (Sartenaer).

Guests in favour: five votes; Guests against: nil. Guests abstaining: two.

Since there are twenty one TM's and only ten present, the unanimous vote of the TM's present did not give the 50% vote required but since there is only one candidate section it was *agreed* to proceed to a Full Postal Vote naming only Mech Irdane.

**B.Cabo la Vela Section.** TM Garcia-Alcalde introduced a paper on this section (Document B) showing that the sequence represented a transition between the lower and upper Emsian and the Daleje Event. In the report they demonstrated that a biological boundary using brachiopods, dactryconarids and other groups gave a Dalejan basal boundary higher than the Upper Emsian base in the neritic realm. He suggested that this suggested a new task to make a clear definition between the two substages.

TM Ziegler asked about the conodont evidence and TM Garcia-Alcalde replied that searches for conodonts had so far produced poor polygnathids only. TM House commented on the extreme length and duration of the Emsian which suggested a division would be useful and TM Walliser commented that this was also the old opinion of Solle but the Zlichovian and Dalejan were condensed carbonate sequences.

A discussion followed on appropriate procedure. TM Oliver thought that a Working Group might be appropriate to deal with this sort of problem but the Commission on Stratigraphy would not accept a formal submission for division at substage level. It was *agreed* that the matter should be left for future discussion and that written submissions should be invited on the subject.

## 6. FUTURE STRATEGY

There was further discussion on the paper introduced by TM House at the Frankfurt meeting (now revised as Document C) regarding future problems for the Subcommittee. It was *agreed* that non-marine/marine correlation was the major problem for the Devonian. TM House spoke to the earlier paper and suggested that themes like Seismic and Event Stratigraphy and Magnetostratigraphy should perhaps now be added. Prof. Crick recommended the production of correlation charts on a regional scale. TM Ziegler supported the production of regional correlation but considered the bioevents analysis not so important, and Milankovitch Band orbital forcing timescales might be taken over by the Commission on Numerical Stratigraphy. TM Walliser agreed that, now the first goals of boundary definition having been achieved by the SDS, the Commission on Stratigraphy should recommend on the priority of future goals. TM Oliver took the view that a statement should be made immediately. TM Ziegler strongly argued that the SDS should continue. TM Walliser considered that the Frankfurt document needed extending to include stratigraphy useful to field geologists, and embrace a holostratigraphy with the documentation of world-wide biological and sedimentologic events. CM Sartenaer thought the Commission on Stratigraphy would not support research, only terminology. He felt parastratotypes, and the recognition of boundary levels was the next step. He drew attention to the problem of the meaning and use of the term Strunian. TM Ziegler took the view that the Strunian was like the Siegenian, a local development and for local definition, but CM Sartenaer did not accept the comparison.

TM Oliver thought the matter similar to the Emsian subdivision and said that the 1973 aims given the SDS were to consider *any* stratigraphic problem of the Devonian: the series and stage definitions were only the first aim. TM Yolkin agreed that the first goal of a common language had been agreed but in the USSR there were different possibilities of subdivision; for example, the Emsian could conveniently be divided into three divisions. The new definitions provided a scale for correlation, not necessarily for rigid use. There were several problems in using SDS boundaries and a new Russian terminology is developing which will be presented in due course. The Chairman, TM Pedder asked for views on the Emsian problem to be presented at the next meeting; he considered the Subcommittee could not be responsible for local correlation and that this should be left to local geologists. He felt the non-marine/marine problem should be stressed and that pelagic-neritic correlations were important. It was *agreed* that the Secretary should modify the Frankfurt document in the light of the discussions and incorporate the revision in the Annual Report to the Commission on Stratigraphy with the request for guidance on priorities. [Document C represents the revised version submitted in December 1991 to the Commission on Stratigraphy].

## 7. MEMBERSHIP.

- a. There were no withdrawals from membership.
- b. TM Pedder said that he did not wish to continue as Chairman and TM House said that he was unable to continue as Secretary because of resource problems. TM Oliver was asked to set up a Nominating Committee to select the new Bureau.
- c. The large circulation remained a large financial commitment. The Secretary was asked to frame a letter for circulation such that no positive reply would mean deletion from the distribution list.
- d. Election of CMs. Dr. Susan Turner (The Queensland Museum, PO Box 300, Brisbane, Australia) and Prof. Carlton Brett (Department of Geological Sciences, University of Rochester, Rochester, New York 14627, USA) were elected *nem. con.*

## 8. REPORTS.

- a. SDS Newsletter. The financial grant did not provide sufficient funds for the printing and circulation of this. Prof. Rex Crick (Department of Geology, The University of Texas at Arlington, Box 19049, Arlington, Texas 76019-0049, USA) offered to arrange for the printing and circulation

of the Newsletter. This was *accepted* with pleasure. He asked for addition reports to those in hand to be submitted by 31 March.

b. Marine/non-marine Correlation. In the absence of CM Blieck, Dr. Lelièvre reported on activities. These were mainly related to the new IGCP Project 328 (Palaeozoic Microvertebrate Biochronology and Global marine/non-marine correlation) of which Susan Turner and Gavin Young had been appointed project leaders: they were in communication with the UNESCO Computer Committee regarding the assembly of a data base. A meeting was planned in Berlin in 1993 and in Paris in 1995. An Atlas of Microvertebrate remains.

