



[Issue 2/2023, October 19th]

## IUBS BioNews

Dear colleagues and members of **IUBS**,

**IUBS** BioNews #2 aims to inform you about some of the important events and developments concerning biology, biodiversity and sustainability that occurred since the release of our **IUBS** BioNews #1.

A month ago, the **IPBES Plenary 10** has agreed on the 'Assessment Report on Invasive Alien Species and their Control' and, most importantly, has decided to conduct the second global assessment of biodiversity during the upcoming four years, ten years after the first IPBES biodiversity report was initiated in 2013 ([see below](#)).

What is impressive about the intergovernmental platforms (e.g., IPBES), panels (e.g., IPCC) and organizations? And what can scientific unions, federations and societies learn from them? Impressive are not only the scientific significance of the outputs and the attention received at the global level, but also the efficiency of engaging large groups of renowned scientists who contribute their pertinent knowledge and invest large amount of their time, highly professional mechanisms to reach decisions, and the organizational support and management. Observing the laborious process of decision making in intergovernmental organizations and the tight link to restrictions defined by the national legislation framework teaches us that we need the bottom-up process of shaping science and activities driven by non-governmental organizations. However, even with these bottom-up activities, we should closely interact with policymakers.

For this reason, **IUBS** with many partner organizations, is very pleased that the United Nations has agreed on the **International Decade of Sciences for Sustainable Development (IDSSD)** ([see below](#)). We scientists and science organizations should use this unique opportunity to attract attention for science from all stakeholders including citizens. To fully exploit this opportunity will require strong interdisciplinary efforts.

Please also read in this **IUBS BioNews #2** about cooperation with other unions and international science societies and the short résumés of three **IUBS** executive committee members and their biological focus, so you know whom to address for any questions.

We wish you pleasant reading.

Cordial Greetings

IUBS-BioNews team



## Updates

SCGES Report

[Read more](#)



## News

IPBES 10<sup>th</sup> plenary  
New international decade

[Read more](#)



## Conferences

10<sup>th</sup> ICD  
38<sup>th</sup> ISCE

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## IUBS EC Members

Gillian Bowser  
Moemen Hanafy  
Le Kang

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## IUBS Members

Learn more about the  
International Society of  
Zoological Sciences

[Read more](#)



## Webinar Series

Our next invited speaker, on  
23<sup>th</sup> November: Christine  
Foyer

[Read more](#)

## Updates from IUBS



### SCGES Report

The [Standing Committee for Gender Equality in Science \(SCGES\)](#) is an independent committee formed in 2020 by nine international scientific organizations, **IUBS** featuring among these. Most SCGES partners are full members of the International Science Council (ISC).

These founding partners had worked together on the ISC supported project "A *Global Approach to the Gender Gap in Mathematical, Computing, and Natural Sciences: How to Measure It, How to Reduce It?*", which became known as the "Gender Gap in Science Project". That the 2023 Nobel Prize in Economics went to a women researcher who has devoted her life to measuring the gender gap using different parameters, indicates how important this issue is.

The aim of SCGES is to ensure liaison amongst international scientific unions to foster gender equality and the implementation of recommendations of the "Gender Gap in Science Project", especially in the scientific communities that the scientific unions represent.

SCGES produces an annual report and the next one will be released on November 2023. It contains brief reports from the SCGES partners, all of which have a stated commitment to gender equality. In its report, **IUBS** highlights its policy: **IUBS** sponsorship of scientific programmes, conferences, and young scientist's grants are approved when active involvement of women in these activities is demonstrated. Exchanging information on all related issues and making them visible is a major motivation for the partners who work together in SCGES.

### 10<sup>th</sup> IPBES Plenary

Invasive species endanger wildlife, established agricultural practice and health

IPBES successfully serves its mission to provide science-based information and advice to policy makers



The 10th Plenary Session of the **Intergovernmental Science - Policy Platform on Biodiversity & Ecosystem Services (IPBES10)** recently took place in Bonn (Germany), from the 28th of August until the 2nd of September 2023, and was hosted by the **United States of America**. The **IPBES Secretariat** with about 20 staff members is based in **Bonn (Germany)**. **IUBS** has the status of observer at IPBES Plenary sessions and K-J Dietz (IUBS President) represented IUBS by participating in the meeting. The chair welcomed four new members, namely Guinea, Namibia, Palau and Oman. Through this advancement, IPBES now has 143 members corresponding to an increase of >50% since its beginning in 2012. Assessing, managing and sharing the available knowledge on biodiversity is one of the key and major objectives of IPBES.

