SILURIAN TIMES

NEWSLETTER OF THE INTERNATIONAL SUBCOMMISSION ON SILURIAN STRATIGRAPHY (ISSS)

(http://silurian.stratigraphy.org)

INTERNATIONAL COMMISSION ON STRATIGRAPHY (ICS)

No. 32 (for 2024)

Edited by Emilia Jarochowska

Přídolían section near the Trubchin village in the Dniester river valley, Podolia, Ukraine.
Photo: Volodymyr Grytsenko

TABLE OF CONTENTS

CHAIRMAN'S CORNER

Dear ISSS members,
Last year was particularly significant for the subcommission, both for the activities carried out and for the results obtained.

After eight years of chairmanship Petr Storch concluded his mandate and I took over the reins, assisted by a new Vice-President (Thjis Vandenbroucke) and a new secretary (Emilia Jarochowska). David Ray, who had done an excellent job as secretary, has also concluded his term. Only Huang Bing continues his job as webmaster of the ISSS web page (https://silurian.stratigraphy.org).

In addition to Petr and Dave, numerous Voting Members have stepped down (David Loydell, Michael Melchin, Carlton Brett, Anna Kozłowska, and Wang Yi), having already held the position for 12 years, the maximum duration possible for the ICS statute.

Our thanks go to them for the excellent results obtained, despite the difficulties encountered during the Covid period, which slowed down the work of the active working groups and, more generally, of the entire subcommission: the new GSSP of the Aeronian and Telychian were ratified by the ICS, and the work that will lead to the division of the Pridoli into two stages has begun. Furthermore, we have resumed having face-to-face meetings, which is essential to keep the subcommission active.

The GSSP for Aeronian is placed at the Hlásná Třebaň section (Czech Republic); that for Telychian at El Pintado (Spain). The official GSSP ceremonies will be organized soon: at El Pintado next September during the next ISSS meeting, whereas at Hlásná Třebaň possibly in 2026. Also, the official papers on Episodes are under way.

After a few years, in September 2024 the ISSS returned to a congress, beautifully organized in Sofia (Bulgaria) by Valeri Sachanski and colleagues. The conference was a joint meeting with the Subcommission on Devonian Stratigraphy. Two days of scientific sessions were followed by two days of field trip. Participants specially enjoyed the possibility to meet face-to-face, and to have time for discussion and for a drink together.

The ISSS business meeting was held during the congress. A second online business meeting of Voting Members was held in November. The minutes of these meetings were already distributed to members and are published in this newsletter. The main topics discussed in these meetings were the activities and goals for the next years.

Following the work already started last year, a working group for the subdivision of the Pridoli has been activated, the possible GSSP has been identified the the Hvížďalka section, in Czech Republic, and the primary criterion is the FAD of the graptolite *Wolynograptus bouceki*. A draft of the proposal is in an advanced state of preparation, and I hope that it will be ready for discussion among the ISSS Voting Members is short time.

A working group for the base of the Sheinwoodian (= base of the Wenlock Series) was activated, too. Possible candidate sections have been preliminarily identified in Gotland (Sweden) and Czech Republic.

The goal for the near future is the replacement of the other inadequate GSSPs, and all of us are asked to cooperate according to our skills and expertise. Homerian, Gorstian and Ludfordian will be the next.

In 2025 the ISSS meeting will be in Spain on September 10-13. Juan Carlos Gutierrez Marco is organizing the scientific sessions in Sevilla, followed by two days of field trip. One of these days includes the Telychian GSSP ceremony at El Pintado section. The first circular of the meeting was distributed a few days ago and is included in this newsletter. Hope to meet many Silurian workers there!

In 2026 the STRATI congress will be in China at Suzhou from June 28th until July 3rd. The website will be activated soon by the organizers. The ICS ask to all Subcommissions to

meet there. We will distribute more information as soon as possible, together with other Silurian news and activities.

Carlo Corradini

International Commission on Stratigraphy
Subcommission on Silurian Stratigraphy

ANNUAL REPORT 2024

1. TITLE OF CONSTITUENT BODY

Subcommission on Silurian Stratigraphy

Submitted by:

Carlo Corradini (Chair)

2. OVERALL OBJECTIVES, AND FIT WITHIN IUGS SCIENCE POLICY

Mission statement

The objectives of the Subcommission relate to three main aspects of IUGS policy:

(1) The development of an internationally agreed scale of chronostratigraphic units, fully defined by GSSPs at Series and Stage levels and related to a hierarchy of units (Substages, Standard Zones, Subzones etc.) to maximize relative time resolution within the Silurian Period;

(2) Establishment of frameworks and mechanisms to encourage international collaboration in understanding the evolution of the Earth during the Silurian Period;

(3) Working towards an international policy concerning conservation of geologically important sites (such as GSSPs, global and regional stratotype sections, *etc*.).

Goals

- Rationalization of Global chronostratigraphical classification
- Intercalibration of fossil biostratigraphies, integrated zonations, and recognition of global datums.
- Establishment of magneto- and chemo-stratigraphic scales
- Redefinition of stage boundaries and restudy of global boundary stratotype sections
- Correlation of Silurian rock successions and events, including marine and non-marine
- Application of astronomically tuned cyclostratigraphy integrated with radiometric data and biostratigraphy

3. ORGANIZATION – Interfaces with other international projects/groups

Organization

The ISSS is a Subcommission of the International Commission on Stratigraphy. The Subcommission is organized by an Executive consisting of Chairman, Vice-Chairman, Secretary, and Webperson who are all Voting Members of the Subcommission. In the Subcommission elected for 2024-2028 there are ten other Voting Members. The Voting Members group has been largely changed with respect to the previous four-years term, as

7 voting members are new. Broad network of Corresponding Members has first of all a responsibility for communication in both directions between the Subcommission and researchers on Silurian topics in their region. Secondly, they represent a broad spectrum of specialized stratigraphical disciplines from those countries or regions where Silurian rocks are extensively studied in relation to fundamental and/or applied geological research.

Current research activities and future plans are communicated through publication of the annual ISSS newsletter, *Silurian Times*, distributed as an email attachment and a web release. Website: https://stratigraphy.org/subcommission-silurian/ contains newsletters, meeting announcements, discussion posting-boards, bibliography of Silurian articles, links to related sites, and other information.

Interface with other international projects / groups

IGCP project no. 652 “Reading geologic time in Paleozoic sedimentary rocks” and “International Subcommission on Timescale calibration” under chairmanship of B.D. Cramer, titular member of the ISSS.

Collaboration will continue with stratigraphically neighbouring subcommissions on Ordovician (ISOS) and Devonian (SDS) stratigraphy.

3a. Current Officers for 2024-2028:

Chair: Carlo Corradini
Vice-Chair: Thjis Vanderbroucke
Secretary: Emilia Jarochowska
Webperson: Huang Bing

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

National/regional support has been provided to active members of Aeronian, Telychian and Wenlock GSSP working groups to facilitate their work.

5. CHIEF ACCOMPLISHMENTS AND PRODUCTS IN 2024 (bullet point each significant achievement; 3-6 bullets)

Silurian Times No 31 was edited by the secretary, David Ray, and distributed in April, 2024, posted on the web site for the ISSS, and circulated as an email attachment to all titular and corresponding members of the Subcommission. It contained the reports on previous meetings, announcements of planned meetings, the latest news and recent publications on Silurian research.

Joint ISSS-SDS conference with field-meeting and business meeting took place in September 12-17, 2024 in Sofia, Bulgaria, in collaboration with Geological Institute of Bulgarian Academy of Sciences and University of Mining and Geology, Sofia.

An online business meeting of Titular Members took place on October 21, 2024, to plan the work of the years 2024-2028. Two new working groups have been appointed: subdivision of the Pridoli Working Group and base Sheinwoodian Working Group.

6. SUMMARY OF EXPENDITURES IN 2024 (can be presented in a table):

Contribution to participation at Sofia ISSS-SDS congress for 1 persons	600 US$
Bank costs and bank fee for conversion in EUR	350 US$

7. SUMMARY OF INCOME IN 2024 (can be presented in a table):

Carried forward from 2023	1000 US$
Allocation from ICS	3500 US$

Since the money was transferred from ICS in late September, after the ISSS annual meeting, it was not possible spend it before the end of the year, and will be transferred to next year

BALANCE (carried to 2025)	3550 US$

8. BUDGET REQUESTED FROM ICS FOR 2025

1000 US$, to support the activities of the two Working Groups and the participation at the annual meeting, that will be organized in Spain in connection with the GSSP ceremony for the base of the Telychian Stage

9. WORK PLAN, CRITICAL MILESTONES, ANTICIPATED RESULTS AND COMMUNICATIONS TO BE ACHIEVED IN 2025 (bullet point each anticipated achievement anticipated; 3-6 bullets)

- ISSS Working Group on Sheinwoodian will start looking for potential GSSP section, upon agreement on the boundary definition timeline
- ISSS Working Group on the Pridoli will discuss the subdivision of the Series into Jarovian and Radotinian stages, as proposed by Manda et al. (2023). A formal proposal of the Hvížďalka section as a GSSP for the upper Přídolí unit - Radotinian Stage will be prepared, discussed and voted in the subcommission and possibly submitted to ISC for approval before the end of the year. Also, the WG will look for possible SABS, both for the bases of Jarovian and Radotinian stages
- A field meeting, with indoor scientific sessions and business meeting, will be organized in September in Andalusia, Spain, in connection with the GSSP ceremony for the base of the Telychian Stage at El Pintado 1 section.
- Continuing updates of the website for Silurian Subcommission by webmaster Huang Bing

9a. Potential funding sources external to IUGS:

Most of the costs of preparing Silurian Times and research activities of the working groups will be met by local support from host institutions and participation by individuals through

national research grants and travel grants from their own authorities. Some minor expenses may be covered from ISSS budget.

10. OBJECTIVES AND WORK PLAN FOR THE PERIOD (2024–2028)

- Principal work will be devoted to GSSP-related research activities – restudy of some previously ratified but currently inadequate stratotypes and search for sections suitable for auxiliary stratotypes.
- Pridoli working Group will formalize the subdivision of the Series into Jarovian and Radotinian Stages. The Hvížďalka section, in Czech Republic will be proposed as GSSP, possibly together of at least one SABS
- Base Sheinwoodian working group will focus on two candidate sections already in study, and possibly others, in order to propose the new GSSP, and possibly SABS.
- Establishment of working groups for the replacement base Gorstian GSSP and base Ludfordian GSSP
- Works on higher-resolution correlation of principal Silurian biozonations (graptolite, conodont, and chitinozoan) with carbon isotope excursions in the timeframe provided by presumed new radiometric data.

APPENDICES

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Working groups and leaders

Base of Sheinwoodian Working Group
Leader: Bradley D. Cramer
Přídolí Working Group
Leader: Carlo Corradini

Corresponding members (simple list of names as known)

Fernando Alvarez
B. Gudveig Baarli
Chris Barnes
James E. Barrick
Frank R. Brunton
Carole J. Burrow
Xu Chen
Maria G. Corriga
G. Susana de la Puente
André Desrochers
Rein Einasto
Mansoureh Ghobadi Pour
Jessica Carolina Gómez
Volodymyr Grytsenko
Juan Carlos Gutiérrez-Marco
Olle Hints
Kathleen Histon
Markes E. Johnson
Dimitri Kaljo
Stephen Kershaw
Philippe Legrand
Qi-jian Li
Steve LoDuca
Jörg Maletz
Peep Männik
Tiiu Märss
Christopher M. McCauley
Alexander (Sandy) D. McCracken
Anna McGairy
Giles Miller
Stephan Oborny
John S. Peel
Silvio Peralta
Ian Percival
Vincent Perrier
José Manuel Piçarra d´Almeida

Leonid Popov
Sigitas Radzevičius
Jiayu Rong
Mike Rosenbaum
Thomas Servais
David Siveter
Derek Siveter
Andrej Spiridonov
Alan Thomas
Susan Turner
Jacques Verniers
Olev Vinn
Guangxu Wang
Xiaofeng Wang
Wenwei Yuan
Renbin Zhan
Wenjin Zhoa
Petr Štorch
Carlton E. Brett
Anna Kozłowska
Axel Munnecke
Wang Yi
Živilė Žigaitė

ISSS BUSINESS MEETING 21.10.24

Online, chaired by Carlo Corradini, minutes taken by Emilia Jarochowska and Carlo

Attendance

Titular Members (13)

Alyssa Bancroft, Carlo Corradini (chair), Brad Cramer, Annalisa Ferretti, Juan Carlos Gutiérrez-Marco, Bing Huang, Emilia Jarochowska (secretary), Tõnu Meidla, David C. Ray, Valeri Sachanski, Ladislav Slavík, Petra Tonarová, Zhang Yuandong

Corresponding Members (1)

Petr Štorch

The meeting began with Carlo greeting the attendees, passing on the apologies for absence from Thijs Vandenbroucke, with whom he had a meeting earlier, informing the attendees that Petr Štorch was invited to the meeting to assure continuity with the operations of the previous executive committee, and presenting the meeting agenda.

The honorary members initiative

Carlo introduced the proposal for honorary members, to recognize the contributions of researchers who had been Titular Members for 12 years and cannot continue as TMs as a result of ICS regulations on membership. Brad Cramer, Ladislav Slavík, David Ray and Emilia Jarochowska discussed the concept. Clarifications were requested on the difference to Corresponding Members. The honorary members would have no voting rights, but could join the meetings of TMs, and would have the same formal role as CMs. Questions were also raised about the duration of the honorary membership, e.g. if HMs were to serve an advisory role for a given working group, whether their honorary membership would end after the group completes its task. A concern was also expressed that the honorary membership was to patch up the fact that corresponding members were not sufficiently involved and the honorary membership was a tool to keep activate the members. Annalisa Ferretti reported that she had spoken with Elisabetta Erba (ICS Chair) and the ICS would soon communicate rules concerning the subcommissions, including the website and corresponding and honorary members. Annalisa also mentioned that the Ordovician Subcommission was also going to introduce honorary membership. Carlo proposed to wait for the official ICS communication on honorary membership and then proceed with the proposal and the vote.

Working groups

Carlo introduced the topic, highlighting that there are several GSSPs in the Silurian that should be verified and probably changed. Therefore, we need to establish working groups. AS we already decided in the business meeting in Bulgaria, the first will be those on Wenlock and on the subdivision of Pridoli. Later the work will move to base of the Gorstian, base of the Ludfordian. He also informed that the ICS may provide a limited amount of money to support activities related to GSSPs and participation to meetings.

3a. Working group on the base of Wenlock

Carlo introduced the need for the working group on the base of Wenlock. Brad Cramer and Petr Štorch presented the status of work on the candidate sections in Gotland and Czechia, respectively. The section in Czechia awaits a decision from the Czech Science Foundation to allow further study. Carlo proposed Brad as the chair of the working group, which has been

approved by other attendees participating in the discussion. It has been proposed that experienced researchers such as David Loydell and Michael Melchin should be invited to the working group, given their experience with the topic. The group would aim at a size of four to six members representing different backgrounds in terms of geography and stratigraphic methodology.

3b. Working group on the subdivision of Přídolí

Carlo was unanimously accepted as the chair of the Working Group. The group would have two tasks: preparation of a proposal for the Hvížďalka section as a GSSP for the upper Přídolí unit, proposed to be called the Radotinian Stage, based on the research led by Petr and Ladislav. Secondly, potential SABS need to be identified for the bases of the Jarovian and Radotinian stages, with a natural candidate at the Cellon section.

SABS

Carlo summarized the concept of SABS and proposed that the Rheidol Gorge could be formally proposed as one and published together with a manuscript on the new GSSP at El Pintado or in a separate article in *Episodes*. The format of the dossier is the same as for a GSSP, but it is enough for the TMs to vote on the proposal, without the acceptance of the ICS.

Possible SABS for the other boundaries should be investigated by the working groups.

Corresponding Members

Carlo emphasized the need to activate Corresponding Members and put out a call for recruiting new ones. Emilia reported that eight CMs (out of 69 registered) had been on the outgoing list as they had not responded to calls for contributions for three years in a row, but one of them has meanwhile reacted to the recent call for filling out an online form.

A question has been raised whether PhD students should be eligible to become CMs. Emilia presented the results of the online form, based on 30 answers, where an optional question indicated voluntarily shared information about career stage and gender. At the time, no students and 2 postdocs responded, compared to 6 respondents who were retired and 9 who reported “other” (i.e. not academic, not in industry, not teacher, not retired and not a student). Brad recommended that the CMs should represent the breadth of stratigraphic approaches and expertise. For that goal, it has been proposed, PhD students should be considered if they bring in perspectives not represented by more senior members.

Future meetings

Possibly the Subcommission should meet each year, either in conjunction with larger meetings, or in dedicated meetings.

In the coming year some large congresses are already scheduled:

- IPC 2026 in Cape Town, South Africa (30 November-3 December)
- Strati 2027. Location to be defined
- IGC 2028. Calgary, Canada

All subcommissions should meet at Strati meeting, but we have to evaluate whether to join another congress, organize dedicated sessions at Strat, or organize our own meeting in the same year, without overlap of dates.

For 2026 (or 2027) we received a proposal for a Silurian meeting in Argentina.

In 2027 the Ordovician Subcommission will organize a congress in China and asked if we were interested in joining.

Carlo suggested to wait for defining plans for next years, awaiting to know where Strati will take place.

Petr announced that in two or three years we should organize the GSSP ceremonies in Czechia for the Aeronian and Radotinian, when the work of the Pridoli Working Group is concluded and the GSSP is formally ratified by ICS.

Tõnu suggested to involve Swedish colleagues in the subcommission and organize a meeting in Gotland in the next years.

As for 2025, Juan Carlos proposed a meeting in Andalusia (Spain), in connection with the GSSP ceremony for the Telychian at El Pintado section. The meeting will consist of two days of indoor sessions and two days in the field. After some discussion, the proposal was approved, and Juan Carlos was asked to organize the meeting. The period will be the second week of September 2025 (precise dated will be defined as soon as possible)

Any other issue

Tõnu reported that the numerical age of boundaries reported in the International Chronostratigraphic Chart are still those of GST 2012, whereas new ages were provided in GST 2020. He asked that the ISSS remark this to ICS, asking to update the numerical ages to more recent data.

ISSS BUSINESS MEETING 13.09.24

University of Mining and Geology "St. Ivan Rilski", Sofia, Bulgaria

Chaired by Carlo Corradini, minutes taken by Emilia Jarochowska.

Attendance

Titular Members (12)

Alyssa Bancroft (online), Carlo Corradini (chair), Brad Cramer (online), Juan Carlos Gutiérrez-Marco, Bing Huang, Emilia Jarochowska (secretary), Tõnu Meidla (online), David C. Ray (online), Valeri Sachanski, Ladislav Slavík, Petra Tonarová (online), Zhang Yuandong (online)

Corresponding Members (3)

Maria G. Corriga, Petr Štorch, Sigitas Radzevičius

Other participants (8)

Li Qiao, John Marshall, Sofie A. Gouwy, Zuzana Strossová, Jau-Chyn Liao, José Ignacio Valenzuela-Ríos, James J. Zambito IV, Zongyuan Sun

At the beginning the Chair welcomed the participants and thanked the past-Chair, Petr Štorch, for the work did by the Subcommission in the last years, mainly to achieve new GSSPs recently ratified. He invited Petr to report on recent ICS facts.

Updates from last year

By Petr Štorch

New Titular Members have been elected. Initially, a new Subcommission had been elected, but had not been accepted by ICS, because they do not accept members serving over 2 terms, with the exception of serving as the chairperson. As a result, Michael Melchin, David Loydell, Carlton Brett, Petr Storch and Anna Kozlowska could not remain TMs and new nominations had been made. The chairman, vice-chairman and secretary accepted all the new nominations. A similar situation has happened in multiple other subcommission.

3250 EUR has been allocated by the ICS to the Subcommission, but it has not arrived yet. The remaining budget from previous years will be passed to the new chairman together with the budget for the coming year.

Report from the International Geological Congress

By Ladislav Slavík

At the ICS chair meeting during the Congress, David Harper ended his term. Some 50% officers have changed in all subcommissions. The new chair of the ICS is Elisabetta Erba. The vicechair Shuzhong Shen remains the same. The new secretary is Charles Henderson.

The new stratigraphic chair is colour-coded, we are encouraged to use the colors in publications, maps etc. At the ICS chair meeting, information on the "digital deep time" project was shared. Ladislav Slavík presented new achievements from Devonian and Silurian stratigraphy at the meeting.

