IBBS World

Newsletter of the International Biodeterioration & Biodegradation Society

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July 2019

IBBS18

International Biodeterioration and Biodegradation Symposium
Bozeman, MT
7-10 September 2020

Updates by Brenda Little

IBBS 18 will be held 7-10 September on the campus of Montana State University (MSU) Bozeman, MT. The local organizing committee (LOC) for IBBS 18 met at MSU, 23-25 April.

Joseph Sufita, Chair of the Organizing Committee, and I spent one day with Toni Lee, Director of Conference and Event Services at MSU.

The Strand University Building (SUB) was selected as the conference headquarters for registration, lunches, technical sessions, and expositions (i.e., vendors and posters). The SUB has been recently refurbished to provide well-equipped conference spaces in addition to inviting coffee shops and lounge areas. A meeting plenary session will be held in Inspiration Hall directly across the street from the SUB. MSU faculty and staff, Recep Avci, Matthew Fields, Darla Goeres, Kristen Griffin and Paul Sturman provided their experience with conference planning and knowledge of the area during the LOC meeting.

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IBBS Membership benefits

Reduced registration rates at IBBS and FEMS sponsored conferences, meetings, symposia.
IBBS national representatives in many countries can help members with the organization of small local meetings.
Eligible for annual IBBS Graduate and Postgraduate Bursaries (up to £1,000), IBBS Small Meetings Bursary, FEMS Research Grants, FEMS meeting grants.

Welcome to the IBBS Newsletter!

This newsletter is usually sent out every 4 months. If you have any news, meetings you would like us to publicise on the IBBS Newsletter, or a cross-word on an appropriate topic, please contact us via our IBBS Hon. Secretary: secretary@ibbsonline.org
We need a text written in .doc, .rtf or .txt formats. The pictures should be of good quality (but not too big) in any of the usual formats (.jpg, .tif, .bmp), preferably not embedded into texts or other documents. Each image should be accompanied by a short caption. In case you add a link to websites, please check that the link and the website work.
Thank you!

Flavia Pinzari
Several social events have been planned for IBBS 18. On the evening of September 8th, after the technical sessions have concluded, delegates will move to the Museum of the Rockies (MOR) (https://museumoftherockies.org). The MOR is a part of MSU, but is slightly off campus. There will be socializing over a beer and wine mixer. We are planning a movie viewing and several of the museum galleries will be open. A culminating dinner and dance, designed to provide delegates with a bit of a Montana experience, is planned for the evening of September 9th at the Hart Ranch (http://hartranchweddings.com/venue). During the meeting there will be sign-up opportunities for a guided group tour of Yellowstone National Park led by David Mogk, a geology professor at MSU.

Planning for the technical program is also well underway. The meeting will kick off with a workshop for early career scholars, entitled, “Preparing for Your First Job in a Science Department—from Application to Interview to Negotiation.” The workshop will be led by Dr. Gordon E. Uno on the afternoon of September 7, 2020, at the conference hotel, the Hilton Garden Inn. The workshop will include practical advice for selecting the right institution, developing an instructional philosophy, knowing the ‘dos and don'ts' of interviewing, asking for what you need to be successful and implementing active learning in STEM education. The guidance will be applicable to both the academic and other job seeking endeavors. See Page 8 for additional details.

Dr. Jennifer Field, Oregon State University, will present a keynote speech, “Forever Chemicals? Per- and Polyfluoroalkyl Substances Expose the Limits of the Biosphere.” It is estimated that about a third of the US population have been exposed to this emergent class of contaminants that has been associated with both human and environmental harm.
Her current research focuses on the development and application of quantitative analytical methods for organic micropollutants and their transformation products in natural and engineered systems. In addition, Dr. Andreas Teske, University of North Carolina, Chapel Hill, will deliver a plenary address entitled, "Guaymas Basin Spreading Center - a Hot Spot of Marine Microbial Activity and Hydrocarbon Transformation." He has been working for many years in a part of the ocean that is involved with microbial and abiotic hydrocarbon production and consumption. Details of technical sessions will be featured in the next newsletter.

