

## SUBCOMMISSION ON PERMIAN STRATIGRAPHY ANNUAL REPORT 2021

### 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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### 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 2021 (including any relevant publications arising from ICS working groups)

- The proposal for the Global Stratotype Section and Point (GSSP) for the base-Artinskian Stage (Lower Permian) has been published in the SPS Newsletters *Permophiles* 71 by

Chernykh et al. (2021). A call to vote on this GSSP was sent to the SPS Voting Members on October 2021. Based on the large majority of positive votes (15 out of 16), the proposal for the GSSP for the base of the Artinskian Stage at the point indicated by the FAD of the conodont *Sweetognathus asymmetricus* at the Dal'ny Tulkas section, Russia was accepted by the Subcommittee on Permian Stratigraphy. A formal proposal of the Artinskian-base GSSP has been submitted to the International Commission on Stratigraphy.

- A professional video was produced to advertise SPS at <https://www.youtube.com/watch?v=s2f1647pCpI> and two webinars were organized live online through zoom <https://www.youtube.com/watch?v=dzkjP84kvfi> <https://permian.stratigraphy.org/Interests/Giovanni>
- A call to fund small projects of young researchers on Permian correlation was organized and four projects were selected <https://permian.stratigraphy.org/news/2021-11-07>
- The Permian Time Scale was updated <https://permian.stratigraphy.org/gssps> and two issues of *Permophiles* were published (SPS Newsletters *Permophiles* 70 and 71).

## **6. SUMMARY OF EXPENDITURE IN 2021**

An amount of Euros 5410 (= USD 6153,3) was spent for video preparation, literature compilation, Dal'ny Tulkas GSSP proposal preparation, and for funding projects of young researchers on Permian correlation. Due to Covid restrictions, it was not possible to do field work in Dal'ny Tulkas and Mechetlino as scheduled.

## **7. SUMMARY OF INCOME IN 2021**

An amount of Euros 2963,39 was allocated from ICS. An additional amount of Euros 4112,79 was received for the Special Project: Turbocharging Permian GSSPs.

## **8. BUDGET REQUESTED FROM ICS IN 2022\*\*\***

We apply for 4500 US\$ from ICS for SPS activities in 2022. This will be mainly for the activities to finalize the base-Artinskian GSSP at Dal'ny Tulkas section, establish the base-Kungurian GSSP at Mechetlino, Russia, and to organize a voting members field trip in the area.

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

- We plan to have the base Artinskian GSSP ratified and start to work on the base Kungurian GSSP.
- We plan to organize several webinars.
- We plan to start a new working group on Gondwana Correlation.

## **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 frameworks 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) Artinskian-base and Kungurian-base GSSP Working Group; Chair-Valery Chernykh.
- 2) Correlation between marine and continental Guadalupian Working Group; Chair-Charles Henderson.
- 3) Correlation between marine and continental Carboniferous-Permian Transition Working Group; Chair-Joerg Schneider.