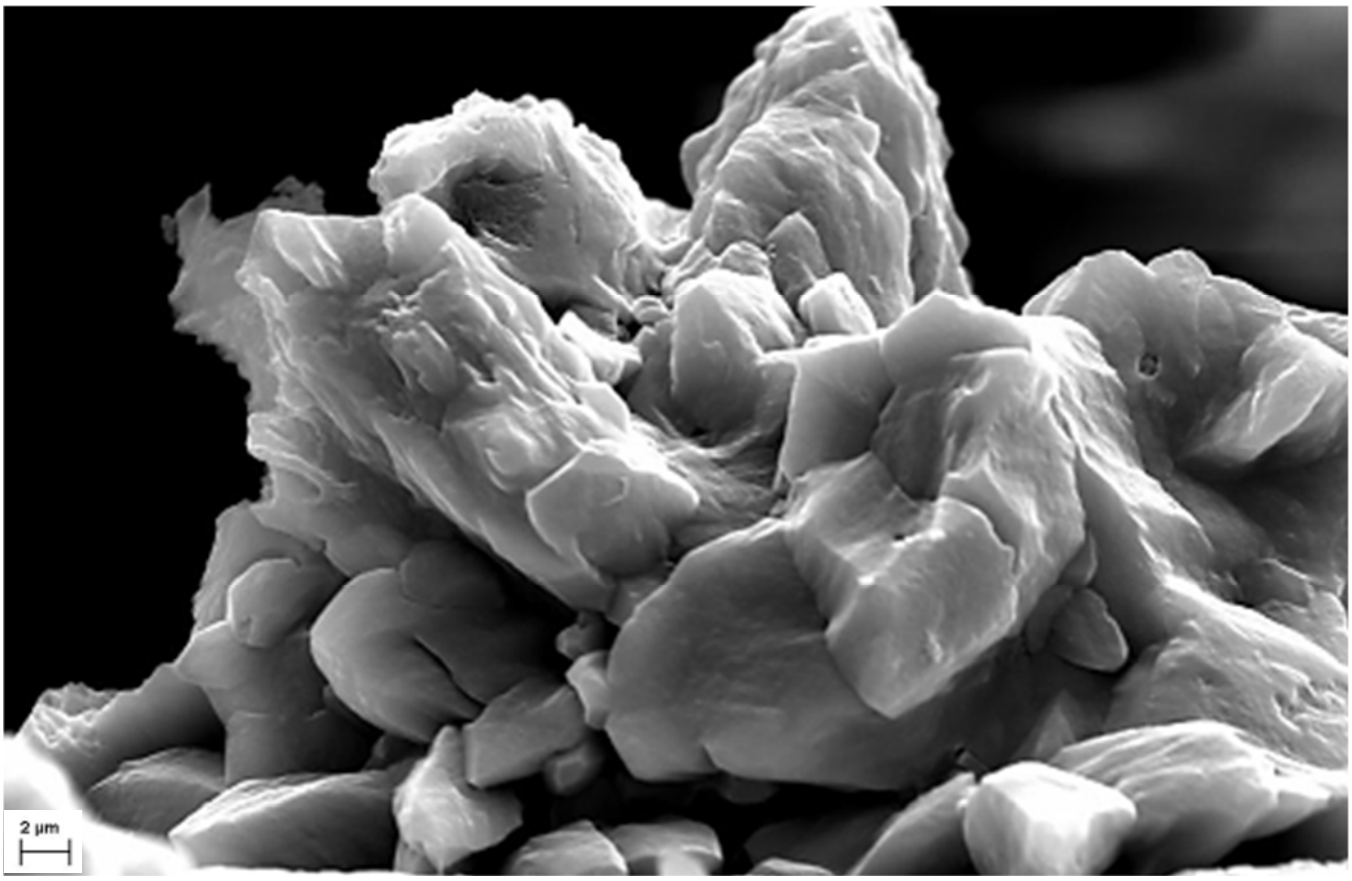

COMMISSION 1.1

SOIL MORPHOLOGY & MICROMORPHOLOGY

International Union of Soil Sciences

NEWSLETTER AUGUST 2020, Vol. 26

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

Layout and design: CRISP
Cover: Secondary P mineral (hydroxyapatite) precipitating in bone pore cavity. From Boyraz et al. 2011 Publication of the Academy of Sciences-Archaeology of Turkey, TUBA-AR 14, 151-158. (Courtesy of Selim Kapur).

Comm. 1.1. Soil Morphology and Micromorphology - IUSS

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LETTERS FROM COMMISSION OFFICERS

Dear all,

It is about eight months (as for bulletin 25) from the previous newletter but it seems much longer and lots of things have happened in between. Above all, we hope that all of you and your families are fine and safe.

