



**IOBC-APRS
Newsletter No. 13
August 2022**



Message from your President

Dear Members,
It seems that the effects of COVID-19 are finally easing and we are gradually getting back to some level of normality, including meetings that don't involve Zoom!

In June, I attended the Australian Wine Industry technical Conference with fellow IOBC member Dr Jian Liu. While there, we presented results from the first year of work in a Wine Australia-funded project on vineyard ecosystem services. Replacing the grassy weeds that tend to dominate vineyard groundcovers with alternative species, including prostrate-growing natives, can deliver a range of ecosystem services. Dramatic reductions in fruit bunch damage by light-brown apple moth *Epiphyas postvittana* (Tortricidae) (a key vineyard pest in Australasia) were evident in plots with cover crops of nectar plants such as alyssum and native shrubs. We also organised a workshop for vineyard managers which was very well attended despite being scheduled for first thing on a Sunday morning; testament to the level of interest within industry.

I have also returned recently from Helsinki where the long-postponed International Congress of Entomology finally went ahead. There was a real sense of joy among the 1200 attendees at being back in a 'proper', in-person meeting, to the extent that the slightly chaotic level of organisation was forgiven. There were many talks on biological control including a whole symposium on delivering this in smallholder agriculture systems.

While in Helsinki, I attended a series of satellite meetings of the International Organisation for Biological Control Global and got to meet representatives from all the regional sections. The ICE organisers were asking such extortionate fees to use a meeting room that our IOBC Global gatherings were held instead in a noisy hotel reception area, in a corner of the conference registration hall, and finally concluded over a dinner.

Finally on the subject of meetings, keep an eye on the upcoming ICE XXVII which will be held in Kyoto, Japan in late July 2024.

Also, to complement the section's newsletters, we also has launched our own Facebook page: www.facebook.com/groups/1132093136801336/. I look forward to seeing you and your work on that page or at a face-to-face meeting sometime soon.



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President's message continued



IOBC Global Executive finalise business over dinner in Helsinki. (Clockwise from bottom left: Yelitza Colmenarez, Brazil; Martin Hill, South Africa; Alejandro Tena, Spain; Geoff Gurr, Australia; George Heimpel, USA; Vanda Paes Bueno, Brazil; Joop van Lenteren, Netherlands; Giselher Grabenweger, Swit-

zerland.

This will be my final presidential message because it's time for a new Executive to be put into place. Details on arrangement for this appear on page 5 in this issue. It is a good time to look back on the last four years at what your executive has achieved with your support. Over the period 2018-2022, membership has surged from 111 to 211 though we are yet to fully resolve issues with ease of payment of subscriptions and many members in some areas are not currently financial. Eighteen countries are represented among our membership, led by China, Pakistan, Australia, New Zealand and India. APRS members Yulin Gao and Ronny Groenteman have been representing our region on IOBC Global. Barbara Barratt has been our member on the Working Group for BC Access and Benefit Sharing. Barbara has also been awarded honorary membership of IOBC Global. Other members, Yadavalli Lalitha (India), Malvika Chaudhary (India), Yulin Gao (China) and Barbara Barratt (NZ) have all contributed their career pathway to IOBC Global website, to inspire the next generation of biological control workers. APRS member Raghu Sathiyamurthy, will be our representative on the new Global Working Group for Classical Biological Control of Weeds.

APRS has sponsored a range of significant events during the last 4 years:

- ◆ Bio-Control Training Course at the Business Incubation Centre and Applied Entomology Laboratory, GC University Lahore, Pakistan in **2020** with nearly 100 participants;
- ◆ 2nd Int. IOBC-APRS Workshop on Predatory Mites as Biological Control Agents **2019**, Chongqing, China. Focussed on "Phytoseiid mites: as or beyond natural enemies".
- ◆ 9th Int. Workshop on Management of Eupatorieae and other Invasive Weeds Kuala Lumpur, Malaysia, **2019**. IOBC jointly with CABI Malaysia.
- ◆ Int. Workshop on Conservation Biological Control of Insect Pests, Lincoln University, New Zealand, **2018**,
- ◆ ICBC **2018**. Biological Control: Approaches and Applications in Bengaluru, India. The conference was jointly organized by ICAR-NBAIR and Society for Biocontrol Advancement (SBA), Bengaluru, with the support of CABI (UK), IOBC & IAPPS. Jointly with IOBC Parthenium Working Group and Tuta working group
- ◆ First Int. Congress of Biological Control, Beijing **2018**. Sponsored jointly by the Chinese Academy of Agricultural Sciences and the China Society of Plant Protection and IOBC.

