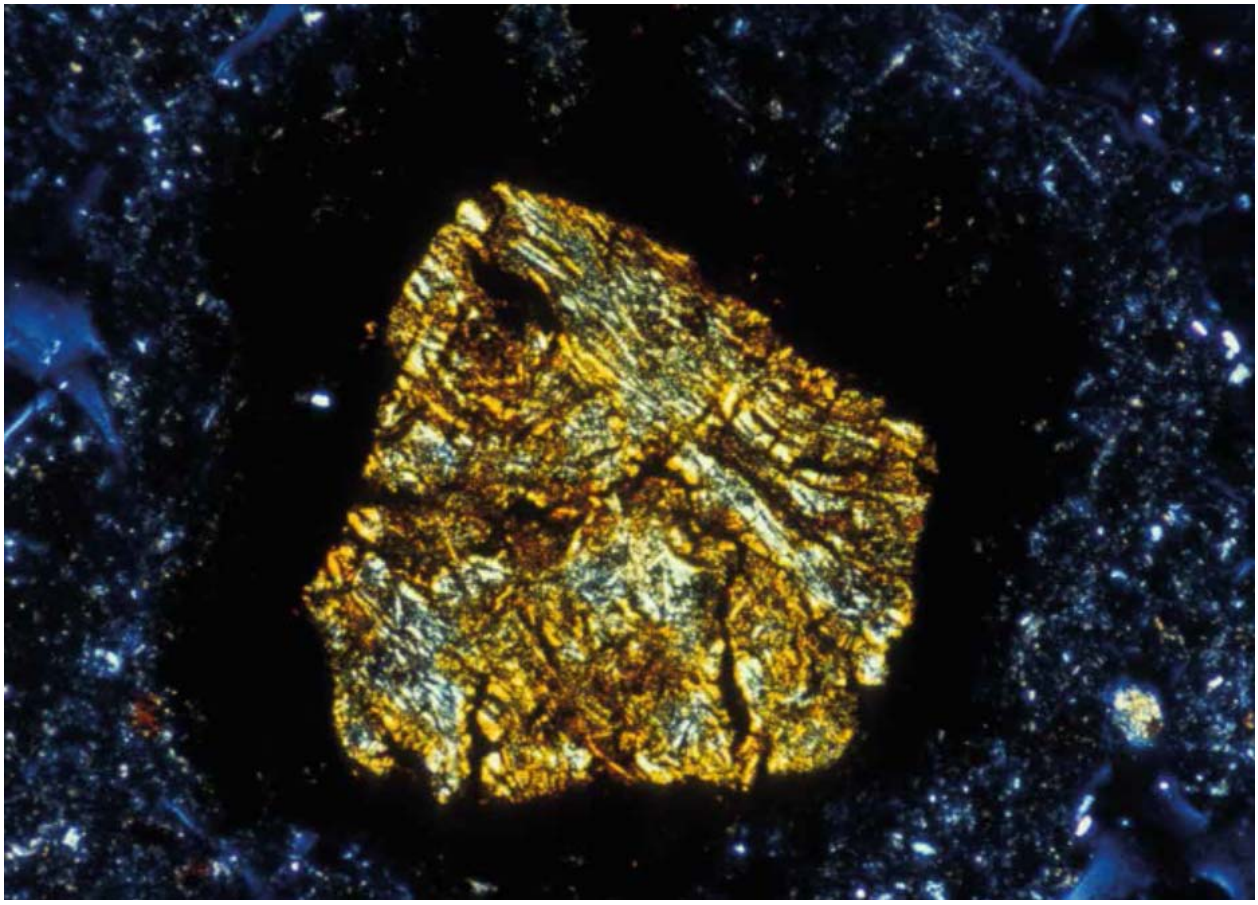

COMMISSION 1.1

SOIL MORPHOLOGY & MICROMORPHOLOGY

International Union of Soil Sciences

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Newsletter prepared by Commission 1.1 Officers 2018-2022
Chair**: Fabio Terribile** (Italy) - fabio.terribile@unina.it
Vice-Chair: **Richard J. Heck** (Canada) - rheck@uoguelph.ca

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Cover: Clay neogenesis within a volcanic shard in Andosol (Frosolone – Molise). Courtesy by Fabio Terribile- CRISP Università di Napoli Federico II, Napoli.

Comm. 1.1. Soil Morphology and Micromorphology - IUSS

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LETTERS FROM COMMISSION OFFICERS

Dear all,

It is about 6 months from the previous newletter. Unfortunatelly Covid is not stopping and we have to admit that this has also affected our scientific communities. Then also the production of this newletter has been affected and its delivery dates have become more flexible than before following the lower rate of activities and news arriving to us.

Despite this reduce intensity, in this volume we are happy to report: (i) our WCSS (August 2022) where there are few symposia having micromorphological topics, (ii) the many soil micromorphology courses ahead of us, (iii) update on Commission 1.1. activities, (iv) the 10th edition of the Kubiëna medal award granted ex -aequo to Paul Goldberg and Richard Macphail, (v) the new call for Young Micromorphology Publication Award.

It is also very important to inform you that in 2021, Commission 1.1. spent rather large energies for awarding both YMPA and Kubiëna medal prizes. This led to the conclusion that it is time for an update of evaluation criteria. In this newletter please read carefully the suggestion we have produced. You will be asked to provide your own suggestions to achieve a final document that will be voted at WCSS in Glasgow 2022. This process will also includes a closed interaction with the related IUSS officers including the Committee on prizes and awards.

In this issue we shall continue the "pills of wisdom" section. This time – considering the outcoming results after the Kubiena medal award, we have asked a contribution from Paul Goldberg and Richard I. Macphail. They gave a very nice overview of the development of archaeological soil micromorphology, thus demonstrating - once again - the interdisciplinary value of soil micromorphology.

Good Reading!

Fabio Terribile & Richard Heck
IUSS Commission Soil Morphology and Micromorphology

PILLS OF WISDOM for soils and soil scientists

Dear reader, this section of our newsletter is devoted to publish small contributions from some of our major soil scientists, who decided to share with us some of their thoughts on key issues relevant for our Commission. This section is thought to be also open to receive some reactions, comments, suggestions, etc.