### IPBES Call for Nominations for experts for the methodological assessment on monitoring biodiversity and nature's contributions to people

In accordance with decision IPBES-10/1 and the procedures for the preparation of IPBES deliverables, the Multidisciplinary Expert Panel invites Governments and other relevant stakeholders **to nominate experts to participate in the monitoring assessment**. All Governments and relevant organizations or institutions are encouraged to submit nominations. The objective of the monitoring assessment is to support national and global efforts to (a) monitor biodiversity, nature's contributions to people and the direct and underlying causes of the observed changes; and (b) specifically monitor progress towards the goals and targets of the Kunming-Montreal Global Biodiversity Framework in support of a balanced and enhanced implementation of the Convention on Biological Diversity.

[Read more on IUBS website](#)

## IYBSSD continues to stand up for fundamental research for progress in sustainability

The **International Year of Basic Research for Sustainable Development (IYBSSD)** was officially opened in the UNESCO headquarters in Paris on July 8th 2022 and continues to be celebrated until the end of 2023. The steering and advisory board met online on August 10th and on September 12th in order to discuss recent activities, planned activities until the end of the year and to give an update on the resolutions. Michel Spiro (President, International Union of Pure and Applied Physics) chaired these meetings. **IUBS** was and is engaged in IYBSSD activities and K-J Dietz (President, **IUBS**) & N. Fomproix (Executive Secretary, **IUBS**) participated in the online meetings.



The latest and planned IYBSSD activities can be found on [here](#). A [24 hour science webinar](#), moving along the time zones of the globe, took place on June 5th and an increasing number of contributions are being made available online. Our former **IUBS** president **LS Shashidara** participated in this event as speaker (Part2: "*More Science of Life for Better Science for Life*"). Other local and regional activities are planned. As of July 8th, IYBSSD events comprised 137 conferences, 87 public outreach activities, 51 webinars or series of webinars, 42 training sessions and 22 contests. These numbers demonstrate its success. The **IYBSSD closing ceremony** will take place at CERN at the new Science Gateway in Geneva on December 15th 2023.

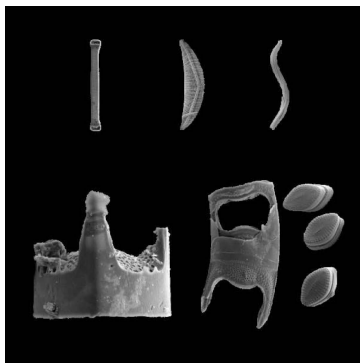
## IDSSD to come: The International Decade of Sciences for Sustainable Development

Our continued struggle for increased and appropriate appreciation of science and knowledge-based decisions remains a challenge and, therefore, it is a great success for us that the United Nations General Assembly accepted the resolution to proclaim the **International Decade of Sciences for Sustainable Development**. IDSSD commences on the 1st of January 2024. The eight UN member countries Serbia (Nebosja Neskovic, coordinating), Argentina, Cuba, Honduras, Hungary, South Africa, Spain, and Vietnam had submitted the resolution to the General Assembly of the UN. Presently the organizational structures, the principles of governance, the provisional program and budget will have to be determined and negotiated. The organizations and bodies shaping the IYBSSD remain players in defining the concept and the activities of IDSSD under the auspices of UNESCO.

Importantly, the IDSSD is going to include additional science disciplines, e.g. theoretical sciences, social sciences and humanities. Several International Unions will be part of the executive committee. The Club of Rome, International Science Council (ISC) and Inter Academy Partnership (IAP) are teaming up as well. **IUBS** strongly supports the declaration of the IDSSD and participates in shaping its goals and activities. We see IDSSD as a great opportunity to increase the standing of biosciences and to participate in activities in close coordination with our members.

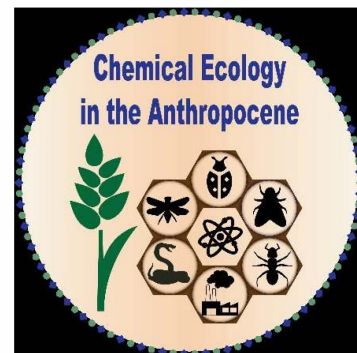
## IUBS Conference sponsoring

**IUBS** supports the organization of international Conferences and Workshops in **IUBS** member countries. Applications are reviewed every trimester by the **IUBS** Executive Committees. Conferences awarded should have women involved in the organizing/scientific committees and there should be a gender balance in the list of the invited speakers. Two conferences have recently benefited from **IUBS** sponsoring:



### ICDX

The **10<sup>th</sup> International Congresses of Dipterology (ICD)** was held at the Silver Legacy Resort in Reno, Nevada, USA, from 16-21 July 2023



### 38<sup>th</sup> ISCE

The **38<sup>th</sup> Annual Meeting of the International Society of Chemical Ecology** was held at the Indian Institute of Science, Bangalore, India between 23-27 July 2023