Geoff Gurr, Orange, Australia

August 2022

Global honour for services to Biological Control for Dr Barbara Barratt

Dr Barbara Barratt a senior scientist at AgResearch, New Zealand, was awarded an honorary member of the IOBC Global at the 18th General Assembly held in Helsinki, Finland in July.

Dr Barbara Barratt has played a leading role internationally in pioneering strategic research into the environmental safety of biological control agents since the mid-1990s. She has been able to establish and maintain international leadership in this complex aspect of applied ecology. She is now well recognised for such work as evidenced by invitations to contribute to 13 international conferences since 1995 and to write chapters for significant books on the subject of biosafety. At the outset, this work was novel and initially, controversial. For a while, the issue of biocontrol safety caused tension amongst biocontrol researchers, but Dr Barratt was able to develop the experimental and ecological techniques needed to gain the traction required to resolve such contention. She led a research team that pioneered analytical methods based on those biological control agents already introduced into New Zealand. The approach used was to compare the host range of biological control agents as determined from laboratory studies to the host range expressed by the agents in the field. These comparisons allowed her to quantitatively assess the precision of the laboratory estimates and have become classic studies in the biological control literature. This work was also of immediate value to international regulatory agencies charged with making decisions on the field release of organisms that can only be examined in containment.



Dr Barratt served on the IOBC-Global Executive Committee for 12 years, from 2008 until 2020, being only the second female ever to serve on the IOBC-Global Committee, and the first in the roles of Vice-President, President, and Past-President. During her years as Vice-President and President and Past President of IOBC Global, she actively promoted biological control internationally. In this role, she helped to tackle the issue of declining uptake of biocontrol practice occurring especially in the USA and Europe, resulting from increased regulation, international agreements (the potentially restrictive Nagoya Protocol on Access and Benefit Sharing), and declining public support for biological control in some countries. A major commitment for IOBC-Global during Dr Barratt's presidency was the 'IOBC Commission on Biological Control and Access and Benefit Sharing' (ABS, an objective of the international Convention on Biological Diversity). Supported by the Food and Agriculture Organization (FAO), the Commission reported on the threat from the Nagoya Protocol to negatively impact upon biocontrol practice and on freedom to operate. Dr Barratt also served on the Committee of the Asia-Pacific Regional Section of IOBC (IOBC-APRS) and was instrumental in reinvigorating it.



Dr Barratt was suitably modest when been informed of the award, saying she was both honoured and surprised at the recognition. She also noted that during her time on IOBC Global she was working with 'an amazing bunch of people, who collectively worked to develop and promote IOBC and biological control throughout the world. She continues to support biological control safety research through her leadership both in New Zealand and internationally, research that contributes to biological control theory.

Because there were limited numbers present at the Helsinki meeting, Dr Barratt's international contribution to biological control will formally be acknowledged during the next General Assembly in Costa Rica in 2024. This year Dr Barratt was also recognised as a Fellow of New Zealand's Royal Society. Congratulations on both awards!

Image: Dr Barratt in 2019 received a Lifetime Achievement Award from Science New Zealand

Profiles of our other honorary members.... Dr Ren Wang

IOBC- APRS now has four honorary members: Dr Barbara Barratt, Dr Rachel McFadyen, Dr Muni Rangaswamy and Dr Ren Wang. In each newsletter we will introduce you to one of them, so you can learn about their life work, and why IOBC honoured them with life membership.

In this newsletter we introduce you to **Dr Ren Wang**.

Dr. Ren Wang obtained his Ph.D in Entomology in 1985 at the Virginia Polytechnic Institute in USA. He was a researcher to Professor level at the Institute of Biological Control of the Chinese Academy of Agricultural Sciences (CAAS) during 1985-1993, and pioneered China's program of managing invasive exotic plants using the classical biological control approach.

From 1993 to 1995, he was the Deputy Director, Programme Development of the International Institute of Biological Control (IIBC), CABI. He then served two terms as Vice President of the Chinese Academy of Agricultural Sciences during 1995-2000 and 2010-2013, respectively. During 2000-2007, Dr. Wang served as Deputy Director General for Research at the International Rice Research Institute (IRRI) based in the Philippines. In July 2007, He became the Director of the Consultative Group on International Agricultural Research (CGIAR) based at the World Bank in Washington, DC, USA. During 2013 to 2018, Dr. Wang served as Assistant Director General of FAO's Agriculture and Consumer Protection Department, based in Rome, Italy.