Honorary members

This initiative was proposed by Carlo Corradini. The rules of nomination remain to be specified and will be subject to a meeting of Titular Members, who will vote on the initiative. Nonetheless, a call for feedback and suggestions is made to all members.

Brad Cramer asked for a clarification on the difference to regular Corresponding Members. Carlo specified that it would be a way to honor or acknowledge people, who made major contributions to ISSS and to encourage them to continue making them.

GSSPs

Aeronian and Telychian

The new GSSPs of Aeronian (El Pintado, Spain) and Telychian (Hlásná Třebaň, Czech Republic) are formally approved by ICS, but the work is not finished: the publication in Episodes GSSP is missing. Carlo invited the two working groups to prepare this article. It could be a joint paper on the GSSP and SABS.

A golden spike ceremony is also needed, but not urgent yet. Ideally it would be combined with a larger meeting in an area close to the Golden Spike. Even if not already decided, there is a chance that Strati in 2027 will be in Valencia, so this would be a potential candidate meeting.

Other inadequate GSSPs that require revision

These GSSPs include the bases of the Sheinwoodian, Homerian, Gorstian and Ludfordian.

On the bases of the Sheinwoodian and Wenlock: some work is being done by Brad Cramer in the Altajme core, drilled behind the Lusklint section in Gotland. Brad and Mikael Calner intend to suggest Lusklint to be the base of Wenlock. The core would be the auxiliary stratotype.

Petr Štorch reported that there is an alternative candidate section for the base of Wenlock, but his team currently has no funding to study it. They are waiting for a decision on a grant proposal. This section has good conodont and graptolite fauna with zonal taxa.

Carlo suggested to reactivate a working group to study both sections. He also proposed to set out one workflow, which would include the definition of a timeline of correlation first.

SABS

Introduced in 2022 by ICS, SABS are reference sections on different continents or facies than the GSSP. SABS can be approved by the subcommission, they do not have to go through the ICS. There can be more than one for a given stage. The procedure is the same as for a GSSP: a dossier needs to be prepared, such as that for a GSSP. However, to propone a SABS we need that a GSSP that should not be revised.

Immediately some ideas have been proposed, e.g. the Cellon section could be a SABS for various upper Silurian boundaries. Other sections which had been candidates not selected for GSSP would be good candidates for SABS (e.g., Rheidol Gorge for Aeronian). The Astana section would be good SABS for the base of the Silurian.

Subdivision of the Pridoli

The proposal is based on the paper by Manda et al. (2023). A definition of the base of the Radotinian Stage (upper Pridoli) is needed. As a result, the base of the Pridoli would also become the base of the Jarovian Stage. The procedure is the same as for a new GSSP. A formal proposal is needed that would first be circulated among TMs. Also a SABS can be already discussed. Ladislav Slavík has committed to preparing the proposal as soon as possible.

New working groups

One is definitely needed for the base of the Sheinwoodian. If another one is created, then ideally one that is not very close to that base. Carlo extends an invitation to join to all potential members of the working groups.

A working group is needed for the base of the Radotinian Stage.

Carlo suggested establishing a working group for a high-resolution correlation between different fossil groups. Brad Cramer asked if the objective was to make a global chronostratigraphic chart or a series of regional charts. Carlo proposed to aim for both, but keeping in mind that GSSPs are a priority for the subcommission.

Discussion on the WG to activate and their composition and Chairs will be the subject of a TMs meeting in the near future

Website

By Huang Bing

According to suggestions by ICS webmaster, the webpage should be made more similar, including eight standard categories. It has been recently updated.

Very old news have been replaced with contents from the Newsletter.

A question has been asked to participants: what other news should be covered on the website? Petr Štorch suggested a short abstract from the business meeting. Carlo – information on new GSSPs.

A call is being made to all members to help find Silurian Times older than no. 13, i.e. pre-2005. If anyone has paper copies, they are kindly asked to scan them and share a digital version for the webpage.

Carlo suggested changing “Specialists” to “Corresponding Members” on the website.

Brad Cramer pointed out that the chronostratigraphic chart requires a permission from Elsevier to be shared in its exact form from GTS, so either a permission needs to be obtained, or the chart needs to be modified.

Membership

One of the goals of the meeting in Sofia was to increase the number of people interested in Silurian stratigraphy and to increase the pool of possible future TMs. Carlo plans to contact possible new CMs directly. At the end of the year there will be a call for nominating new CMs.

Future meetings

The meeting in Sofia was the first ISSS meeting since 2019. Carlo would like to introduce a ISSS meeting every year, possibly tied to another broader meeting such as Strati.

News on upcoming meetings which could be combined with ISSS meetings were discussed as follows: A meeting proposal from Argentina is expected soon.

Juan Carlos Gutierrez Marco pointed out that the ISSS used to have two types meetings: conferences and field meetings. He suggested to organize a field meeting in Eastern Atlas in Morocco. It would be a field trip and not a conference, focused on the field and not on official ceremonies. Carlo noted that some participants need to demonstrate that they gave a talk in order to obtain reimbursement, so talks should be included. The budget is estimated at ca. 90 EUR per day incl. hotel and meals.

The ISSS cannot join the “GeoTolosa2025”, Devonian-Carboniferous-Permian meeting in Toulouse (last week of June 2025) because the meeting is very large and there is no capacity to increase it further.

Ladislav Slavík proposed to consider the IPCC in Cape Town for 2026.

The next IGC (2028) has not been decided, there have been offers from Australia, Glasgow and Canada.

Carlo noted that in general the attendance of subcommission members to large meetings as IGC and IPC is scarce, so we can consider also smaller meetings devoted, as example, to golden spike ceremonies of new GSSPs (e.g., once Radotinian will be formally approved, two new GSSPs will be in Czech Republic).

Further discussion and plans will be the subject of a TMs meeting in the near future.

Other points of interest

In the last years the Silurian community lost several researchers: Mauricio Gnoli, Enrico Serpagli and Jiri Kříž, among others. A special issue of Bollettino della Società Paleontologica Italiana, related to Serpagli's work, is planned, with space for a limited number of contributions. It is meant to appear as the first issue of 2026.

Stepan Manda, the editor of the Bulletin of Geosciences, offered a special thematic issue in memory of Jiri Kriz, related to the Ordovician, Silurian and Devonian. It is meant to be published next year.

In memory of M. Gnoli, his family plans to establish an award to support an ECR paleontologist who made an important contribution to Ordovician, Silurian and Devonian paleontology. Nominations should be supported by a recommendation letter. An announcement will be distributed online within the upcoming months.

Ladislav Slavík asked if news were available about future ICOS meetings. It is planned for December 2025 in S Brazil, including a field trip in the upper Paleozoic. The circular is available in the Pander Society Newsletter.

Reports of Activities in 2024

Working Group for the Base of the Wenlock Series

We have assembled a new working group for the Base of the Wenlock Series. This is a new working group following the excellent work of the previous group by a series of ISSS scientists most recently led by David Loydell. The new working group will consist of Brad Cramer, Mike Melchin, David Loydell, Petr Štorch, Mikael Calner, Alyssa Bancroft, and Thijs Vandenbroucke. Outcrop sections in two regions are currently being evaluated including one from Gotland, Sweden, and another from the Prague Basin, Czechia. It is still early in the process, but it already seems likely that whatever conclusion is made by the working group that both sections will be presented as a potential new GSSP and a SABS in the end.

Brad Cramer – Chair

Working Group for the subdivision of the Pridoli series

The working group on the Pridoli has the main goal to propose the subdivision of the Pridoli, in two stages, names Jarovian and Radotinian, following the paper published by Manda et al. (2023).

The working group is composed by Carlo Corradini (Chair), Maria Giovanna Corriga, Neo McAdams, Sigitas Radzevičius, Ladislav Slavík, Andrej Spiridonov and Petr Štorch, with cooperation by Vincent Perrier and Amalia Spina.

The possible GSSP has been identified the the Hvížďalka section, in Czech Republic, and the primary criterion is the FAD of the graptolite Wolynograptus bouceki, that is well approximate by the FAD of the conodont Oulodus elegans detortus. The working group is now focusing on the correlation timeline, checking other fossil groups and possible abiotic events. A draft of the proposal is in an advanced state of preparation. Beside GSSP, the working group is also looking for possible SABS.

Carlo Corradini – Chair

Joint ISSS-SDS Meeting report

Officers and titular and corresponding members of the International Subcommission on Silurian Stratigraphy and the Subcommission on Devonian Stratigraphy took part in the Joint ISSS-SDS Meeting “Timeline of Silurian and Devonian environmental and biotic changes”, held on 12th–17th of September 2024 at University of Mining and Geology “St. Ivan Rilski”, Sofia, Bulgaria. Over 90 participants from 18 countries and 50 institutions submitted their papers for the joint meeting. The short papers and abstracts (published in *Geologica Balcanica*) cover different aspects of the main objectives of the subcommissions:

International Subcommission on Silurian Stratigraphy (ISSS)

1. development of an internationally agreed-upon scale of chronostratigraphic units, fully defined by GSSPs at Series and Stage levels and related to a hierarchy of units to maximize relative time resolution within the Silurian Period;
2. establishment of frameworks and mechanisms to encourage international collaboration in understanding the evolution of the Earth during the Silurian Period;
3. working towards an international policy concerning conservation of geologically-important sites.

Subcommission on Devonian Stratigraphy (SDS)

1. to develop an internationally-approved chronostratigraphic timescale for the Devonian with maximum time resolution, as part of the ICS standard global stratigraphic scale;
2. to produce a stratigraphic chart displaying agreed-upon stage and substage subdivisions marking boundaries that are defined by a GSSP.
3. to promote new and modern stratigraphic techniques and their integration into Devonian multidisciplinary schemes.


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Some of the participants of the indoor sessions

№	Name and SURNAME	Institution	Country
1	James ZAMBITO	Beloit College	USA
2	Jau-Chyn LIAO (Teresa)	University Complutense of Madrid	SPAIN
3	Li QIAO	Nanjing Institute of Geology and Palaeontology, Chinese Academy of Sciences	PR CHINA
4	Catherine CRONIER	Université de Lille	FRANCE
5	Bing HUANG	Nanjing Institute of Geology and Palaeontology, Chinese Academy of Sciences	PR CHINA
6	Héctor BARRERA-LAHOZ	University of Zaragoza	SPAIN
7	José Ignacio VALENZUELA-RÍOS (Nacho)	University of Valencia	SPAIN
8	Sofie A. GOUWY	Natural Resources Canada, Geological Survey of Canada	CANADA
9	Ulrich JANSEN	Senckenberg Research Institute and Natural History Museum	GERMANY
10	Emilia JAROCHOWSKA	Utrecht University	THE NETHERLANDS
11	Ladislav SLAVÍK	Institute of Geology of the Czech Academy of Sciences	CZECH REPUBLIC
12	Tomáš KUMPAN	Masaryk University	CZECH REPUBLIC
13	Carlo CORRADINI	Università di Trieste	ITALY
14	Štěpán DAMBORSKÝ	Masaryk University	CZECH REPUBLIC
15	Maria G. CORRIGA	Università di Trieste	ITALY
16	Petr ŠTORCH	Institute of Geology of the Czech Academy of Sciences	CZECH REPUBLIC
17	Juan Carlos GUTIÉRREZ-MARCO	Instituto de Geociencias (CSIC-UCM)	SPAIN
18	John MARSHALL	University of Southampton	UNITED KINGDOM
19	Dimitar DIMITROV	Student at the University of Mining and Geology “St. Ivan Rilski”	BULGARIA
20	Yavor IVANOV	Student at the University of Mining and Geology “St. Ivan Rilski”	BULGARIA
21	Polina ANDREEVA	Geological Institute “Strashimir Dimitrov”, Bulgarian Academy of Sciences	BULGARIA
22	Hristo KISELINOV	Geological Institute “Strashimir Dimitrov”, Bulgarian Academy of Sciences	BULGARIA

Participants of the field trips

№	Name and SURNAME	Institution	Country
1	Zongyuan SUN	Chengdu University of Technology	PR CHINA
2	Sigitas RADZEVIČIUS	Vilnius University	LITHUANIA

№	Name and SURNAME	Institution	Country
3	Li QIAO	Nanjing Institute of Geology and Palaeontology, Chinese Academy of Sciences	PR CHINA
4	Štěpán DAMBORSKÝ	Masaryk University	CZECH REPUBLIC
5	Tomáš KUMPAN	Masaryk University	CZECH REPUBLIC
6	Bing HUANG	Nanjing Institute of Geology and Palaeontology, Chinese Academy of Sciences	PR CHINA
7	Carlo CORRADINI	Università di Trieste	ITALY
8	Juan Carlos GUTIÉRREZ-MARCO	Instituto de Geociencias (CSIC-UCM)	SPAIN
9	Catherine CRONIER	Université de Lille	FRANCE
10	Maria G. CORRIGA	Università di Trieste	ITALY
11	Elitza ZAREVA	University of Mining and Geology “St. Ivan Rilski”	BULGARIA
12	Ulrich JANSEN	Senckenberg Research Institute and Natural History Museum	GERMANY
13	Valeri SACHANSKI	University of Mining and Geology “St. Ivan Rilski”	BULGARIA
14	James ZAMBITO	Beloit College	USA
15	Ladislav SLAVÍK	Institute of Geology of the Czech Academy of Sciences	CZECH REPUBLIC
16	Sofie A. GOUWY	Natural Resources Canada, Geological Survey of Canada	CANADA
17	Jau-Chyn LIAO (Teresa)	University Complutense of Madrid	SPAIN
18	José Ignacio VALENZUELA-RÍOS (Nacho)	University of Valencia	SPAIN
19	Petr ŠTORCH	Institute of Geology of the Czech Academy of Sciences	CZECH REPUBLIC
20	Héctor BARRERA-LAHOZ	University of Zaragoza	SPAIN
21	Zuzana STROSSOVÁ	Charles University	CZECH REPUBLIC

11TH BALTIC STRATIGRAPHICAL CONFERENCE

A regional IGCP 735 meeting, the 11th Baltic Stratigraphical Conference, took place in Estonia on August 19th-25th, 2024. The number of participants reached 40, from 10 countries: Estonia, Latvia, Lithuania, Poland, Czechia, Sweden, Denmark, Germany, the UK, and the USA. The meeting started with scientific sessions in Tartu, followed by a field trip to Ordovician and Silurian outcrops and then further talks and a drill core workshop in the Arbavere core study facility of the Geological Survey of Estonia. The programme also included a business meeting of the Baltic Stratigraphic Association.

A longer post-conference excursion focused this time mainly on the Silurian of western Estonia. The visited Silurian sections covered the whole Silurian System, from an Ordovician-Silurian boundary section (Reinu Quarry) up to the late Přidolian (Ohesaare Cliff).

The scientific part of the meeting was focused on the Palaeozoic of the Baltic region, and about half of the talks and posters were devoted to the Silurian, from regional stratigraphy to geochemistry, palaeontology and biotic turnovers. The conference volume with abstracts and field guide is available for download at https://stratigraafia.info/11bsc.

The next Baltic regional geological-stratigraphical meeting will be held in Riga, Latvia, 2027.

Olle Hints and Tõnu Meidla

Participants of the 11th Baltic Stratigraphical Conference in Tartu. Photo by R. Männik, 19.08.2024.

Participants of the 11th Baltic Stratigraphical Conference Post-Conference Field Excursion investigating the Soeginina Cliff section (Rootsiküla Stage, Upper Wenlock) on the Saaremaa Island. Photo by U. Toom, 23.08.2024.

ANNOUNCEMENTS OF MEETINGS AND ACTIVITIES IN 2024

ISSS MEETING 2025: FIRST CIRCULAR

ISSS Meeting 2025

"Advances in Silurian chronostratigraphy and high-resolution correlation"

Seville, Spain, 10th–13th September 2025

ISSS Meeting 2025: First Circular

The official 2025 meeting of the International Subcommission on Silurian Stratigraphy will take place in Spain, as agreed by the delegates at the last annual meeting held in Sofia, Bulgaria, in September 2024.

This year marks the 27th anniversary of the Silurian Field Meeting that took place in Spain and Portugal in June 1998, which also visited the outcrops in northern Seville. In 2025, coinciding with the meeting, the *Golden Spike* marking the replacement Global Stratotype Section and Point (GSSP) of the Telychian Stage of the Llandovery Series will be officially established there.

Seville is a fitting location for a Silurian meeting due to its special significance in Spanish history, its status as a very pleasant city full of colour and tourist attractions, and, of course, its proximity to the most complete, continuous and fossiliferous Silurian sections in Spain. These sections are located in the Ossa-Morena Zone of the Iberian Massif, within the Natural Park and UNESCO Global Geopark Sierra Morena de Sevilla, an area of great scenic, geological, and cultural value.

The Silurian rocks of Seville have attracted geological studies since the late 19th century. However, it was not until the 1970s that the discoveries of the distinguished French geologist Michel Robardet initiated a series of investigations into their exceptional stratigraphy and fossil record, making the region a model area for Silurian studies.

Seville and its Silurian strata welcome you in September 2025!

Juan Carlos Gutiérrez-Marco and Sara Romero
On behalf of the organisers

Schedule and Deadlines

Due to the proximity of the meeting dates, an almost immediate response to the questionnaire at the end of this circular is required.

March 31st	Response to the questionnaire of the First Circular (see below)
April 15th	Distribution of the Second Circular with definitive fees
June 15th	Deadline for paying the regular fee
July 1st	Deadline for short papers and abstracts
July 30th	Distribution of the Third Circular with the Final Programme
September 9th	Arrival in Seville
September 10th–11th	Scientific sessions, official dinner
September 12th	Silurian Excursion and *Golden Spike* ceremony of the base of Telychian replacement GSSP
September 13th	Optional excursion to the Silurian of the North of Seville
September 14th	Departures from Seville

About Seville

Seville (Sevilla in Spanish) is the capital and largest city of the Spanish autonomous community of Andalusia and the province of Seville. It is situated on the lower reaches of the River Guadalquivir, in the southwest of the Iberian Peninsula. It has a municipal population of about 701,000 and a metropolitan population of about 1.5 million, making it the largest city in Andalusia and the fourth-largest city in Spain. The Seville harbour, located about 80 kilometres (50 miles) from the Atlantic Ocean, is the only river port in Spain.

The capital of Andalusia experiences high temperatures in summer, with daily maximums routinely above 35°C (95°F) in July and August, and slightly lower in September (mean daily maximum 26.3ºC, mean daily minimum 18.4ºC, percentage of possible sunshine 70, average precipitation days 2.8 mm). Find out more at: https://www.spain.info/en/destination/seville/ ; https://visitasevilla.es/en/

Travel

Seville Airport (IATA: SVQ, ICAO: LEZL), also known as San Pablo Airport, is a large airport in Spain that has non-stop passenger flights scheduled to 83 destinations in 21 countries. In total, there are 23 airlines operating flights to and from Seville. Find out more at: https://www.flightconnections.com/flights-from-seville-svq

The connection to Seville via Madrid can be made by domestic flight or, if you wish to take advantage of your trip to visit the Spanish capital, there is a connection with Seville via high-speed trains that usually depart daily around 06:00, while the last service is around 21:00, providing great schedule flexibility. The Madrid–Seville journey takes about 2 hours and 30 minutes, with trains departing from Atocha station in Madrid and arriving at Seville Santa Justa station. In addition to Renfe's AVE trains (https://www.renfe.com/es/en), options like Iryo, OUIGO, and AVLO offer competitive prices and frequencies that complement the journey. Remember that you can find cheap train tickets from Madrid to Seville if you book in advance or take advantage of special offers.

Please check if you need a visa for the Schengen Area and contact the organisers in advance should you require an official invitation.

Accommodation

Conference participants are responsible for arranging accommodation for the entire period of stay, including post-conference excursions.

A variety of hotels and Airbnb rooms/apartments are available, with an estimated total price per person for 5 nights (check-in Tuesday 9th, check-out Sunday 14th) ranging between 450–750 € in hotels and 270–570 € in tourist apartments. Prices vary depending on how early you book and the type of accommodation you choose, but generally, you can find cheaper alternatives if you book in advance or take advantage of special offers.

As a safety measure, try to avoid accommodation in the area of Seville known as "Las Tres Mil (3000) Viviendas" (southeast of the city centre).

Conference venue

The scientific sessions will take place in a central location in Seville near Plaza de España, within walking distance of the historic Old Town, a UNESCO World Heritage Site comprising three buildings: the Alcázar palace complex (11th-14th centuries), the Gothic Cathedral (incorporating part of the Almohad mosque, 12th century) and the General Archive of the Indies.

The next circular will include a site map with its detailed location.