The Secretary said that he had received a letter from Susan Turner seeking the support of the SDS and he had replied to say the SDS very much welcomed this development and that he considered the SDS would be happy to co-sponsor appropriate activities. The action was *endorsed* by the meeting. It was hoped that the proposal of Dr. Turner as a CM was intended to ensure the closest cooperation.

c. South American Activities.

There was no report from South America but TM Ziegler stated that he had been invited by TM Hünicken to a conodont meeting in Argentina to consider Silurian and some Devonian problems.

d. Finances.

The Chairman reported that no subvention had been received for the current year. At the beginning of the year the account stood at \$575. The secretarial expenses were \$225, leaving \$350 which would be used wholly to support a member from an unconvertible currency area.

## 9. FUTURE MEETINGS.

a. As had previously been agreed the next meeting would be held in Guilin on the occasion of the "International Symposium on the Devonian System and its Oil and Mineral Resources" (September 9-12, 1992) organised by the Geological Society of China, the Guangxi Association for Science and Technology and the Geological Society of Guangxi, a meeting which the SDS agreed to sponsor. IGCP Project 293 planned a Field Meeting on the Frasnian/Famennian boundary on 6-7 September and possibly 17-18 September also in Guilin. It seemed appropriate that the SDS hold its next Business Meeting on 8 September (Mr. Li Bao Shuo has since confirmed this will be arranged and that IGCP 328 would probably also meet during the symposium.)

## 10. ANY OTHER BUSINESS

There being no other business the Chairman thanked members and visitors for their attendance and closed the meeting.

Michael House, Secretary, December 1992

## APPENDIX; DOCUMENTS SUBMITTED TO THE RABAT MEETING 1991

### DOCUMENT A.

WALLISER, O.H. (Ed.). Guide-Book, Morocco Field Meeting of the Subcommittee on Devonian Stratigraphy, International Union of Geologist Sciences, Nov. 28-Dec. 5, 1991.

### DOCUMENT B.

TRYOLS-MASSONI, M. and J.L. GARCIA-ALCALDE. The Lower Emsian/Upper Emsian boundary at the Cabo la Vella (Arnao, Asturias, NW Spain). 6 pp.

### DOCUMENT C.

HOUSE, M.R. Outstanding Devonian stratigraphic problems requiring international cooperation. 2 pp.



# DOCUMENT RESULTING FROM A MEETING OF THE SUBCOMMISSION ON DEVONIAN STRATIGRAPHY, AND TRANSMITTED TO THE COMMISSION ON STRATIGRAPHY

## OUTSTANDING DEVONIAN STRATIGRAPHIC PROBLEMS REQUIRING INTERNATIONAL COOPERATION

The major task undertaken by the Subcommission on Devonian Stratigraphy (SDS) since 1973 has been related to the definition of series and stage boundaries. This work is now nearly complete, and now that international problems of terminology of the Devonian are large solved it is relevant to consider the major international stratigraphic problems, which are the main concern of the Commission on Stratigraphy, which might be pursued as next objectives by the SDS. This document is framed, following a meeting of SDS in December 1991, in a way to solicit advice from the Commission on how it considers future priorities. Because of the structure and composition of the SDS, it is quite the most formidable and informed group for advancing international issues where these require considerable precise stratigraphical expertise. Many general issues have been addressed in the IGCP programme, but these have generally had a great spread of interest through geologic time and have been able to deal with possible problems at the system level in only a superficial manner. Some of the major problems which remain for the Devonian are listed below and the question is raised as to which of these should receive especial attention.

### 1. MARINE/NON-MARINE CORRELATION

This is regarded by the SDS as the field requiring urgent attention because of the importance in the Devonian of non-marine sequences and the need to explain how the new marine terminology applies in such areas. Already cooperation is established with IGCP 328.

### 2. REGIONAL STRATIGRAPHIC CORRELATION

There is a need for internationally integrated regional reviews of Devonian terminology and correlation of rock sequences as a framework for general geological advance.

### 3. BIOLOGICAL STRATIGRAPHY

The work of the Subcommission has shown the importance of bioevents. The work on IGCP 216 has been too general to lead to international documentation of faunal and floral ranges over these events. This is required before the biological record and the environmental perturbations can be understood internationally.

### 4. RADIOMETRIC STRATIGRAPHY

Generally Devonian stratigraphers have regarded the radiometric time scale as too imprecise for practical use. The number of critical data are few, and most are subject to uncertainties. The SDS has agreed that it is only by specific collaboration with the Subcommission on Geochronology that this situation can be improved and has set in train supporting collaboration.