In Mar 2018, he retired from FAO and returned to China to take up the assignment as Director General, China National GeneBank, Shenzhen (CNGB). He finished his term at the CNGB in July 2022, and returned to CAAS to work as Senior Advisor, International Cooperation based at the Agricultural Genomics Institute, Shenzhen (AGIS-CAAS).



During his career he has served on many influential Agricultural boards and trusts, and has been made honorable professor of both Huazhong Agriculture University, and Shanxi Agriculture University of China.

Dr Wang's favourite insect is the green lacewing, *Chrysoperla sinica* Tjeder. Green lacewings are important predators of pests in crop fields.



Your new IOBC-APRS Executive 2022-2026

President

Dr Toni Withers, is a biological control scientist from New Zealand's Forestry Research Institute, Scion, in Rotorua. She takes over the reins from Dr Gurr as President.



Dr Withers began her research career in behavioural entomology, studying the host plant-insect interactions of the wheat pest Hessian Fly. She then applied her skills to weed biological control, specialising in host specificity testing, and how this can be improved. She currently undertakes research on biological control for managing invasive trees pests in New Zealand.

Email: toni.withers@scionresearch.com

Vice-President

Dr Xue-xin Chen is Chang-Jiang Distinguished Professor of Entomology at Zhejiang University, Zijingang Campus, Hangzhou, China. He joins the APRS committee as Vice-President.



While teaching classes and supervising post-graduate students, Xue-xin undertakes research on parasitoids in IPM and for biological control, as well molecular phylogeny and evolution, and developmental biology of Hymenopteran parasitoids, especially the family Braconidae. He has a strong research interest in molecular mechanisms underlying the host regulation by the parasitoids.

Email: xxchen@zju.edu.cn

Treasurer

Assistant Professor Ikju Park is from Kyungpook National University, Daegu, South Korea.

He is a sensory ecologist specialising on how insect herbivores exploit their host plants from non-host plants based on olfactory and visual cues in the complex environment.



We are delighted Ikju will be our Treasurer. He will soon be sending you all membership invoices for 2022, so please be willing to part with your membership fees promptly.

Email: ikjupark@knu.ac.kr

Secretary-General

Situation Vacant

If interested, please contact:
toni.withers@scionresearch.com

Sincere thanks to our outgoing APRS committee members



We are extremely grateful for the outgoing executive who have served multiple terms. We are farewelling **Mike Cripps**, who has done a wonderful role as Treasurer since 2017, and enabled our society region to build up bank account funds sufficient to contribute to Global.

We are also extremely grateful for the at least 8 years of service provided by **Yulin Gao**, during which time he has also continued to be active on Global Executive. He has made us a very proud region. Thank you sincerely to you both.



Beta-ionone is a functional plant volatile that attracts the parasitic wasp, *Microplitis pallidipes*

Hao Zhang, Jin-Yan Wang, Yi-Juan Chen, Evan Siemann, Xiang-Yun Ji , Jie-Xian Jiang  & Nian-Feng Wan 

BioControl **67**, 1–13 (2022) | [Cite this article](#)



Host specificity testing of *Pauesia nigrovaria* (Hymenoptera: Braconidae: Aphidiinae) for classical biological control of *Tuberolachnus salignus* (Hemiptera: Aphididae: Lachninae) in New Zealand

Stephanie Sopow , Carl Wardhaugh, Rebecca Turner, Belinda Gresham, Roanne Sutherland, Georgia Woodall & Toni Withers

BioControl **66**, 739–751 (2021) | [Cite this article](#)

Strategic positioning of *Beauveria bassiana* sensu lato JEF-410 in management of poultry red mite, *Dermanyssus gallinae* (Mesostigmata: Dermanyssidae)

So Eun Park, Mi Rong Lee, Se Jin Lee, Jong Cheol Kim, Bruce L. Parker, Kyeong Seon Ryu, Chun Ik Lim & Jae Su Kim 

BioControl **67**, 39–48 (2022) | [Cite this article](#)