Fees and payment

The amount of the registration fees is indicative and will be set for an early bird registration between April 15th and June 15th, depending on the acquisition of new financial support for the organization, as most of our sponsors contribute in kind. The final fees will be announced in the second circular, which will be distributed on April 15th.

	Payment of the fee until June 15th, 2025	Payment of the fee after June 15th, 2025
Senior researcher	300 €	350 €
Accompanying person	120 €	150 €
Subcommission Dinner Thursday 11th	ca. 60–70 €	ca. 60–70 €
Optional field trip Saturday 13th	95 €	120 €

The registration fee will include: admission to all sessions, workshop, conference programme and excursion guide, publication in the conference volume, snacks and coffee breaks as scheduled, social events, and the Silurian Field Trip on Friday, 12th September (*Golden Spike* ceremony).

The accompanying person fee includes attendance at the social events and the excursion on Friday, 12th September.

Bank transfer payments are preferred to the following account:

- IBAN- ES09 3025 0006 2914 3322 6827
- SWIFT (BIC) – CDENESBBXXX

(For verification: Bank name CaixaEnginyers/CajaIngenieros; account name SEDPGYM)

Please indicate the keyword "REUNION SILURICO+" and the names of participant(s) in the payment description, and ensure that the payment is made without charges to the beneficiary.

For paying the early bird conference fee, SEDPGYM will issue invoices on request.

After paying the fees, you will receive an email from the treasurer to confirm your registration once payment is settled.

Cancellation notice: Refunds of 50% of the conference and excursion fees will be granted if the cancellation is received before 1st July 2025. No refunds will be possible after this date. In the unlikely event of cancellation or postponement of the meeting due to an unexpected war or global health crisis, the fees will be refunded.

Support

Very limited support covering the registration expenses for early career researchers from the ISSS may be available; please contact the ISSS chairman prof. Carlo Corradini (ccorradini@units.it) for further details. Note that only participants with presentations will be considered for support.

Registration and Icebreaker

The registration desk will be open at the conference venue on the morning of 10th September 2025. An informal "icebreaker party" will be held for interested participants at a *tapas bar* in the centre of Seville, serving as a meeting point in the late evening of Tuesday 9th September. As this is an optional event, each person will cover their own expenses. The chosen place will be indicated in the final circular.

Conference Dinner and Activities for Accompanying Persons

The conference dinner will take place on Thursday 11th September. The venue will be also announced in the final circular. Please note that the Conference Dinner is not included in the registration fee.

The activities for accompanying persons included in their specific fee comprise a flamenco spectacle on the evening of 11th September and the excursion on Friday 12th (full-day). Professional contacts for guided tours in Seville or visits to the nearby Roman ruins of Italica (birthplace of Roman Emperor Hadrian) will be made available to accompanying persons upon request. This option must be indicated in response to the final circular.

Short papers and abstracts

Submission by June 30th, 2025. The short or extended abstracts will be published at the time of the meeting in the *Palaeontological Publications* Series (free open access without APC) of the Spanish Palaeontological Society (https://sepaleontologia.es/palaeontological-publications-series/): they may be up to 10 pages long and must be formatted according to the requirements that will be sent in the second circular. Short communications submitted after June 30th, will not be published.

Following the meeting, facilities will be provided for those participants wishing to publish their contributions in full in a Spanish scientific journal indexed in international rankings.

Presentations

Depending on the final numbers, regular oral presentations will be limited to either 10+5 or 15+5 minutes. Slides should be prepared in MS PowerPoint (.ppt, .pptx) or PDF formats.

Posters in vertical A0 size will be displayed throughout the entire meeting and presented during the poster sessions.

Workshop on Silurian Age-Depth Modelling

Coordinated by Emilia Jarochowska, Niklas Hohmann and the MindTheGap team, Utrecht University and the Netherlands eScience Center

Workshop description

Age-depth models are crucial to determine the timing and pace of past changes and events. They formalize stratigraphical hypotheses, thus allowing application of the hypothetico-deductive approach to the reading of the geological record. Multiple packages are available to construct age-depth models from stratigraphical data, allowing for a quick and reproducible estimation of age-depth relationships. However, most packages rely on assumptions that are best suited for specific depositional environments or type of stratigraphical data and cannot be treated as universal. In particular, most have been developed and validated on Neogene datasets. Deep-time, Palaeozoic stratigraphical data are more sparse and require a dedicated approach.

This workshop is an introduction to age-depth modeling for Silurian case studies with two versatile R packages "admtools" and "BChron". The packages provide a combination that should prove suitable for a very wide range of Palaeozoic studies. BChron is a Bayesian method originally developed for Quaternary records based on a specified accumulation model, while admtools provides two nonparametric methods to estimate age-depth models from stratigraphical and sedimentological expert knowledge such as (semi-quantitative) constraints on sedimentation rates or tracer fluxes. We focus on computing age uncertainty

from the age-depth models, propagating this uncertainty into interpretation of proxy records, and the discussion of model assumptions and their influence on uncertainties.

At the end of the workshop, participants will be able to decide which method is most suitable for their respective records, independently construct age-depth models from their data, and propagate age-uncertainties into downstream analyses. Interested participants are encouraged to bring their own datasets to the meeting or to contact the workshop leader, Emilia Jarochowska (e.b.jarochowska@uu.nl) to discuss how age-depth modelling can be applied to their studies.

Prerequisites

Participants should bring their own laptops with an up to date version of R Software and RStudio installed. For those not familiar with R we recommend going through an introductory course (e.g., https://utrechtuniversity.github.io/workshop-introduction-to-R-and-data/ at least until chapter 11). Participants must be familiar with basic usage of RStudio to install packages, execute scripts, and load data.

The focus of the workshop will be the concepts underlying age-depth modeling, and not programming in R. We will provide all R scripts to focus on the scientific contents rather than the programming language. However, familiarity with R syntax will improve the learning experience.

Excursions

Two Silurian field trips to the Natural Park and UNESCO Global Geopark Sierra Morena de Sevilla will complement the indoor sessions. Due to the access conditions to the Silurian outcrops (dirt roads with a limited turning radius), a standard coach cannot be used, and the number of seats is limited to 30 people, with preference given to the officers and titular members of the Silurian Subcommission/ICS. The remaining places will be allocated in order of registration and will only be secured if the fee is paid before 15th June 2025. If the number of registrations slightly exceeds the available places, one of the collaborating entities may accommodate the excess participants by transporting them in their own official vehicles. Both excursions are full-day trips, departing from and returning to Seville.

The first field trip (Friday 12th, from 08:30 to 20:30) is dedicated to the El Pintado-1 section in the Valle Syncline, north of Seville. It is an integral part of the activities of the Silurian meeting and is included in the registration fee. The section consists of a largely undeformed, graptolitic succession ranging from the basal Rhuddanian to close to the Ludlow/ Přídolí boundary, with a stratigraphical thickness exceeding 120 metres. In the lower 64 metres of the succession, more than 200 different graptolite species have been identified. The four standard graptolite biozones of the Rhuddanian are recognised, while the Aeronian is represented by five graptolite biozones, showing a gap in sedimentation spanning the upper *triangulatus*–lower *leptotheca* biozones and probably another, shorter gap in the *sedgwickii* Biozone. From the Telychian, only the graptolites of its basal part have been studied (*guerichi* and lower *turriculatus* biozones). The remaining Telychian strata, as well as the Wenlock, Ludlow, and Přídolí parts of the section, have not yet been studied in detail, but they will also be examined during the excursion. This includes the only two limestone beds in the upper half of the succession: the thin Ludlow "Orthocerathid limestone" and the mostly Přídolí "*Scyphocrinites* limestone." On the morning of the excursion, the *Golden Spike* ceremony will take place, marking the replacement Global Stratotype Section and Point (GSSP) of the Telychian Stage, with the attendance of various national, regional, and local authorities.

The second field trip (Saturday 13th, from 08:30 to 20:30) is optional and aims to visit a Ludlow outcrop in the Cerrón del Hornillo Syncline, where we will also visit other Cambrian

or Ordovician geosites of the Geopark. We will then return to the Valle Syncline to complete the study of sections not visited the previous day, particularly one concerning the Wenlock/Ludlow boundary, which was published in 1996.

Scientific committee

Carlo Corradini, chairman (University of Trieste, Italy)
Bing Huang (NIGPAS, China)
Bradley D. Cramer (University of Iowa, USA)
Annalisa Ferretti (University of Modena, Italy)
Emilia Jarochowska (Utrecht University, The Netherlands)
Anna Kozłowska (Institute of Paleobiology PAS, Poland)
David K. Loydell (University of Portsmouth, UK)
Jörg Maletz (Freie Universität Berlin, Germany)
Tõnu Meidla (University of Tartu, Estonia)
Mike J. Melchin (St. Francis Xavier University, Canada)
José Manuel Piçarra (LNEG, Portugal)
Vincent Perrier (Université Claude Bernard Lyon 1, France)
David C. Ray (University of Birmingham, UK)
Artur A. Sá (Univertity of Trás-os-Montes e Alto Douro, Portugal)
Valeri Sachanski (Geological Institute BAS, Bulgaria)
Ladislav Slavík (Institute of Geology CAS, Czech Republic)
Petr Štorch (Institute of Geology CAS, Czech Republic)
Zhang Yuandong (NIGPAS, China)

Organizing committee

Juan Carlos Gutiérrez-Marco, chairman (Spanish Research Council – IGEO)
Sara Romero, secretary and scientific editor (Complutense University, Madrid)
Isabel Rábano, treasurer (Spanish Research Council – IGME)
Fernando Ruiz Bermudo (Spanish Research Council – IGME)
Saturnino Lorenzo Álvarez (University of Castilla-La Mancha, Spain)
Vicente Castaño Torres (Sierra Morena de Sevilla UNESCO Global Geopark)
Gonzalo Fernández de Castro Martínez (Sierra Morena de Sevilla UNESCO Global Geopark)

Sponsored by

- Instituto de Geociencias CSIC-UCM–MICIU/Institute of Geosciences-IGEO
- Natural Park and UNESCO Global Geopark Sierra Morena de Sevilla, Junta de Andalucía (Andalusian Government)
- Centro Nacional Instituto Geológico y Minero de España-CSIC–MICIU/Spanish Geological and Mining Institute-IGME
- Asociación de Geólogos y Geofísicos Españoles del Petróleo–AGGEP/Association of Spanish Petroleum Geologists and Geophysicists
- Confederación Hidrográfica del Guadalquivir–MITECO/Guadalquivir River Hydrographic Confederation
- Sociedad Española para la Defensa del Patrimonio Geológico y Minero–SEDPGYM/Spanish Society for the Defense of Geological and Mining Heritage
- Sociedad Española de Paleontología– SEP/Spanish Palaeontological Society

Contact and further information

Website (provisional):

https://silurian.stratigraphy.org/meetings

E-mail and phone:

Sara Romero (conference secretary): phone/whatsapp +34 689 274 108, sarome01@ucm.es
Juan Carlos Gutiérrez-Marco (chairman of organizing committee): phone +34 676 933 499, jcgrapto@ucm.es
Isabel Rábano (treasurer): phone/whatsapp +34 699 232 550, i.rabano@igme.es

Summary of Provisional Schedule

	PRELIMINARY PROGRAMME			
	WEDNESDAY 10th	**THURSDAY 11th**	**FRIDAY 12th**	**SATURDAY 13th**
8:30-9:00	Registration		SILURIAN FIELD TRIP The *Golden Spike* ceremony for the new Telychian GSSP at El Pintado 1 section (Cazalla de la Sierra) + Silurian outcrops of the Valle syncline (Rhuddanian to Pridoli) (picnic lunch)	Optional field trip to the Silurian outcrops of the Valle and Cerrón del Hornillo synclines, Sierra Morena de Sevilla UNESCO Global Geopark (picnic lunch)
9:00-9:30	Opening	Oral Sessions		
9:30-10:00	Inaugural lecture: Telychian GSSP			
10:00-11:00	Oral Sessions			
11:00-11:30	Coffee Break + Poster Session	Coffee Break + Poster Session		
11:30-12:30 12:30-13:30	Oral Sessions	Business Meeting ISSS		
13:30-15:00	Lunch	Lunch		
15:00-16:00 16:00-17:00	Oral Sessions	Workshop on Silurian Age-Depth Modelling		
17:00-17:30	Coffee Break + Poster Session			
17:30-18:00	Oral Sessions			
18:00-18:30		Poster Session		
18:30-19:00 19:00-19:30				
19:30-20:30		Flamenco Spectacle		

See you in Seville!

ISSS Meeting 2025
"Advances in Silurian chronostratigraphy and high-resolution correlation"

Seville, Spain, 10th–13th September 2025

Title, Name, Surname:

Institution:

Address:

E-mail:

Full participation (10th–12th September),	yes	no
Attendance at the planned workshop (own laptop needed),	yes	no
Optional excursion (13th September)	yes	no

Oral presentation(s)

Preliminary title

Poster presentation(s)

Preliminary title

Accompanying person,	yes	no
Specific dietary requirements,	yes	no

please specify:

Please fill in the form and send it via e-mail by March 31st at sarome01@ucm.es

CYCLONET MEETING AT UTRECHT UNIVERSITY

The CycloNet meeting 2025 will be held in Utrecht from the 26th to the 27th June 2025, with an associated field trip to Belgium from the 28th to 29th of June. Hybrid participation for Thursday and Friday will be possible. Meeting website: https://www.uu.nl/en/research/department-of-earth-sciences/cyclonet-meeting-utrecht

We invite all cyclostratigraphers and researchers from adjacent fields to discuss methodology, uncertainty, and reproducibility in cyclostratigraphy in this meeting.

This meeting is supported by the CycloNet project, funded by the Research Foundation Flanders (FWO, grant no. W000522N), and the ERC Starting Grant "MindTheGap".

Registration fees

Early Career Researchers (Masters and PhD students) – 80 EUR
Senior researchers – 150 EUR
Hybrid participation – free, but registration is still required
Registration fees include lunches, coffee breaks and dinner on Thursday June 26th.

Preliminary program

Thursday 26th

Morning

Parallel workshops

- **Stratigraphic forward modeling for cyclostratigraphy** led by Johannes Hidding and Xianyi Liu
- **Age-depth modeling in R** led by Niklas Hohmann and David De Vleeschouwer
- **FAIR code and data** led by Ilja Kocken

Afternoon

Keynotes on methodology, uncertainty, and reproducibility in cyclostratigraphy.
Keynote speakers:

- Klaudia Kuiper (Vrije Universiteit Amsterdam)
- Margriet Lantink (University of Wisconsin-Madison)
- Hemmo Abels (Delft University of Technology)

One speaker to be confirmed.

Friday 27th

Morning: Contributions by the community. We welcome case studies, critical positions, new methodological approaches and replication attempts. You can submit your suggestion in the registration form.
Afternoon: Work on a white paper and discussion on future directions

Saturday-Sunday 28th-29th

Led by Anne-Christine Da Silva and David De Vleeschouwer. Participation fee: 200 EUR, including transport from Utrecht and back, hotel with breakfast and field lunch.

The target of the field trip is to visit Devonian and Carboniferous outcrops with a target on cyclostratigraphy.

- Chanxhe – Uppermost Famennian, Hangenberg black shale event, Devonian-Carboniferous boundary and Lowermost Carboniferous – Mass extinction and astronomical forcing.
- Rivage – Lowermost Carboniferous – cycles and carbonate platform drowning
- Heid des Gattes (Aywaille) - Famennian tidal rhythmites
- Lustin Formation (Aywaille) - Frasnian carbonate platform
- Ninglinspo - Unconformity at the northwestern border of the Lower Palaeozoic Stavelot-Venn basement. Lochkovian basal conglomerate and reddish claystones, unconformably lying on Cambrian slates. The Wilson cycle at its best!
- Sallet - Carboniferous cyclicity.

Registration

https://forms.office.com/e/UrVjH0iH3s
Registration closes May 1st.
For up-to date information see the meeting webpage: CycloNet meeting Utrecht - Department of Earth Sciences - Utrecht University

Venue

The meeting will take place at the Department of Earth Sciences at Utrecht Science Park, the science campus of Utrecht University. The address: Vening Meineszgebouw A, Princetonlaan 8a, 3584 CB Utrecht.

Travel

Utrecht is the national railway hub in the Netherlands, with frequent train service from adjacent countries. For train tickets, consult https://www.nsinternational.com/, https://www.eurostar.com or your local train service. Night train service is available from Germany, Austria and Italy. A ferry service operates from Harwich (UK) to Rotterdam harbor.

Arrival by plane: Amsterdam Schiphol airport is 30 min from Utrecht Centraal, with frequent direct train service. Budget airlines fly to the Eindhoven Airport, which is 1:20 h from Utrecht (bus + train).

For participants interested in the Workshops we recommend arriving Wednesday evening, as workshops start at 9:00 am.

Organizing committee

Chair: Niklas Hohmann n.h.hohmann@uu.nl
Sietske Batenburg
Anne-Christine da Silva
David De Vleeschouwer
Emilia Jarochowska
Ilja Kocken
Xianyi Liu
Lucas Lourens
Laurent Puyana

OBITUARIES

JOSEP ROQUÉ BERNAL (1953-2024), IN MEMORIAM

I write this in tribute to Josep, a fine man passionate about Silurian graptolites who, due to life's circumstances, was never able to dedicate himself to studying them professionally. After obtaining a Master's Degree in Geology from the University of Barcelona in 1978, he spent his early years working in mineral prospecting and hydrogeology for two different companies, and later as a high school geology teacher. Unfortunately, he had to interrupt his career to take charge of the family business – a traditional bakery in the city of Tarragona – which he managed until his retirement in 2020.

During this long period of essentially nocturnal work, Josep developed his vocation for graptolites, to which he dedicated his few days off, as well as the short holidays when he took turns with his brother in running the business. On the one hand, he visited the libraries of the Natural History Museum of Barcelona and the university to gather information and stay up to date with graptolite research; on the other, he carried out detailed sampling of the Silurian graptolite sections in Catalonia (NE Spain). His methodical fieldwork led to the discovery of significant Llandovery localities in the Catalan Coastal Range and, above all, the spectacular Estana section in the Pyrenees – the only continuous black-shale succession of the Ordovician–Silurian boundary in peri-Gondwanan Europe. Right up until his death, Josep was still researching, together with Petr Štorch and Zuzana Strossová, newly characterized Llandovery biozones in this same section.

The first news I had of this Silurian and graptolite enthusiast dates back to the end of 1995, when Jaume Gallemí, curator of Palaeontology at the Barcelona Museum, informed me about the monthly visits to the library by a geologist from Tarragona who was searching for articles on graptolites. After providing him with my contact information and confirming Josep's enthusiasm and extensive knowledge of the group, I convinced him to start publishing his discoveries, which he did in a series of local articles. However, it is his discovery of the exceptional graptolite succession around the Ordovician–Silurian boundary in the Eastern Pyrenees that will make his memory indelible to Science, beyond the fond memories and the emotional void he leaves behind in his family and friends.

Josep was born in 1953, lived in Tarragona, and passed away at the age of 70 due to cancer.

Rest in peace.

Juan Carlos Gutiérrez-Marco

Publications:

Roqué Bernal, J. 1997. Graptolitos rhuddanienses en la Sierra de Miramar (Cadenas Costeras Catalanas) [Rhuddanian graptolites in the Sierra de Miramar (Catalonian Coastal Ranges)]. *In*: Grandal d'Anglade, A., Gutiérrez-Marco, J.C. and Santos Fidalgo, L. (eds.) *XIII Jornadas de Paleontología y V Reunión Internacional del Proyecto 351 del PICG*. Libro de Resúmenes y Excursiones, A Coruña, 95−97.

Roqué Bernal, J. 1999. La Biozona *ascensus-acuminatus* en el Silúrico de las Cadenas Costeras Catalanas (NE de España) [The *ascensus-acuminatus* Biozone in the Silurian of the Catalonian Coastal Ranges, NE Spain)]. *Temas Geológico-Mineros ITGE*, **26** (2), 632−637.

Roqué Bernal, J., Štorch, P. and Gutiérrez-Marco, J.C. 2017. Bioestratigrafía (graptolitos) del límite Ordovícico-Silúrico en los Pirineos orientales (curso alto del río Segre, Lleida) [Graptolite biostratigraphy of the Ordovician−Silurian boundary in the Eastern Pyrenees (high valley of the Segre River, Lleida]. *Geogaceta*, **61**, 27−30.

Gutiérrez-Marco, J.C. and Roqué Bernal, J. 2024. Sinrabdosomas de graptolitos: el falso mito de las supercolonias con flotador central. *In*: Moncunill-Solé, B., Blanco, A., Grandal d'Anglade, A., González-Fortes, G., Santos Fidalgo, L. and Bao, R. (eds.) *Libro de Resúmenes XXXIX Jornadas de la Sociedad Española de Paleontología*, A Coruña. *Palaeontological Publications*, **5**, 58.