Needless to add the COVID19 emergency has created huge problems and disfunctions to some of us; thus it is not surprising that this newletter reaches you with 2-3 months delay. Please accept our apologies.

Considering the large uncertainty around overcoming the COVID19 emergency and its potential recuidenscence, our feeling is that we must find new ways of interaction until this emergency will be over. Next months will be dedicated to some progresses on this directions. Soon we shall update you.

Of course our community has been strongly affected by both cancellation/ rescheduling of many conferences. Our key conference ICoSM meeting was postponed to 2021 (below a short notice from the organising committee). We must also add that there have been many transformations of conferences to online events (e.g. EGU2020) and in almost all these cases, big successes were claimed. Here on the topic of large coferences, we may express our personal opinion, in fact in many occasions scientific interactions were rather minimal and even frustrating. On the other side, indeed more focused events such as online short event (e.g. seminars, conferences organised on half day bases) have been even very successful and this maybe a good direction were to go considering the uncertainty of the currect situation.

As you may recall, we made a general call for colluegues willing to provide some availability to collaborate with us in some new Commission 1.1 activities. You will read about it in the session concerning “new activities” and we need your help to fill-in some questionnaire about (i) thin sections manifacturers and (ii) occurrence of medium to large collections of thin sections. Of course each of you is still invited to contribute to these activities (please just write to fabio.terribile@unina.it). We need your help !

In this issue we shall continue the “pills of wisdom“ section. This time we have an invited contribution from Prof. Ahmet Mermut, one of our prominent soil scientist and micromorphologist. This contribution is important because it both provides (i) a call to further integrate soil morphology within Commission 1.1, and (ii) a engaging perspective about the value of soil micromorphology. A special thanks to Ahmet !

Good Reading!

Fabio Terribile & Richard Heck
IUSS Commission Soil Morphology and Micromorphology

ANNOUCEMENT FROM THE ICOSM ORGANISING COMMITTEE

In light of the developing coronavirus outbreak, the Organizing Committee of the International Conference on Soil Micromorphology (ICoSM), Kraków, Poland, decided to postpone the conference to 2021. The short micromorphological course was also postponed to 2021, as it is strictly connected with the conference.

Current situation related with coronavirus all around the world forced us, unfortunately, to do so. We hope that you will understand our decision.

The new date of the conference has been announced (see this newsletter).

We will keep you informed about our next decisions.
Take care of you and hopefully see you in Kraków in 2021!

On behalf of the ICoSM 2020 Organizing Committee,

Lukasz Uzarowicz

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 contribution from Ahmet Ruhi Mermut. Prof. Mermut is both a well-known prominent soil scientist who devoted major attention to soil micromorphology and he has also been very active within IUSS also acting as Division chair.

Then Ahmet simply thanks !

Ahmet Ruhi Mermut
Former Chair Division I and Honorary Member of the IUSS

I was lucky enough working in the Konya Plain, Central Turkey, with Prof. P. Buringh group from Wageningen the Netherlands. First, I learned the meaning of soil morphology at that time when I intended to do my doctorate and latter on working incredibly beautiful Prairies in Saskatchewan, Canada. Noticed that tropics, deserts, volcanic and soils of craic environments, each one has their own peculiarities. Working with ISSS and IUSS between 1998-2010, I witnessed the major development in the structure of our International Union. I am happy to say that I also contributed the establishing of Commissions and Working Groups in Division I, including the Commission 1.1 Soil Morphology and Micromorphology. In my opinion so far, morphological aspect of this Commission has not been fully emphasized and yet is so important for soils studies in the field and prerequisite for soil survey activities, use and management.

Here I must emphasize that we do not think attentively about one very important role of the soil which is the place storing of solar energy on the surface of our planet earth. While plants grown on the soil is food for mankind and large animals, all organic matter in the soils are energy source for entire living substances. The cycle of carbon and through the air water and soil the role of photosynthesis should be recognized an extremely important bio-chemical reaction. This way one should also express the amount of energy stored in the soil on carbon bases. Unfortunately, we have neglected this issue for a long time. In 1936 Selman Abraham Waksman Nobel Laurier in 1952 "for his discovery of streptomycin, the first antibiotic effective against tuberculosis said that “Humus plays a leading part in the storage of energy of solar origin on the surface of the earth.

