

## SUBCOMMISSION ON PERMIAN STRATIGRAPHY

ANNUAL REPORT 2004

### 1. TITLE OF CONSTITUENT BODY and NAME OF REPORTER

International Subcommittee on Permian Stratigraphy (SPS)

#### *SUBMITTED BY:*

Charles M. Henderson, Chairman SPS

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### 2. OVERALL OBJECTIVES, AND FIT WITHIN IUGS SCIENCE POLICY

**Subcommission Objectives:** The Subcommittee's primary objective is to define the series and stages of the Permian, by means of internationally agreed GSSP's, and to provide the international forum for scientific discussion and interchange on all aspects of the Permian, but specifically on refined regional correlations.

**Fit within IUGS Science Policy:** The objectives of the Subcommittee involve two main aspects of IUGS policy:

1. The development of an internationally agreed chronostratigraphic scale with units defined by GSSP's where appropriate and related to a hierarchy of units to maximize relative time resolution within the Permian System; and
2. Establishment of frameworks and systems to encourage international collaboration in understanding the evolution of the Earth during the Permian Period.

### 3. ORGANIZATION

The Subcommittee has an Executive consisting of a Chairman, a Vice-Chairman, and a Secretary; all three are Voting Members of the Subcommittee. These three executive positions are new as of the IGC meeting in Florence in August 2004. There are sixteen total Voting Members representing most regions of the world where Permian rocks are exposed.

The objectives of the Subcommittee are pursued by both stratigraphic and thematic Working Groups that are disbanded upon completion of their directed task. For example, the Working Groups on the Carboniferous-Permian Boundary, on the Guadalupian stages (Middle Permian), and on the base-Lopingian boundary (base-Wuchiapingian Stage) have been disbanded on the successful establishment of their defining GSSP's and ratification by IUGS. The current working groups include the following: 1. Cisuralian stages, 2. base-Changhsingian Stage, 3. Continental Permian, 4. Transitional biotas as gateways for global correlation, and 5. Neotethys, Palaeotethys, and S. China intraplateau basin correlation. The Subcommittee also supports a special project titled "The Permian: from glaciation to global warming and mass extinction".

#### 3a. Officers for 2004-2008:

Chair: Professor Charles M. Henderson, University of Calgary

Vice-Chair: Dr. Vladimir Davydov, Boise State University

Secretary: Dr. Shuzhong Shen, Nanjing Institute of Geology and Palaeontology

SPS website is located at <http://pri.boisestate.edu/Permophiles/>. This site includes numerous back issues of *Permophiles* in downloadable PDF format. A link to *Permophiles* and Permian research has also been established at <http://www.geo.ucalgary.ca/asrg>.

### 4. INTERFACES WITH OTHER INTERNATIONAL PROJECTS

SPS interacts with many international projects on formal and informal levels. SPS is taking an active role on the development of integrated chronostratigraphic databases by participating with CHRONOS, which is an NSF funded initiative. Bruce Wardlaw (SPS Past-Chairman) is concentrating on the Permian-Triassic Time Slice Project and the development of improved taxonomic dictionaries, database sharing and manipulation associated with this CHRONOS project and PALEOSTRAT. SPS is active with IGCP Project 359: Correlation of Tethyan Circum-Pacific and marginal Gondwanan Permian-Triassic and the Permian Research Group of SE Asia. SPS is also involved in a drilling project of the Permian-Triassic boundary at Meishan, China; this project is an international collaboration investigating the signature and causes of the P-T extinction. SPS is also co-sponsoring meetings on Triassic Chronostratigraphy and Biotic Recovery in Chaohu, China in May 2005 and on the Nonmarine Permian in Albuquerque, New Mexico in October 2005.

#### 5. CHIEF ACCOMPLISHMENTS AND PRODUCTS IN 2004

**GSSP's:** The proposal for the base-Lopingian (base-Wuchiapingian) was ratified by ICS and IUGS in 2004. The proposal for the base-Changhsingian was voted and ratified by SPS in 2004 and will be distributed during late 2004 to ICS for voting.

**Publications:** The December 2003 issue of *Pemphiles* (#43) was produced at Reston, Virginia in February 2004 and distributed to a mailing list of 280 from the University of Calgary later in the year. The June/December 2004 issue of *Pemphiles* (#44) was produced at Pend Oreille, Idaho during October 2004 and was distributed in December 2004 from the University of Calgary.

**Meetings:** The SPS conducted its annual business meeting at the IGC meeting in Florence, Italy on August 23, 2004 with 23 people in attendance. This business meeting was preceded by a session on "The Lower Permian Cisuralian Stages" co-chaired by Boris Chuvashov and Charles Henderson. This was a successful session with six oral presentations and several posters that demonstrated clear progress in the definitions for the Cisuralian stages. Abstracts for these papers appear in *Pemphiles* issue #44.

**Membership:** During the past year the voting membership of SPS has seen considerable renewal. We have a completely new executive (see 3a above) and six new voting members. In order to allow this renewal, a few members were asked to retire their voting status. The SPS executive has decided to name a new membership category, Honourary Members, to reflect the significant past and continuing contributions of these retiring voting members. The first Honourary Members are Professors Brian Glenister, Heinz Kozur, and Claude Spinosa. Honourary Members will receive GSSP proposals and be invited to comment on the merits of the proposal, but they will not vote on the proposal. The comments of Honourary Members will be included in subsequent versions of the proposal.