Contrasting host: parasitoid synchrony drives differing levels of biocontrol by two introduced *Microctonus* spp. in northern New Zealand pastures

Philippa Gerard , Derrick Wilson & Martin Upsdell

BioControl **66**, 727–737 (2021) | [Cite this article](#)

Enhanced expression of DNA methyltransferase 1-associated protein1 gene thermotolerance in a high-temperature acclimated predatory mite *Neoseiulus barkeri*

Ya-Ying Li, Chuan-Bei Tian, Yi-Xia Wu, Tian-Di Niu, Hao Wang, Wen-Hui Fan & Huai Liu 

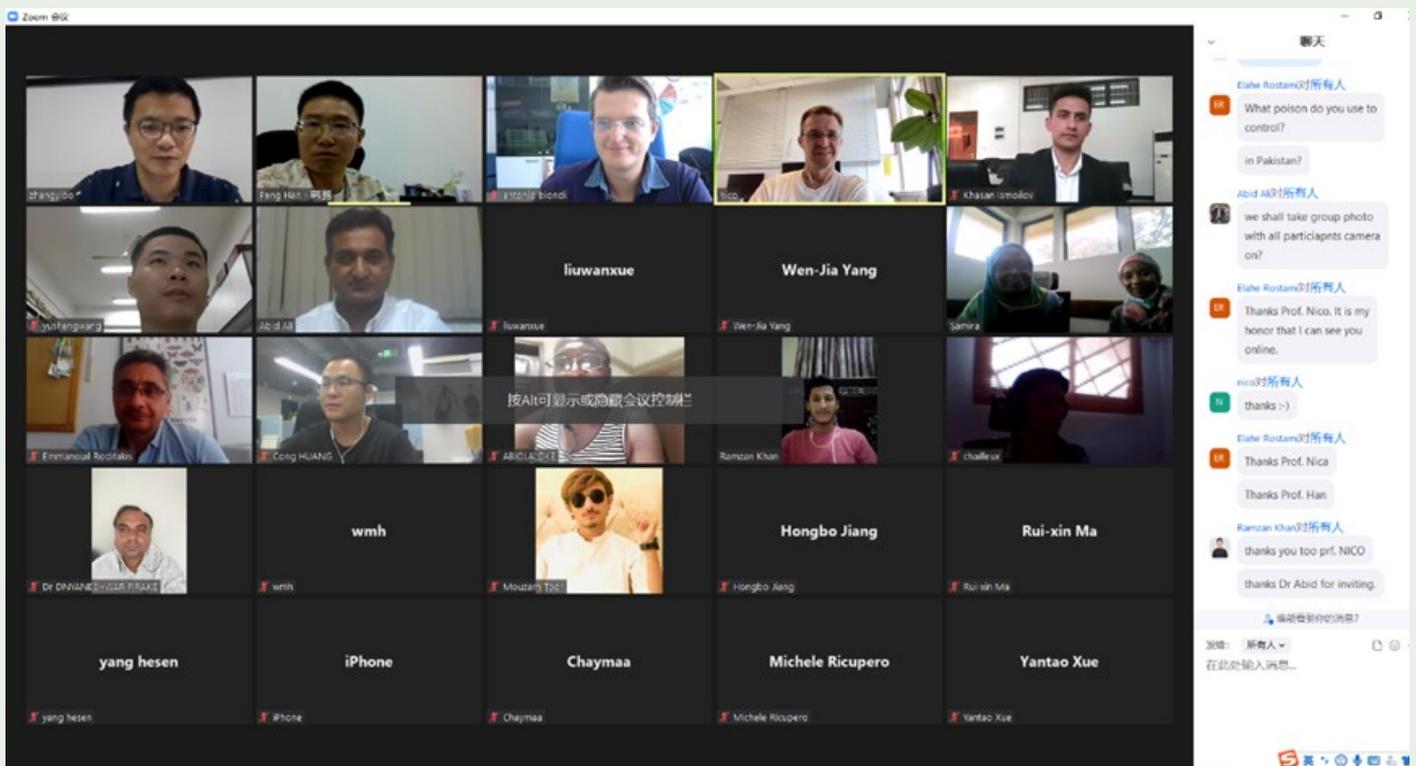
BioControl **66**, 779–788 (2021) | [Cite this article](#)

Report from Int. Symposium on green Control and prevention of *Tuta absoluta*, a major new invasive pest

On June 28-29, 2022, The International Symposium on the Green Prevention and Control of *Tuta absoluta*, a major invasive moth species in the family Gelechiidae, was successfully held in Beijing, hosted by Institute of Plant Protection, Chinese Academy of Agricultural Sciences (IPPCAAS). This symposium was supported by the Comprehensive Project of International Organization Affairs of China Association for Science and Technology. Meanwhile, it was co-sponsored by IPPCAAS, China Society of Plant Protection, IOBC, National Research Institute for Agriculture, Food and Environment (INRAE) and Yunnan University.