We soil scientists know that soil plays a vital role in Earth’s ecosystem and attracted the attention of mankind for a long time. All monotheistic religions indicate the live giving aspects of the soils. In my view, it is very correct saying “if we understand the very complex soil system, we then understand ourselves and the nature around us”. About 500 years ago when there was no understanding of the soils, however, the fames Italian scientist Leonardo da Vinci says “why do we know more about distant celestial objects than we do about the ground beneath our feet”. Luckily research has gone to the level of molecular levels and as the development of instrumentations in basic sciences developing. At this stage we can work on minerals at nano scale release certain element in the gas form and analyze it for its stable isotope. Is this not extraordinary?

Soon we will deal with the celestial materials brought from planet Mars. In this regard scientists have already started to talk about Astro-pedology, thanks the soil group working in NASA. It has already been said that, soils are not only from the Earth's dust, we are from star dust, dust and gases from the explosion of dying stars. Soil minerals are so exiting and incredibly beautiful under microscope, now ultra thin section we can make and examine the secrecy of the mother nature, the soils, we are dealing with. Soils are incredibly valuable, despite of the fact that they are in common place. We think we know them all, what we know could be evaluated a drop in the ocean. So, our struggle must continue learning more about the soil system.

In the process of learning more about pedology, recently I was able to see the English version of the book by V. V. Dokuchaev published in 1883 known as the Russian Chernozems and also 'la Pedology' in 1899 and the book PEDOLOGY by Jacob S. Joffe which is published in 1949, New Brunswick, NJ, USA. I know very well the great contribution made by German Prof. H. Stremme from Danzig early 1930ies in the formulation, understanding and characterization of soil formation. Hans Jenny who was born in Basel, Switzerland had publication Stremme. Works in the 18th century are even very impressive. Prof. Hans Peter Blume contributions especially to soil morphology and also the book by Scheffer und Schatshabel which is now converted to a book SOIL SCIENCE in English (2015). Thanks to our all predecessors.

Micromorphology is the branch of soil science that is concerned with the description, interpretation and, to an increasing extent, the measurement of components, features and fabrics in soils at a microscopic level" (Bullock et al, 1985). As mentioned by Blume (2008).

Morphology and Micromorphology being a Commission in IUSS charged with a special mission is to study of the soil cover structures, develops knowledge about soil properties and dynamics; it also permits the understanding of genesis of the soil. Lots to do in this area.

Walter Ludwig Kubiena (1938) viewed the micro-pedology, as part of general pedology dealing with the morphology, genesis, general dynamics and biology of soils. Soil micromorpholgy has central function in the integrated research and is able to support interdisciplinary approaches for soil protection and management. Prime role could be to link different soil disciplines such as physics, chemistry, mineralogy, soil biology to each other. Blum (2008) sees micromorphology an integrating toll for all soil disciplines. Thanks to our all visionaries.

Blume, W. E. H. 2008. The role of soil micromorphology in the light of European Thematic Strategy for soil protection. In S. Kapur, A. Mermut, and G. Stoops (Eds) New Trend in Soil Micromorphology. 1-4, Springer.
Bullock P., Fedoroff N., Jongerius A., Stoops G., Tursina, T., Babel, U. 1985. Handbook for Soil Thin Section Description. Waine Research Publications, Albrighton.
Kubiena, W. L. 1938. Micropedology. Collegiate Press Inc, Ames, Iowa.

NEW ACTIVITES

A year ago, we have made a general call asking your collaboration for new Commission 1.1 activities. Eight collegues confirmed their availability. Then – including the officers - we are about 10 people potentially active on the 10 selected activities[a]:

Below a short update on things we have managed to perform

Promoting soil micromorphology with social media

Danny Itkin, Ben-Gurion University of the Negev, Israel
itkind@post.bgu.ac.il

Today, international communication is at the very heart of science. The importance and advantages of taking part in an ongoing global connection is obvious to all of us, as already well put by Yaalon (1999). Since the emergence of soil micromorphology (first as 'micropedology') by W. L. Kubiena at the 1930s (Stoops and Nicosia, 2017), our platforms for broad communication are mostly journal publications, conferences and workshops. However, since mid 2000s, a growing number of scientific organizations and initiatives are making much of their communication via social media, while reaching a large number of people much faster.

Recently, Commission 1.1 – Soil morphology and micromorphology is trying to find new ways of promoting its activity. Knowing that the popularity of social media rapidly increase, it seemed worthwhile to join the many colleagues who are already on the web.