Gutiérrez-Marco, J.C., Ferrer, E., Robardet, M. and Roqué Bernal, J. 1999. Graptolitos multirramosos del Devónico de las Cadenas Costeras Catalanas (noreste de España) [Multiramous graptolites from the Devonian of the Catalonian Coastal Ranges, NE Spain]. *Temas Geológico-Mineros ITGE*, **26** (2), 610−617.

Gutiérrez-Marco, J.C., Roqué Bernal, J., Robardet, M. and Ibáñez Sotillos, R. 1999. Graptolitos de la Biozona de *Coronograptus cyphus* (Rhuddaniense: Silúrico Inferior) en el área del Montseny (Cadenas Costeras Catalanas, noreste de España) [Graptolites from the *Coronograptus cyphus* Biozone (Rhuddanian, lower Silurian) in the Montseny area (Catalonian Coastal Ranges, NE Spain)]. *Temas Geológico-Mineros ITGE*, **26** (2), 618−622.

Štorch, P., Roqué Bernal, J. and Gutiérrez-Marco, J.C. 2019. Graptolite-rich Ordovician–Silurian boundary strata in south-central Pyrenees, Spain: the only uninterrupted O–S boundary black-shale succession in peri-Gondwanan Europe. *Geological Magazine*, **156** (6), 1069−1091. doi: 10.1017/S001675681800047X.

Strossová, Z., Roqué Bernal, J. and Štorch, P. 2023. Graptolite-rich Ordovician–Silurian boundary and Rhuddanian reference section in the south-central Pyrenees, Spain: stratigraphy and correlation. In: *4th International Congress on Stratigraphy*, Lille-France, Book of Abstracts, 315.

Illustration: Recent portrait of Josep Roqué.

JIŘÍ KŘÍŽ (1943–2024)

Jiří Kříž was born on March 31st, 1943, in the working-class districts of Prague. In 1953, at the age of ten, he discovered fossils and a geological guidebook in a waste pile outside his school. This sparked his interest in geology, and he gradually began exploring the field in Prague and its surrounding areas. In 1961, Jiří enrolled in the Geology program at Charles University in Prague. Initially, he was interested in studying trilobites, but on the advice of B. Bouček, he shifted his focus to bivalves. After completing his thesis, Jiří joined the Central Geological Survey in Prague in 1966, where he remained for a whole career, with the exception of a year-long research fellowship at the Smithsonian Institution in 1972. In 1977, he successfully defended his doctoral thesis under the supervision of Vladimír Pokorný. His thesis, which focused on a detailed systematic study of the newly established superfamily Cardiolidae, was a significant contribution to the field. Afterward, he continued his research at the Geological Survey. Following the Velvet Revolution in 1989, Jiří served for many years as the head of the Department of Regional Geology of Sedimentary Formations at the Czech Geological Survey.

From 1984, Jiří Kříž served as a voting member of the International Subcommission on Silurian Stratigraphy (ISSS) which, at the time, was primarily composed of British scientists. As part of the Ecostratigraphy project, he collaborated with colleagues to establish four international Silurian series. In 1984, the International Geological Congress in Moscow formally accepted the Přídolí Series and the Požáry site near Řeporyje as the global boundary stratotype (GSSP). Later, in 1993, Jiří, together with H. Jaeger, H.P. Schönlaub, and P. Dufka, proposed a division of the Přídolí Series into two stages, although this proposal was not accepted by the Silurian Stratigraphic Subcommission. After more than thirty years, a modified version of the proposal is resubmitted by his followers.

While Jiří dealt with Silurian stratigraphy, he was not a specialist in graptolites or conodonts. Instead, he emphasized the correlation potential of other groups, particularly bivalves. Jiří advocated for the possibility of palaeoecological analyses of fossil groups with living representatives and interpretable functional morphology. In numerous works, he documented the correlation and palaeoecological potential of Silurian peri-Gondwanan bivalve faunas, although this area of study has seen limited follow-up. His contributions to malacology include the revision of many genera and species, the description of 28 new genera and 120 new species of bivalves, the identification of the oldest known bivalve in 1973, the discovery of the oldest fossilized pearls within bivalves in 1979, and the first description of a nektonic bivalve, *Maida*, from the upper Silurian in 1996. He also pioneered the study of ecological strategies in Lower Palaeozoic bivalves, publishing his findings in 1985.

Jiří was a significant figure in the protection of nature and the landscape of the Czech Republic starting in the 1980s and was involved in independent ecological activities before the Velvet Revolution. He was instrumental in proposing and securing protected status for many of today's internationally recognized key geological profiles and paleontological sites,

including several of Barrande's localities in Central Bohemia. Recognizing the need for more effective conservation, he became a founding member of ProGEO (International Association for the Conservation of Geological Heritage). He served on the board of the European ProGEO association as the Czech national correspondent and, from 1998, chaired the Czech section of ProGEO.

After his retirement in 2007, Jiří Kříž remained active, continuing his work part-time and later as an emeritus researcher. Even in retirement, as long as his health allowed, he continued publishing scientific articles and contributed to several chapters in the newly prepared *Treatise of Invertebrate Paleontology*. Over the course of his prolific career, Jiří published more than 210 scientific papers and monographs, in many of which he was the sole author or first author, as well as numerous popular publications and several books.

Marika Polechová, Štěpán Manda, and Petr Štorch

Selected publications devoted to the Silurian and bivalves:

POJETA, J., RUNNEGAR, B., KŘÍŽ, J. 1973. *Fordilla troyensis* Barrande: The oldest known pelecypod. *Science*, **180**(4088), 866–868.

KŘÍŽ, J. 1979. Silurian Cardiolidae (Bivalvia). *Sborník geologických věd, paleontologie*, řada P, 22, 1–160. Praha.

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KŘÍŽ, J. 1985. Silurian Slavidae (Bivalvia). *Sborník geologických věd (Paleontologie)*, **27**, 47–111.

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KŘÍŽ, J. 1989. *Přídolí Series in the Prague Basin (Barrandian area, Bohemia)*. *– A Global Standard for the Silurian System*, HOLLAND C.H. ET BASSETT M.G. (ed.), 90–100. Cardiff.

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KŘÍŽ, J., SERPAGLI, E. 1993. Upper Silurian and lowermost Devonian Bivalvia of Bohemian type from Western Sardinia. *Bolletino della Societá Paleontologica Italiana*, **32**(3), 289–347.

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KŘÍŽ, J. 1998. Silurian, 79-101. *In* CHLUPÁČ, I., HAVLÍČEK, V., KŘÍŽ, J., KUKAL, Z. & ŠTORCH, P. *Paleozoic of the Barrandian (Cambrian to Devonian).* 183 s. Český geologický ústav, Praha.

KŘÍŽ, J. 1999. Silurian and lowermost Devonian bivalves of Bohemian type from the Carnic Alps. *Abhandlungen der Geologischen Bundesanstalt*, **56**(1), 259–316.

KŘÍŽ, J. 1999. Bivalvia dominated communities of Bohemian type from the Silurian and Lower Devonian carbonate facies, 229–252. *In* Boucot A.J., Lawson, J.D.

(eds).Palaeocommunities: A case study from the Silurian and Lower Devonian. *World and Regional Geology series 11, Cambridge University Press*, 1–895, Cambridge.

KŘÍŽ, J. 1999. Silurian Bivalvia - evolution, palaeocology, palaeogeography, importance for biostratigraphy and correlation. *Abhandlungen der Geologischen Bundesanstalt*, **54**, 377–384.

KŘÍŽ, J. 2001. Enantiomorphous dimorphism in Silurian and Devonian bivalves; *Maminka* BARRANDE, 1881 (Lunulacardiidae, Silurian) - the oldest known example. *Lethaia*, **34**, 309–322.

KŘÍŽ, J. 2005. Telychian (Llandovery, Silurian) bivalves from Spain. *Palaeontology*, **48**(3), 455–477.

KŘÍŽ, J. 2007. Origin, evolution and classification of the new superorder Nepiomorphia (Mollusca, Bivalvia, Lower Paleozoic). *Palaeontology*, **50**(6), 1341–1365.

KŘÍŽ, J. 2008. *Algerina* gen. nov. (Bivalvia, Nepiomorphia) from the Silurian of the North Gondwana margin (Algeria), peri-Gondwanan Europe (France, Italy), Perunica (Prague Basin, Bohemia) and the Siberian Plate (Tajmyr Basin, Russia). *Bulletin of Geosciences*, **83**(1), 79–84.

KŘÍŽ, J. 2008. A new bivalve community from the lower Ludlow of the Prague Basin (Perunica, Bohemia). *Bulletin of Geosciences*, **83**(3), 237–280.

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KŘÍŽ, J. 2010. Silurian *Spanila* Barrande, 1881 (Bivalvia, Spanilidae) from the European peri-Gondwana (Bohemia, Germany, France and Austria). *Bulletin of Geosciences*, **85**(3), 425–434.

ALFRED LENZ (1929-2024)

It is with great sadness that I let you know that Alf Lenz passed away on September 18, 2024. Alf has been a prominent member of the community of Silurian workers since the 1960s. His publications span a period of 61 years from 1962 until 2023. He is best known for his pioneering biostratigraphic and taxonomic studies of the Ordovician-Devonian graptolite-bearing successions in northwestern and Arctic Canada. He also contributed significantly to our understanding of the details of graptolite morphology, phylogeny and evolution, as well as many other aspects of graptolite studies. He had numerous collaborations with researchers from around the world, especially Dennis Jackson and Ania Kozłowska, and a very early international Chinese exchange with Chen Xu. He also published papers on brachiopods and other fossil groups and collaborated on chemostratigraphic research. To me and many others Alf was a great mentor, colleague and friend. His passing is a great loss to our community.

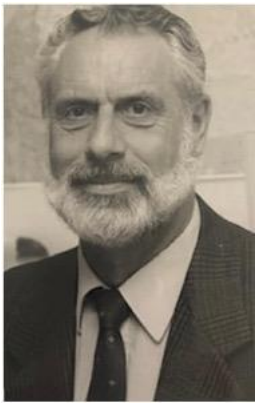
Attached is his obituary and also a list of his publications related to Silurian research.

Best regards to all, Mike Melchin

Obituary

It is with great sadness we announce the passing of Alfred Carl Lenz on September 18, 2024, at University Hospital in London Ontario. Alfred was in his 96th year and had a wonderful, long and adventurous life. Alf is predeceased by his beloved wife Grace, daughter Carol Lenz and sister and brother-in-law Marion and Ken Kasha. He was the loving father of Dianne Lorimer (Darren) and Steven Lenz. He was the proud grandfather (Gpa) to Lucas and Chloe Lorimer and brother to Gordon Lenz (Melodie).

Alfred was born on a farm in Olds Alberta, January 6, 1929. Inspired at an early age by his maternal grandfather, he dreamed of leaving the farm and becoming a geologist. Through hard work and dedication, he graduated from Princeton University with his doctorate in Geology. After a few years of working for oil companies, he decided his true passion was in research and teaching and became a professor at the University of Western Ontario. Alfred enjoyed a wonderful career contributing greatly as teacher, researcher, mentor and friend to the geological community.



Alfred was an avid traveler, wonderful cook and loved to pair his cooking with the perfect glass of wine. In recent years when he could no longer travel the world, his adventures included trips to Toronto to spend time with his two grandchildren who he adored.

Publications:

Bates, D.E., Kozłowska, A. and Lenz, A.C., 2005. Silurian retiolitid graptolites: Morphology and evolution. Acta Palaeontologica Polonica, 50(4), pp.705-720.

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Kozłowska-Dawidziuk, A., Lenz, A.C. and Štorch, P., 2001. Upper Wenlock and lower Ludlow (Silurian), post-extinction graptolites, Všeradice section, Barrandian area, Czech Republic. Journal of Paleontology, 75(1), pp.147-164.

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VIIVE VIIRA (1933–2025)

With sadness, we inform the Silurian community that Viive Viira, a well-known expert on early Palaeozoic conodonts, passed away on February 13th, 2025, at the age of 92.

Viive's scientific career began in the late 1960s when she published her first papers on Ordovician conodonts from Estonia. She defended her Cand. Sci. (PhD) thesis on the same topic in 1970 and, a few years later, published the monograph "*Ordovician Conodonts of the East Baltic Region"*. This work established the basis for Ordovician conodont biostratigraphy in the region and continues to be cited today. At the same time, Viive started studying Silurian conodonts. She contributed to the collective monograph "*The Silurian of Estonia"* published in 1970, and focused on the upper Silurian conodont biostratigraphy in several subsequent works. Over the course of her career, Viive authored more than a hundred publications on conodont taxonomy, biostratigraphy, palaeoecology, taphonomy, and diversity patterns, with her final paper published in 2022 on the Ludfordian integrated bio- and chemostratigraphy of the Ohesaare reference drill core from Saaremaa Island, Estonia. Her full bibliography is available at https://kirjandus.geoloogia.info/en/library/98

Viive worked closely with bedrock geologists and palaeontologists at the Institute of Geology of the Estonian Academy of Sciences and later at Tallinn University of Technology. She also maintained strong collaborations with international colleagues, notably Anita Löfgren from Lund and Richard Aldridge from Leicester. I had the privilege of working with Viive on several Estonian sections and co-authoring a few publications. She introduced me to the world of conodonts, for which I am deeply grateful. Viive's well-curated conodont collections remain available for future researchers to build upon her work.

In her personal life, Viive's love of sports and horses deserves special mention. She was one of Estonia's top dressage riders and among the very few true amateurs to earn the title of Master of Sport in dressage. She became Estonian champion in various dressage programs 17 times during the 1960s and 1970s, and her passion for horses and riding never faded.

Colleagues from Estonia and beyond will remember Viive Viira as a warm-hearted person and a dedicated palaeontologist and biostratigrapher, whose contributions significantly advanced the study of conodonts in the Baltic region.

Olle Hints, on behalf of Estonian palaeontologists

SILURIAN RESEARCH 2024: NEWS FROM THE MEMBERS

(in alphabetical order)

FERNANDO ALVAREZ

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Publications

An appreciation of John A. Talent's IYPE <Earth and Life> I & II. 2024. (J.A. Talent & F. Álvarez, editors), pp1-235, Oviedo. ISBN: 978-84-09-63483-5

ALYSSA BANCROFT

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Continue mapping Silurian strata in Iowa associated with USGS STATEMAP Projects; working with undergraduate and graduate students on a variety of chronostratigraphic projects, quite a number of them related to the Silurian.

CHRISTOPHER BARNES

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Nothing to report for 2024.

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Publications

Barrick, J. E., Klapper, G. and Peavey, F. N., 2024. Conodont biostratigraphy of the upper member of the Henryhouse Formation (late Ludfordian-Pridoli, Silurian), southern Oklahoma, USA. Stratigraphy, 21: 287-322. https://doi.org/10.47894/stra.21.4.02

CARLTON BRETT

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Although I have continued to be heavily involved in research on the Devonian and on Ordovician of the Cincinnati Arch, my students and I have continued substantial research in the Ordovician-Silurian boundary strata of eastern North America.

Research on Ordovician-Silurian Boundary Sequence and Chemostratigraphy and Conodont Biostratigraphy:

In June 2024, PhD student, Cole Farnam, completed and defended a dissertation on the latest Hirnantian to early Rhuddanian in eastern North America. This dissertation includes chapters on chemostratigraphy and sequence stratigraphy of the latest Ordovician Manitoulin Formation in Ontario, and the Whippoorwill Formation of southern Ohio and southeastern Indiana. Cole also reported on the paleoecology of an exceptionally preserved fauna

("Centerville Lagerstätte") from a newly discovered site in southern Indiana as part of his dissertation. We are continuing to collaborate with Dr. Jin Jisuo, (University of Western Ontario), who is describing the brachiopods, and Dr. Robert Elias (University of Manitoba) who is studying the rugose corals. I am presently working with MS student, Lincoln Shoemaker, discoverer of the Lagerstätte, who is studying the well-preserved echinoderm fauna including at least four species of crinoids, as well as ophiuroids and an asteroid. Lincoln is also comparing the new assemblage to all other known Hirnantian and Rhuddanian crinoid assemblages from eastern North America. The new faunal assemblage is completely different from immediately underlying Cincinnatian (uppermost Katian). It resembles the Edgewood and latest Hirnantian early Silurian Manitoulin and Cabot Head faunas of New York and Ontario, Canada. This unique occurrence provides important insights into the post-extinction recovery in this critical interval.

Outcrop sections in southern Indiana also have provided important new details on the Ordovician-Silurian boundary interval (Belfast Member) and lowest Silurian Rhuddanian Brassfield Formation through Aeronian, an interval miss-named "Golden Brassfield" Formation (actually Aeronian Age and correlative with Oldham of Kentucky). In 2024 we have extended our studies of these lower Silurian sections with detailed sampling and processing for conodonts in collaboration with Christopher Waid of the Ohio Geological Survey. Most samples proved to have abundant, well preserved conodont assemblages; these were compared to previously obtained conodonts from the coeval strata in southern Ohio. A report has been produced on the stratigraphic distribution of the conodonts as well as amending the conodont zones of the uppermost Hirnantian-Rhuddanian-early Aeronian, updating of the taxonomy of about 15 conodont species. We hope that this important Hirnantian-lower Silurian biostratigraphy paper will be out in 2025.

Paleosalinity of upper Ordovician-Silurian Facies in the Cincinnati Arch Region

Dr. Thomas Algeo (University of Cincinnati) developed a new proxy for paleosalinity that utilizes the boron/gallium ratio of ancient shales. As clays absorb more B in proportion to salinity higher ratios indicate normal to elevated salinity, whereas low ratios suggest brackish conditions. Over the past few years, we have systematically sampled shales from the Katian, Hirnantian, and Llandovery-Wenlock interval in Kentucky. Working with Dr. Zhanhong Liu of China University of Geosciences, Wuhan, China and Tom Algeo, we have obtained B/Ga analyses of these shales which can be compared with facies evidence for salinity, reported in Liu et al. (2024). Virtually all Katian samples yielded B/Ga values in the normal marine salinity range; a couple of Hirnantian samples, probably representing lowstand facies produced low ratios suggestive of brackish conditions and lower Silurian samples were mainly in the normal marine range but with a few suggesting possible elevated salinities. However, these are dolomitic shales which may have been compromised by diagenetic processes. In any case, the Ba/Ga proxy does provide a promising new avenue of study that may explained some shales that are barren or show restricted diversity.

Publications

FARNAM, C.A.* AND BRETT, C.E., 2024. Analysis of the late Hirnantian and early Rhuddanian unconformities of southern Ontario: evidence for far-field glacioeustatic effects. *Canadian Journal of Earth Sciences* 61 (3): 1-25.

LIU, Z., ALGEO, T.J., AREFIFARD, S., WEI, W., BRETT, C.E., LANDING, E., AND LEV, S. M., 2024. Testing the salinity of Cambrian to Silurian epicratonic seas. *Journal of the Geological Society* 181: 2023-217.

Theses and dissertations

FARNAM, COLE, 2024. The Hirnantian Record of the East-central North America. Unpublished PhD Dissertation, University of Cincinnati, Cincinnati, OH, 245 p.

Honors

In 2024 I was elected to Fellow of the American Association for the Advancement of Science (AAAS)

FRANK BRUNTON

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Nothing to report for 2024.

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I am active in a series of projects with focus on the Silurian coupled biogeochemical events (Ireviken, Mulde and Lau). These projects normally are based on scientific drilling campaigns on Gotland, which provide continuous records of strata and provide a base for highly time-resolved studies. I am working with Guanzhou Yan (currently in Lund) and Rongchang Wu's group at NIGPAS, with comparison and correlation of Silurian events between Baltica and the South China plate. I am collaborating with Carolina Klock Campos Ferreira and Thijs Vandenbroucke's group (Ghent University) on chitinozoans from deep offshore strata formed during the Mulde Event, and I am continuing work with Bradley Cramer (University of Iowa) and his group on Silurian events (mostly Ireviken and Mulde) and with the stratigraphy of the Llandovery-Wenlock boundary interval based on a new drillcore from Gotland.

Publications

Yan, G., Lehnert, O., Männik, P., Calner, M., Li, L., Wei, X., Gong, F., Luan, X. and Wu, R., 2025. New bio- and chemostratigraphic data from southwestern China and its relation to Telychian (Llandovery, Silurian) climate change. Palaeogeography, Palaeoclimatology, Palaeoecology 662, 112740.

