

**International Commission on Stratigraphy
Subcommission on Permian Stratigraphy
ANNUAL REPORT 2005**

1. TITLE OF CONSTITUENT BODY

International Subcommission on Permian Stratigraphy (SPS)

Submitted by:

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2. OVERALL OBJECTIVES, AND FIT WITHIN IUGS SCIENCE POLICY

The Subcommission's primary objective is to define the series and stages of the Permian, by means of internationally agreed GSSPs, 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 Subcommission involve two main aspects of IUGS policy:

1. The development of an internationally agreed chronostratigraphic scale with units defined by GSSPs 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 Subcommission has an Executive consisting of a Chairman, a Vice-Chairman, and a Secretary; all three are Voting Members of the Subcommission. 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 Subcommission 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), on the base-Lopingian boundary (base-Wuchiapingian Stage), and on base-Changhsingian have been disbanded on the successful establishment of their defining GSSP's and ratification by IUGS.

The current working groups include:

1. Cisuralian stages
2. Continental Permian
3. Transitional biotas as gateways for global correlation
4. Neotethys, Palaeotethys, and S. China intraplateau basin correlation

The Subcommission also supports a special project titled "*The Permian: from glaciation to global warming and mass extinction*".

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

Website: <http://www.nigpas.ac.cn/permian/web/index.asp>. This site includes all back issues of *Permophiles* in downloadable PDF format (#1 in 1978 to #46 Dec. 2005). Links to *Permophiles*/Permian research have also been established at <http://pri.boisestate.edu/> and <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 and

PALEOSTRAT, which are NSF funded initiatives. Bruce Wardlaw and Vladimir Davydov are concentrating on the Permian-Triassic Time Slice Project and the development of improved taxonomic dictionaries, database sharing and manipulation with PALEOSTRAT. SPS is also involved in core study from 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 co-sponsored 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 and will meet at the *2nd International Palaeontology Congress* in Beijing, China in June 2006.

5. CHIEF ACCOMPLISHMENTS AND PRODUCTS IN 2005

GSSP's: The proposal for the base-Changhsingian was voted and ratified by ICS/IUGS in 2005.

Publications: The June 2005 issue of *Permophiles* (#45) was produced at Nanjing China during June 2005 and distributed to a mailing list of 280. The December 2005 issue of *Permophiles* (#46) was produced at the University of Calgary during November 2005 and distributed as a pdf on our website. In addition the remaining back issues of *Permophiles* were scanned and added to our website providing a complete series of communications by Permophiles since 1978.

Meetings: The SPS conducted two business meetings in 2005 including at the Triassic Chronostratigraphy and Biotic Recovery meeting in Chaohu, China on May 23, 2005 with 27 in attendance and at the Non-marine Permian Conference at Albuquerque New Mexico on Oct. 23, 2005 with 28 in attendance. This latter conference was organized by Spencer Lucas and was very successful with 68 people in attendance from 12 countries.

Membership: Significant changes were made to our voting membership in 2004, but only one change in voting membership occurred in 2005. Professor Giuseppe Cassinis of Italy retired as a voting member and Dr. Marc Durand of Universite de Nancy, France was voted by the executive as a replacement. The SPS executive created a new membership category in 2004, Honourary Members, to reflect the significant past and continuing contributions of some retiring voting members. Professor Cassinis was added to that list in 2005. 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 revisions suggested by Honourary Members will be included in subsequent versions of the proposal.

6. CHIEF PROBLEMS ENCOUNTERED IN 2005

There were no major problems in 2005.

7. SUMMARY OF EXPENDITURES IN 2005 (ANTICIPATED THROUGH MARCH 2006):

INCOME

Donations: \$ 600

University of Calgary support (1): \$4,500

NIGPAS (2): \$1,000

ICS (3): \$ 900

TOTAL: \$7,000 (quoted in US\$ using 0.84 as the conversion from Canadian\$)

(1) University of Calgary support from NSERC grant to Charles Henderson.

(2) NIGPAS (Nanjing Institute of Geology and Palaeontology) support from NSF-C grant to Shuzhong Shen.