As a first step, we joined Twitter (in October 2019) under the name of "@micromorphology" and added a link to the IUSS Commissions webpage, so anyone can get a glimpse to what our commission is. We chose Twitter due to its high prevalence among the scientific community. Our account allows us to upload any relevant materials in a wide array of formats, including text, images and online links to videos, PDFs and more. That means that we can share almost everything, from photos of thin section, announcements, practical field and lab experiences, and more. Any material that we upload via Twitter can reach broad international audience within a very short time. This is achieved by choosing popular keywords adjacent to an hashtag sign (#), e.g., #soil, #IUSS, or keywords which are aimed for specific search queries, e.g., #micromorphology, #claycoating etcetera (note that singular form of keywords is better

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[a] List of planned new activities

1. *Revise and support Website, youtube channel, twitter, facebook,*
2. *Produce and update commented list of scientific literature: archeology*
3. *Produce and update commented list of scientific literature: x-ray tomography*
4. *Assemble a list of manufacturers of soil thin sections*
5. *Videoclips (5 minutes) of selected speechs (to be placed on our website) including: (i) achievements in soil micromorphology (chosen on the base of most cited paper) ; (ii) people who have received awards, (iii) emerging issues or opportunities*
6. *Teleconference Round tables – once each semester - (e.g. by Skype, Webex, global.gotomeeting.com) about specific topics in soil micromorphology: soil genesis, archeaology, tomography, etc..*
7. *Establish an archive for digital copies of micromorphology publication not readily available through standard digital sources (e.g. WoK, Scopus, etc.). For example proceedings of micromorphology meetings, special project reports, etc*
8. *Create a list of places having large thin section collections, and interact with those places for identifying features to be recorded (e.g. soil type, features, location etc.)*
9. *Reporting about the integrated use of microscopic techniques for various soil applications (carbon sequestration, structure preservation, human and climate impact).*
10. *The microphotograph of the month" should be published both in the micromorphology websites and on the newsletter…*

than plural). It also enables us to retweet other items of interest, reply and be involved in discussions. By May 2020 we have 63 followers. Enhancing our twitting activity will surely increase our audience and associates. Other social media platforms (e.g., Facebook, YouTube, Instagram) are certainly considered. *Please check https://twitter.com/micromorphology and see yourself most welcomed to join our net!*

Stoops, G., Nicosia, C., 2017. Introduction. In: Nicosia, C., Stoops, G. (Eds.), Archaeological Soil and Sediment Micromorphology. John Wiley & Sons, Chichester, pp. 1-7.
Yaalon, D.H., 1999. On the importance of International Communication in soil science. Eurasian Soil Science. 32, 22-24.

BELOW WE NEED YOUR HELP 😊

Assemble a list of manufacturers of soil thin sections.

In order to achieve this goal, our colluegues Lukasz Uzarowicz and Vedran Rubinić have produced a nice questionaire that we have transformed in a google form at the following link.

https://docs.google.com/forms/d/e/1FAIpQLSdnZY5vLrE1NpxlLTyao_pn0wwMSSBOnWTPrbnQiEzS9ihogw/viewform?usp=sf_link

Please copy&paste the link on your browser and fill-in the questionaire (10 minutes job) ! In the next buletin Lukasz and Vedran shall let us know about the results !

Create a list of places of collections having a medium-large number of thin section.

The aim of this activity is to have a first good set of information of collection having a medium-large number of thin section (above 50 thin sections)**.** Our final goals being to create such list ans share it with you then to interact with those places (especially those having a large set of thin sections) for identifying features to be recorded (e.g. soil type, features, location etc.).

In order to achieve this goal, our colleagues Rosa Poch with Georges Stoops produced a questionaire that we have transformed in a google form at the following link

https://docs.google.com/forms/d/e/1FAIpQLSf0OSiu4XvtaqlYV7oAEVxiooTp0L7YluBc7c468zmS9eHPYg/viewform?usp=sf_link

Please copy&paste the link on your browser and fill-in the questionaire (10 minutes job) ! In the next buletin Rosa and Georges shall let us know about the results !

FORTHCOMING MEETINGS

Brazilian Meeting on Soil Micromorphology originally scheduled for December 13-15, 2020 has been postponed to 2021, because the Coronavirus pandemic. If you want to to learn more: https://www.esalq.usp.br/eventos/1%C2%AA-reuni%C3%A3o-brasileira-de-micromorfologia-de-solos.

International Conference on Clay Science to be held in Istanbul, July 2021 is planning to have two thematic sessions on micromorphology related to Pedology and Archaeometry.