CHEN ZHONGYANG

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I have been working on Silurian conodonts and stratigraphy. In 2024, I attended the 6th International Conference of Palaeogeography in Nanjing and gave an oral presentation entitled "First documentation of early Silurian conodonts from western Thailand and its geological implications". I also attended the IGC 2024 in Busan and gave an oral presentation entitled "Silurian conodonts from western Yunnan and Xizang (Tibet), China".

Publications

Chen, Z.Y.*, Chen, Q., Wang, G.X., Fang, X., Tang, P., Yan, G.Z., Yuan, W.W., Huang, B., Zhang, X.L., Yan, K., Zhang, Y.D., Wang, Y., 2024. Silurian integrative stratigraphy, biotas and palaeogeographical evolution of the Qinghai-Tibetan Plateau and its surrounding areas. Science China Earth Sciences, 67(4): 1005-1035. https://doi.org/10.1007/s11430-023-1235-3

CARLO CORRADINI

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My work on Silurian conodonts and biostratigraphy continues. Most of the research were devoted to the Carnic Alps, where I am investigating the Pre-Variscan Sequence (Upper Ordovician-lower Carboniferous). Studies on Silurian and Lower Devonian mainly focus on "Orthoceras limestones" and calcareous levels within black shales sequences, both studying new sections and updating data from classical localities. Among other studies, a paper on astrochronology of the Cellon section has been published (M. Arts et al.), and an investigation of an abundant and diverse microfauna from the Llandovery/Wenlock of Monte Cocco area is in progress.

The Ockerkalk limestones of Sardinia came back in my interest: the revision of a huge conodont collection from several sections, some still unpublished, is in progress (with M.G. Corriga and A. Ferretti), with implication taxonomy and biostratigraphy.

A study on a low diversity conodont and cephalopod association from Western Sahara has been published (Ferretti et al.), as well as a global revision of conodonts in biostratigraphy. Investigation of the Silurian of Tuscany is in progress (with A. Spina, M.G. Corriga and others)

Taxonomical studies on late Silurian conodonts are in progress (with M.G. Corriga).

Publications:

ARTS M., CORRADINI C., PONDRELLI M., PAS D. & DA SILVA A.-C., 2024. An astrochronological framework for the upper Silurian Cellon section constructed using Monte Carlo Simulations and wavelet analysis using the WaverideR package. *Frontiers in Earth Sciences*,12, 1357751, 24 pp. doi: 10.3389/feart.2024.1357751

CORRADINI C., HENDERSON C., BARRICK J.E. & FERRETTI A. 2024. Conodonts in biostratigraphy. A 300-million-years long journey through geological time. *Newsletters on stratigraphy* 40 pp, doi: 11.1127/nos/2024/0822

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CORRADINI C., CORRADETTI A., CORRIGA M.G., DEVOTO S., DORIGO L., PONDRELLI M. & SPALLETTA C., 2024. *A Ovest di Passo di Monte Croce Carnico*. Le guide del Geoparco delle Alpi Carniche, 6, 48 pp. Comunità di montagna della Carnia editore. ISBN: 978 88 96546 15 4

Abstracts:

CORRADINI C., CORRIGA M.G., DESOGUS S., ONGARI C. & FERRETTI A., 2024. Mineralized microremains from the Silurian of the Carnic Alps (Italy). *Geologica balcanica*, 53, 96.

SPINA A., CAPEZZUOLI E., MOLLI G., CORRADINI C., BROGI A., LIOTTA D., ZUCCHI M. & RONCHI A., CORRIGA M.G., DEGL'INNOCENTI N., SCARANI R., 2024. Palynological analysis from the Silurian (Ludlow) of Tuscany (Italy) new findings and chronostratigraphic and palaeogeographic correlation. *Geologica balcanica*, 53, 107.

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I am working on conodont taxonomy and biostratigraphy across the Silurian-Devonian boundary mainly in the Carnic Alps, Sardinia and other North Gondwana regions.

In the Carnic Alps, researches mainly focus on the Silurian and Lower Devonian in various sectors of the chain. A project on the Silurian of Tuscany has just started (with C. Corradini, A. Spina and others).

In Sardinia, I'm revising the conodont collection from several sections, some still unpublished, from the Ockerkalk limestones is in progress (with C. Corradini and A. Ferretti).

Taxonomical studies on late Silurian conodonts are in progress (with C. Corradini).

Publications

FERRETTI A., SERVENTI P., FERRARI G., CORRIGA M.G. & CORRADINI C., 2024. Low-diversity conodont and cephalopod-assemblages from the Silurian of the Tinduf Basin, Western Sahara. *Geologica balcanica*, 53, 45-50. doi: 10.52321/GeolBalc.53.3.45

CORRADINI C., CORRADETTI A., CORRIGA M.G., DEVOTO S., DORIGO L., PONDRELLI M. & SPALLETTA C., 2024. *A Ovest di Passo di Monte Croce Carnico*. Le guide del Geoparco delle Alpi Carniche, 6, 48 pp. Comunità di montagna della Carnia editore. ISBN: 978 88 96546 15 4

Abstracts

CORRADINI C., CORRIGA M.G., DESOGUS S., ONGARI C. & FERRETTI A., 2024. Mineralized microremains from the Silurian of the Carnic Alps (Italy). *Geologica balcanica*, 53, 96.

SPINA A., CAPEZZUOLI E., MOLLI G., CORRADINI C., BROGI A., LIOTTA D., ZUCCHI M. & RONCHI A., CORRIGA M.G., DEGL'INNOCENTI N., SCARANI R., 2024. Palynological analysis from the Silurian (Ludlow) of Tuscany (Italy) new findings and chronostratigraphic and palaeogeographic correlation. *Geologica balcanica*, 53, 107.

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Work continues on a range of Silurian projects including new radioisotopic dates from the Altajme drill core, a proposal is still pending to support research on a new drill core from Gotland in collaboration with Mikael Calner (Lund), and new chemostratigraphic data from the Altajme drill core are also being generated. Two new manuscripts were submitted and are in review.

Academic meetings

We have a proposal in to the Geological Society of America to host a Penrose Meeting related to the future of the Geologic Time Scale. If successfully funded, this will be to host a meeting in 2026, but organization and planning will take place during 2025.

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The PhD Project of Michiel Arts (under my supervision) is reaching its final year. Different manuscripts are in preparation on this matter on the different records studied by Michiel (Cellon section from the Carnic Alps already published, Altajme core from Gotland, and the Sommerode core from Bornholm, Denmark)

Publications

Arts, M.C.M., Corradini, C., Pondrelli, M., Pas, D., Da Silva, A.C. (2024): An astrochronological framework for the upper Silurian Cellon section constructed using Monte Carlo Simulations and wavelet analysis using the WaverideR package. Frontiers Sedimentology, Stratigraphy and Diagenesis, v.12. Article number 1357751. https://doi.org/10.3389/feart.2024.1357751

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I am currently working on Silurian chitinozoans and stratigraphy of the Central Andean Basin, in the northwest of Argentina, and the Tandilia region, in central-east of Argentina, in collaboration with sedimentologists and paleontologists. I have advised two undergraduate students during 2024. I was in charge of teaching a short postgraduate course on Palynology for the III Chilean Palaeontological Congress at the University of Atacama in Chile. I am in charge of organizing the postgraduate courses for the Doctorate in Geosciences (Doctorado en Geociencias) at the university (Argentine).

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I currently serve as the Scientific Director at the Anticosti UNESCO World Heritage Site and as an Adjunct Professor at the University of Ottawa. Our Anticosti NPO has recently launched a research incubator designed to support high-resolution stratigraphic studies. These studies integrate carbonate sedimentology, sequence stratigraphy, biostratigraphy, and chemostratigraphy to address various aspects of the End Ordovician mass extinction.

Selected collaborative projects in progress:

- **Upper Ordovician–Lower Silurian Strata of Anticosti Island:**
  Utilizing Anticosti Island as a natural laboratory to unravel chitinozoan paleoecology and to track global Ordovician and Silurian biovents.
  (Collaboration with Thijs Vandenbroucke and several of his graduate students)
- **Stratigraphy and Timing of the End Ordovician Mass Extinction:**
  Investigating the detailed stratigraphic record and the precise timing of extinction events.
  (Collaboration with Joshua Zimmt, Steve Holland, and Seth Finnegan)
- **Reconstructing the late Ordovician evolution of tropical continental weathering**
  Studying the evolution of terrestrial weathering and associated nutrient fluxes across the Hirnantian glaciation.
  (Collaboration with Germain Bayon and Jean-François Ghienne)

Publications

Zimmt, J.B., Holland, S.M., Desrochers, A., Jones, D.S., & Finnegan, S. (2024). A high-resolution sequence stratigraphic framework for the eastern Ellis Bay Formation, Canada:

A record of Hirnantian sea-level change. *Geological Society of America Bulletin.* **136** (9-10): 3825–3849. doi: 10.1130/B37190.1

Klock, C., Desrochers, A., McLaughlin, P.I., Emsbo, P., DeBacker, T., Jonckheere, F.M., Esteves, C.J.P., & Vandenbroucke, T.R.A. (2024). Chitinozoan biostratigraphy through the Aeronian–Telychian boundary interval on Anticosti Island, Canada. *Journal of Micropalaeontology, **43** (2)*, 475–495. doi: 10.5194/jm-43-475-2024

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My Silurian research continues to be focused on the biosedimentology and paleoecology mostly of the Austrian Carnic Alps. Recent papers have focused on the effect of diagenesis on bioapatite mineralogy and crystallization patterns over geological time.

A global reassessment of conodonts in biostratigraphy has been recently published and is available in open access (Corradini et al., 2024). A summary of the present knowledge on conodonts is there presented, mainly focused on their stratigraphic applications. Biozonation schemes in use are discussed and the importance of these fossils in chronostratigraphic correlation is stressed.

Ferretti et al. (2024b) discuss a peculiar Silurian cephalopod slab collected in Western Sahara that hosts almost monospecific conodont and cephalopod associations.

Academic meetings

Annalisa Ferretti has co-edited with Guillermo Albanesi and Xavier Crosta (Albanesi et al., 2024) the Thematic Issue of *Marine Micropaleontology* "Beyond biostratigraphy: Conodont matters in evolving planetary scenarios", resulting from the homonymous Session at the 5th International Conodont Symposium "ICOS 5" held in Wuhan, China (June 24-27, 2022). The Issue includes several Silurian contributions and a preface (Ferretti et al., 2024a) introducing the significance of the Special Issue and its contents.

Finally, Annalisa Ferretti is involved in the guest-editing (with Marco Balini, David A.T. Harper and Thomas Servais) of the Thematic Issue of *Palaeogeography, Palaeoclimatology, Palaeocology* "From rock to time: evolutionary lineages and the calibration of the Chronostratigraphic Scale", resulting from the General Plenary Session at the 4th International Congress on Stratigraphy STRATI 2023 held in Lille, France (July 11-13, 2023).

Publications

Albanesi, G., Ferretti, A. & Crosta, X. (EDITORS) 2024. Beyond biostratigraphy: Conodont matters in evolving planetary scenarios. *Marine Micropaleontology*, VIRTUAL SPECIAL ISSUE, ISSN: 0377-8398. 1 Editorial + 16 Research articles, Amsterdam.

Corradini, C., Henderson, C., Barrick, J. & Ferretti, A. 2024. Conodonts in Biostratigraphy. A 300-million-years long journey through geologic time. *Newsletters on Stratigraphy*: 40 pp. doi: 10.1127/nos/2024/0822 (open access).

Ferretti, A., Albanesi, G., Crosta, X. & Jordan, R.W. 2024a. Beyond biostratigraphy: Conodont matters in evolving planetary scenarios. *Marine Micropaleontology*, 189: 102364. doi: 10.1016/j.marmicro.2024.102364

Ferretti, A., Serventi, P., Ferrari, G., Corriga, M.G. & Corradini, C. 2024b. Low-diversity conodont and cephalopod assemblages from the Silurian of the Tinduf Basin, Western Sahara. *Geologica Balcanica*, 53(3): 45-50. doi: 10.52321/GeolBalc.53.3.45.

JIŘÍ FRÝDA

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After a long break, I am starting again as a new corresponding member of the ISSS. According to the Silurian Times, I was listed as a corresponding member until 2020. For this reason, I list here my activities from 2021 onwards. In the past years, I continued working with several colleagues (including my PhD students) on Silurian chemo- and event stratigraphy. Research relevant to the Silurian is divided into three project areas.

1. *Ludfordian chemo- and event stratigraphy*: High-resolution analysis of carbon and sulfur cycling during the mid-Ludfordian carbon isotope excursion (MLCIE) and the linkage with the late Silurian Lau and Kozlowskii Events was published (Frýda et al. 2021a). Analysis of sea-water surface temperature changes using $\delta^{18}O_{phos}$ records from different regions in temperate (Prague Basin and Carnic Alps) and tropical (Gotland) paleolatitudes revealed significant global cooling during the MLCIE. Intensive cooling and a eustatic sea-level fall were explained by a major glaciation in polar and subpolar Gondwana, named "Mid-Ludfordian Glaciation" (Frýda *et al.* 2021b). The $\delta^{138}Ba$ carbonate record from the Kosov section (Czech Republic, peri-Gondwana) shows a large negative excursion suggesting the upwelling of isotopically light Ba from deeper waters due to pelagic barite dissolution under euxinic conditions (Zhang *et al.* 2022). Significant enrichment of Mo, U, V, Co, Ni, Zn, Cr, and Pb was recorded in the Prague Basin indicating the expansion of oxygen-depleted deep waters (named as Siluricus Ocean Anoxic Event) from the upper slope/deep shelf onto the carbonate platform peaked just before the MLCIE at the level of the Lau/Kozlowskii extinctions. The $\delta^{238}U$ records from temperate (peri-Gondwana) and tropical (eastern Australia, eastern Gondwana) paleo-realms demonstrate that a time interval of widespread global anoxia occurred before and during the onset of the MLCIE (del Rey *et al*. 2023). The $\delta^{238}U$ records, as a measure of the 'global redox state of the oceans', support the global nature of the Siluricus Ocean Anoxic Event (Frýda et al. 2021b). Osmium and lithium isotopes from the Kosov section suggested weathering feedback associated with the orbitally rapid burial of organic carbon and glaciation (Sproson et al. 2022). High $\delta^{34}S_{py}$ and low $\delta^{44/40}Ca_{carbonate}$ values agree well with a high deposition rate of syngenetic pyrite and rapid calcium carbonate precipitation under carbonate hypersaturation conditions during the MLCIE (Farkaš *et al*. 2024). Additional redox proxies (I/Ca, Fe speciation) from two sections in the Prague Basin confirmed our previous model for environmental changes during the MLCIE (Allman et al. 2024).
2. *Wenlock chemo- and event stratigraphy*: New high-resolution chemostratigraphical records across the Homerian carbon isotope excursion, suggested that increased oxygenation of offshore environments played a key role in the decline of graptolite biodiversity during the Lundgreni Event (Frýda and Frýdová, submitted). The first evidence for the Homerian carbon isotope excursion is documented from eastern Gondwana (Frýda et al., in prep.). In 2021, high-resolution analysis of the marine evolution during the Sheinwoodian carbon isotope excursion in both the nearshore and offshore environments was initiated, based on several sections from the Prague Basin and Australia (Simpson et al., 2021; Frýda et al., in prep).
3. *Silurian plants and palynozonation*: Silurian climatic zonation of cryptospore, trilete spore and plant megafossils during the on the Přídolí Epoch (Bek et al. 2024) and

dynamics of Silurian plants as response to climate changes (Pšenička et al., 2021) was studied.

Publications

GUTIÉRREZ-MARCO, J.C. – LOYDELL, D.K. – ŠTORCH, P. – FRÝDA. J. (2024): El Pintado (Geoparque Mundial de la UNESCO Sierra Morena de Sevilla), séptimo Estratotipo Global de Límite ubicado en España y primero de Andalucía (GSSP Telychiense, Llandovery: Sistema Silúrico). - *Geogaceta*, 76, 3-6, https://doi.org/10.55407/geogaceta104708.

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DEL REY, Á. – FRÝDA, J. – CALNER, M. – FRÝDOVÁ, B. – ZHANG, F. – WANG, CH. – PLANAVSKY, N. – DAHL, T.W. (2023): Mid-Ludfordian uranium isotope records distinguish the role of expansive marine anoxia in global carbon cycle dynamics during the late Silurian Lau/Kozlowskii bioevent. – *Planetary and Global Change*, 229, 1-9, 104248. https://doi.org/10.1016/j.gloplacha.2023.104248.

ZHANG, F. – FRÝDA, J. – MOJTABA FAKHRAEE – YI-BO LIN – GUANGYI WEI – MENGCHUN CAO - NA LI – JIANLIN ZHOU – FRÝDOVA, B. – HAIZHEN WEI – SHUZHONG SHEN (2022): Marine anoxia as a trigger for the largest Phanerozoic positive carbon isotope excursion: evidence from carbonate barium isotope records. – *Earth and Planetary Science Letters*, 584, 117421. https://doi.org/10.1016/j.epsl.2022.117421

SPROSON, A.D. – POGGE VON STRANDMANN, P. A. E. – SELBY, D. – JAROCHOWSKA, E. – FRÝDA, J. – HLADIL, J. – LOYDELL, D. K. – SLAVIK, L. – CALNER, M. – MAIER, G. – MUNNECKE, A.– LENTON, T.M. (2022): Osmium and lithium isotope evidence for weathering feedbacks linked to orbitally paced organic carbon burial and Silurian glaciations. – *Earth and Planetary Science Letters*, 577, 117260. https://doi.org/10.1016/j.epsl.2021.117260

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SIMPSON, A.J. – MATHIESON, D. – FRÝDA, J. – FRÝDOVÁ, B. (2021): Summary of East Gondwanan conodont data through the Ireviken Event at Boree Creek. – *Journal of Earth Science*, 32:512-523. https://doi.org/10.1007/s12583-021-1310-9

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FRÝDA, J. – LEHNERT, O. – FRÝDOVA, B. – FARKAS, J. – KUBAJKO, M. (2021): Carbon and sulfur cycling during the mid-Ludfordian anomaly and the linkage with the late Silurian

Lau/Kozlowskii Bioevent. – *Palaeogeography, Palaeoclimatology, Palaeoecology*, 564, https://doi.org/10.1016/j.palaeo.2020.110152

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I continue my work on the Aeronian trilobites fauna of east-central Iran (Tabas region) in cooperation with Robert Owens and Leonid Popov.

Publications

Popov, L.E., Ghobadi Pour, M., Modzalevskaya, T.L., Hairapetian, V. (online in 2024). First late Silurian (Ludfordian–Pridoli?) brachiopods from Iran, Palaeoworld, doi: https://doi.org/10.1016/j.palwor.2024.11.002

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This year only one field expedition was conducted on Dniester Silurian Sequence for monitoring of environment conditions along riverbanks. The results of search described in Grytsenko & Furmanchuk (2024).

The danger of Russian war is the reason for refusing to hold international conferences related to the Silurian System in the Ukraine. Every day we learn about rockets, drones and explosions on territory of Ukraine, including its western part.

In Ukraine there are three national parks that contain notable Silurian succession: “Podillian Tovtry”, “Khotyn”, “Podillian canyon”, as well as the natural reserve “Medobory”, which exposes the Silurian succession in the Dniester River Valley. But many outcrops are in bad conditions (overgrown with trees and bushes).

My main tasks have been:

1. Revision of collections of Cnidaria (Rugosa, Tabulata, Heliolitoidea and Stromatoporata) – in process.
2. Revision of memorial collections of trilobites (collected by Leonid Konstantinenko) – in process.

Publications

Volodymyr Grytsenko, Kyiv, Galyna Furmanchuk, Khmelnytskyi.
New finds of fossil remains during the expedition in august 2024. (Podillia, Ukraine). "Bulletin of the Netishyn Local History Museum". Issue 8., pp 127-132. (in Ukrainian: Володимир Гриценко м. Київ, Галина Фурманчук м. Хмельницький, 2024. Нові знахідки викопних решток під час експедиції в серпні 2024 року (Поділля, Україна). «Вісник Нетішинського краєзнавчого музею». Вип. 8., стор. 127-132).

Volodymyr Grytsenko, Kseniia Rudenko. 2023. A revision of Silurian corals (Anthozoa: Heliolitoidea) from the collection of the National Museum of Natural History, NAS of Ukraine (Kyiv)). GEO&BIO, pp. 75-108. https://doi.org/10.53452/gb2507

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Іванік, О. М. 2024. Геолого-геоморфологічні пам'ятки природних регіонів України (на прикладі Донбасу та Поділля). Одеса, Видавничий дім «Гельветика», 1-162 с.)

