

SUBCOMMISSION ON PERMIAN STRATIGRAPHY ANNUAL REPORT 2023

1. TITLE OF CONSTITUENT BODY and NAME OF REPORTER

International Subcommittee on Permian Stratigraphy (SPS)

Submitted by: Lucia Angiolini, SPS Chair

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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 GSSPs and establish a high-resolution temporal framework based on multidisciplinary (biostratigraphical, geochronologic, chemostratigraphical, magnetostratigraphical etc.) approaches, and to provide the international forum for scientific discussion and interchange on all aspects of the Permian, but specifically on refined intercontinental and 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 GSSPs where appropriate and related to a hierarchy of units to maximize relative time resolution within the Permian System; and 2) the establishment of framework and systems to encourage international collaboration in understanding the evolution of the Earth and life during the Permian Period.

3. ORGANISATION - interface with other international projects / groups

3a. Officers for 2020-2024 period:

Prof. Lucia Angiolini (SPS Chair)

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Prof. Michael H. Stephenson (SPS Vice-chair)

British Geological Survey. Keyworth, Nottingham NG12 5GG, and Stephenson Geoscience Consulting, Keyworth, Nottingham, NG12 5HU, United Kingdom, E-mail: mikepalyno@me.com

Prof. Yichun Zhang (SPS Secretary)

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4. EXTENT OF NATIONAL/REGIONAL/GLOBAL SUPPORT FROM SOURCES OTHER THAN IUGS

Shuzhong Shen and Michael Stephenson are investigating the possibility of support for SPS through the Deep-time Digital Earth (DDE) Big Science Program of IUGS focused on informatics support for biostratigraphic data management and palaeogeographic reconstructions.

5. CHIEF ACCOMPLISHMENTS IN 2023 (including any relevant publications arising from ICS working groups)

- The redefinition the Global Stratotype Section and Point (GSSP) for the base of the Wuchiapingian Stage (and Lopingian Series) was ratified by the IUGS Executive

Committee on 24 July 2023.

- A Standard Auxiliary Boundary Stratotype (SABS) for the base of the Wuchiapingian Stage at the Fengshan Section, China, was approved by SPS on 16 April 2023.
- The paper "Proposal for the Global Stratotype Section and Point (GSSP) for the base-Artinskian Stage (Lower Permian)" by Chernykh et al. was published online in *Episodes*, June 15, 2023.
- The paper "Redefinition of the Global Stratotype Section and Point (GSSP) and new Standard Auxiliary Boundary Stratotype (SABS) for the base of Wuchiapingian Stage (Lopingian Series, Permian) in South China" by Shen et al. was published online in *Episodes*, November 1, 2023.
- Four new voting members were selected based on their extensive research in Permian stratigraphy (Neil Griffis, USA; Hana Jurikova, United Kingdom; Lorenzo Marchetti, Germany; Michael Read, USA). A Newsletter Editor has been invited (Elizabeth Weldon, Australia).
- A new Working Group was organized: Kungurian-base GSSP Working Group.
- The Permian Time Scale was kept updated <https://permian.stratigraphy.org/gssps>, the SPS website was kept updated, and two issues of *Permophiles* were published (SPS Newsletters *Permophiles* 74 and 75, the latter a special issue with "Permian Perspectives").
- Two webinars were organized, one on The IUGS Deep-time Digital Earth Program by Stephenson and one on Progress, problems and perspectives for the base-Roadian and base-Wordian GSSPs by Shen & Henderson (<https://permian.stratigraphy.org/interest>).

6. SUMMARY OF EXPENDITURE IN 2023

The amount received from ICS was spent for literature compilation, for the Standard Pro Annual ZOOM license for SPS, to support the participation to the STRATI 2023 Congress in Lille of two early career SPS corresponding members, and for funding two research projects of young SPS corresponding members on Permian topics.

The participation of Lucia Angiolini to STRATI 2023 was supported by the Organizing Committee of the STRATI 2023 Congress as she was invited to give a Plenary Talk; only subordinately SPS funds were used to support part of the field excursion expenses.

The field-trip to the Rockland section (Nevada), base Kungurian GSSP candidate, was postponed to 2024.

7. SUMMARY OF INCOME IN 2023

An amount of Euros 3262,56 euros was allocated from ICS in June 2023.

8. BUDGET REQUESTED FROM ICS IN 2024***

We apply for 4500 US\$ from ICS for SPS activities in 2024. This will be mainly for the activities to establish the base-Kungurian GSSP at Rockland, Nevada and to organize a field trip in the area,

9. WORK PLAN, CRITICAL MILESTONES, ANTICIPATED RESULTS AND COMMUNICATIONS TO BE ACHIEVED NEXT YEAR:

- We plan to have the proposal of the base Kungurian GSSP published in *Permophiles* and voted by SPS voting members.
- We plan to start the revision of the Guadalupian base Roadian and base Wordian GSSPs.

- We plan to organize several webinars.
- We plan to support the activity of the working groups.
- We plan to renew the composition of the voting members bringing in more younger members of the Permian community.
- We plan to publish two *Permophiles* issues.

10. KEY OBJECTIVES AND WORK PLAN FOR THE PERIOD 2020-2024

- Establish the Artinskian and Kungurian GSSPs.
- Revise the Permian timescale where it needs to be improved (Guadalupian stages, replacement GSSP section of the base-Lopingian).
- Establish a robust palaeogeographic framework for the Permian and focus on N-S correlations.
- Propose DDE-sponsored informatics support for biostratigraphic data management and palaeogeographic reconstructions.
- Organize webinars to increase the size, diversity and international coverage of the Permian Community.
- Publish at least two *Permophiles* issues each year.

APPENDIX [Names and Addresses of Current Officers and Voting Members]

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Working group leaders

- 1) Kungurian-base GSSP Working Group; Chair – Charles Henderson.
- 2) Correlation between marine and continental Carboniferous-Permian Transition Working Group; Chair - Joerg Schneider.
- 3) Gondwana to Euramerica correlations; Chair - Mike Stephenson.