Save the date for ICSM 2021 - INTERNATIONAL CONFERENCE ON SOIL MICROMORPHOLOGY – Kraków August 29 – September 2, 2021

Please visit http://www.icosm2020.sggw.pl/

VENUE: Jagiellonian University in Krakow, 3rd Campus, Gronostajowa Str.
CONFERENCE ORGANIZERS

- International Union of Soil Science, Division 1. Soil in Space and Time, Commission 1.1 - Soil morphology and micromorphology
- Soil Science Society of Poland
- Jagiellonian University in Krakow
- Agricultural University in Krakow
- Warsaw University of Life Sciences – SGGW

Organization is ongoing please check the status at http://www.icosm2020.sggw.pl/

NATIONAL ORGANIZING COMMITTEE

- Wojciech Szymański (Jagiellonian University, Krakow) – VICE-CHAIR
- Łukasz Uzarowicz (Warsaw University of Life Sciences – SGGW) – SECRETARY
- Marek Drewnik (Jagiellonian University, Krakow)
- Bartłomiej Kajdas (Agricultural University, Krakow)
- Przemysław Mroczek (Maria Curie-Skłodowska University, Lublin)
- Zbigniew Zagórski (Warsaw University of Life Sciences – SGGW)
- Tomasz Zaleski (Agricultural University, Krakow)

THE CONFERENCE – August 29 – September 2, 2021:

- August 29 (Sunday) – registration (in the afternoon) and ice-breaking party, Faculty of Forestry, University of Agriculture in Kraków; visit in the Museum of Soils
- August 30 (Monday) – registration, opening session, plenary sessions, poster session 1, afternoon: visit in the Kraków city center with a guide (undergrounds beneath the Main Market Square, a walk around the city center, dinner in a restaurant)
- August 31 (Tuesday) – Plenary sessions, poster session 2, IUSS Business Meeting, Banquet
- September 1 (Wednesday) – Mid-conference trip (Kraków and its close vicinity)
- September 2 (Thursday) – Plenary sessions, summary and closing ceremony

POST-CONFERENCE TRIP – September 3–5 (from Friday to Sunday):
Polish Upland tour with emphasis to: contemporary soils (e.g. Chernozems, soils developed on gypsum and carbonate rocks), sequences of paleosols in loess, fossil Lower Jurassic podzols, influence of metal mining on soil environment.

MICROMORPHOLOGICAL COURSE – September 6–11 (from Monday to Saturday)

Registration for the conference will start in autumn 2020. Previous registration will be cancelled, thus please register once again once the registration starts in a proper time.
We will update our web page http://www.icosm2020.sggw.pl/ as soon as possible, and we will inform you about our further decisions.

We hope that you are doing well and that we will meet in Krakow in 2021.
Yours sincerely,
Lukasz Uzarowicz on behalf of the Organizing Committee

AWARDS IN SOIL MICROMORPHOLOGY

Young Micromorphology Publication Awards (YMPA) 2021

Commission 1.1 - Soil Morphology and Micromorphology will award 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. Considering that the planned IWMSM2020 meeting in Kracow has been postponed to 2021 due to the COVID19 emergency then the award has also been postponed accordingly. Then it is planned to have two close YMPA awards (IWMSM-2021 and WCSS-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 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(s) 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(s) are also welcome. ***Applications are due December 31, 2020***. Send by email to: prof. Fabio Terribile fabio.terribile@unina.it

KUBIENA MEDAL 2022

Definition
The Kubiena 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.

Criteria for selection of nominees
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.

Nomination procedure

The call for the nominations is publicized, during the year before the date of the award, via the Commission Newsletter, Commission Business Meetings and/or IUSS Alerts. Considering that the next WCSS date will be August 2022, it was decided to announce now (*the year before the date of the award*) the next Kubiena award 2022 call.
The nominees may be proposed by institutions, societies, commissions and working groups of the IUSS, and individuals. Members of the Award committee are not eligible to make nominations or second nominations.

The proposal for nomination must be submitted to the Award committee chair, and should include:

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

Award Committee Members

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.

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		2022	22th WCSS Glasgow (UK)

How to apply

The nominees may be proposed by institutions, societies, commissions and working groups of the IUSS, and individuals. Members of the Award committee are not eligible to make nominations or second nominations.
The proposal for nomination must be submitted to the Award committee chair, and should include:

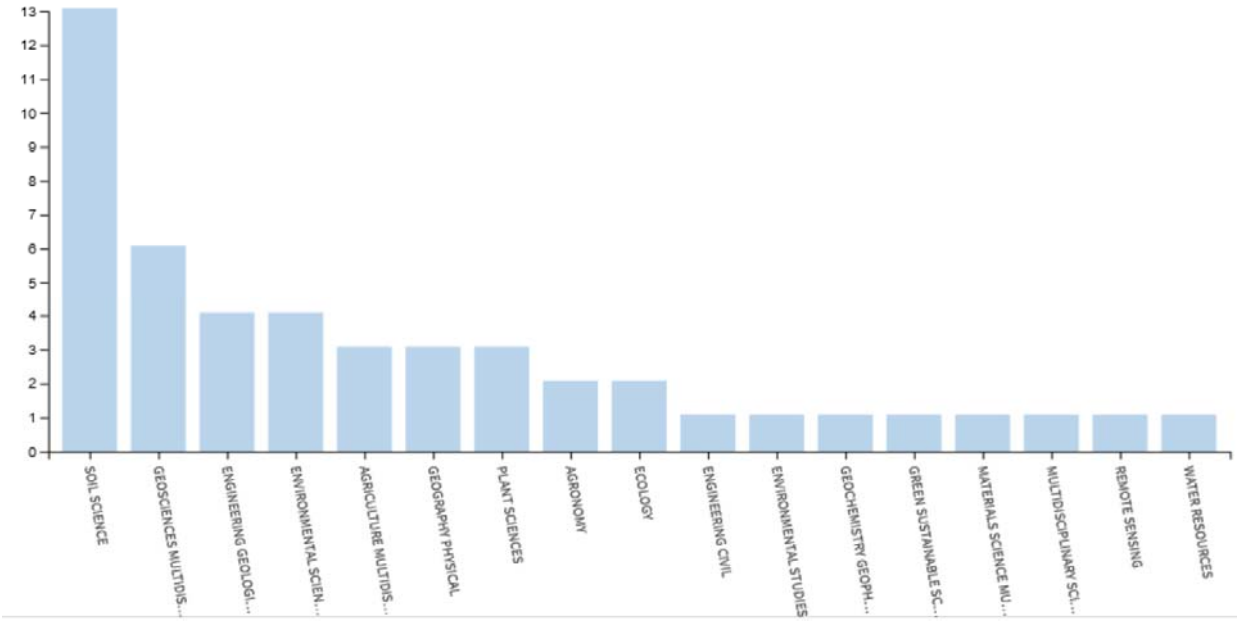
1. Statement of key achievements and career highlights of the nominee (1 page)
2. Curriculum vitae detailing career history and publication record of the nominee
3. Name of proposer and seconder for the nominee
4. Any other relevant information in support of the nominee
5. Full address and contact details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

Applications are due March 31, 2021. Send by email applications to: prof. Fabio Terribile fabio.terribile@unina.it

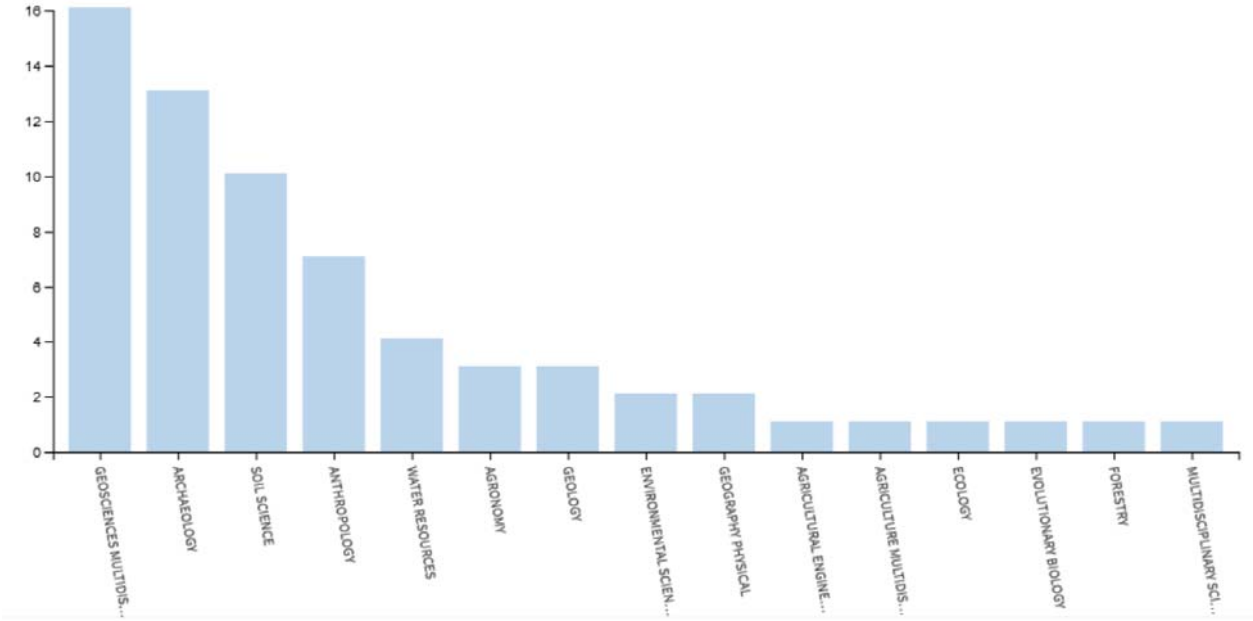
A GRAPHICAL OVERVIEW OF OUR RESEARCH PAPERS

Following the previous issue, here we report an enlarged graphical overview (after WoS) about the occurrence of papers fro the period 2019-2020 (24/08/2020) – 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 and soil morphology as linkage between different disciplines. Here it is of special interest to highlight the large importance of archeology in soil micromorphological papers.