In this number we are very pleased to publish the reflection on the historical development of the application of micromorphology to archaeology, from Paul Goldberg and Richard I. Macphail, who have been awarded the Kubiëna Medal for their contributions in this field.

Then... special thanks to Paul and Richard!

A contribution by Richard I. Macphail[1] & Paul Goldberg[2]

1. Institute of Archaeology,
University College London
31-34, Gordon Sq,
London, WC1H 0PY, UK

2. Institut für Naturwissenschaftliche
Archäologie (INA)
University of Tübingen
Hölderlinstr. 12
72074 Tübingen
Germany

Archaeological soil and sediment micromorphology developed exponentially since the 1950s to its present role as a global method for analyzing archaeological sites. But, how did this happen? Inspired by W. L. Kubiëna **(Kubiëna,** 1938**,** 1953**),** the specific application of soil micromorphology to archaeology seems to have begun at the Institute of Archaeology, University College London through Ian Cornwall, although interest in archaeological soils was developing Europe wide in the 1950s and 60s within environmental archaeology (Cornwall, 1952, 1953; Dimbleby, 1962; Duchaufour, 1982). The ground for this field of study had already been created by the pioneering Quaternary geologist Frederic Zeuner (Zeuner, 1946, 1959), who was professor of Environmental Archaeology at UCL from 1946 to 1963. One student of Zeuner and Cornwall was John Dalrymple (Dalrymple, 1958), while another was Geoffrey Wainwright, who recalled to one of the present authors how he had hand-finished thin sections for Ian Cornwall. Wainwright went on to be Chief Archaeologist for English Heritage (1989-1999). His period of tenure coincided with Macphail's English Heritage archaeological soil contract at the Institute of Archaeology (1978-1998), which included a review of the Cornwall thin section archive (Macphail, 1987). Independently, while working on his dissertation in the US (Goldberg, 1973), PG came across Brewer's inspiring book (Brewer, 1964) and straightaway became convinced of the value of micromorphology in archaeology (Goldberg 1979, 1980).

Nonetheless, its application to archaeology was mainly introduced to mainstream soil micromorphology during the 1981 International Working Meeting on Soil Micromorphology in London (Goldberg, 1983; Macphail, 1983), and these authors joined Marie-Agnès Courty to produce the first textbook on the subject, *Soils and Micromorphology in Archaeology* (Courty et al., 1989). The international character of site coverage encouraged funding bodies to support archaeological soil micromorphology especially in Europe, and by 1990 an *ad hoc* organization under the umbrella of the IUSS – The Working Group on Archaeological Soil Micromorphology

– began to have annual workshops geared to the training of, and interaction between, students and professionals alike. These meetings, which sometimes ran in parallel with IUSS soil micromorphology conferences also led to increasing numbers of published archaeological soil micromorphology investigations (Macphail, 2013; Stoops, 2003). It has become obvious, however, that Europe with its strong interest in environmental archaeology has become the epicenter for developments in archaeological soil micromorphology, while the USA with its focus on theoretical archaeology, has been largely left behind except for the Microstratigraphy Laboratory at Boston University. Unfortunately this closed in 2014. As pointed out by Stoops (2014) there are some centers in the USA and Canada, but these are soil based with little application to archaeology, apart from at Simon Fraser University. Moreover, although geoarchaeology is a major well-funded discipline in North America (particularly in CRM), there has been surprisingly little interest shown in the microstratigraphic approach.

However, world-wide, there has been a demand for clear examples of how soil micromorphology can be applied to archaeology has led to a spate of new specialist volumes (Karkanas and Goldberg, 2018; Macphail and Goldberg, 2018; Nicosia and Stoops, 2017), which have provided fundamental databases for both new and experienced micromorphologists. Most recently, 15 years of specialist training in London and regular person-to-person workshops were halted by Covid. Fortunately, a new generation of highly skilled soil micromorphologists working in archaeology initiated virtual meetings (Virtual Micromorphology or 'ViMi') during 2020-2021; ViMi1 via centres at Basle, Frankfurt, and Cologne was hosted by Christine Pümpin, Dagmar Fritzsch, and Astrid Röpke, respectively. At the two-day long ViMi2 (organized by Carolina Mallol, Univ. of La Laguna, Tenerife - 17th-18th November 2021), along with centers at Amersfoort, Basel, Frankfurt and Tübingen that were again involved, more than 250 people worldwide took part. Under normal circumstances, only a few workers could afford to attend such workshops, but ViMi has permitted soil micromorphologists from Europe, North and South America, Africa, and the Far East to be involved. This strategy to unite researchers involved in archaeological micromorphology is now truly a global event.

Finally, for our community and regardless of where we are in the world, we can happily state that it is gratifying to realize that so many of our notions/interpretations/hypotheses about a layer/soil/archaeological feature that we generate in the field, commonly need modification after we look at the thin sections that come from them. These thin slices of undisturbed soils or sediments mounted on glass provide windows into the past and they furnish powerful insights into both the people who lived then and the world around them.

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FORTHCOMING MEETINGS

22nd World Congress of Soil Science August 2022, Glasgow, UK

The 22th World Congress of Soil Science will be hold in Glasgow in the period 31 July - 5 August 2022.

Symposia including soil microscopy and micromorphology issues in the description are many. Between them (i) soil carbon: from particle to planet (Convenors: B. Jansen; E. Kandeler; C. Monger; P. Smith) , (ii) Novel methods and techniques (Convenors: S. Hillier; Q. Huang; A. Hartemink), (iii) Soil classification and palaeopedology (Convenors: C. Monger; M. Bronnikova; B.B. Mishra; E. Solleiro-Rebolledo), (iv) Soil structure - Observation, resilience and its role in ecosystem functioning (Convenors: Stephan Peth; Richard Heck; Fabio Terribile).

Symposia explicitly including soil morphology issues are the followings: (i) The Legacy of Henry Lin and the future of Hydropedology (Convenors: H. Vogel; J. van Tol), (ii) Progress in Digital Soil Morphometrics- deeper and more precise soil observations (Convenors: A. Hartemink; J. Huang; R. Heck), (iii) Advances in understanding soils as reflected by the 4th edition of the WRB (Convenors: P. Schad; S. Mantel; C. Kabala; C. Van Huyssteen).