## ICDX, 10<sup>th</sup> International Congresses of Dipterology (ICD)



The **International Congresses of Dipterology (ICD)** have been consistently held every four years since the first one held in Budapest, Hungary, in 1986. This tenth congress has broken that mold, being postponed for a year due to the global Covid-19 pandemic. Although this extra year should have resulted in more travel, the number of delegates were less than more recent ICDs. Worldwide financial and other difficulties might have played a significant role in this. The delegation consisted of 200 dipterists, one-quarter of which were students, from 35 countries representing all continents except Antarctica. In total, 222 abstracts were submitted, representing 190 oral presentations arranged into 20 symposia, a General session, Plenary (5) and Banquet (1) addresses, and a book launch event (3) for Volume 3 of the Manual of Afrotropical Dipterology. The Poster session consisted of 32 posters. In total, students gave 39 of the oral presentations and 10 of the posters.

This Tenth congress was hosted and organized by the North American Dipterists Society, and held at the Silver Legacy Resort in Reno, Nevada, USA, from 16-21 July 2023. We gratefully acknowledge **IUBS** for their sponsorship, along with the generous donations of other sponsors, without whom we could not have offered such an excellent congress for a reasonable registration cost, which enabled a larger audience to attend this congress. Besides running the meeting in general, we supported nine students with grants that covered their registrations, hotel, and some travel costs. Among our extracurricular activities, we had competitions for best student presentation (Kinga Walczak), best student poster (Maxwell Arnold), and best Diptera photograph (Zachary Dankowicz, a high school student, out of 25 submissions).

According to the feedback we have have been given, ICDX was very well received and contributed significantly to the communication and networking of the worldwide dipterist community.

## 38<sup>th</sup> ISCE, 38th Annual Meeting of the International Society of Chemical Ecology (ISCE)



The 38th Annual Meeting of the **International Society of Chemical Ecology** was held at the Indian Institute of Science, Bangalore, between 23-27 July 2023. The theme of the conference was Chemical Ecology in the Anthropocene. The conference was attended by over 200 delegates that represented 22 countries. Plenary talks were presented by Zain Syed from the University of Kentucky, Baldwyn Torto from the International Centre of Insect Physiology and Ecology (ICIPE) in Nairobi, Silke Allmann from the University of Amsterdam and Athulla Atygalle from Stevens Institute of Technology, USA. There was a good mixture of basic and applied science and talks that also feature Integrated Pest Management using semiochemicals and involving techniques such as mating disruption and pheromone trapping. The conference also featured for the first time a special symposium on venomics and the development of suitable antivenom. This is a most pressing need considering the thousands of individuals who suffer morbidity and mortality due to snakebite in countries such as India and continents such as Africa. The conference was also able to provide travel support and conference fee waivers to many students and early career researchers. Approximately 50% of the delegates were from India.

## The IUBS EC Members 2023-2026

Following the 3 EC Members presented in the earlier BioNews#1, we continue in this section to introduce EC Members who have been elected at the last General Assembly in Tokyo.

### Gillian Bowser

**IUBS Executive Committee Member Gillian Bowser** is from Colorado State University, Department of Ecosystem Science and Sustainability. She is a dedicated scientist and academic professional with 25+ years of experience in federal land management, international and domestic nature-based assessments of biodiversity.



Skilled communicator on assessing the state and trends of biodiversity systems focused on the interdependence of nature, environmental and climate justice and environmental sustainability, Dr. Bowser is a visionary leader and has shown long term commitment towards a collaborative culture. She has established her research credentials through over 30 peer reviewed articles, 17 National Science Foundation grants and multiple international assessments on nature and society. She has emphasized the ecological indicators of climate change, e.g., pollinator insects, and has a holistic overview on the effects of climatic disruptions on local communities. She is involved as an avid scientific communicator at international platforms like International Union for the Conservation of Nature (IUCN), UN Framework Convention on Climate Change (UNFCCC), and UN Environment Assembly (UNEA) or through national public radio. She has compelling methods to showcase user-friendly science products including artistic design and messaging to reach diverse audiences. Dr. Bowser has worked as a wildlife biologist and ecologist for the several organisations like the U.S. National Park Service in Yellowstone or serves on the board of the Rocky Mountain Sustainability and Science Network.

## Moemen Hanafy

**IUBS Treasurer Moemen Hanafy** is a Professor and Head of the Plant Biotechnology department, Biotechnology Research Institute at National Research Centre (NRC), Egypt. After his PhD as a DAAD fellow in Hanover, Germany, Dr. Hanafy continued in his early career research with prestigious JSPS and Alexander von Humboldt (AvH) fellowships. He has also served as Associate Professor of plant biotechnology at Faculty of Science and Humanities, Salman bin Abdul-Aziz University, Al-Kharj, Saudi Arabia.