#### 6. CHIEF PROBLEMS ENCOUNTERED IN 2004

There were no major problems in 2004. Only one issue of *Pemphiles* was produced in 2004 partly as a result of the turnover of the executive and partly as a cost-reduction measure because expenses have exceeded income on the past few issues. Two issues will be produced in 2005 and reduced costs will be achieved by sending some of these as pdf's; paper issues will continue to be mailed to those individuals and institutions that have so requested.

#### 7. SUMMARY OF EXPENDITURES IN 2004 (ANTICIPATED THROUGH MARCH 2005):

##### INCOME

Donations: \$ 500.00  
University of Calgary support: \$3,500.00  
U.S. Geol. Survey support: \$2,000.00  
ICS: \$1,000.00

**TOTAL: \$7,000.00** (quoted in US\$ using .84 as the conversion from Canadian\$)

##### EXPENDITURES:

Printing and Mailing of *Pemphiles*: \$1,850.00  
Travel support for *Pemphiles* Production: \$1,200.00  
Support for travel for SPS sponsored international meetings and fieldwork: \$4,350.00

**TOTAL: \$7,400.00** (quoted in US\$ using .84 as the conversion from Canadian\$)

**BALANCE: -\$400.00**

#### 8. WORK PLAN, CRITICAL MILESTONES, ANTICIPATED RESULTS AND COMMUNICATIONS TO BE ACHIEVED NEXT YEAR (2005):

1. Ratification by ICS and IUGS on the base-Changhsingian GSSP.

2. Votes by Cisuralian Working Group on base-Sakmarian and base-Kungurian GSSP's.
3. Completion of proposal by Cisuralian Working Group on base-Artinskian GSSP.
4. Possible working group excursion to Cisuralian GSSP localities in either 2005 or 2006.
5. SPS vote on base-Sakmarian GSSP.
6. Production of two issues of *Permophiles* (#45 and #46 in June and December 2005).
7. Participation in the Triassic Chronostratigraphy and Biotic Recovery meeting in Chaohu, China, May 23-25, 2005.
8. Participation and annual business meeting at the Nonmarine Permian meeting in Albuquerque, New Mexico, Oct. 21-29, 2005.

#### 9. BUDGET AND ICS COMPONENT FOR 2005

Cisuralian Working Group Field Excursion	\$3,000.00
Cisuralian GSSP production and dispersal	\$ 500.00
Annual Business Meeting, Albuquerque	\$2,500.00
SPS Participation at Chaohu, China	\$2,100.00
<i>Permophiles</i> printing and postage	\$1,900.00
<i>Permophiles</i> travel (will coincide with 2 meetings above)	\$ 0.00

**TOTAL 2005 BUDGET            \$10,000.00**

Support from University of Calgary (Henderson)	\$3,500.00
Support from NSF China (Shen)	\$1,500.00
Anticipated donations from <i>Permophiles</i>	\$ 600.00

**TOTAL BUDGET REQUEST (ICS)   \$1,400.00**

#### 10. REVIEW CHIEF ACCOMPLISHMENTS OVER PAST FIVE YEARS (2000-2004)

The SPS has approved the general divisions of the Permian and has now had 5 GSSP's ratified by ICS and IUGS (Asselian, Roadian, Wordian, Capitanian, Wuchiapingian). A 6<sup>th</sup> GSSP (base-Changhsingian) was voted 94% in favour during the summer of 2004 by SPS voting members and will be distributed to ICS during late 2004. Support for documentation (fieldwork and publications) of the various chronostratigraphic methods for the establishment of the GSSP's has been the most outstanding and differentiating character of this Subcommittee. *Permophiles* has become an internationally respected newsletter and bears an ISSN designation (1684-5927) and is deposited in the National Library of Canada. See Accomplishments in 2004 (above) for additional details.

#### 11. OBJECTIVES AND WORK PLAN FOR NEXT 5 YEARS (2004-2008)

The primary objective is to complete the GSSP process by 2008. We currently anticipate that the last three GSSP's (Sakmarian, Artinskian, and Kungurian) should be ratified by 2006 or early 2007.

1. A vote by SPS on the Sakmarian proposal will be conducted during 2005.
2. A vote by SPS on the Kungurian should be ready for early 2006.
3. A vote by SPS on the Artinskian is anticipated during late 2006.

Once this process is completed SPS will shift focus toward three directions: 1. correlations into Continental deposits, 2. correlations across provincial boundaries and within the Tethys region, 3. detailed documentation of the geologic evolution of the Earth during the Permian with respect to the established chronostratigraphic framework.

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#### APPENDIX

##### Officers and Voting Members

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**List of Working Groups and their officers**

1. Cisuralian stages; Chairman is **Boris Chuvashov**
2. base-Changhsingian Stage; Chairman is **Yugan Jin**
3. Continental Permian Correlations; Chairman is **Joerg Schneider**
4. Transitional biotas as gateways for global correlation; Chairman is **Guang Shi**
5. Neotethys, Palaeotethys, and S. China intraplate basin correlation; Co-Chairmen are **Vladimir Davydov** and **Heinz Kozur**.