In the coming 2-3 weeks, by connecting to www.22wcss.org we shall know ore details about oral and poster presentation in the above symposium.

If you have any queries please head to the above conference website or email to wcss@speak.co.uk

16th International Conference on Soil Micromorphology, 2022, Kraków, Poland

The registration for the 16th International Conference on Soil Micromorphology is open.

The 16th International Conference on Soil Micromorphology will be hold in Kraków, Poland from September 4-8 2022.

The venue of the conference is the Jagiellonian University in Kraków, Poland.

All necessary information about the conference is available at http://www.icosm2020.sggw.pl/. You can download the second circular at http://www.icosm2020.sggw.pl/wp-content/uploads/2021/11/1st_Circular_ICoSM_2022_Krakow.pdf

The optional micromorphological course is to take place on August 29 – September 3, 2022. All necessary information is available at http://www.icosm2020.sggw.pl/course/

The optional post-conference trip is to take place from September 9th to 11th, 2022. The detailed information about the trip is available at http://www.icosm2020.sggw.pl/trips/

We offer three ICoSM 2022 Young Micromorphologist Awards. Details at http://www.icosm2020.sggw.pl/scholarships/

On behalf of the ICoSM Organizing Committee - Lukasz Uzarowicz

NEW ACTIVITES BY THE COMMISSION

We plan to give you a larger report update in the next newsletter edition.

Here we just want to inform you that work continues on our new Commission 1.1 website, which we anticipate to go live by the end February of 2022.

FORTHCOMING COURSES *(in order of date)*

Archaeological Micromorphology short intensive course
April 19-27, 2022
The London Archaeological Micromorphology planned a short intensive course at the UCL Institute of Archaeology co-organised by M. Arroyo-Kalin and R. Macphail.
The course programme will cover:
For beginners:

i. •Introduction and practice of thin section description and interpretation

For advanced practitioners

i. •Major soil horizon types and palaeosols
ii. •Hunters and gatherers sites and associated caves
iii. •Clearance, low-impact and herding signatures
iv. •Signatures of industrial activities
v. •Signatures of cultivation, manuring, and associated animal management
vi. •Signatures of occupation surfaces and other settlement loci
vii. •Signatures of funerary practices
viii. •European Dark Earths
ix. •Tropical Dark Earths
x. •Experimental Geoarchaeology

The main emphasis of the course will be the study of thin sections from collections produced in the course of multiple research projects.
Further details:
https://www.ucl.ac.uk/archaeology/study/continuing-education/archaeological-soil-micromorphology
Due to COVID19 restrictions we will need to limit participation to ensure safety protocols. Course registration (£ 450) will go live on 15 January 2022 via the following link:
https://onlinestore.ucl.ac.uk/conferences-and-events/faculty-of-social-historical-sciences-c03/institute-of-archaeology-f31/f31-archaeological-soil-micromorphology-training-course-2021
Enquiries: Manuel Arroyo-Kalin - m.arroyo-kalin@ucl.ac.uk

8th Intensive Course of Soil Micromorphology
9th to 20th of May 2022
Organised by Departament de Medi Ambient i Ciències del Sòl – Universitat de Lleida and Institut Cartogràfic i Geològic de Catalunya – Centre Territorial de Tremp (coo: Prof. R. Poch)
Please check info at http://www.formaciocontinua.udl.cat/ca/programes-formatius/cursos/3338/

Archaeological Soil and Sediment Micromorphology Course
June 6-10, 2022
An intensive course in Archaeological Micromorphology is offered by the M. H. Wiener (Lab. Archaeological Science). Dr. P. T. Karkanas, Director of the Wiener Lab., and Dr. Paul

Goldberg, Senior Visiting Professor, Institut für Naturwissenschaftliche Archäologie (INA), University of Tübingen, will lead the course, which will primarily focus on deciphering site formation processes and micro-stratigraphy.
Students will receive instruction in optical mineralogy, description, and interpretation of micromorphological thin sections based on analysis of soil fabrics and sedimentary microstructures. A maximum of 8 students will be accepted for the course. Preference is given to advanced students with a background in geoarchaeology, and preferably some exposure to optical mineralogy as well.
training fee: 350 euros for the entire week (accommodations are not included)
to learn more and apply: https://www.ascsa.edu.gr/programs/wl-micromorphology-course
deadline: March 1, 2022.
For more information or questions, please contact Dr. Karkanas at tkarkanas@ascsa.edu.gr

Micromorphology course at the 16th International Conference of Soil Micromorphology
August 29 and September 3, 2022
This course is to take place between August 29 and September 3, 2022 (from Monday to Saturday).
The course is organized in labs at the Institute of Geography and Spatial Management, Jagiellonian University, Kraków, Gronostajowa Str. 7. Labs are equipped in polarizing microscopes and necessary teaching tools. There are also labs with computers for classes based on software applications.
Please register to the course using this registration form (also at http://www.icosm2020.sggw.pl/wp-content/uploads/2021/12/Micromorphology-Course-2022-registration-form.doc)
The form should be sent to Dr. hab. Wojciech Szymański, e-mail: w.szymanski@uj.edu.pl
General information about the course:
Pre-registration period: from October 1, 2021 to February 1, 2022
Registration period: from February 2, 2022 to May 31, 2022
Maximum number of students: 20
Full cost: 250 EURO including field trip, coffee breaks and lunches (accomodation not included)
Topics covered (for full information click here or at http://www.icosm2020.sggw.pl/wp-content/uploads/2021/12/Micromorphology-Course-2022.pdf) : *Introduction to soil micromorphology, sampling techniques, mineral identification in thin sections, mineral weathering description, microstructure and porosity description, systematic description of thin section, micromorphometry, pedofeatures in different environments and soils, carbonates and gypsum in Mediterranean soils, micromorphology of loess soils, micromorphology of frost-affected soils, tropical soils.*

4th Latin-American Intensive Course on Soil Micromorphology (IV curso latino-americano de micromorfología de suelos)
21-25 November 2022 (in Spanish).
The third micromorphology course was at the Instituto de Geología Universidad Nacional Autónoma de México (UNAM) - Mexico City, Mexico in 2016. The 4th Latin-American Intensive Course on Soil Micromorphology will take place at the Escuela Profesional de Ingeniería Geológica - Universidad Nacional del Altiplano – Puno, Perú.
The objective is to extend the knowledge of the Micromorphological discipline to the Spanish-speaking public in Latin America. Techniques for micromorphology, clay mineralogy, soil mineralogy in the thick fraction. The course will be oriented to the areas of Agronomy, Geography, Geology, Archeology, Biology and many other fields of environmental sciences. Course taught in Spanish.