Bozeman, MT, is a vibrant destination, with many educational, cultural and scenic attractions. The one admonition that I have heard repeatedly during this visit is, “Plan early, commit early.” Fall 2020 is the start of a new MSU semester and that alone brings many people into the area. September is also the start of a new college football season. Fortunately, IBBS 18 is mid-week and sandwiched between a home game and an away game. Those planning to recreate before the meeting may find lodging rates and rental cars at premium prices. The Bozeman Area Chamber of Commerce will provide a welcome bag that includes maps and other useful information.

IBBS Country Representatives
IBBS is looking for Country Representatives of the Society all over the World
The IBBS Country Representatives should: 1) promote the Society whenever possible. For example, include "IBBS rep for..." on the title page of your conference power point or poster presentations; 2) encourage colleagues/students to join IBBS, emphasizing the very reasonable membership fees; 3) consider organizing small meetings of local members and invited people. Currently we have received proposals for IBBS Representatives in the following countries: Argentina, Australia, China (2), Egypt and other Arab countries, Germany, Iran, Israel, Italy, Latvia, Mexico, New Zealand, Poland, Romania, Spain, Sweden, USA.
News from the President

The IBBS Council met in London on 24 May. The following actions were reported. Details regarding IBB18 were provided by Joe Sufita, Chair of the Local Organizing Committee (See Article on Page 1). Nuno Mesquita, a co-opted member of Council, has received training to become the Honorary Membership Secretary. Responsibilities for that position are being transitioned from John Gillatt (Past President) and should be complete before the next Council meeting.

Flavia Pinzari accepted the position as Managing Editor for the IBBS newsletter. The newsletter, published three times each year, is a compilation of news, technical articles, reviews and announcements, submitted by IBBS members. In the past, editorship of individual issues was rotated among volunteers who used multiple software packages for formatting. The result of the rotation was some confusion tracking submissions and difficulty in production. Flavia, experienced in desktop publishing, will provide continuity and consistency in the newsletter. Please support the newsletter with your submissions to Christine Gaylarde (secretary@ibbsonline.org).

IBBS members are invited to attend the IBBS Annual General Meeting (AGM) to be held on 3rd October in The Green Man pub in central London. Chris will send information and invitations to all IBBS members at a closer date. The AGM will be followed by a celebration to acknowledge the 50-year anniversary of IBBS. Other Golden Anniversary activities are planned to highlight seminal papers published in the IBB journal, perspectives on contributions of IBBS members to current understanding of biodeterioration and biodegradation and comments from Past-Presidents (see Page 5 for the first in the series. Chris and I have prepared a directory of IBBS Presidents that includes dates-in- office and brief biographical sketches. I would like to include photographs. I would also like to prepare a collage of photographs from past meetings. Please send photographs to me directly (brenda.little@att.net) with names, dates and locations. I will have the collage available for the 3 October celebration and IBBS 18.

Lastly, it is clear from the above that IBBS depends on time and talent of volunteers. Thanks to Joe, Nuno and Flavia for accepting the responsibilities of Chair of Local Organizing Committee for IBBS 18, Honorary Membership Secretary and Managing Editor of the newsletter, respectively. It is also obvious that Chris and John have assumed responsibilities beyond their primary roles as Honorary Secretary and Past President. Thank you.

Brenda Little

News from the Society Journal

I would like to welcome Joe Sufita, Professor Emeritus, University of Oklahoma, to the society journal of International Biodeterioration & Biodegradation (IBB) as an Associate Editor. Joe is not new to many of our society members and non-members as he has been working on microbial degradation, especially under anaerobic conditions, and biocorrosion for many years and is a well-established scientist. We have received an increasing number of manuscripts to this journal compared with previous years. Consequently, publication of manuscripts is becoming more and more competitive with a current rejection rate at ~80%.

Ji-Dong Gu
Editor-in-Chief, The University of Hong Kong, e-mail: jdgu.ibb@gmail.com

Joe Sufita
50th Anniversary by Jo Verran

I knew Jimmy Walker from our common research interests, particularly biofilms. He suggested I consider coming onto the IBBS Council in the 1990s – and I am so grateful to him for doing so! I was really impressed with the movers and shakers in that group, representing a society with truly global membership, and a very focused research interest, hosting meetings around the world.