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My Silurian research continues to focus on graptolite biostratigraphy in different zones of the Iberian Massif (a general paper on the Spanish part of the southern Central Iberian Zone is still in preparation with Saturnino Lorenzo). Additionally, I am involved in various collaborations with other specialists—Vincent Perrier (ostracods), Paolo Serventi (cephalopods), Olev Vinn (cornulitids), and Samuel Zamora (crinoids)—to describe other Spanish faunas.

During 2024, together with David K. Loydell (Portsmouth), Petr Štorch (Prague), and Jírí Frýda (Prague), we have completed a paper submitted for publication in *Episodes*, concerning the replacement Global Stratotype Section and Point (GSSP) of the Telychian Stage, located in Spain (El Pintado 1 section, Seville province, Andalusia). In the same area of the Valle Syncline (Ossa-Morena Zone), the position of the Ordovician/Silurian boundary has also been investigated.

Together with Enrique Bernárdez, we have begun studying significant outcrops of metamorphic Silurian rocks in northwestern Spain, which contain nodules with an interesting fauna of ostracods, molluscs, and graptolites ranging from the Telychian to the Ludfordian.

Publications

Gutiérrez-Marco, J.C., Bernárdez, E. and Serventi, P. 2024a. Nódulos fosilíferos del Silúrico de la región de A Fonsagrada (Lugo, Zona Asturoccidental-leonesa, noroeste de España). *In*: Moncunill-Solé, B., Blanco, A., Grandal d'Anglade, A., González-Fortes, G., Santos Fidalgo, L. and Bao, R. (eds.) *Libro de Resúmenes XXXIX Jornadas de la Sociedad Española de Paleontología*, A Coruña. *Palaeontological Publications*, **5**, 110.

Gutiérrez-Marco, J.C., Loydell, D.K., Štorch, P. and Frýda, J. 2024b. El Pintado (Geoparque Mundial de la UNESCO Sierra Morena de Sevilla), séptimo Estratotipo Global de Límite ubicado en España y primero de Andalucía (GSSP Telychiense, Llandovery: Sistema Silúrico). *Geogaceta*, **76**, 3–6, https://doi.org/10.55407/geogaceta104708 https://recyt.fecyt.es/index.php/geogaceta/article/view/104708/80472

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Lorenzo, S. and Gutiérrez-Marco, J.C. 2024. El registro de filocáridos (Arthropoda, Malacostraca) en el Silúrico del centro-suroeste de la península Ibérica. *In*: Moncunill-Solé, B., Blanco, A., Grandal d'Anglade, A., González-Fortes, G., Santos Fidalgo, L. and Bao, R. (eds.) *Libro de Resúmenes XXXIX Jornadas de la Sociedad Española de Paleontología*, A Coruña. *Palaeontological Publications*, **5**, 60.

Perrier, V., Carmelle, H., Lorenzo, S. & Gutiérrez-Marco, J.C. 2024. The southernmost Silurian myodocope fauna (Spain), biostratigraphy and palaeobiogeography. *Il Naturalista Siciliano [4]*, **48**, 85–86, https://doi.org/10.5281/zenodo.13762368

OLLE HINTS

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In recent years, my primary research has focused on the Ordovician System, with some smaller projects also ongoing in the Silurian. In collaboration with Petra Tonarová, our study of Silurian scolecodonts continued into 2024, yielding progress on several manuscripts, notably on the Ludfordian Lau event and its impact on polychaetes in the Prague Basin and the Baltic Region. Additionally, work is ongoing on the integrated bio- and chemostratigraphy of a lower Silurian succession in Latvia.

Together with Tõnu Meidla and colleagues, we organized the 11th Baltic Stratigraphical Meeting in Estonia in 2024, where several presentations explored aspects of the Silurian System in the Baltic region. The abstracts and field guide are available at: https://stratigraafia.info/11bsc.

HUANG BING

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In 2024, I maintained an active presence in the international academic community, notably presenting my two newly published research at major conferences: the 9th International Brachiopod Congress (IBC 9) in Toronto, Canada, and the ISSS-SDS Joint Meeting in Sofia, Bulgaria. My field research encompassed three excursions, with a particular focus on the Ordovician-Silurian boundary and lower Silurian strata. During these expeditions, I accumulated an extensive collection of brachiopod fossils from Guizhou and Yunnan, South China, with specimens from the O-S boundary being specifically collected for a new master's student's thesis project. The additional collections have contributed valuable data to our understanding of biotic recovery following the Late Ordovician Mass Extinction (LOME).

My research productivity this year was marked by several publications, developed through continued collaboration with both students and international colleagues. These works included studies on paleobiogeography after the LOME, paleoecogeographical research on brachiopods during the LOME interval, and reports on two interesting early Silurian brachiopod faunas, examining their ecological and stratigraphic significance in post-extinction radiation. I collaborated with international colleagues to investigate the Edgewood-Cathay fauna in the Oslo region and its significance within a global framework. Additionally, my expertise in quantitative methods, which had been successfully applied in Silurian brachiopod studies, was utilized to assist colleagues in analyzing plant dispersal patterns in the Devonian world.

As deputy editor-in-chief for Acta Palaeontologica Sinica, I managed numerous manuscripts, while also reviewing seven papers for various international journals. As the web manager for ISSS, I conducted a comprehensive update of the website, revising the homepage, incorporating information about the new subcommission, and refining other details. On the teaching front, I co-taught a postgraduate course with a colleague, focusing on quantitative methods in paleontology and paleontological Latin nomenclature. My doctoral student is making steady progress and is expected to graduate next year.

Publications

Huang B*., Rong J.Y., 2024. Heterogeneous palaeo-ecogeography of brachiopods during the Late Ordovician mass extinction in South China. *Palaeontology*, Vol. 67, e12728. https://doi.org/10.1111/pala.12728

Huang B*., Candela Y., Shi K.Y., Rong J.Y., 2024a. A new post-LOME (Late Ordovician Mass Extinction) recovery brachiopod fauna from South China. *Journal of Paleontology* , Vol. 98: 366-377. https://doi.org/10.1017/jpa.2024.14.

Huang B*., Chen D., Candela Y., 2024b. A new brachiopod fauna from the Telychian (early Silurian) of Southwest China and its palaeoecological significance. *Alcheringa*: *an Australasian Journal of Palaeontology*. https://doi.org/10.1080/03115518.2024.2431912. Online.

Shi K.Y., Huang B*., 2024. Is there synchronicity between brachiopod diversity changes and palaeobiogeographical shifts across the Late Ordovician mass extinction? *Palaeontology*, Vol. 67, e12730. https://doi.org/10.1111/pala.12730

Baarli B.G., Huang B., Johnson M.E., 2024. The deep-water, high-diversity Edgewood-Cathay brachiopod Fauna and its Hirnantian counterpart. *Palaeogeography, Palaeoclimatology, Palaeoecology* 642, 112153. https://doi.org/10.1016/j.palaeo.2024.112153

Liu, B. C., Wang, K., Bai, J., Wang, Y., Huang, B*., & Xu, H. H*. 2024. Plant dispersal in the Devonian world (c. 419–359 Ma). *Palaeontology*, 67(3), e12699. https://doi.org/10.1111/pala.12699.

EMILIA JAROCHOWSKA

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I dedicate myself primarily to the project MindTheGap: Quantifying the completeness of the stratigraphic record and its role in reconstructing the tempo and mode of evolution, funded by the European Research Council, which allows me to use Silurian case studies but does not address a specific period in the Earth's history. Last year with my PhD student we proposed a nonparametric method of estimating age-depth models, which should accommodate deep-time datasets. A manuscript presenting the method is in revision in *Geochronology* (Hohmann et al. 2024). I use conodonts to test models of evolution (albeit not limiting myself to the Silurian) in incomplete successions. We are also about to release the official version of the Open Source model for modelling carbonate platforms, CarboKitten. The model is age-agnostic but can be adapted to emulate carbonate producers with particular features.

Last year we finally published the key finding from my previous project, which involved the PhD dissertation by Bryan Shirley, defended *cum laude* in 2022: Shirley et al. (2024).

I continue to collaborate with David Ray on the Silurian of the Midland Platform.

Academic meetings

In January 2024 I co-chaired with Peter Burgess the meeting "Stratigraphy in Modern Geoscience: methodologies, application and future relevance" hosted by the Energy Group of the Geological Society (UK).

My research group is hosting the CycloNet meeting on the reproducibility of cyclostratigraphy and its integration with other stratigraphic approaches. Niklas Hohmann is the lead organizer. The meeting will take place on 26-28th June in Utrecht, with a weekend fieldtrip to the Silurian and Devonian of Belgium afterwards.

Publications

Shirley, Bryan, Isabella Leonhard, Duncan J. E. Murdock, John E. Repetski, Przemysław Świś, Michel Bestmann, Pat Trimby, Markus Ohl, Oliver Plümper, Helen E. King, Emilia Jarochowska. 2024. Increasing Control over Biomineralization in Conodont Evolution. *Nature Communications* 15 (1): 5273. https://doi.org/10.1038/s41467-024-49526-0.

Hohmann, N., D. De Vleeschouwer, S. Batenburg, and E. Jarochowska. 2024. Nonparametric Estimation of Age-Depth Models from Sedimentological and Stratigraphic Information. *EGUsphere* 2024:1–31. https://doi.org/10.5194/egusphere-2024-2857

Honors

I received the Hodson Award of the Palaeontological Association (2024).

STEPHEN KERSHAW

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Stephen continues work on Silurian stromatoporoids. Current focus is on the status of their taxonomy; a Figshare.com file is in preparation as a discussion document to explore the validity of Silurian stromatoporoid taxa in relation to the established systematics scheme, that may have potential flaws.

ANNA KOZŁOWSKA

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Publications

Kozłowska A., Bates D. & Maletz J. 2024. Cortical developments in the Graptolithina (Pterobranchia) under the Scanning Electron Microscope – new clues. Annales Societatis Geologorum Poloniae, 94(3): 205–223

Yonan Y., Zalasiewicz J., Holt-Wilson T., Harvey T. H. P, Kozłowska A., Porębska E., Danelian T., Molyneux S., Williams M., Peter G. H., Wong Hearing T. W. & Rose J. 2025. A unique, far-travelled graptolite-bearing erratic pebble from the Lowestoft Till (Quaternary: Anglian Stage) of North Lopham, Norfolk. Proceedings of the Yorkshire Geological Society, 65: 1-12

STEVEN LODUCA

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Work continues on the taxonomy, phylogeny, paleoecology, and taphonomy of early Paleozoic macroalgae, including the recovery and analysis of biomolecules from specimens preserved as carbonaceous compressions.

Publications:

LoDuca, S.T., 2025, New species of noncalcified dasycladalean and bryopsidalean macroalgae and a new occurrence of *Thalassocystis striata* (Chlorophyta) from the Silurian (Llandoverian) of Michigan. Journal of Paleontology (in press).

DAVID LOYDELL

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The first half of 2024 was dominated by the completion of remaining teaching-related commitments and the huge job of clearing much of my previous office space of graptolite

collections, reprints, etc., following my retirement from teaching at the end of 2023 (I now have a visiting research position at the University of Portsmouth). None of this was helped by the very lengthy time spent recovering from COVID which reduced energy levels both fairly frequently and unpredictably (and sadly prevented my attendance at the meeting in Bulgaria). Silurian graptolite activities have now resumed, with miscellaneous unfinished projects hopefully being completed and published over the coming years. As required for GSSPs, a paper has been written and submitted to *Episodes*, summarizing the El Pintado base Telychian GSSP, which many of you will hopefully visit later this year.

Publications

Gutiérrez-Marco, J.C., Loydell, D.K., Štorch, P. and Frýda, J. 2024. El Pintado (Geoparque Mundial de la UNESCO Sierra Morena de Sevilla), séptimo Estratotipo Global de Límite ubicado en España y primero de Andalucía (GSSP Telychiense, Llandovery: Sistema Silúrico). *Geogaceta*, **76**, 3–6. https://doi.org/10.55407/geogaceta104708

Stockey, R.G. et al. (= 56 other authors!) 2024. Sustained increases in atmospheric oxygen and marine productivity in the Neoproterozoic and Palaeozoic eras. *Nature Geoscience*, **17**, 667–674. https://doi.org/10.1038/s41561-024-01479-1

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Wang, Y., Wignall, P.B., Xiong, Y., Loydell, D.K., Peakall, J., Baas, J.H., Mills, B.J.W. and Poulton, S.W. 2024. Marine redox dynamics and biotic response to the mid-Silurian Ireviken Extinction Event in a mid-shelf setting. *Journal of the Geological Society*, **181**. https://doi.org/10.1144/jgs2023-15

ŠTĚPÁN MANDA

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In 2024 continued activities concentrated on Gorstian biostratigraphy and off-shore fauna in the Prague Basin. The official proposal for the Přídolí Series division was finished. Study of reproductive strategies and dispersal potential of Silurian cephalopods and their paleoecology continued. The work focused on ontogeny and autecology of the oldest nautilid acquired extant *Nautilus* habit is in progress.

Publications

Manda, Š. and Turek, V. 2024. Early ontogeny and distribution of the orthocerid cephalopod *Calorthoceras* Chen, 1981 – taxonomic and palaeoecological implications. Bulletin of Geosciences, 99(4), 323–342. https://doi.org/10.3140/bull.geosci.1905

PEEP MÄNNIK

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Starting from the beginning of 2023, my studies are mainly related to Ordovician (5-year project PRG1701: “From Greenhouse to Icehouse: Reconstructing Ordovician Climate Transitions and Biotic Response in Baltica” financed by Estonian Research Council.

Publications

Yan, G-z., Lehnert, O., Männik, P., Calner, M., Li, L., Wei, X., Gong, F-y., Luan, X-c. & Wu, R-c. 2025. New bio- and chemostratigraphic data from southwestern China and its relation to Telychian (Llandovery, Silurian) climate change. – PPP https://doi.org/10.1016/j.palaeo.2025.112740

Hints, O., Ainsaar, L., Männik, P., Meidla, T, Nõlvak, J. & Toom, U. 2024. Stop 19: Reinu quarry. – In: Hints, O., Männik, O. & Toom, U. (eds) XI Baltic Stratigraphical Conference. Abstracts and Field Guide. Geological Society of Estonia, Tallinn, 145–150.

Lehnert, O., Yan, G-z., Meinhold, G., Joachimski, M. M., Calner, M., Männik, P., Fryda, J., Gong F-y & Wu, R-c. 2024. Early Silurian climate changes on Baltica and South China – a sedimentological, bio- and chemostratigraphic framework. – In: Hints, O., Männik, O. & Toom, U. (eds) XI Baltic Stratigraphical Conference. Abstracts and Field Guide. Geological Society of Estonia, Tallinn, 20.

Meidla, T., Tinn, O. & Männik, P. 2024. Stop 13; Soeginina cliff. – In: Hints, O., Männik, O. & Toom, U. (eds) XI Baltic Stratigraphical Conference. Abstracts and Field Guide. Geological Society of Estonia, Tallinn, 123–125.

Männik, P. 2024. Stop 9: Salevere Salumägi. – In: Hints, O., Männik, O. & Toom, U. (eds) XI Baltic Stratigraphical Conference. Abstracts and Field Guide. Geological Society of Estonia, Tallinn, 111–112.

Männik, P. 2024. Stop 10: Pulli cliff. – In: Hints, O., Männik, O. & Toom, U. (eds) XI Baltic Stratigraphical Conference. Abstracts and Field Guide. Geological Society of Estonia, Tallinn, 113–114.

Männik, P. 2024. Stop 11: Panga cliff. – In: Hints, O., Männik, O. & Toom, U. (eds) XI Baltic Stratigraphical Conference. Abstracts and Field Guide. Geological Society of Estonia, Tallinn, 115–116.

Männik, P., Meidla, T. & Hints, O. 2024. Silurian stratigraphy in Estonia. – In: Hints, O., Männik, O. & Toom, U. (eds) XI Baltic Stratigraphical Conference. Abstracts and Field Guide. Geological Society of Estonia, Tallinn, 60–64.

Männik, P., Meidla, T. & Hints, O. 2024. The Silurian System in Estonia: Recent developments and challenges. – In: Hints, O., Männik, O. & Toom, U. (eds) XI Baltic Stratigraphical Conference. Abstracts and Field Guide. Geological Society of Estonia, Tallinn, 25.

Männik, R., Ainsaar, L., Männik, P., Meidla, T., Radzevičius, S. & Hints, O. 2024. Microfossil response to the late Silurian Lau Event in the Bebirva-111 drill core, Lithuania. – In: Hints, O., Männik, O. & Toom, U. (eds) XI Baltic Stratigraphical Conference. Abstracts and Field Guide. Geological Society of Estonia, Tallinn, 26.

Tinn, O., Kirsimäe, K., Ainsaar, L. & Männik, P. 2024. Stop 2: Kalana quarry. – In: Hints, O., Männik, O. & Toom, U. (eds) XI Baltic Stratigraphical Conference. Abstracts and Field Guide. Geological Society of Estonia, Tallinn, 71–76.

NEO MCADAMS

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Nothing to report for 2024.

PAT MCLAUGHLIN

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I am Principal Research Scientists at the Illinois State Geological Survey, University of Illinois, and head the Basin Analysis Laboratory. The lab contains facilities for stable isotope analysis, biostratigraphy, petrography, and elemental analysis and employs geologists, geochemists, and students focused on integrated study of critical mineral distributions in basin systems. During 2024 I continued my collaborative Silurian studies on the Ireviken and Mulde events in the U.S.A. and Sweden. In the final days of the year, University of Ghent (Belgium) PhD student Carolina Klock and I, together with multiple coauthors, wrote a paper on the chitinozoan biostratigraphy and chemostratigraphy of the Mulde Event in the U.S. Midcontinent Basin. It received favorable reviews at Palaeo3 and we expect it to be published in Spring 2025.

TÕNU MEIDLA

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I am teaching several courses related to historical geology and palaeontology at the University of Tartu, Estonia, and continue working on several aspects related to the Silurian System: regional stratigraphy, stable isotopes and events. I have also several projects in progress on ostracod taxonomy, distribution and biostratigraphy in the Silurian. We are continuing an integrated study of several Lithuanian and Latvian core sections in cooperation with S. Radzevičius and S. Petrukonė. Together with O. Hints and P. Männik, we have submitted an overview paper on the Silurian stratigraphy of Estonia. I am also acting as vice chair of the Estonian Commission on Stratigraphy.

Academic meetings

I was involved in organising the XI Baltic Stratigraphical Conference on August 19-21, 2024 that took place in Tartu and Arbavere, Estonia. I was guiding the mid-conference excursion and the four-day post-conference excursion.

Publications

Gul, Bilal; Ainsaar, Leho; Meidla, Tõnu (2024). Baltoscandian Ordovician and Silurian brachiopod carbon and oxygen stable isotope trends: implications for palaeoenvironmental and palaeotemperature changes. Geological Quarterly, 68 (2), 1−15. DOI: 10.7306/gq.1742.

Kudzma, Donatas; Cichon-Pupienis, Anna; Ainsaar, Leho; Meidla, Tõnu; Radzevičius, Sigitas (2024). Litho – and chemostratigraphy along Ordovician and Silurian boundary in western Lithuania. 3rd virtual meeting of IGCP735, abstract volume. Prague, 18th - 20th November 2024: 3rd virtual meeting of IGCP 735 'Rocks and the Rise of Ordovician Life'. Ed. Laibl. Lukaš; Polechovà, Marika; Nohejlovà, Martina. Praha: Czach Geological Survey Czech Academy of Sciences institute of Geology, 17−17.

Männik, R.; Ainsaar, L.; Männik, P.; Meidla, T.; Radzevičius, S.; Hints, O. (2024). Microfossil response to the late Silurian Lau Event in the Bebirva-111 drill core, Lithuania. In: Hints, O.; Männik, O.; Toom, U. (Ed.). XI Baltic Stratigraphical Conference. Abstracts and Field Guide. (26). Tallinn: Geological Society of Estonia.

Meidla, Tõnu; Tinn, Oive (2024). Stop 12: Suuriku cliff. In: Olle Hints, Peep Männik; Ursula Toom (Ed.). XI Baltic Stratigraphical Conference. Abstracts and Field Guide. (117−122). Tallinn: Geological Society of Estonia.

Meidla, Tõnu; Tinn, Oive; Männik, Peep (2024). Stop 13: Soeginina cliff. In: Olle Hints, Peep Männik; Ursula Toom (Ed.). XI Baltic Stratigraphical Conference. Abstracts and Field Guide. (123−125). Tallinn: Geological Society of Estonia.