Contents**:** Sampling and thin section preparation, soil thin section description, soil mineralogy, micromorphometry, applications in geoarchaeology, volcanic soils, vertisols, anthropic soils, paleosols, loess and soil physics. Focuses in tropical soils and environments.
Practical work: Maximum 2 students per microscope, the students will use the plenty of time for observation of the thin sections provided by the lecturers, as well for study of his own thin sections.
Field excursion to the Experimental Center of Illpa, Puno. Included in the inscription fees.
Lecturers: Carlos Alberto Torres Guerrero (Investigador CONACyT – México), Juan Carlos Loaiza Usuga (Universidad Nacional de Colombia - Colombia), Sandro Sardón Nina (Universidad Nacional del Altiplano Puno – Perú), Roger Gonzales Aliga (Universidad Nacional del Altiplano Puno – Perú).
Course fees 195 US$ (including Spanish handbook and field trip). Maximum 16 participants.
More information (contents, location) Sandro Sardón Nina ssardonnina@gmail.com
Organizers: Universidad Nacional del Altiplano Puno – Perú, Universidad Nacional de Colombia – Sede Medellín, Sociedad Peruana de Ciencias del Suelo.

AWARDS IN SOIL MICROMORPHOLOGY

Results from the Kubiëna medal 2022

Background

The Kubiëna Medal award is conferred by the IUSS Soil Morphology and Micromorphology Commission (originally Subcommission B - ISSS) to commemorate Walter L Kubiëna for his distinguished contribution to soil micromorphology. This IUSS medal is awarded for outstanding and sustained contribution in the discipline of soil micromorphology.

Walter Ludwig Kubiëna (born 1897 in Neutitschein, Moravia, † 1970 in Klagenfurt) was an Austrian soil scientist. He is considered to be the founder of micromorphological soil research, which began with the publication, in 1938, of his book "Micropedology". His works opened up a new dimension to soil science and had a lasting influence on international research in the areas of soil genesis, soil classification and soil geography.

The awardees must demonstrate an outstanding and sustained performance in the discipline of soil micromorphology. All areas of micromorphology including research, teaching and its application to environmental, agricultural, archaeological and industrial problems are considered relevant.

Periodicity of nomination: The Kubiëna Medal is currently awarded every four years and presented at the World Congress of Soil Science of the IUSS.

Results

The composition of the Judging Committee, for this competition was: prof. Georges Stoops (former University Ghent), prof. Maria. I. Gerasimova (former Lomonosov Moscow State University), Dr. Rienk Miedema (former Wageningen University) Dr. Richard J Heck (University of Guelph, Vice-Chair of Commission 1.1), and prof. Fabio Terribile (Università di Napoli Federico II, Chair of Commission 1.1).

In total, the Judging Committee received five competitive submissions to consider. It was a very difficult task for the awarding Committee of this 10th Kubiëna Medal to make a choice between the many good, and even excellent nominees. Unfortunately, it was not possible to award the Medal to all the best nominees.

According to the rules, the awardees must demonstrate an outstanding and sustained performance in the discipline of soil micromorphology. All areas of micromorphology including research, teaching and its application to environmental, agricultural, archaeological and industrial problems are considered relevant. For the first time bibliometric studies of the nominees' publications were made, including number of micromorphological publications, citations, etc., as one of the elements of selection.

Finally, the Committee agreed to award the 10th Kubiëna Medal ex aequo to Paul Goldberg (University of Tübingen, formerly University of Boston), and to Richard Macphail (University College, London). Both retired scientists presented a breath-taking list of publications which obtained many citations, were involved in teaching micromorphology, and are still the faces of archaeological micromorphology. Without their efforts this branch of our discipline would not be as well-developed and as popular as it is now. They both used micromorphology throughout their career, contributing to methods, applications and interpretation. Paul Goldberg and Richard Macphail are considered as the spiritual fathers of archaeological micromorphology.

Eventually the awarding Committee congratulates all nominees for their performances, and especially the two new medal-holders.

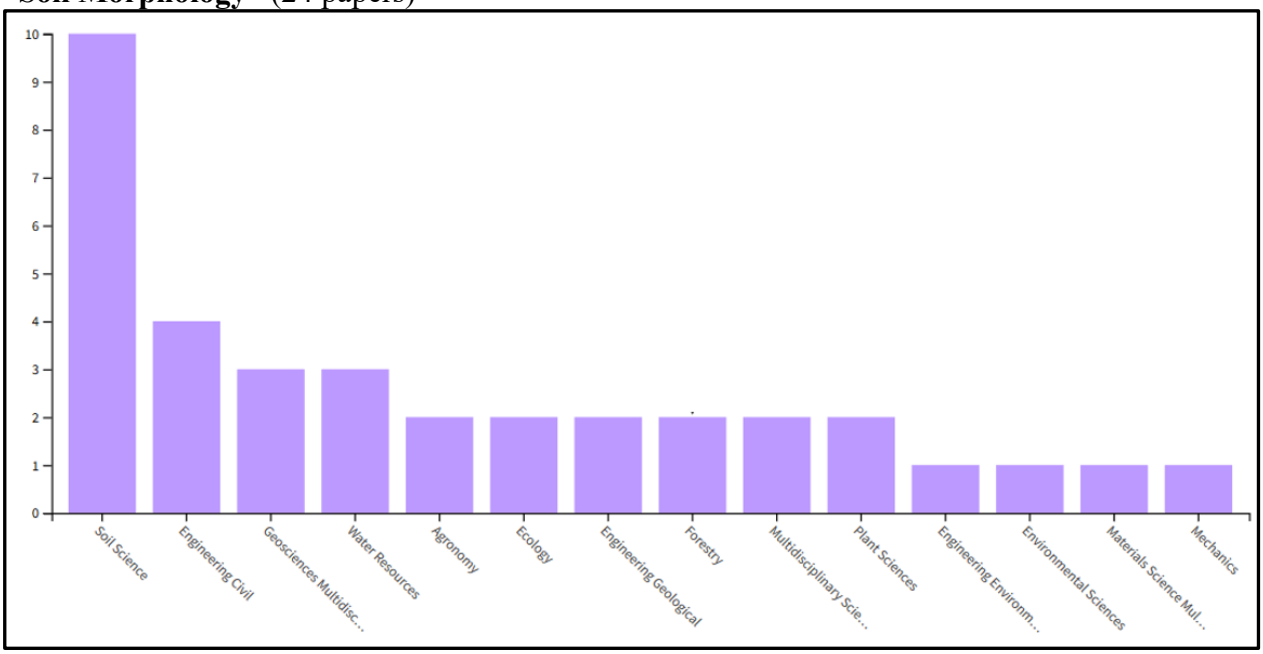
As complement here we provide the update list of all Kubiëna medal awardees