“Soil Morphology” (34 papers)



“Soil Micromorphology” (36 papers)



RESEARCH NOTES, BOOKS AND PUBLICATIONS

Guidelines for Analysis and Description of Soil and Regolith Thin Sections (2nd edition) 2020

by ***Georges Stoops***

(xv + 227 pages + index; including 18 tables, 63 figures, 62 colour plates);
Published by the Soil Science Society of America in partnership with Wiley
ISBN: 978-0-891-18975-6
Expected in Summer 2020; Provisional price: ± 75 – 80 US$
More information: https://www.wiley.com/en-us/9780891189756

In order to stop the confusing proliferation of concepts and terms used by micromorphologists, the International Society of Soil Science (now International Union of Soil Scientists) set up an International Working Group on Micromorphology to prepare a uniform, internationally acceptable system. This resulted in the Handbook for Soil Thin Section Description by Bullock et al. (1985). After it was out of print for some years, the SSSA invited the authors to prepare a revised version. The new "Guidelines for Analysis and Description of Soil and Regolith Thin Sections", by G. Stoops, was published in 2003. It is considered worldwide as the standard for concepts and terminology for soil thin section descriptions, and widely used by soil scientists, archaeologists and Quaternary geologists. After it became out of print almost three years ago, an upgraded second edition was urgently expected.

The content of the second edition is largely identical to that of the original book, although a number of improvements are made: some topics are restructured in a more logic way, several definitions are partly rephrased to make them linguistically more appropriate, the content is updated with recent new information, part of the figures appear in colour, some appendixes are deleted or incorporated in the text, and the micrographs, that were added as a CD-ROM to the first edition, now appear in the text as full colour plates (each containing generally 6 micrographs). In addition new micrographs, figures and tables are added.

Content

List of publications as suggested by our members

- D. J. Huisman, M. J. L. Th. Niekus, J. H. M. Peeters, R. C. A. Geerts, A. Müller 2019, Deciphering the complexity of a 'simple' mesolithic phenomenon: Indicators for construction, use and taphonomy of pit hearths in Kampen (the Netherlands). *Journal of Archaeological Science, Volume 109, September 2019, Article 104987*.(this paper has a Comment + Reply about the nature of these pits, i.e. whether they are natural phenomena (burnt ants nests) or indeed anthropogenic.

3 recent papers have been published on micromorphology of Brazilian soils:

- *https://doi.org/10.1016/j.catena.2019.104234*
- *https://doi.org/10.1016/j.catena.2019.104319*
- *https://doi.org/10.1016/j.geodrs.2020.e00279*
- Morras et al. 2020. Microstructure of pampean soils cultivated under no-till. the battle between biology and machines. 7th-WCCA proceedings, p62-66
- Moretti et al. 2020. Origen de los materiales parentales y génesis de suelos en el extremo noroccidental de la cuenca de los bajos submeridionales, Santiago del Estero, Argentina. *Latin American Journal of Sedimentology and Basin Analysis. Volume 27 (1) 2020, 29-53*
- Stoops et al. 2020. Micromorphology of soils and palaeosoils in Belgium. An inventory and meta-analysis. Catenna 194. *https://doi.org/10.1016/j.catena.2020.104718*
- Zehetner et al. 2020. Linking rock age and soil cover across four islands on the Galápagos archipelago. Journal of South Africa Earth Science vol. 99

REPORT ON PREVIOUS MEETINGS

REPORT ON: FIRST COURSE ON SOILS MICROMORPHOLOGY UNALM – Lima – Perú, November 2019 (photos & report by Héctor J. M. Morrás).

This "Primer Curso de Micromorfología de Suelos" was organized by the Soils Department of the Faculty of Agronomy of the "Universidad Nacional Agraria La Molina", of Lima, Peru. This one week course took place in November 2019, and the lectures were given in Spanish by Prof. Héctor J. M. Morrás (INTA-FAUBA-USal, Argentina).

The course was attended by 24 participants from different Peruvian Universities and from the Ministry of Agriculture. All the participants were agronomists, specialized in soil science and working in different regions of the three main ecological regions of Peru, i.e. the western coast, the central mountains of the Andes and the eastern tropical forest.