(3) University account includes revenue from ICS and donations minus printing and postage. Current balance is a deficit of \$245.49 CAN (\$207US).

EXPENDITURES:

Printing and Mailing of *Permophiles* (1): \$1,707.00

Travel support for *Permophiles* Production (2): \$1,000.00

Support for travel for SPS sponsored international meetings and fieldwork (3): \$4,500.00

TOTAL: \$7,207.00 (quoted in US\$ using .84 as the conversion from Canadian\$)

BALANCE: -\$207.00

- (1) paid by donations and ICS support
- (2) Shen to Calgary
- (3) Henderson to Chaohu and Nanjing China and Albuquerque NM

8. WORK PLAN, CRITICAL MILESTONES, ANTICIPATED RESULTS AND COMMUNICATIONS TO BE ACHIEVED NEXT YEAR (2006):

1. Cisuralian Working Group Workshop to be conducted in July 24-August 4, 2006.
2. Analysis of samples collected by working group in #1.
3. Preparation of proposal by Cisuralian Working Group on base-Sakmarian GSSP.
4. Production of *Permophiles* #47 in Nanjing during June 2006.
5. Business meeting to be held during IPC in Beijing June 2006.
6. Production of *Permophiles* #48 in Calgary during November 2006.

9. BUDGET AND ICS COMPONENT FOR 2006

Cisuralian Working Group Field Excursion (1) \$34,000
Annual Business Meeting, Beijing, IPC (2) \$ 2,500
Permophiles and GSSP printing and postage \$ 1,900
Permophiles travel (3) \$ 1,000

TOTAL 2006 BUDGET \$40,000

Support from University of Calgary (Henderson; NSERC) \$ 5,000
Support from NIGPAS (Shen; NSF-C) \$ 3,000
Fieldtrip Participants to form Cisuralian Working Group \$30,000
Anticipated donations for *Permophiles* \$ 600

TOTAL BUDGET REQUEST (ICS) \$ 1,400

- (1) Based on \$800.00/participant internal costs in Russia for 20 participants (includes Russians) and average airfare of \$1,200 times 15 international participants.
- (2) Cost of travel to IPC meeting for Executive
- (3) Cost of Shen travel to Calgary in November

10. REVIEW CHIEF ACCOMPLISHMENTS OVER PAST 5 YEARS (2001-2005)

The SPS has approved the general divisions of the Permian and has now had 6 GSSP's ratified by ICS and IUGS (Asselian, Roadian, Wordian, Capitanian, Wuchiapingian, Changhsingian). 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 Subcommission. *Permophiles* has become an internationally respected newsletter and bears an ISSN designation (1684-5927) and is deposited in the National Library of Canada; nine issues were published during the five-year period. *See Accomplishments in 2005 (above) for additional details.*

11. OBJECTIVES AND WORK PLAN FOR NEXT 4 YEARS (2005-2008)

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 2007. In order to achieve this, the SPS executive is preparing an International Workshop for July 24-August 4, 2006 at the probable Cisuralian GSSP sites along the west flank of the Urals. This field workshop will be limited to twenty researchers and they will be charged with completing analysis of new samples and producing first drafts of GSSP proposals by early to mid-2007. New samples will document geochemical signatures and augment extensive geochronologic work, and conodont samples will highlight the accessibility of the sections and reproducibility of the chosen potential points. The trip will end at Aidaralash, Kazakhstan to celebrate the production of a permanent display for the base-Permian GSSP. We anticipate the following schedule:

1. A vote by SPS on the **Sakmarian** proposal may be conducted during early 2007.

2. A vote by SPS on the **Artinskian** is anticipated during late 2007.
 3. A vote by SPS on the **Kungurian** is anticipated during late 2007.
- 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.

Names and Addresses of Current Officers and Voting Members, 2004-2008

SUBCOMMISSION ON PERMIAN STRATIGRAPHY

Officers and Voting Members

Dr. Boris I. Chuvashov

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Prof. Claude Spinosa

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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 intraplateau basin correlation; Co-Chairmen are **Vladimir Davydov** and **Heinz Kozur**.