1	Ekaterina Yarilova & Roy Brewer	1985	7th IWMSM Paris (France)
2	H. Jürgen Altemüller	1988	8th IWMSM Texas
3	Georges Stoops	1992	9th IWMSM Townsville (Australia)
4	Ewart Adsil FitzPatrick	1998	16th ISSS Congress Montpellier
5	Larry Wilding	2001	11th IWMSM Ghent (Belgium)
6	Herman Mucher & A, Jongerius	2006	18th WCSS Philadelphia (USA)
7	Nicolas Fedoroff	2010	19th WCSS Brisbane (Australia)
8	Rienk Miedema	2014	20th WCSS Jeju (Korea)
9	Maria Gerasimova	2018	21th WCSS Rio de Janeiro (Brazil)
10	**Paul Goldberg & Richard Macphail**	**2022**	**22th WCSS Glasgow (UK)**

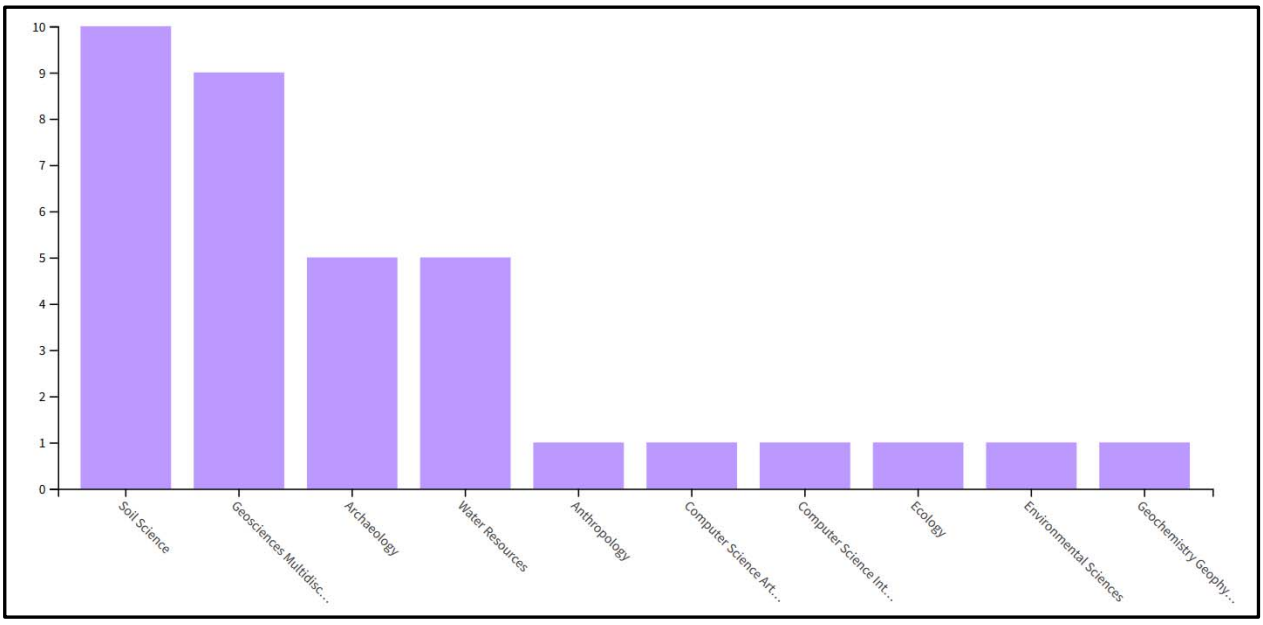
A GRAPHICAL OVERVIEW OF OUR RESEARCH PAPERS

Following the previous issues, here we report the usual graphical overview (after WoS) about the occurrence of papers for the entire year 2021 (up to 28/12/2021) – ranked for subject science category - having “soil micromorphology” and “soil morphology” as topic. Of course each paper can be ascribed to more than one science category.
The overall picture provides a rapid view about the strength of both soil micromorphology as linkage between different disciplines. Here it is confirmed the large importance of geoscience multidisciplinary and archeology in soil micromorphological papers while soil morphology papers remains mainly important within the soil science boarders.