Prof. Wende Liu (Assistant Director General of IPPCAAS), Prof. Nicolas Desneux (INRAE), Prof. Yulin Gao (Vice president of IOBC), and Prof. Wanxue Liu (chief scientist of the Innovation team of Agricultural invasive biological Prevention and Monitoring of IPPCAAS) attended the opening ceremony of the Symposium and delivered welcome address. The opening session was chaired by **Dr. Yibo Zhang**, associate professor from the Innovation team of Agricultural invasive biological Prevention and Monitoring of IPPCAAS.

Prof. Wende Liu emphasized in his welcome address that since its invasion in 2017, *T. absoluta* has spread to more than 10 provinces in China, including Xinjiang, Yunnan, Guizhou and Sichuan and so on, seriously threatening the production of tomato industry in these provinces. The invasion period of this pest is quite short, and the experience of prevention and control of this pest is scarce. Therefore, the organization of this international Symposium will fully exchange the successful experiences of prevention and control of *T. absoluta* in different countries and regions, which is of great significance to improve the comprehensive control ability of this species in China.



Online *Tuta absoluta* symposium cont..

Prof. Nicolas Desneux first thanked IPPCAAS for its efforts in organizing this symposium. He stated that the symposium would greatly promote the exchange of researchers focused on the *Tuta absoluta* at the international level, which is of great significance for the realization of cross-regional linkage and efficient control of this pest. **Prof. Yulin Gao** delivered a speech and proposed that IOBC will actively promote the biological control technology of tomato leaf miner moth worldwide.

More than 60 experts from 17 countries and regions including France, Spain, Italy, Greece, Turkey, Tunisia, Nigeria, Iran, Pakistan and India participated in the symposium offline or online.

18 Chinese and foreign experts made oral presentations which focused on four themes, such as the foundation of tomato leaf moth, biological control, chemical biology and genomics and agricultural control, comprehensive control. The experts also communicated with each other through online oral questions or chat room messages. This successful symposium not only shared experience, promoted exchanges, but also laid a good foundation for further international cooperation and exchanges in the future.



Image left: Damage to tomato plants by *Tuta absoluta* in South Africa. Photograph by R. J. Nieuwenhuis



Image Right: *Tuta absoluta* adult, photograph by D. Visser

Tuta absoluta (Lep.: Gelechiidae) was originally described in 1917 by Edward Meyrick as *Phthorimaea absoluta*, based on individuals collected from Huancayo (Peru). The larva feeds voraciously upon tomato plants, producing large galleries in leaves, burrowing in stalks, and consuming apical buds and green and ripe fruits. It is capable of causing a yield loss of 100%. The pest mainly presents nocturnal habits, and adults usually remain hidden during the day. While Tomato is the main host plant, *T. absoluta* also attacks other crop plants of the nightshade family, including potato, eggplant, pepino, pepper and tobacco. It is also known from many solanaceous weeds. There is a high risk of further invasion into southern Asia, Australia and New Zealand.

APRS news—a change to membership invoices

All members will soon be receiving their 2022 IOBC-APRS invoices from treasurer Dr Park. If we did not receive your 2021 membership, we will also include this amount as **arrears due**.

Our treasurer will again be utilising pay-pal for receiving membership payments but international transactions will also be possible. All our member countries should be able to utilise one of these methods for payment.

It is the intention of the new committee to invoke a change— members of APRS who do NOT pay within 3 months, will be classified as a “Corresponding Member”. This will permit those members continued access to e-Newletters from APRS and from IOBC global, but NO voting rights, no access to global funds for sponsorship of events, or training courses, and no membership certificates.