Hints, O., Ainsaar, L., Männik, P., Meidla, T., Nõlvak, J., Toom, U. (2024). Stop 19: Reinu quarry. In: Hints, O., Männik, P., Toom, U. (Ed.). XI Baltic Stratigraphical Conference. Abstracts and Field Guide. (145−150). Tallinn: Geological Society of Estonia.

Hints, O.; Aren, M.; Hang, T.; Kaljo, D.; Kirs, J.; Marandi, A.; Meidla, T.; Männik, P.; Nirgi, S.; Ploom, K.; Sibul, I.; Soesoo, A. (2023). Geoloogiline ajaskaala 2023 (The Geologic time Scale 2023). (1−1). Eesti Stratigraafia Komisjon. DOI: 10.23679/1028.

Gul, Bilal; Ainsaar, Leho; Meidla, Tõnu (2023). High resolution carbon and oxygen isotopes of the Early Ordovician-Late Silurian of the Baltica: Implications for palaeoenvironmental changes and palaeotemperature trends. Geological Society of America Abstracts with Programs, 55: GSA Connects 2023 Meeting in Pittsburgh, Pennsylvania. Geological Society of America, 105-3. (6). DOI: 10.1130/abs/2023AM-389596.

Radzevicius, Sigitas; Stankevic, Robertas; Budginas, Rimvydas; Cichon-Pupienis, Anna; Venckute-Aleksiene, Agne; Meidla, Tonu; Ainsaar, Leho; Spiridonov, Andrej (2023). Integrated stratigraphy of the Ludlow (Silurian) of the Baubliai-2 core (western Lithuania) and the record of $\delta^{18}O$ and $\delta^{13}C$ climatically driven co-variability. Newsletters on Stratigraphy, 56 (1), 75−88. DOI: 10.1127/nos/2022/0712.

Hints, Olle; Ainsaar, Leho; Lepland, Aivo; Liiv, Merlin; Männik, Peep; Meidla, Tõnu; Nõlvak, Jaak; Radzevičius, Sigitas (2023). Paired carbon isotope chemostratigraphy across the Ordovician–Silurian boundary in central East Baltic: Regional and global signatures. Palaeogeography, Palaeoclimatology, Palaeoecology, 624, 111640. DOI: 10.1016/j.palaeo.2023.111640.

Meidla, T,; Hints, O.; Ainsaar, L. (2023). Searching for the Ordovician–Silurian boundary in Estonia, Latvia and Lithuania. Estonian Journal of Earth Sciences, 72 (1), 70−73. DOI: 10.3176/earth.2023.53.

MICHAEL MELCHIN

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In my retirement I am continuing to work on several projects related to graptolite biostratigraphy and biodiversity, as well as chemostratigraphy through the Late Ordovician and early Silurian, particularly in North America, China, and Europe, collaborating with Zongyuan Sun, Qing Chen, Charles Mitchell, Chris Holmden, Gordon Love, and others. I am collaborating with Erik Sperling and others on Ordovician to Lower Devonian graptolite biostratigraphy and chemostratigraphy in Alaska and Arctic Canada. I am also working with Petr Štorch and others on several projects related to morphologic and phylogenetic analyses of early Silurian graptolites. However, my main retirement projects relate to describing the many collections of graptolites that are in my lab that have not yet been fully described.

Publications

Sun, Z-y, Melchin, M.J., Štorch, P., Chen, Q., Zhao, F.-q. and Fan, J.-x. 2024. High-resolution integrated stratigraphy of Upper Ordovician to lower Silurian strata: applications to black shale drill cores in South China. Newsletters on Stratigraphy. DOI: 10.1127/nos/2024/0752.

Štorch, P., Loydell, D.K., Melchin, M.J. and Goldman, D. 2024. Graptolites in biostratigraphy: the primary tool for subdivision and correlation of Ordovician, Silurian, and Lower Devonian offshore marine successions. Newsletters on Stratigraphy. DOI: 10.1127/nos/2024/0810

GILES MILLER

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Nothing to report for 2024.

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In 2024, I spent more time in the Jurassic than in the Silurian. Anna-Lene Claussen, who is working on her dissertation on bryozoans from the Silurian of Gotland, completed it last year and found, among other things, that phosphatic components (bryozoan pearls and linings as well as phoshatic brachiopods) obviously show a clear correlation with isotope development (Claussen & Munnecke 2024). Together with Patrycja Dworczak and Steve Kershaw, we are working on determining the skeletal structure and diagenesis of stromatoporids and the causes of their growth banding. And finally, together with Nina Wichern and Theresa Nohl, I am working on determining the influence of diagenesis on the rhythmicity of limestone-marl alternations, among other things by examining sample material from Gotland.

Academic meetings

I was member of the organising committee of the 68th Annual Meeting of the Palaeontological Association in Erlangen (Germany).

Publications

Claussen, A.L. & Munnecke, A. (2024): Benthic response to the strong Silurian climatic fluctuations-implications from Gotland (Sweden). Facies, 70(4), no. 14 (32 pages). DOI: 10.1007/s10347-024-00686-x

Nohl, T., Munnecke, A. & Wright, V.P. (2025): Bedding and bedding surfaces in carbonate and mixed carbonate-siliciclastic successions: a critical evaluation of biases in identification and interpretation across disciplines and schools. In: N.S. Davies, & A.P. Shillito (eds), Bedding Surfaces: True Substrates and Earth's Historical Archive. Geological Society, London, Special Publications, 556. DOI: 10.1144/SP556-2024-93

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Yu, S., Li, Q.J., Kershaw, S., Munnecke, A., Mao, Y.Y. & Li, Y. (2024): Rhuddanian to Aeronian (Llandovery, early Silurian) carbon isotope stratigraphy throughout carbonate sequences in the upper Yangtze region, South China block. Island Arc, 33(1), no. e12512 (11 pages). DOI: 10.1111/iar.12512

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Nothing to report for 2024.

VINCENT PERRIER

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My research focuses on the colonization of pelagic environments by arthropods. My group of expertise, the myodocope ostracods, are an important component of recent zooplankton, adapting to this pelagic lifestyle during the upper Silurian. At the moment I am studying the high-latitude Ludlow-Pridoli myodocope faunas from Spain.

Publications

Perrier, V., Perrichon, G., Nesme, F., Groos-Uffenorde, H., Lorenzo, S., & Gutiérrez-Marco, J.C. 2023. Ecologically distinct myodocope ostracod faunas from a single horizon in the late Silurian of Spain. Revue de Micropaléontologie, 80, 100729.

Siveter, D.J., Perrier, V., & Williams, M. 2022. Silurian myodocopes display adaptations for a nektobenthic lifestyle: The paleobiological evidence. Marine Micropaleontology, 101906.

José Manuel Piçarra d'Almeida

LNEG - (Laboratório Nacional de Energia e Geologia / Geological Survey of Portugal). Unidade de Geologia, Hidrogeologia e Geologia Costeira. Ap. 14, 7601-909 Aljustrel, Portugal; Tel.00 351 210924672
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I'm retired but I'm still a collaborator of the National Laboratory of Energy and Geology (LNEG)/Geological Survey of Portugal.

Leonid Popov

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I have been retired for several years but still hold an honorary position at the National Museum Cardiff, where I am primarily engaged in a taxonomic study of Silurian brachiopods from Iran, Kazakhstan, and Wales.

Sigitas Radzevičius

Department of Geology and Mineralogy, Institute of Geoscience, Vilnius University, M.K. Čiurlionio 21/27, LT-03101, Lithuania.
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I am working on the taxonomy, stratigraphic distribution, diversity, disparity, and phylogeny of Silurian graptolites. Most of my research is concentrated on the construction of higher solution Silurian time scales by means of integrated (bio-, chemo-, cyclo-) stratigraphy. I'm integrating stratigraphic models, taxonomic data, geochemical, and geophysical proxies in order to understand the drivers of Silurian global extinction and turnover events. We are continuing research on Silurian integrated stratigraphy of Bardo Mountains and Holy Cross Mountains in cooperation with P. Raczyński (Wroclaw) and W. Trela (Kielce). Together with T. Želvys (Vilnius University), we are working on integrated stratigraphy (bio and chemo) of Wenlock in Lithuania and with D. Kudžma and A. Cichon-Pupienis (Vilnius) we are working on Ordovician / Silurian boundary problems of geological sections in Lithuania.

Publications

Radzevičius, S., Raczyński, P., Garbaras, A., Cichon-Pupienis, A., & Želvys, T. (2024). Integrated stratigraphy of the Llandovery-Wenlock Boundary in the Łopianka–2 outcrop of the Sudeten Mountains, southwest Poland. Lethaia, 57(2), 1-9. DOI10.18261/let.57.2.8

Stankevič, R., Venckutė-Aleksienė, A., Radzevičius, S., & Spiridonov, A. (2024). Phytoplankton and zooplankton paleocommunity change before and during the onset of the Lau Extinction Event (Ludlow, Silurian). Marine Micropaleontology, 189, 102368. DOI10.1016/j.marmicro.2024.102368

DAVID RAY

Honorary Research Fellow at the University of Birmingham, UK (please contact me by e-mail).
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During 2024, my research on the Silurian was focused upon the late Llandovery and Wenlock of the Midland Platform (UK), and included the following studies:

A study of the late Llandovery Coralliferous Formation of Pembrokeshire, Wales (Veevers *et al.* 2024). A notable outcome of this study was the identification of a significant palaeotopography, which was transgressed during the late Telychian, and has been used to estimate the magnitude of sea-level rise.

Research into the transgression of the Midland Platform during Telychian and Sheinwoodian times. This study is in collaboration with Emilia Jarochowska, Helen Hughes, Alan Richardson, and Alan Thomas, and is focused upon the creation of a eustatic sea-level curve. This study identifies glacioeustasy as the main driver of sea-level change, and identifies a glacial maximum in the middle Sheinwoodian. We hope to publish this study in 2025.

In collaboration with James Wheeley, Georgia Hazeldine, Adrian Burrows, and Steve Kershaw I have been involved in the study of the Homerian stratigraphy of the May Hill and Gorsley inliers of the southern Midland Platform. This study shows how the carbon isotopic, sea-level, and the lithological expression of this succession fits into the regional/global understanding of the Homerian. Notably, the Homerian age of the Gorsley Limestone is further confirmed by this study, and a latest Homerian unconformity and island may be inferred for the Gorsley area. We hope to publish this study in 2025.

In collaboration with Helen Hughes and Alan Thomas a study into the trilobite associations of the Buildwas and Coalbrookdale formations (Wenlock), recorded from the Lower Hill Farm Borehole (Shropshire), is nearing completion.

Fieldwork aimed at improving the stratigraphy of the Wenlock of the Usk Inlier (south Wales) is ongoing.

MICHAEL ROSENBAUM

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Nothing to report for 2024.

VALERI SACHANSKI

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Publications:

Sachanski, V., Zareva, E. 2024. The Silurian and the Devonian in the Svoge Unit, Western Bulgaria – a brief overview. – Geologica Balcanica, 53, 3, 23–35. https://doi.org/10.52321/GeolBalc.53.3.23

Andreeva, P., Boncheva, I., Kiselinov, H., Sachanski, V. 2024. Microfacies of the Silurian/Devonian boundary interval in the Gorna Vrabcha 2 section (Morava Unit, SW Bulgaria) – preliminary results. – Review of the Bulgarian geological society, 85, 3, 46–49. https://doi.org/10.52215/rev.bgs.2024.85.3.46

Sachanski, V., Gutiérrez-Marco, J.C., Georgiev, S., Lakova, I., Yanev, S. 2024. A fossil proof for the origin of the Hirnantian glaciomarine record in Bulgaria: A preliminary result. – Review of the Bulgarian geological society, 85, 3, 77–80. https://doi.org/10.52215/rev.bgs.2024.85.3.77

MUHAMMAD AQQID SAPARIN

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In 2024, I completed my PhD in Petroleum Geoscience at Universiti Teknologi PETRONAS, Malaysia, with a dissertation titled "High-resolution graptolite biostratigraphy and palaeoenvironment reconstruction of the Ordovician-Silurian basin of Northwestern Domain Peninsular Malaysia." After graduating, I spent the remainder of the year job-hunting and attending meetings. One such meeting was the 37th International Geological Congress in South Korea, where I presented a talk titled "The Early History of Graptolite Discovery in the Asian Region." I was then invited by the Nanjing Institute of Geology and Palaeontology (NIGPAS) to join them as a visiting scientist during the summer. Currently, I'm a postdoctoral researcher at NIGPAS under the supervision of Prof. Yuandong Zhang. My research focuses on graptolites—specifically their systematics, biodiversity, biostratigraphy and palaeobiogeography, across the South China and Sibumasu paleoplates during the Late Ordovician-Early Silurian transition (Katian to Llandovery). At the moment, I'm investigating the earliest Silurian graptolites from Guizhou province and will soon extend my research to the Yunnan province of China.

Publications:

Saparin, M.A. and Ismail, M.S., 2024. A History of 20th Century Graptolite Studies in Malaysia: the Role of Clive Roderick Jones. Earth Sciences History, 43(2), pp.272-285. (A paper talking about the early Palaeozoic establishment in Malaysia)

LADISLAV SLAVÍK

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In 2024 continued activities concentrated on Mid-Palaeozoic global correlation and late Silurian - early Devonian conodont biostratigraphy. Several papers on conodont faunas from the Silurian-Devonian boundary in cooperation with Chinese colleagues have been published. Ms Jiayi Yin has spent a year with L. Slavík at the Department of Paleobiology and Paleoecology of the Czech Acad Sci Inst Geol studying marine faunas from the system boundary (S-D) from NW China. The proposal for the Přídolí Series subdivision (Slavík, L. et al.) has been submitted to the ISSS in November 2024.

Academic meetings

"Time-line of Silurian and Devonian environmental and biotic changes" Joint ISSS-SDS Meeting, Sofia, Bulgaria, Spetember 12.-18. 2024 (L. Slavík – Member of the Organizing Committee - International members)

Publications:

Holcová, K., Vacek, F., Čáp, P., Bruthansová, J., Slavík, L., Mergl, M., Kraft, P., Kerkhoff, M.L.H. & Chadimová, L. (2024): Microboring organisms – an overlooked Early Palaeozoic marine ecosystem: Case study from the Prague Basin (Czech Republic). Palaeoworld 33/1 (March 2024): 39-56. https://doi.org/10.1016/j.palwor.2023.01.010

Yin, J.Y., Slavík, L., Lu, J.F., Ma, J., Liu, Y.L., Zong, R.W., Gong, Y.M. (2024): Discovery of the earliest Devonian conodonts from Xinjiang, Northwest China. Palaeoworld 33/5 (October 2024): 1256-1267. https://doi.org/10.1016/j.palwor.2023.10.001

Yin, J.Y., Slavík, L., Wang, Z.H., Shen, Z., Zhang, X.S., Liu, Y.L., Ma, J., Gong, Y.M. Zong, R.W. (2024): The Silurian–Devonian Boundary of China: Review and perspectives. Earth-Science Reviews 254 (2024) 104805. https://doi.org/10.1016/j.earscirev.2024.104805

Yin, J.Y., Slavík, L., Zong, R.W., Gong, Y.M. (2025): Silurian–Devonian boundary in Northern Xinjiang, NW China. Palaeogeography, Palaeoclimatology, Palaeoecology, 659 (2025) 112636: 1-19. https://doi.org/10.1016/j.palaeo.2024.112636

AMALIA SPINA

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Nothing to report for 2024.

ANDREJ SPIRIDONOV

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Nothing to report for 2024.

PETR ŠTORCH

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My research on Silurian graptolites and stratigraphy continues despite my partial retirement. Studies related to the replacement sections for the Aeronian and Telychian GSSPs have been completed by review papers submitted for publication in the IUGS journal *Episodes*. Collaboration with Štěpán Manda, Juan Carlos Gutiérrez-Marco, Zongyuan Sun, Mike Melchin, and David Loydell remains active through several informal projects. A recent study on the Aeronian graptolite assemblages of the base Telychian El Pintado GSSP section will be finalized in collaboration with J.C. Gutiérrez-Marco and D.K. Loydell. Additionally, research on Lower Gorstian graptolites and biostratigraphy of the Prague Synform is being prepared for publication with Š. Manda. A joint project with Z.Y. Sun and M.J. Melchin focuses on Petalolithinae. Zuzana Strossová continues her PhD research on lower Telychian graptolites and high-resolution stratigraphy under my supervision.

Publications:

Guriérrez-Marco, J.C., Loydell, D.K., Štorch, P. and Frýda, J. 2024. El Pintado (Geoparque Mundial de la UNESCO Sierra Norte de Sevilla), séptimo Estratotipo Global de Límite ubicado en España y primero de Andalucía (GSSP Telychiense, Llandovery: Sistema Silúrico). *Geogaceta*, 76, 3–6. https://doi.org/10.55407/geogaceta104708.

Gutiérrez-Marco, J.C., Romero, S., Pereira, S. and Štorch, P. 2024. The Ordovician–Silurian boundary beds in the El Pintado section (Sierra Morena de Sevilla Global UNESCO Geopark, SW Spain). *Geologica Balcanica*, 53(3), 37–43. https://doi.org/10.52321/GeolBalc.53.3.37.

Štorch, P., Loydell, D.K., Melchin, M.J. and Goldman, D. 2024. Graptolites in biostratigraphy: the primary tool for subdivision and correlation of Ordovician, Silurian, and Lower Devonian offshore marine successions. *Newsletters on Stratigraphy*. https://doi.org/10.1127/nos/2024/0810.

Strossová, Z., Kovář, V. and Štorch, P. 2024. Qualitative and quantitative analysis of the graptolite assemblage in the linnaei Biozone (Silurian, lowermost Telychian) at Želkovice, Prague Synform (Czech Republic). *Palaeontologica Electronica*, 28(1), a1. https://doi.org/10.26879/1425.

Sun, Z.Y., Melchin, M.J., Štorch, P., Chen, Q., Zhao F.Q. and Fan, J.X. 2024. High-resolution integrated stratigraphy of Upper Ordovician to lower Silurian strata: applications to black shale drill cores in South China. *Newsletters on Stratigraphy*, 57 (4), 445-474. https://doi.org/10.1127/nos/2024/0752.

SUN ZONGYUAN

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Supervised one MSc student who successfully graduated in 2024 and is now employed by China National Petroleum Corporation (CNPC).

Publications

Sun, Z., Melchin, M. J., Štorch, P., Chen, Q., Zhao, F., & Fan, J., 2024. High-resolution integrated stratigraphy of Upper Ordovician to lower Silurian strata: applications to black shale drill cores in South China. Newsletters on Stratigraphy, 57(4), 445–474. https://doi.org/10.1127/nos/2024/0752

Academic meetings

Young Scholars Forum on Palaeontology (China), Chengdu, China, Chengdu University of Technology, December 15–16, 2024. Served as one of the key organizers on behalf of the host institution.

ZUZANA TASÁRYOVÁ

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Cooperation on geochemical restudy of previously ratified GSSPs: Aeronian Stage (Hlásná Třebaň) and Přídolí Epoch (Hvížďalka quarry). Geochemistry and volcanic textures of Silurian basalts exposed in well cores drilled during exploration for the Prague Basin railway tunnel.

Cooperation on geochemical restudy of previously ratified GSSPs: Aeronian Stage (Hlásná Třebaň) and Přídolí Epoch (Hvížďalka quarry). Geochemistry and volcanic textures

of Silurian basalts exposed in well cores drilled during exploration for the Prague Basin railway tunnel.

Publications:

Book chapter

Manda, Š. - Budil, P. - Žák, K. - Tasáryová, Z. (2024): Geologie a geomorfologie. In: Žák, K. Et al.: Svatý Jan pod skalou, Dějiny, génius loci a přírodní poměry, s. 221-239. - Praha. Neuveden. ISBN 978-80-7675-186-6.

Book

Žák, K. - Ševčík, J. - Cílek, V. - Majer, M. - Budil, P. - Budil, P. - Bruthans, J. - Elleder, L. - Frolík, J. - Garkisch, M. - Havlíková, D. - Hejna, M. - Hradilová, D. - Hrdina, Z. - Drtikolová Kaupová, S. - Kolčava, M. - Manda, Š. - Podroužková, Š. - Prach, J. - Schmelzová, J. - Sklenář, K. - Stolz, D. - Svoboda, D. - Tasáryová, Z. - Tichý, T. - Velemínský, P. - Veselý, J. (2024): Svatý Jan pod Skalou : Dějiny, genius loci a přírodní poměry. 1. 334 s. - Dokořán. Praha. 1286. ISBN 978-80-7675-186-6.