“Soil Morphology” (24 papers)

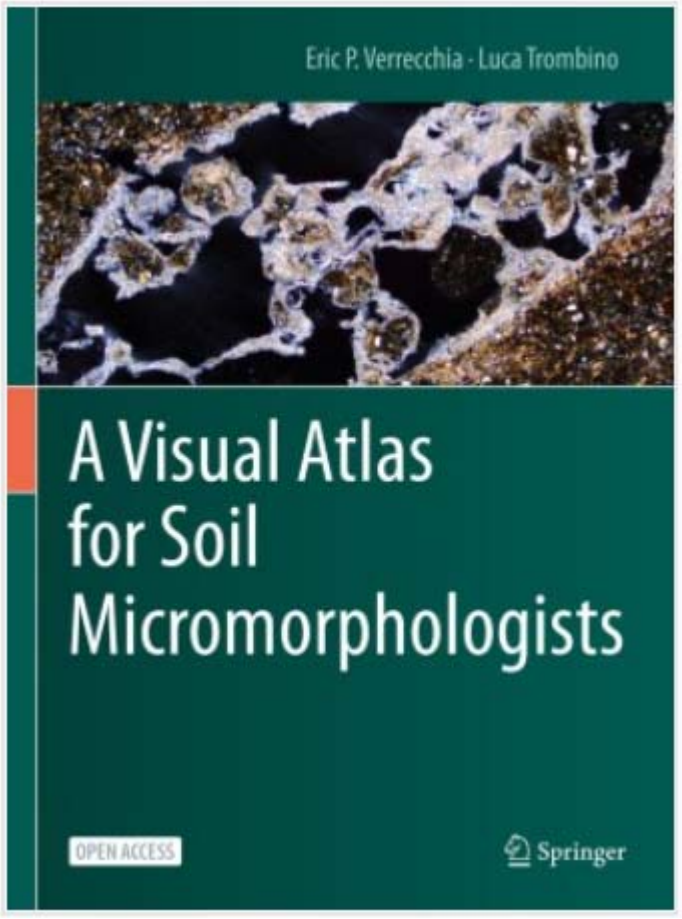


“Soil Micromorphology” (22 papers)



RESEARCH NOTES, BOOKS AND PUBLICATIONS

A new **Visual Atlas for Soil Micromorphologist** is now available in Open Access.



This open access atlas is an up-to-date visual resource on the features and structures observed in soil thin sections, i.e. soil micromorphology. The book addresses the growing interest in soil micromorphology in the fields of soil science, earth science, archaeology and forensic science, and serves as a reference tool for researchers and students for fast learning and intuitive feature and structure recognition. The book is divided into six parts and contains hundreds of images and photomicrographs. Part one is devoted to the way to sample properly soils, the method of preparation of thin sections, the main tool of soil micromorphology (the microscope), and the approach of soil micromorphology as a scientific method. Part two focuses on the organisation of soil fragments and presents the concept of fabric. Part three addresses the basic components, e.g. rocks, minerals, organic compounds and

anthropogenic features. Part four lists all the various types of pedogenic features observed in a soil, i.e. the imprint of pedogenesis. Part five gives interpretations of features associated with the main processes at work in soils and paleosols. Part six presents a view of what the future of soil micromorphology could be. Finally, the last part consists of the index and annexes, including the list of mineral formulas. This atlas will be of interest to researchers, academics, and students, who will find it a convenient tool for the self-teaching of soil micromorphology by using comparative photographs.

PUBLICATIONS

List of the most cited articles published in 2020 and 2021 *(having soil morphology or soil micromorphology as topic; hyperlink available)*

- X-ray microtomography analysis of soil pore structure dynamics under wetting and drying cycles. Pires, LF; Auler, AC; (...); Mooney, SJ - Mar 15 2020 |
- Soil parent material is the main control on heavy metal concentrations in tropical highlands of Brazil. Zinn, YL; de Faria, JA; (...); Skorupa, ALA Feb 2020 |
- Linking rock age and soil cover across four islands on the Galapagos archipelago. Zehetner, F; Gerzabek, MH; (...); Sprafke, T - Apr 2020 |
- Physicochemical properties and micromorphology of degraded alpine meadow soils in the Eastern Qinghai-Tibet Plateau. Ma, XP; Asano, M; (...); Wang, T - Nov 2020 |
- Is soil quality a concern in sugarcane cultivation? A bibliometric review. Martini, AF; Valani, GP; (...); Cooper, M . Oct 2020 |
- Soil microstructure alterations induced by land use change for sugarcane expansion in Brazil. Canisares, LP; Cherubin, MR; (...); Cerri, CEP - Apr 2020 | Jan 2020 | 36 (2) , pp.189-199
- Soils as a useful tool for reconstructing geomorphic dynamics in high mountain environments: The case of the Buscagna stream hydrographic basin (Lepontine Alps). Masseroli, A; Bollati, IM; (...); Trombino, L - Dec 15 2020 |
- Emergence of corpse cremation during the Pre-Pottery Neolithic of the Southern Levant: A multidisciplinary study of a pyre-pit burial. Bocquentin, F; Anton, M; (...); Horwitz, LK - Aug 12 2020 |
- Formation of Vesicular Pores in Aggregates from the Eluvial Horizon of Albic Glossic Retisol during Freeze-Thaw Cycles. Skvortsova, EB; Shein, EV; (...); Abrosimov, KN - Jul 2020 | 53 (7) , pp.913-921
- Morphological and isotopic study of pedogenic carbonate coatings from steppe and forest-steppe areas of Baikal region, South-Eastern Siberia. Golubtsov, V; Bronnikova, M; (...); Turchinskaia, S Jan 2021 | 196

17TH INTERNATIONAL CONFERENCE ON SOIL MICROMORPHOLOGY: CALL FOR PROPOSALS

IUSS Commission 1.1 is inviting proposals to host the 17th International Conference on Soil Micromorphology, to be held in 2024. Interested groups are asked to develop and formally submit their proposals according the following guidelines:

1) Narrative Elements (present and elaborate):
    a. Proposed Location, Venue and Accomodation options.
    b. Special Theme
    c. Proposed Program (including dates)
    d. Organizing Committee
    e. Associated Activities (e.g tour, short courses)
    f. Facilitating Participation (e.g. incentives for students, hybrid in-person/virtual sessions)
2) Document Format:
    Maximun of 4 pages, A4 format, Times New Roman 12pt font, 1.15 line spacing, margins, pdf file format.
3) Document Submission:
    Final proposal document to be submitted to the Chair of Commission 1.1. (Prof. Fabio Terribile, terribilesci@gmail.com) by 24:00 CET on May 31, 2021. All proposals will be posted to the Commission website for member review.
4) Formal Presentation:
    5 minute presentation, with Q&A, at Commission 1.1. Business Meeting during 22WCSS. Can be in person or pre-record.
5) Final Decision:
    By electronic vote following the Commission 1.1. Business Meeting during 22WCSS.