So, I suppose I have been associated with the Society for about half of its existence. I have also really enjoyed my links with its partner group, IBRG (International Biodeterioration Research Group), who focus on developing relevant and robust testing methods for assessing different strategies to control or prevent biodeterioration of a whole range of different substrates. When I became President, we hosted the triennial meeting in Manchester, a joint meeting with IBRG.

Organising a conference is a truly stressful event, worrying about attendance, finance, social events, the science.....But I needn’t have worried. It went well, and I was so proud to show off the city to our delegates. Indeed, in recent years, Manchester has been a virtual home for the Society, with many of our Council members being able to access the city relatively easily through its airport (and perhaps less easily through Skype!).

It is the science and the people who are really special at IBBS. My research is about the attachment of microorganisms to surfaces, and the effect of surface modifications on that interaction. But I also always loved archaeology, so IBBS was heaven for me!

Through my association with IBBS, I was invited to present the Endnote for the Heritage, Microbiology and Science Conference in Portsmouth in 2005, and spent three days listening to applied microbiology that spanned the Mary Rose in Portsmouth, historic buildings in Latin America, stained glass in Italy (Heritage Microbiology and Science [2005], Eds E.May, M.Jones, J. Mitchell, RSC Publishing, Cambridge UK). I was hooked forever to biodeterioration of cultural heritage, and was thrilled to have a PhD student whose work focused on the conservation of cinefilm at the North West Film Archives in Manchester. He, of course, also joined the society.

The famous researchers in the field are all prominent members of IBBS, and I have loved meeting them and listening to their work in beautiful locations around the world (Sardinia and Vienna were particular favourites). We all worked together to produce information sheets about biodeterioration of different substrata (see photo from Vienna meeting) which we also published (An Atlas of Biodeterioration [2013] Ed. J. Verran, D.Alsopp, IBBS): such collaboration is surely pretty unique! IBBS has enriched my science and my career, but also my life – so thanks for that, happy anniversary, and may we celebrate many more together!

With love, Jo Verran

Could you host IBBS19 in 2023?

2019 IBBS Annual General Meeting
The AGM will be held on 3rd October in The Green Man pub in central London and would be followed by a 50-year anniversary get together. We will send out information and invitations to all IBBS members at a closer date.
Joanna Verran awarded by AAAS for her public engagement in Science

We were delighted to find out that Joanna Verran, Emeritus Professor of Microbiology at Manchester Metropolitan University, UK, and IBBS past-president, received a major award this year.

Jo was presented with the 2019 American Association for the Advancement of Science Mani L Bhaumik Award for Public Engagement with Science at the AAAS meeting in Washington DC. The award was ‘for her commitment to devising and delivering innovative microbiology-focused public engagement with the same rigor as laboratory-based research, with attention to appropriate design, thorough evaluation and wide dissemination’

https://youtu.be/rXqagzNlyiw

Throughout her career, Jo worked hard to engage her students in their studies, for example by bringing art into the undergraduate microbiology curriculum, so that students could consider art as a medium for communication of science (and she was sure to include some IBBS work on the deterioration of cultural heritage in the classes!). Subsequently, she established the Bad Bugs Bookclub (www2.mmu.ac.uk/engage/what-we-do/bad-bugs-bookclub), where scientists and non-scientists discuss novels in which infectious disease forms part of the plot.

In 2019, the bookclub celebrates its tenth anniversary, and the website provides reading guides for almost sixty novels! With colleagues from other disciplines, Jo explored the potential of using vampires, zombies and werewolves as models for infectious disease; this project led her to many adventures including computer simulations, immersive theatre (Deadinburgh), even scientific publications – and lots of gruesome makeup! This year, she will be hosting several bookclub events across the UK to celebrate the anniversary (with some sponsorship from the Society for Applied Microbiology). She is also hosting the public engagement event at the FEMS Congress.

Jo said: ‘It was such an honour to receive this award, but to be honest, I enjoyed these activities so much, they barely felt like work! On the serious side, I think it is important to tell colleagues about experiments in public engagement as well as in laboratory research. For the same reasons, the work can be repeated, improved and developed. I also learned a lot myself, and found the cross-disciplinary collaborations really valuable’ (yet another echo of IBBS activities!).

