

Sardar Formation which seems to postdate the Gzhelian in this area, and for the calibration of the conodont based age with the fusulinid based age of the basal Bagh-e-Vang Member.

Future issues of Permophiles

The next issue of Permophiles will be the 63th issue.

Contributions from Permian workers are very important to move Permian studies forward and to improve correlation and the resolution of the Permian Timescale, so I kindly invite our colleagues in the Permian community to contribute papers, reports, comments and communications.

The deadline for submission to **Issue 63** is **1st June, 2016**. Manuscripts and figures can be submitted via email address (lucia.angiolini@unimi.it) as attachments.

To format the manuscripts, please follow the TEMPLATE that you can find on the new SPS webpage at <http://permian.stratigraphy.org/> under Publications.

We welcome your contributions and advices to improve the webpage as we move forward.

Notes from the SPS Chair

Shuzhong Shen

Time is flying and the year 2016 comes to us quickly. This is a time when all worries and sorrows are left behind and the only rule is to be merry and celebrate. On behalf of the Permian Subcommittee on Stratigraphy, I would thank our Vice-Chair Joerg Schneider and Secretary Lucia Angiolini for their very hard work during the last four years; thanks are also given to other 14 voting members and all other colleagues in the Permian community for their support and contributions to the Permian studies and Permophiles. So far, we have published more than 62 issues. The term of the current SPS executive committee will end in middle August, 2016 when the International Geological Congress held in Cape Town, South Africa. A ballot prepared by SPS former chair Charles Henderson was sent to the 14 SPS voting members (Joerg Schneider, Lucia Angiolini and myself are not included) and 5 honorary members asking whether they supported a second term for the current executive committee. The results indicate that the SPS executive has been elected to a second term. I would thank Charles Henderson for organizing such an important procedure. According to the ICS rule, some of our voting members will be replaced too, please let us know if you have candidates who are actively involved in the Permian community.

We are slow to finish the remaining Cisuralian GSSPs in the Permian System. During the XVIII International Congress on the Carboniferous and Permian Stratigraphy held in 2015 in Kazan, Russia and the pre-congress field excursion in southern Urals, I presented to all participants the main pitfalls of the potential GSSP candidate sections in southern Urals, Russia. I agree that the Sakmarian-base candidate at Usolka is good because it has excellent exposure, and contains abundant conodonts, some fusulinids and ash beds which were precisely dated by Ramezani Jahan, Mark Schmitz and Vladimir Davydov. Chemostratigraphy is also available at the Usolka section. However, the candidates for

the Artinskian-base at Dalny Tulkas and the Kungurian-base at Mechetlino Quarry and Mechetlino sections are heavily covered by weathered deposits, and the outcrops are not thick enough to serve as as GSSPs. I am very glad to see that our Russian colleagues immediately organized a meeting during the ICCP 2015 to discuss how to solve the natural pitfalls of the sections. I hope that the excavation of the Mechetlino Quarry section and the Dalny Tulkas section will be completed soon, so international colleagues can go to those sections to investigate more about the conodont biostratigraphy and chemostratigraphy in the near future. I also hope we can move forward to the voting for the Sakmarian-base GSSP candidate at Usolka shortly, after Valery Chernyk provides me more conodont data from the Usolka section. We need more data preparation for the proposal of the Sakmarian-base GSSP candidate before we can send out for voting.

I would like to thank Jonena Hearst and Lance Lambert for their guidance and support for the field work on the Guadalupian Series in the Guadalupe National Park in West Texas, and Bruce Wardlaw for his very useful discussion on the conodonts from the sections. As a part of the GSSP work, we have organized two trips to collect samples from the GSSP sections. So far, the official papers on the three Guadalupian GSSPs, which are usually published on Episodes, have not been published yet.

I would also thank Joerg Schneider for his great efforts to organize the joint working group of the Carboniferous-Permian marine and non-marine correlation around the Carboniferous-Permian transition. I hope more and more colleagues will be interested to join in this working group.

In addition, Spencer Lucas and I have organized a Special Publication of the Geological Society of London on "The Permian Timescale." This special volume will bring together state-of-the-art reviews of the non-biostratigraphical and biostratigraphical data that are used to define and correlate Permian time intervals, present comprehensive analyses of Permian radio-isotopic ages, magnetostratigraphy, isotope-based stratigraphy and timescale-relevant marine and non-marine biostratigraphy. We expect this publication before the end of 2016.

Finally, I wish all colleagues a happy, healthy and prosperous 2016!

SUBCOMMISSION ON PERMIAN STRATIGRAPHY ANNUAL REPORT 2015

1. TITLE OF CONSTITUENT BODY and NAME OF REPORTER

International Subcommittee on Permian Stratigraphy (SPS)

Submitted by:

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2. OVERALL OBJECTIVES, AND FIT WITHIN IUGS SCIENCE POLICY

Subcommission Objectives: The Subcommission'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 Subcommission 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 framework and systems to encourage international collaboration in understanding the evolution of the Earth during the Permian Period.

3a. CHIEF ACCOMPLISHMENTS AND PRODUCTS IN 2014

The proposals of the Sakmarian-base and Artinskian-base GSSPs have been published in Permophiles (Issue 58). After the proposals were published, we received a couple of comments and discussions on the conodont taxonomy for the index species and quality of the sections from the working group members, which have also been published in the subsequent Permophiles 59. Since discrepancies on the taxonomy of conodonts and selection of the conodont index species for the definition of the two GSSPs are present in the working group, a special workshop on these issues were discussed in a business meeting during the ICCP 2015 in Kazan. The Russian Stratigraphic Committee agreed to excavate the sections and organize another joint field excursion during 2016.