YOUNG MICROMORPHOLOGIST PUBLICATION AWARD (YMPA): 2022 COMPETITION

Commission 1.1 - Soil Morphology and Micromorphology awards the 'Young Micromorphologist's Publication Award' every 2 years: at each International Working Meeting on Soil Micromorphology, and at each World Congress of Soil Science. Though the 16th IWMoSM, originally programmed for 2020 in Kracow, has been postponed to September 2022 (due to the COVID-19 pandemic), the YMPA was awarded in 2021. In order to resume our normal schedule, the YMPA will again be awarded during the 22nd WCSS (Glasgow) in August of 2022.

The purpose of this award is to encourage and promote the use of soil micromorphology by young scientists. The Award will be given to one or more young scientist who has published research in the preceeding 4 years, that is an outstanding contribution to the principles, methodology, or application of micromorphology. The author must be less than 35 years old at the time of acceptance of the publication, and he/she must be the first author. The paper must be published in an international journal with wide distribution, but not necessarily a scientific journal. The award is not restricted to papers published in the English language only.

The current Award Committee is composed by Fabio Scarciglia, Irina Kovda, Peter Kühn and Chair (Fabio Terribile and Vice-chair (Richard Heck) of Commission 1.1.

Applicants should submit the following: (1) a pdf file of the paper (only one) to be considered for the award, (2) proof of age for eligibility (ex: photocopy of ID or other document with birthdate), and (3) a cover letter explaining why they should be considered for this award. Letters of support from senior micromorphologists, outlining the qualities of the publication are also welcome. Applications are due March 31, 2022; send by email to: prof. Fabio Terribile (fabio.terribile@unina.it).

RETHINKING GUIDELINES FOR OUR AWARDS

Time is passing and also standards to evaluate scientific work requires to be updated . Commission 1.1 awards two prizes: YMPA for young micromorphologists and Kubiëna medal to reward an outstanding carrier in soil micromorphology.

In Commission 1.1 we have analysed past editions and we have realized that the criteria for these awards have been very subjective and a bit out of date. This is why the two established Award Commissions for delivering YMPA 2021 and Kubiëna medal 2022 have implemented and agreed – before the actual start of the evaluation – more quantitative criteria. These criteria were valid only for the current evaluation that has already been done.

Starting from this preliminary effort, here we want to expose an update of this work to you and to start a discussion with all our Commission 1.1 members to achieve a new version of the evaluation criteria for both YMPA and Kubiëna medal to be voted at next business meeting at WCSS in Glasgow and to be used in next award editions (after WCSS Glasgow) . The Commission will always be in charge of establishing scores and corresponding ranks but in the framework of better framed criteria.

In the pages below we summarise the current criteria (in grey box) and below the suggested changes.

We invite any comments, regarding the proposed refinements – please sent to prof. Fabio Terribile (fabio.terribile@unina.it). To facilitate this process, it is suggest to use 'track changes' in MS Word (of course you must trasform this pdf text into a word file).

Of course any formal change of the award rules will be done in agreement with IUSS offices including the IUSS Committee on prizes and awards.

Kubiëna Medal

Current Description

Purpose of Award (established):
The Kubiëna Medal award is conferred by the IUSS Soil Morphology and Micromorphology Commission (originally Subcommission B - ISSS) to commemorate Walter L Kubiëna for his distinguished contribution to soil micromorphology. His works opened up a new dimension to soil science.
This IUSS medal is awarded for outstanding and sustained contribution in the discipline of soil micromorphology.

Qualifying Criteria (established):
The awardees must demonstrate an
1) Outstanding performance in the discipline of soil micromorphology
2) Sustained performance in the discipline of soil micromorphology

All areas of micromorphology including research, teaching and its application to environmental, agricultural, archaeological and industrial problems are considered relevant.

Application Package (established):
1) Statement of key achievements and career highlights of the nominee (1 page)
2) Curriculum vitae detailing career history and publication record of the nominee
3) Name of proposer and seconder for the nominee
4) Any other relevant information in support of the nominee
5) Full address and contact details of the nominee

Composition of the Kubiëna Medal Committee
The selection committee for the Kubiëna Medal award is composed of the previous Kubiëna medal holders plus the Chair and past Chair of IUSS Commission 1.1. Soil Morphology and Micromorphology.

PROPOSED REFINEMENTS

Background:
Here we aim to respect the original "Criteria for selection of nominees" given above but (i) implementing those with more precise sub-criteria and (ii) implement additional criteria (e.g. recognition to services to soil micromorphology).
The Kubiena medal evaluation Committe has to implement these criteria and has the freedom to establish how to weight them. In general terms, here it is suggested that for each candidate the research criteria (1a) must represent the majority of the total evaluation.
Kubiëna Medal candidates do not require to be retired, but please remind that this is a prize rewarding an outstanding carrier in Soil Micromorphology thus the award assumes that candidates would be in a 'later' stage of their careers.

EVALUATION GUIDELINES:
A. Characterizing "Outstanding Performance in the Discipline of Soil Micromorphology":
1 Contributions to the Science of Soil Morphology:
1a) Advancing the Frontier of Knowledge (Research)
* To consider both the *quality* and *quantity* of papers (IF and not IF) and books
* *Evaluation criteria* to include:
  - congruency of research contributions with soil micromorphology
  - originality of the research
  - use of metrics (n. papers, quality of papers (e.g. journal ranked on impact factor-IF normalised for Soil Science, number of citations, h-index, etc.)
  - impacts in soil science and allied scientific communities (i.e. diversity)

1b) Knowledge Translation and Transfer (Technical Innovations and Applications)
* To consider the *quality* and *quantity* of techniques, technologies and applications
* *Evaluation criteria* to include:
  - impacts in soil science and allied scientific communities (i.e diversity)
  - impacts on land management and policy

2 Contributions to the Promotion of Soil Morphology:
2a) Preparing the Next Generation Soil Micromorphologists (Teaching)