Dr. Hanafy has over 30 years experience in plant biotechnology research. Over the past 20 years, his work has led to 38 research articles published in peer-reviewed international journals, five book chapters and about 30 invited presentations at national and international levels. He is a member of several professional societies and currently serves on three editorial boards. In the last 14 years, Dr. Hanafy was granted two prizes: Prize of the President of the National Research Centre for best applied research (2008) and National Research Centre Prize for scientific encouragement in biology (2013). Due to his good scientific relation with the European scientific landscape he has been appointed as an Ambassador Scientist of the Alexander von Humboldt (AvH) Foundation-Germany to Egypt from January 2016 to December 2021. In 2018, Prof. Hanafy was elected Chairman of the Egyptian National Committee of Biological Sciences till 2022. In 2023, he was elected the Treasurer of the International Union of Biological Sciences (IUBS).

## Le Kang

**IUBS Vice President Le Kang** is a CAS distinguished Professor in the Institute of Zoology, Chinese Academy of Sciences (CAS), and focuses on ecological genomics and adaptation of insects. He serves as president of the Beijing Institutes of Life Sciences (CAS) and Hebei University. His work has revealed the molecular mechanisms for phenotypic plasticity and adaptation of locusts at both genetic and epigenetic levels using interdisciplinary methods. His work has provided a scientific outlook on locust biology, and has led to crucial approaches towards developing novel control strategies against the swarming insects.



Dr. Kang was elected member of the Chinese Academy of Sciences (CAS) and as a foreign member or fellow of 7 national and international academic organizations including the US National Academy of Sciences (NAS). Dr. Kang has published about 260 research articles in international peer-reviewed journals with about 11,000 citations. His representative papers are published in *Nature*, *Science*, *Science Advances*, *PNAS*, *Nature Communications*, *Genome Biology*, *Molecular Biology and Evolution*, *Global Change Biology*, *eLife*, *Cell Reports*, *EMBO Reports* etc. Dr. Kang is a Council Member of the International Congress of Entomology since 2008. He has been awarded numerous national and international awards.

## Spotlight history – how IUBS shaped the self organization of biosciences

The history and activities of the international federations and societies in the various biodisciplines were always closely linked to **IUBS**. Close to 90 international societies nowadays are scientific members of **IUBS**. The new **Executive Committee** of **IUBS** wishes to strengthen its relationship with its scientific members. We are planning to contact you, the representatives of the scientific members, to explore ways of teaming up with you in times of urgent need for input of biology into policy making and for reaching the sustainable development goals.

### International Society of Zoological Sciences



The International Society of Zoological Sciences ([ISZS](#)) was started in 2004 in Beijing as a direct continuation of the International Congress of Zoology first held in 1889 in Paris.

The aim of ISZS is to facilitate the development of global zoology by improving communication between zoologists and zoological organizations; increase the availability of resources needed to conduct zoological research; and promote co-ordination, collaboration and co-operation between different fields of zoology.

ISZS is a Scientific Member of IUBS. Currently, it has 124 institutional members (representing over 30,000 zoologists), as well as over 1000 individual members, from scientific academies, universities, NGOs, nature reserves, zoos and other professional societies on every continent.

The core business of ISZS includes organizing the International Congress of Zoology every four years, publishing a multidisciplinary scientific [journal—\*Integrative Zoology\*](#) (a top SCI-Indexed zoological journal in the world), organizing International Symposia in Integrative Zoology in non-Congress years, and facilitating international research programs such as the IUBS sponsored programs Biological Consequences of Biological Sciences (BCGC) and the Wildlife Disease Research Network (WDRN).

## IUBS Webinar Series

In the framework of the IUBS centenary webinar series, **Prof. Christine H. Foyer** will speak about, **Photosynthesis in times of climate change** and "how will plants adapt to a high CO<sub>2</sub> world?" on **23<sup>rd</sup> November 15:00 CET**



Climate change is the defining issue of our generation. In this presentation, Prof. Christine Foyer will introduce the topic of climate change, the greenhouse effect and greenhouse gases, covering photosynthesis and its importance in ecosystems, particularly in relation to the carbon dioxide fertilisation effect and nature-based solutions to climate change.

[Free registration to the webinar here](#)



The following people have contributed to the newsletter:

Renee M Borges, Gillian Bowser, Karl-Josef Dietz, Nathalie Fomproix, Christine Foyer, Stephen Gaimari, Moemen Hanafy, Le Kang, Vijay Kumar, Nils Christian Stenseth, Zhibin Zhang.