In addition, we organized an international group to do the second joint field excursion on the Guadalupian Series in West Texas in April, 2015. During this field excursion more than 800 kg samples were collected for conodont and high-resolution geochemical analyses. Seven ash bed samples were collected.

3b List of major publications of subcommission work (books, special volumes, key scientific paper)

Three issues of Permophiles (Issues 60, 61 and 61 suppl.) have been published since June, 2014.

An updated Permian timescale has been published in the proceeding volume of STRATI 2013 by Shen and Henderson (2014). A special issue titled "The Permian Timescale" has been organized by Spencer Lucas and Shuzhong Shen. This will be published on Geological Society of London, Special Publications in 2016.

3c. Problems encountered, if appropriate

We have encountered problems that discrepancies in conodont taxonomy and selection of the index species of the two proposals for Sakmarian-base and Artinskian-base GSSPs are present. The section for the Kungurian-base GSSP in southern Urals is still too short as a GSSP section. The Russian Stratigraphic Committee promised to excavate the section as soon as possible.

We also met a problem for the Lopingian-base GSSP which will be flooded after a dam established in 5 years for electronic power in the downstream of the Hongshui River in Guangxi, South China. We have extensively discussed with the

local government and a detailed plan for searching the replacement of the GSSP section nearby the GSSP has been made. Field work to search replacement section in South China was carried out too during 2015.

4a. OBJECTIVES AND WORK PLAN FOR NEXT YEAR (2015)

The primary objectives are to complete the last three GSSPs (Sakmarian, Artinskian, and Kungurian stages). The Russian Stratigraphic Committee has made a plan to excavate the section, then SPS will organize an international joint field excursion to collect various samples. In addition, the chair of the Sakmarian-base GSSP Working Group, Valery Chernyk, has agreed during the ICCP 2015 in Kazan to provide the detailed taxonomic data for the section to complete the GSSP proposal for voting soon.

4b. Specific GSSP Focus for 2015

The priority of 2015 for GSSP is to send the Sakmarian-base GSSP proposal for voting in the Working Group and SPS.

5. SUMMARY OF EXPENDITURES IN 2015

- 1) As planned in the Annual Report 2014, a field excursion on the three potential GSSP sections in southern Urals was organized by Valery Chernyk (18th ICCP) partly under the support of SPS. We invited all voting members to attend the field excursion, six voting members finally attended the excursion, four of them are supported by SPS (1980 US\$). In addition, we also supported the vice-chair for his field trip to the terrestrial PTB sections in Kazan (440 US\$)
- 2) A session and an SPS business meeting on the Permian GSSPs were organized during the 18th ICCP meeting (580.54US\$).
- 3) Supporting a part of Lucia Angiolini's stay in Nanjing in May, 2015 and editing Permophiles (US\$1000).
- 4) A second field excursion for the three GSSPs of the Guadalupian Series in the Guadalupe National Park was organized in April. This costed a lot of money which is mostly covered by Shuzhong Shen's project, approximately 1000US\$ was used for the field trip.

6. BUDGET REQUESTS AND ICS COMPONENT FOR 2016

1. Shuzhong Shen will organize a session in the 35th IGC which will be held at Cap Town, South Africa and attend the ICS business meeting during the 35th IGC. This will cost more than US\$2000. It depends upon how much ICS will support to cover his trip to Cap Town.
2. SPS secretary Lucia Angiolini will be invited to Nanjing to edit the next Permophiles and work on the proposal for the three Cisuralian GSSP proposals (1000US\$).
3. A working group led by Valery Chernykh will excavate the Kungurian-base and Artinskian-base GSSP sections in southern Urals. The Working Group will invite SPS voting members to work on those sections. SPS will partly support this important activity with a total amount (US\$2000).
4. A workshop organized by the Marine and non-marine Working Group (Joerg Schneider) will be held in the late 2016. SPS will try to support this workshop for 1000US\$ depending upon how much ICS will support SPS.

In total: **US\$6000**

APPENDICES

7. CHIEF ACCOMPLISHMENTS OVER PAST FIVE YEARS (2010-2015)

- 1) A new SPS website has been established.
- 2) Three GSSP bronze markers have been placed on the GSSPs in the Guadalupe National Park in USA.
- 3) A high-resolution timescale of the Permian system has been significantly refined (see SPS webpage Permian Timescale).
- 4) SPS decided to search new GSSP candidate for the Kungurian Stage after an investigation on the previous candidates. Now two candidates for the Kungurian-base GSSP are available, but further work is necessary before a voting process is conducted.
- 5) Significant progress on the Sakmarian-base and Artinskian-base GSSP candidates has been made. Proposals for voting have been published and extensively discussed.
- 6) Two monuments have been built and a protected area has been established at Penglaitan, Laibin, Guangxi Province, China for the Wuchiapingian-base GSSP.
- 7) Seven formal issues and three supplementary issues of Permophiles have been published since 2010.
- 8) A Working Group on the Carboniferous-Permian transition between marine and non-marine sequences has been organized in 2015.

8. OBJECTIVES AND WORK PLAN FOR NEXT 4 YEARS (2015-2019)

- 1) Publishing the revised version of the proposals, organizing the field excursions and establishing the three (at least two) GSSPs for the Cisuralian.
- 2) Continue to work on the Guadalupian and global correlation for chemostratigraphy and geochronologic calibration. Publish the official papers for the three Guadalupian GSSPs.
- 3) Searching the replacement of the Lopingian-base GSSP nearby the stratotype section at Penglaitan, Guangxi, South China because the original will be flooded in 5-10 years by a dam for electronic power.
- 4) Developing a large working group on the correlation between marine and continental sequences. This has already been organized.

9. ORGANIZATION AND SUBCOMMISSION MEMBERSHIP

9a Names and Addresses of Current Officers and Voting Members

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