Congratulations Jo!

Do you know that ....IBBS Council, our executive body, is made up of 50% men and women; our current President is a woman. How many scientific societies can say that their members are equally divided between the sexes? We can! Follow us on Twitter.. @ibbs_online
Biodeterioration of Monuments: Rock Art and Stone Structures in the Ventania Hill System (Buenos Aires, Argentina)

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In the Ventania Hill System located in the province of Buenos Aires, Argentina, there is a type of monumental archaeological record of remarkable characteristics: a total of 39 sites (caves and/or rock shelters) have been recorded that present some type of rock art, together with 70 stone structures. Our studies started in 2004, involving observations, records and studies of geophysical, geochemical, microbiological and human agents of deterioration. The presence of microorganisms forming biofilms on rocky surfaces causes alterations of cave art and stone structures. Additional factors influencing deterioration include microclimate, presence of water (infiltration), cracks, rock exfoliation and superficial accretion of crusts, among others. Here, we show the results of preliminary studies. Surface samples were collected and counts of the various microorganisms in the biofilms made. Scanning electron microscopy (SEM) and confocal scanning laser microscopy (CSLM) were used to collect images (Fig. 1 and Fig 2, respectively). In situ microbial cultures were produced (Fig. 3), allowing us to consider the contaminated rock art in direct relationship with its environment. The rock surfaces are integrated into the landscape structure, where topographical elements have recreated a new rock landscape, as well as the changes arising from organizational aspects of the societies that produced the rock paintings. Biofilms may cause physical changes in pore size, fissures and mechanical fractures, chemical instability, surface discoloration, as well as other modifications, resulting in weakening of mineral structures and deterioration of the rock paintings. The aim of the research is to obtain an overview of the conservation of the rock art sites to allow the design of adequate protection policies.

Special ISSUE of the IBB Journal with contributions from 2018 IBBS Meeting held in Coimbra (Portugal)

The manuscript submission for the Special Issue of the International Biodeterioration and Biodegradation Journal dedicated to COIMBRA IBBS meeting is still open! The deadline for manuscript submission for this special edition has been set to the 1st of August! Conference participants can still submit their manuscripts in the journal’s website: https://www.journals.elsevier.com/international-biodeterioration-and-biodegradation

Please note that during the submission process, users should select the Special Issue (VSI: IBBS2018) on the menu. For this Special Issue, all manuscripts will be peer-reviewed as usual.
New Fungi from Photocatalytic Roof Tiles Could be Important in Standard Tests

Anna Gorbushina and her co-workers recently isolated a new fungal species from roof tiles with a strong photocatalytic coating in northwestern Germany. In honour of the location of the university at which Wolfgang Krumbein started the work on black fungi from monuments and building materials in the 1990s, the new species was named Constantinomyces oldenburgensis. The closest relative is an as yet unnamed rock-inhabiting strain TRN431, which they describe as C. patonensis. Both are members of the Capnodiales, typical melanized microcolonial rock fungi from various extreme habitats, which flourish in these hostile conditions on highly oxidizing material surfaces. These isolates will be important organisms for use in testing of protective materials.

Ruibal et al., 2018, Life, 8: 30 doi.org/10.3390/life8030030

Workshop announcement

IBBS18 - the 18th International Biodeterioration and Biodegradation Symposium, 7 - 10 September, 2020, at Montana State University, Bozeman, USA.

Pre-Symposium Workshop for Early Career Scholars, entitled: “Preparing for Your First Job in a Science Department—from Application to Interview to Negotiation”.

This workshop will be led by Dr. Gordon E. Uno on September 7, 2020 and held at the conference hotel, the Hilton Garden Inn.

Dr. Uno is the former Chair of the Microbiology and Plant Biology Department at the University of Oklahoma, NSF Program Officer, President of the National Association of Biology Teachers, President of the Botanical Society of America, and member of the Board of Directors for the American Institute of Biological Sciences. He is currently a Fellow of the American Association for the Advancement of Science.

The workshop will include practical advice on:
- Selecting the right institution,
- Developing an instructional philosophy,
- Knowing the ‘Dos and Don’ts’ of interviewing,
- Asking for what you need to be successful and
- Implementing active learning in your STEM class.