* To consider the *quality* and *quantity* of theoretical courses, skill-training activities, as well as development of relevant instructional materials (e.g. textbooks, reference sections/images)
* To consider the *quality* and *quantity* of scholars mentored (e.g. supervision of post-graduate students, post-doctoral researchers)

2a) Service to Micromorphology Community
* To consider the participation and contribution on relevant committees (e.g. Chair/Vice-Chair of Commission 1.1, organization of ICoSM or other items of similar importance).
* Representation of micromorphology in non-traditional forums

B. Characterizing "Sustained Performance in the Discipline of Soil Micromorphology":
* Eligibility for the Kubiëna Medal does not require candidates to be retired, but it does assume that they would be in a 'later' stage of their careers. Accordingly, candidates will be evaluated from the perspective of the effort they regularly focussed to micromorphology during their professional career. This may include temporal continuity (N. of years) of active engagement in soil micromorphology.

C. Additional Considerations regarding Application Package:
*Each candidate must be nominated independently. Decisions to potentially jointly recognize more than one individual, would be entirely the purview of the Kubiëna Medal Award Committee.
*The evaluation of candidates will be based on the presented documentation; but the Committee members are free to consult web resources (e.g. WoS, Scipus) to get further insight in the presented applications. In this regard, nomination packages should be as specific and succinct as possible, ensuring that the various evaluation criteria are effectively addressed in the statement of key achievements and curriculum vitae.

COMPOSITION STANDING AWARD COMMITTEE FOR THE KUBIËNA MEDAL:
* The Standing Award Committee for Kubiëna Medal shall be composed of at least five members: (i) All recipients of the two most recent Kubiëna Medal competitions (also considering ex -aequo); (ii) the current Chair and most recent past-Chair of IUSS Commission 1.1; and (iii) until reaching the minimum of 5 members additional senior soil micromorphologists will be selected from previous terms chair and past-Chair of IUSS Commission 1.1.. Despite the above, in case the number of 5 components is not reached then an electronic election will be performed.
* Nominated candidates, and nominators of Kubiëna Medal candidates, will be ineligible to participate on the Award Committee. If one of the Award Committee members becomes a Medal candidate, or the nominator of a Medal candidate, the current Vice-Chair of IUSS Commission 1.1 shall that substitute that individual on the Award Committee.
* Deliberations among Award Committee members will typically be through emails and by video conference.

Young Micromorphologist Publication Award

Current Description

Purpose of Award (established):
- To encourage and promote the use of soil micromorphology by young scientists.
- To be given to one (or more) young scientists (each two-year cycle), for a published research that is an outstanding contribution to the principles, methodology, or application of micromorphology.

Qualifying Criteria (established):
1) candidate must be less than 35 years old at the time of acceptance of the article
2) candidate must be first author of the publication
3) article was published within the preceding 4 years
4) article was published in an international journal (not necessarily scientific) with wide distribution
5) not restricted to articles published in English language

Application Package (established):
1) a pdf file of the paper to be considered for the award
2) proof of age for eligibility (ex: photocopy of ID or other document with birthdate)
3) a cover letter explaining why it should be considered for this award
4) letter(s) of support from senior micromorphologists, outlining the qualities of the publication are also welcome

PROPOSED REFINEMENTS

EVALUATION GUIDELINES:

A. Main Criteira:

1) Effective Contribution of Candidate:

* It is assumed that the submitted publication may have co-authorship. Accordingly, it is strongly reccomended that the cover letter clarifies the effective contribution of the candidate and specify the contributions of co-authors, who should (when possible) co-sign the letter.

2) Congruency of Research with Soil Micromorphology:

** reflecting on the scope of the research, vis-à-vis the field of soil micromorphology.*

e.g. Soil Micromorphology is Primary Focus of Research > Soil Micromorphology Substantially Supports the Research > Soil Micromorphology is an 'Extra' Dimension of the Research

3) Originality/Innovativeness of Research:

** reflecting on the novelty of the research (example ranking below).*

- The originality and innovativeness of this research may transform (cutting-edge) the science and the applicability of soil micromorphology (e.g. *a substantial development of techniques, or novel ramework for interpreting soils*);
- The originality and innovativeness of this research may influence the science and the applicability of soil micromorphology (e.g. *refinement of techniques, or novel interpretation of standard characterization of soil*) ;

- The originality and innovativeness of this research is a modest contribution to the science and the applicability of soil micromorphology (*e.g. application of basic techniques for standard characterization of soil*).;

4) Methodological/Interpretive Rigor:
* Considers the appropriateness and effective description of research design, methodology and interpretation of results.

5) Potential Impact of the Research
** reflecting on the potential contribution of the research*
Here it is expected that the Committee members use more quantitative criteria and consult science metrics such as Citations normalised x publication year, IF rank (percentile) of the Scientific Journal in its Subject Category, etc..

B. Additional Criteria:
1) Quality of presentation (note: assumption is that papers with considerable flaws would not pass editorial review)
** reflecting on the effectiveness of the paper in conveying the results and ideas.*
e.g. negligible deficiencies in composition, presentation and integration of results, and argumentation of conclusions >> minor deficiencies (don't impact understanding) in composition, presentation and integration of results, and argumentation of conclusions.

COMPOSITION STANDING AWARD COMMITTEE FOR THE YMPA:
* The Standing Award Committee for the YMPA shall be composed of five members: (i) the current Chair and current Vice-Chair of IUSS Commission 1.1; and (ii) three additional established and active soil micromorphologists to be selected through the Commission 1.1 Business Meeting during the WCSS.
* The term for membership on Standing Award Committee for the YMPA will be four years (normally involving two award cycles). Individuals may serve a maximum of two terms (but requiring formal reappointment through the Commission 1.1 Business Meeting during the WCSS) on the Award Committee.
* Nominators of YMPA candidates, will be ineligible to participate on the Award Committee. If one of the Award Committee members becomes the nominator of a YMPA candidate, the past Chair or past Vice-Chair of IUSS Commission 1.1 may be asked to substitute that individual on the Award Committee.
* Deliberations among Award Committee members will typically be through emails and by video conference.