Other information:

Bulletin of Geosciences is celebrating its centenary in 2025 and in honour of the late Jiří Kříž, a special issue themed in Silurian and/or Bivalves is being prepared. Deadline for manuscript submissions is end of March 2025. (Stepan Manda will provide more detailed info if needed).

ALAN THOMAS

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I took early retirement in 2010 but continue some joint research, particularly with David Ray and with former Ph.D. students. Most recently, I have collaborated on a paper with David Ray, Emilia Jarochowska, Helen Hughes and Alan Richardson which concerns the occurrence and magnitude of glacioeustatic sea-level changes in the Telychian and Sheinwoodian of England and Wales. I am currently collaborating with Ray and Hughes on a detailed study of the *Dalmanites-Raphiophorus* trilobite association from the Wenlock type area.

Publications

Veevers, S. J., Ray, D. C., Ratcliffe, K. T. & Thomas, A. T. 2024. The application of chemostratigraphy and proximality trends to the Silurian coralliferous Formation of SW Wales: rhythmical sedimentation during the transgression of a palaeo-shoreline. Journal of the Geological Society London, 181, doi.org/10.6084/m9.figshare.c.7251814.

PETRA TONAROVÁ

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I keep working on research of Lower Paleozoic microfossils. Last year, I studied together with colleagues from the Czech Geological Survey and TalTech (Estonia) Sheinwoodian and Ludfordian scolecodonts and accompanying microfossils in the Prague Basin. We have submitted a paper on Ludfordian (Lau event interval) scolecodonts from the Kosov Quarry and a paper on scolecodonts from the same interval from Baltica (Lithuania) is in preparation. Our studies confirm the high endurance of jawed polychaetes even under unstable environmental conditions. Simultaneously with the assemblage analyses, we are testing

methods on 3D modeling of scolecodonts based on measurements by submicron CT (CEITEC Micro & Nano X-ray CT Laboratory, Brno) and SEM photogrammetry. The research was also presented at two international meetings (abstracts Tonarová et al. 2024b, c).

Publications:

TONAROVÁ, P., SUTTNER, TJ., HINTS, O., LIANG, Y., ZEMEK, M., KUBAJKO, M., ZIKMUND, T., KAISER, J. & KIDO, E. 2024a. Late Ordovician scolecodonts and chitinozoans from the Pin Valley in Spiti, Himachal Pradesh, northern India. *Acta Palaeontologica Polonica*, **69** (2), 199–215. DOI 10.4202/app.01135.2024

Abstracts

TONAROVÁ, P., ZEMEK, M., HINTS, O., ŠVAGERA, O., NOHEJLOVÁ, M., KUBAJKO, M., ZIKMUND, T. & KAISER, J. 2024b. 3D imaging techniques in the study of microfossils. *In*: LAIBL, L., POLECHOVÁ, M. & NOHEJLOVÁ, M. (eds), *3rd virtual meeting of IGCP 735 Rocks and the Rise of Ordovician life, Prague. Abstract volume*, p. 32.

TONAROVÁ, P., HINTS, O., ZEMEK, M., NOHEJLOVÁ, M., ŠVAGERA, O., KUBAJKO, M., ZIKMUND, T. & KAISER, J. 2024c. Imaging techniques in the study of fossil scolecodonts. *In*: BEK, J. & VOTOČKOVÁ FROJDOVÁ, J. (eds), *XV International Palynological Congress, XI International Organization of Palaeobotany Conference, 27–31 May 2024, Prague, Czech Republic, Abstract Book*, p. 207.

THIJS R. A. VANDENBROUCKE

Ghent University, Dept. of Geology (WE13), Krijgslaan 281 / S8, 9000 Ghent, Belgium; Tel. +32 (0)9 264 45 15 ; Webpage: www.earthweb.UGent.be; Instagram: @palaeo_UGent
Email: Thijs.Vandenbroucke@UGent.be

Thijs Vandenbroucke (Belgium-UGent) remains interested in reconstructing the Silurian palaeoclimate and palaeo-environment. **Tim De Backer** is finalizing his PhD research project with me at UGent focussing on the geochemistry and palynology of selected sections of the upper Silurian and Devonian in N. America and Sweden. **Carolina Klock** continues her PhD project focussing on the palynology of the Silurian Valgu and Mulde events, using material from the USA Midwest, Anticosti and Gotland. **Iris Vancoppenolle** continues her PhD project focussing on the palynology of the Ireviken event, with a focus on Gotland and the USA. **Nick Van Faals** pursues a PhD project on chitinozoan ecology and will partly be working on Silurian sections. **Himadri Haldar's** PhD project focusses on stable carbon isotope geochemistry in the Ordovician and Silurian. MSc student **Nick Jespers** has a project focussing on chitinozoans from the Mulde Event on Gotland. These are projects in collaboration with Poul Emsbo (USGS), Patrick McLaughlin (Illinois Geol. Survey), Mikael Calner (ULund), Appy Sluijs (UUtrecht), Brad Cramer & Alyssa Bancroft (UIowa), Mark Williams (ULeicester), Jean-François Ghienne (UStrasbourg) and André Desrochers (UOttawa). **Mathilde Bon** is a joint PhD student between UGent and ULille, co-supervised by Kevin Lepot, and investigates the organic geochemistry of, amongst others, Silurian palynomorphs. The other members of the lab, including PhD students Cristiana Esteves, Joana Rosin & Synnove Saugen, and MSc students Hilja Du Seuill, Kaatje Peirs & Lena Lardinois are pursuing projects that are not specifically focussed on the Silurian.

Publications

Klock, C., Desrochers, A., McLaughlin, P. I., Emsbo, P., De Backer, T., Jonckheere, F. M., Esteves, C. J. P. & Vandenbroucke, T. R. A. 2024. Chitinozoan biostratigraphy through the Aeronian – Telychian boundary interval on Anticosti Island, Canada. *Journal of Micropalaeontology*, 43, 475–495. Doi: 10.5194/jm-43-475-2024

JACQUES VERNIERS

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I'm happy to announce that Jan Mortier's Ph.D. (2014) was finally printed this September in the Memoirs of the Geological Survey of Belgium, with an extensive study on the uppermost Ordovician and Silurian of many sections plus their chitinozoans in the Belgian Condroz Inlier. (full colour, 241 pages, 89 figures, 28 tables, 24 plates & 2 appendices/3 figures in annexes). It can be purchased at gsb@naturalsciences.be; printed copy: € 32.00 + shipping cost; electronic pdf: € 25.00.

As mentioned before we continue to work on three manuscripts for the revue Geologica Belgica:

A new biostratigraphy with chitinozoans for the Silurian of Belgium, a revision and synthesis of all studies done in Belgium in the last half century.

A review on what we know now on the Silurian of Belgium.

The Silurian formations in Belgium anno 2025, following the previous overview of Verniers et al (2002) (for the National Commission on Stratigraphy of Belgium).

Publications:

Mortier J., Vanmeirhaeghe, J., Harper D. A. T., Štorch P., Zalasiewicz J., Van Den Haute P., Deckers J., Mestdagh T., Pille T., Verniers J., 2023. Stratigraphy, Biostratigraphy, and Chitinozoans of the Uppermost Ordovician and Silurian of the Condroz Inlier. Memoirs of the Geological Survey of Belgium, 65, 241 p.

OLEV VINN

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I have been working on the evolution of symbiosis, predation, bioerosion, and encrustation in the Silurian. I am also working on the palaeontology of problematic calcareous tubeworms from the Palaeozoic (e.g., cornulitids, tentaculitids, microconchids, Sphenothallus, etc.) and the evolution of tubeworm biomineralization. My other research interests include trace fossils of the Silurian of Estonia and beyond. I am currently the editor of the Journal of Paleontology, and all your papers dealing with Silurian fossils are welcome.

Publications

Vinn, O., Alkahtane, A.A., El Hedeny, M. & Al Farraj, S. 2024. Encrustation of crinoid holdfasts and pluricolumnals from the Pridoli (upper Silurian) of Saaremaa Island, Estonia. Proceedings of the Geologists' Association 135, 57-60.

Vinn, O., Jäger, M., Słowiński, J. & Zatoń, M. 2024. Convergent evolution of encrusting calcareous tubeworms. Palaeoworld 33, 267-283.

Vinn, O., Holmer, L.E. & Wilson, M.A. 2024. Evolution of brachiopod symbiosis in the early Paleozoic. Historical Biology 36(7), 1274-1294.

Vinn, O., Wilson, M.A., Isakar, M. & Toom, U. 2024. Two high value geoheritage sites on Sõrve Peninsula (Saaremaa Island, Estonia): a window to the unique Late Silurian fauna. Geoheritage 16, 53.

Vinn, O., Alkahtane, A.A., El Hedeny, M.M., Al Farraj, S. & Toom, T. 2024. Earliest styliolinids from the Wenlock of Saaremaa Island (Estonia): paleoecological and evolutionary implications. Palaeoworld 33, 899-904.

Vinn, O., Ernst, A., Alkahtane, A.A., Magdy El Hedeny, M. & Al Farraj, S. 2024. New cecidospecies of Anoigmaichnus in the cystoporate bryozoan *Fistulipora przhidolensis* from the upper Pridoli (Silurian) of Saaremaa Island, Estonia. Neues Jahrbuch für Geologie und Paläontologie, Abhandlungen 312(1), 101-107.

WANG GUANGXU

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A monograph on Late Ordovician–middle Silurian stauriid rugose corals has been completed and has now been submitted to *Fossils and Strata* in 2024. Additionally, a monographic work that entails a revision of Late Ordovician-early Silurian cystiphyllid rugose corals is still in preparation stage.

Publications

Chen, Z.Y., Chen, Q., **Wang, G.X.**, Fang, X., Tang, P., Yan, G.Z., Yuan, W.W., Huang, B., Zhang, X.L., Yan, K., Zhang, Y.D., Wang, Y. 2023. Integrative Silurian stratigraphy, biotas and palaeogeographical evolution of the Qinghai–Tibetan Plateau and its surrounding areas. Science China Earth Sciences, 67, 1005–1035.

WANG XIAOFENG

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In the last year Wang Chuanshang, Wang Jianbo, Wang Xiaofeng accomplished compiled new edition of Ordovician and Silurian Stratigraphical Lexicon of China, respectively. Besides they studied the chitinozoan of Shenxuan Member of Ningqiang Formation in the northern margin of the Yangtze Platform and completed the dating of tuff samples in *Lituigraptus convolutus* zone in Baojing, Hunan Province, and a zircon SHRIMP age of 439±2Ma obtained. Carried out cooperative research with Jörg Maletz on the taxonomy and comparison of early Silurian graptolite fauna in western Hunan and Hubei provinces.

NINA WICHERN

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I would like to use this edition of the Silurian Times as an opportunity to introduce myself as a new member of the ISSS. I am a cyclostratigrapher and palaeoclimatologist based in Münster, Germany. Previously I worked on Devonian cyclostratigraphy during my PhD. Currently, I am also interested in cyclostratigraphy in the Silurian; both as a means to constrain time and durations in order to improve the resolution of the Silurian timescale, as well as a way to study Silurian climate, especially the enigmatic major carbon isotope excursions.

In the long term, I hope to contribute to the field of Silurian cyclostratigraphy. Last year, I made the first very small step towards that aim. In October, I visited the beautiful island of Gotland, in order to 1) determine the potential of Gotland, with its highly detailed biostratigraphy, as a target site for cyclostratigraphic analysis, and 2) to study the interaction between the preservation of potential Milanković climate signals and early carbonate

diagenesis, together with Theresa Nohl (Vienna) and Axel Munnecke (Erlangen). The data we gathered there are still being processed.

I hope to learn more about every aspect of the Silurian from the ISSS community. If you are interested in collaborating, or know of any promising Silurian sections I should visit, please contact me!

Photo: A great first acquaintance with Silurian rocks: the impressive cliffs of the Svarven section in the north of Gotland.

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Nothing to report for 2024.

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Nothing to report for 2024.

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Yuandong ZHANG (China) is continuously working on:

(1) Systematic palaeontology and biostratigraphy of the Anji Biota (dominated by late Katian to Rhuddanian sponges and graptolites) in Anji County, northwestern Zhejiang

Province, SE China. This work has been funded by President's International Fellowship Initiatives program (PIFI) and a grant from NSF of China (2018-2021). Recently, the work has been financially supported by a new grant from Ministry of Science and Technology of China (2023-2028), which aims to address the faunal turnovers during the Ordovician-Silurian transition and their potential impact on the mass accumulation of organic matter in black shale. This work has been jointly carried out with Drs. Joseph Botting and Lucy Muir from UK, and will be implemented further through cooperations with international colleagues including Olle Hints from Estonia and Zhen Yong Yi from Australia.

(2) Systematic palaeontology of Silurian (Telychian, Ludlow and Pridoli) graptolites from the Junggar Basin, Xinjiang, northwestern China, together with Chen Xu and some other Chinese colleagues from NIGPAS and China University of Geosciences (Wuhan). A palaeontological study of the graptolites from the limited outcrops in the basin has turned out as a manuscript in 2023, which has been revised in 2024 and will be re-submitted in early 2025.

Publications:

Fang, X., Zhen, Y.Y., Wang, G.X., Wei, X., Chen, Z.Y., Liang, Y., Wu, X.J., Li, W.J., Li, C., Zhan, R.B., Zhang, Y.D.* 2024. Ordovician integrative stratigraphy, biotas, and paleogeographical evolution of the Qinghai-Tibetan Plateau and its surrounding areas. Science China Earth Sciences, 67(4): 971–1004. https://doi.org/10.1007/s11430-023-1184-6.

Chen, Z.Y.*, Chen, Q., Wang, G.X., Fang, X., Tang, P., Yan, G.Z., Yuan, W.W., Huang, B., Zhang, X.L., Yan, K., Zhang, Y.D., Wang, Y. 2023. Integrative Silurian stratigraphy, biotas and palaeogeographical evolution of the Qinghai-Tibetan Plateau and its surrounding areas. Science China Earth Sciences, 67(4): 1005–1035. https://doi.org/10.1007/s11430-023-1235-3.

Jeon, J.W.*, Kershaw, S., Li, Y., Chen, Z.Y., Toom, U., Yu, S.Y., Zhang, Y.D. 2024. Stromatoporoids of the upper Hirnantian (Upper Ordovician) Shiqian Formation of South China: implications for environmental interpretation and the Ordovician–Silurian stromatoporoid transition. Journal of Systematic Palaeontology, 22(1): 2351930. https://doi.org/10.1080/14772019.2024.2351930.

Wang, H.Q., Zhang, H.Y., Zhang, Y.D.* 2024. Improved graptolite isolation technique and micro/nanostructure analysis. Acta Palaeontologica Sinica, 63(3): 404–414. DOI: 10.19800/j.cnki.aps.2024005.

Zhang, J.P.*, Li, C., Zhong, Y.Y., Wu, X.J., Fang, X., Liu, M., Chen, D.Z., Gill, B.C., Algeo, T.J., Lyons, T.W., Zhang, Y.D., Tian, H. 2024. Linking carbon cycle perturbations to the Late Ordovician glaciation and mass extinction: A modeling approach. Earth and Planetary Science Letters, 631 (2024). 118635. https://doi.org/10.1016/j.epsl.2024.118635.

Academic meetings

As the secretary general, I organized the Sixth International Conference of Palaeogeography (May 17–20, 2024, Nanjing, China). The conference focused on theme "Life Evolution, Palaeogeography, and Resources", together with one pre- and two post-conference field trips on strata and fossils of Neoproterozoic to Cenozoic in South China and North China. The conference attracted some 800 participants from 200 academic and industrial institutions of 22 countries including China, Thailand, India, Korea, Iran, Pakistan, Malaysia, Bangladesh, UK, Russia, France, Germany, Netherland, Italy, Ireland, Romania, USA, Canada, Argentina, South Africa, Senegal, and Australia. Forty-two scientific sessions (including T1-1: Palaeobiogeography and major biotic transitions; T2-1: Carbonate sedimentation: from facies analysis to global changes; etc.) and one workshop (Trace fossils in Palaeoenvironment and

Palaeogeography) were organized, and six plenary talks, 566 orals (91 of which were keynotes) and 228 posters were presented.

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I continued working on the Silurian vertebrate paleontology and relative stratigraphy in 2024, supported by the National Natural Science Foundation of China. Together with my colleagues in China, some new Silurian galeaspid fishes were detailed described and the integrated studies of carbon and sulfur cycling in the Qujing Basin, South China have been conducted (Li et al., 2024a; Li et al., 2024b; Sun et al., 2024). Both *Changxingaspis nianzhongi* sp. nov. and *C. gui* are described from the early Telychian Tataertag Formation in Tarim Basin and Kangshan Formation in Zhejiang Province, respectively. New discovery of the early Silurian fossil fish *Changxingaspis* (Xiushuiaspidae, Galeaspida) provides new evidence to support faunal exchanges between the South China and the Tarim blocks and the hypothesis of a united Tarim-South China Block during the early Silurian (Li et al., 2024a). New discoveries of the late Silurian fossil fish *Dunyu* (Eugaleaspidae, Eugaleaspiformes, Galeaspida), *Dunyu tianlu* sp. nov. and *Dunyu* sp., are described from the Xiaoxi Formation in Xiushan of Chongqing and Xiushui of Jiangxi, South China, respectively. Discovery of new specimens of *Dunyu* provides direct evidence on the genus level for the correlation of the late Ludlow strata between the margin and interior of the Yangtze Platform, further supporting that the central part of the Yangtze Platform suffered from widespread transgression in the late Silurian (Li et al., 2024b). The result from the C-isotopic data of organic carbon ($\delta^{13}C_{org}$) and multiple S-isotopes of pyrite ($\delta^{34}S$ and $\Delta^{33}S$) suggests that the rise in $\delta^{13}C_{org}$ near the Silurian-Devonian boundary (~4‰) may have resulted from the weathering of the ^{13}C-enriched carbonate platform, rather than from oceanic anoxia, however, the positive $\delta^{34}S$ values with either positive or negative $\Delta^{33}S$ values suggest that seawater sulfate concentrations were very low in the Qujing Basin during the late Silurian-Early Devonian (Sun et al., 2024).

Publications

Li, X.T., Zhang, Y.M., Lin, X.H., Zhu, M., **Zhao, W.J.**, Tang, L.Z., Shan, X.R. and Gai, Z.K. 2024a. New findings of *Changxingaspis* (Xiushuiaspidae, Galeaspida) from the Silurian of Tarim Basin and Zhejiang Province, China. *Acta Geologica Sinica (English Edition)*, **98**, 531-540, https://doi.org/10.1111/1755-6724.15168.

Li, Q., Shan, X.R., Gai, Z.K., Chen, Y., Peng, L.J., Zheng, J.Q, Lin, X.H., **Zhao, W.J.** and Zhu, M. 2024b. New findings of *Dunyu* (Eugaleaspiformes, Galeaspida) from the Xiaoxi Formation in South China and their biostratigraphic significance. *PeerJ*, **12**, e18760, https://doi.org/10.7717/peerj.18760.

Sun, L.L., Zhang, X.L., Zhu, M., Xu, Y.L., **Zhao, W.J.** and Shen, Y.A. 2024. Carbon and sulfur cycling across the Silurian-Devonian boundary in the Qujing Basin, South China. *Chemical Geology*, **648**, 1-10, https://doi.org/1016/j.chemgeo.2024.121952.

REPORTS FROM FRIENDS OF THE SILURIAN SYSTEM

PETRO TSEGELNYUK

Publications

Tsegelnyuk Petro D., PDF: Graptolites and biochronology of shelf and neritc sediments of the Silurian System of Ukraine / Kyiv-Toronto, 2024, 343 p.

Petro D. Tsegelnyuk. Difficult questions of Stratigraphy of geological Systems of the Early Paleozoic / Kyiv-Toronto, 2025, 52 p.

Petro D. Tsegelnyuk, PDF: Geological Time of the Phanerozoic Era / Kyiv-Toronto, 2025, 26 p.

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I work in China as a Research Associate at the Nanjing Institute of Geology and Palaeontology (NIGP), Chinese Academy of Sciences. I am currently focusing on survival, recovery and radiation of trilobites during the early Silurian, together with Prof. Zhan Renbin (NIGPAS) and Prof. Zhou Zhiqiang (Xi'an Institute of Geology and Mineral Resources). Recently, a paper on the uppermost Hirnantian-Rhuddanian trilobite faunas discovered in South China has been accepted for publication in the Journal of Systematic Palaeontology.