It is to be mentioned that this course on Micromorphology was the first one ever given en Peru. Although a significant number of Peruvian soil scientists participated in micromorphology courses as part of their postgraduate training in other countries, particularly through the courses taught by Prof. G Stoops at the University of Ghent, there have been no Peruvian colleagues applying this method of research. In fact, there are no laboratories and soil micromorphology works in that country. As far I know, there would only be three published works on Peruvian soils and paleosols using micromorphology, all of them carried out by European researchers with some participation of Peruvian students.

The course was almost completely theoretical due to the lack of petrographic microscopes in the Faculty of Agronomy. With polaroid films in a couple of microscopes for biological observations, some pedological features in several thin sections were shown, although of course this was quite fast and superficial. On the other hand, in a pit excavated in the experimental fields of the Faculty, a practice of sampling with Kubiena boxes and by means of other procedures for coherent and for loose soils was carried out. Concerning the lectures, after a refreshing introduction on general concepts about factors and processes of soil formation, weathering and soil mineralogy, the course was focused on the concepts and on the descriptive system of soil micromorphology, together with the theoretical principles of optical and electronic microscopy. The reference text for the course was the "Manual de Micromorfología de Suelos y Técnicas Complementarias" (Loaiza, Stoops, Poch & Casamitjana, Eds., 2015), the first comprehensive handbook in Spanish on soil micromorphology. Besides, about a third part of the course was employed to present and discuss the applications of micromorphology. Considering the background and the interests of participants, a great part of subjects presented were about the micromorphological procedures for the study of soil structure and porosity and its application to problems on soil physics, soils degradation and soils management.

The course was intense and it is to be highlighted the interest and the enthusiastic participation of students. Despite practical limitations, several participants began to consider the use of micromorphology in their research, while the Soils Department began to consider the acquisition of the necessary equipment. On the other hand, several of the participants are Professors at the Faculty, so it is likely that their students will also begin to know about the procedures and possibilities of our discipline. I trust that this brief activity has served to sow the seed of Micromorphology in Peru again, thanking the Faculty and the Department of Soils for the invitation to teach this course and for its excellent organization.
Prof. Dr. Héctor J. M. Morrás,
Buenos Aires, Argentina.

ONLINE COURSE ON SOIL MINERALOGY AND MICROMORPHOLOGY (IN SPANISH)
HOLD 6TH TO 17TH JULY 2020, BUENOS AIRES
The "Alberto Soriano" Post Graduate School of the Faculty of Agronomy of the University of Buenos Aires, in collaboration with the Institute of Soils of INTA-Castelar, Argentina, has offered a new edition of the "Course on Soil Mineralogy and Micromorphology" from July 6 to 17, 2020. This intensive two-week course taught by Prof. Dr. Héctor J.M. Morrás every two years since 1985, had the collaboration of Dr. E. Favret, Dr. L. Moretti, Dr. F. Behrends, Dr. M. Castiglioni and M.Sc. E. Bressan. The lectures have been given in Spanish and online through the Google Meet platform.
The first week has been devoted to the study of inorganic fractions of soils, focused on clay mineralogy and concepts on processes of mineral weathering, soil formation and soil organization, including an introduction to analytical techniques particularly X-ray diffractometry. The second week has been centered on soil micromorphology including the descriptive system and the principles and techniques of optical and electronic microscopy. During the course numerous examples of application of mineralogy and micromorphology to different fields of research, particularly to soil genesis, soil physics and soil management were exposed and discussed.
For more information, on the course may contact Prof. Morrás to hmorras@gmail.com or the Post Graduate School to epg@agro.uba.ar or through the site www.epg.agro.uba.ar

THE LAST PAGE

My favorite take-home messages from Ahmet Mermut letter.

Fabio

- *working incredibly beautiful Prairies in Saskatchewan, Canada. Noticed that tropics, deserts, volcanic and soils of craic environments, each one has their own peculiarities.*
- *In my opinion so far, morphological aspect of this Commission has not been fully emphasized and yet is so important for soils studies in the field and prerequisite for soil survey activities, use and management*
- *if we understand the very complex soil system, we then understand ourselves and the nature around us*
- *Soil minerals are so exiting and incredibly beautiful under microscope*
- *Soils are incredibly valuable, despite of the fact that they are in common place.*
- *We think we know them all* (soils)*, what we know could be evaluated a drop in the ocean. So, our struggle must continue learning more about the soil system*
- *. Soil micromorpholgy has central function in the integrated research .... Prime role could be to link different soil disciplines such as physics, chemistry, mineralogy, soil biology to each other. Blum (2008) sees micromorphology an integrating toll for all soil disciplines.*