### 5. SEISMIC AND EUSTATIC STRATIGRAPHY.

Detailed collaboration is needed between seismic geophysicists and biostratigraphers to integrate facies changes and sea-level changes with the precision only possible with the biostratigraphic scale. The work of the SDS has shown the importance of global short-term sedimentary perturbations and integration with the burgeoning seismic work is essential to take advantage of the new techniques.

### 6. MILANKOVITCH-BAND STRATIGRAPHY.

The recognition of the role of orbital forcing in certain sequences gives the opportunity for revised time scale of significantly greater resolution than any available. The initial stage would be in the

estimation of the duration of stages and zones.

## 7. STRATIGRAPHIC DATA BASES

The desirability of centralized and accessible data basis for stratigraphic terminology, bibliography, and data retrieval is highly desirable. I would lead to a more numerical and analytical approach to stratigraphic studies but would only be appropriate for the SDS to consider if part of a broader project.

## 8. MAGNETOSTRATIGRAPHY.

This is an area of considerable potential values yet hardly touched on for the Devonian. Cooperation of specific studies in relation to GSSPs and standard stage sequences.

## 9. INTERNATIONAL PALAEOGEOGRAPHIC SYNTHESSES.

Great advances have been made in the construction of palaeogeographical maps but little coherent attempt has been made to assemble stratigraphic data on them. This now becomes possible for the Devonian with the establishment of an internationally recognized time scale.

## 10. SUMMARY.

The aim of this note has been to emphasize that the work of the SDS in boundary definition has provided only the framework for the study of the many outstanding international stratigraphic problems of the Devonian. Those of non-marine/marine correlation are conceded to be major. But it seems important that the SDS should draw the attention of the Commission on Stratigraphy and the IUGS to the major problems which now are open to it and to seek advice on subsequent priorities.

Michael House, Secretary of the Subcommission  
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December 1991

## CURRENT SDS MEMBERSHIP

The following is an alphabetical listing of the current membership. Please check your entry for accuracy and completeness, and, if possible supply telephone numbers for office or home and facsimile machines as appropriate and postal codes where missing to the Editor. The status of each member is indicated parenthetically where CM = Corresponding Member, HM = Honorary Member and TM = Titular Member.

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## DEVONIAN PUBLICATIONS

A backlog of publications touching on some aspect of the Devonian follows. These have been submitted over the past few years and the response from the membership is somewhat uneven. In the interest of expediency, entries are arranged here in alphabetical order and occur without diacritical marks. Apologies for errors which have escaped a cursory review. Corrections are appreciated. Supplements will be prepared from these and other publications pertaining to the Devonian presently contained within a data base of Devonian stratigraphy, biostratigraphy, paleontology, biogeography, etc. Supplements will be arranged by paleogeographic region, systematic category and stage/epoch interval, and will contain appropriate diacritical marks. Contributors and the membership may request a disk copy of the data base in a variety of formats. Contact Rex Crick for information.

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## PALEOBIOGEOGRAPHY: GLOBAL CHANGE AND EVOLUTION - A SYMPOSIUM

The symposium is part of the program of the North American Paleontological Convention (Chicago, 27 June - 2 July) and organized by Rex E. Crick, Christopher R. Scotese, and Anne Raymond with sponsorship by The Paleontological Society. The purpose of the symposium is to bring together a wide range of subject matter relating to paleobiogeography in order to showcase methods and future trends in the field. Acceptable papers will be published in one or two issues of the journal *Historical Biology*. The symposium program contains 21 papers, 10 invited and 11 contributed, and range from Cambrian trilobites through modern molluscs with a healthy mixture of plant, microinvertebrate, macroinvertebrate and vertebrate papers. Of interest to the SDS membership are four papers pertaining to the Devonian:

Crick, R.E., *The biogeographic nature of Paleozoic nautiloid cephalopods.*

House, M.R., *Palaeobiogeography and evolution of Late Palaeozoic Ammonoids.*

Klappert, G., *Biostratigraphy and biogeography of Frasnian, Upper Devonian conodonts.*

Young, G.C., *Paleobiogeography of Devonian vertebrates.*

## PALEOMAP PROJECT - UT-ARLINGTON

Dr. C.R. Scotese has recently completed a major revision and expansion of his Paleogeographic Atlas for the Phanerozoic which should be available for purchase later in 1992. Maps were produced by the combined efforts of the PALEOMAP Project (International Lithosphere Program) and Mobil Exploration and Production Services. These 28 paleogeographic reconstructions illustrate the changing configuration of mountains, land, shallow seas, and deep ocean basins during the last 545 million years. Active plate boundaries such as spreading centers and subduction zones, are also shown. All age assignments are based on the Decade of North American Geology timescale. The maps use color to distinguish areal relationships among ocean, shelf, orogenic and emergent areas. A reduced version of the Middle Devonian (377 MA) map from the Atlas is reproduced below.

These 28 maps and their standard counterparts, showing only the outline of landmasses, are available individually in color, black & white, digital form and 35 mm slide for a nominal charge. Inquiries can be addressed to

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