<http://aprs.iobc.info/>

http://www.iobc-global.org/rs_aprs.html



Newsletters of possible interest to members:

Forest health news—from Scion, New Zealand—<https://www.scionresearch.com/services/science-publications/forest-health-news>

Invasive invertebrates from Landcare Research, New Zealand

<https://www.landcareresearch.co.nz/discover-our-research/biosecurity/invasive-invertebrates/>

What's News in Biocontrol of Weeds—from Landcare Research, New Zealand— <https://www.landcareresearch.co.nz/publications/weed-biocontrol/>

CSIROscope—Weeds, fungi, weevils and biosecurity— from CSIRO Australia—<https://blog.csiro.au/weeds-fungi-weevils-and-biosecurity/>

Chinese Academy of Agricultural Sciences—IPP - Newsletter

<https://ipp.caas.cn/en/newsletter/201701/no4201702/index.htm>

Australian Entomological Society - <https://entomology.edu.au/news>

4th International Congress on Biological Invasions -ICBI 2023

See next page for the congress flyer: - scientific sessions may include an IOBC session, as well as:

- Strengthening biosecurity across the Pacific
- Harnessing indigenous knowledge for biosecurity
- Adapting to global (climate) change
- Innovation and interdisciplinary approaches to management across the biosecurity continuum
- Economic and environmental impacts of invasive species
- The ecology and evolution of invaders
- Emerging biosecurity issues

In addition to the International Congress on Biological Invasions (ICBI2023), the Better Border Biosecurity (B3) (<https://www.b3nz.org.nz/>) conference will be held on 5 May, immediately after ICBI2023. Enquiries about abstracts can be directed to: mark.mcneill@agresearch.co.nz

ICBI 2023

4TH INTERNATIONAL CONGRESS ON BIOLOGICAL INVASIONS

Fourth International Congress on Biological Invasions

1-4 May 2023 | Christchurch Town Hall, New Zealand

INNOVATION

COLLABORATION

PARTNERSHIP



The 4th International Congress on Biological Invasions will be hosted in Ōtautahi Christchurch, New Zealand. The ICBI congress will provide a forum to explore, share, and develop responses to the global challenges and threats that Invasive Alien Species present to the biodiversity, ecological systems, and food safety, in terrestrial, freshwater, and marine ecosystems.

ABSTRACT
SUBMISSIONS
NOW OPEN



International Congress of Entomology in Japan—2024



Dates : August
25_[sun] - 30_[fri], 2024

Venue : **Kyoto, Japan**
[Kyoto International Conference Center]

XXVII International Congress of Entomology

It is with great excitement that we support our Japanese colleagues and prepare for the global entomology community to visit Asia.

The congress will take place at the magnificent Kyoto International Conference Center

As expected there will be a vast array of sessions covering all aspects of Entomology.

Please prepare to support this Congress by keeping an eye on developments announced on the website

<https://ice2024.org/>

International Hemipteran-Plant Interactions Symposium—2022

Melbourne Australia is hosting this (delayed) International Symposium HPIS—Hemiptera-Plant Interactions. This congress brings together researchers who study phytophagous piercing/sucking insects, their complex interactions with their host plants, environment and pathogen transmission. The important Orders Hemiptera and Thysanoptera and their endosymbionts, will be discussed by plant biologists and physiologists with expertise on plant defences and responses to hemipteran feeding, and plant pathologists with expertise on transmission of plant pathogens by hemipterans.

Website: <http://hpis2020.com>

HPIS 2022
HEMIPTERAN-PLANT
INTERACTIONS SYMPOSIUM

Melbourne, Australia 7-9 December 2022



XVI Int. Symposium on Biological Control of Weeds - 2023

The ISBCW for the first time in South America: Puerto Iguazú, Misiones, Argentina

The International Symposium on Biological Control of Weeds (ISBCW) was first organised in 1969, and has been the most important international meeting for weed biocontrol scientists since.

During these meetings scientists from all over the world get together to exchange advances in the discipline, renew ties of friendship and collaboration, and discuss the way forward.



Website: <https://isbcw-iguazu.com>

Int. Entomophagous Insects Congress - now 2023

Diego Segura (chair) and the organizing committee have just announced they will find a new date in 2023 to hold this amazing international conference—The 7th International Entomophagous Insects Conference in Buenos Aires.

<https://ieic2022.org/>



17th International Auchenorrhyncha Congress—now 2023

The 17th International Auchenorrhyncha Congress will be held in 2023 due to concerns about international travel.

It will be held at Tagaytay, the Philippines in July 2023.

<https://tymbal.org/meetings.htm#17th>

