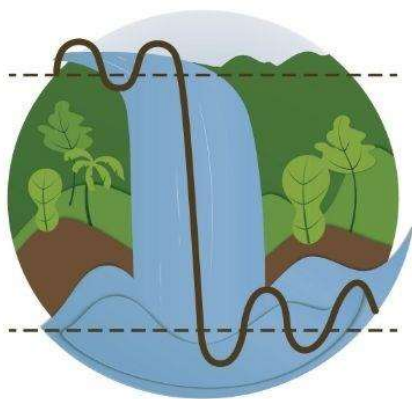


# PROCEEDINGS



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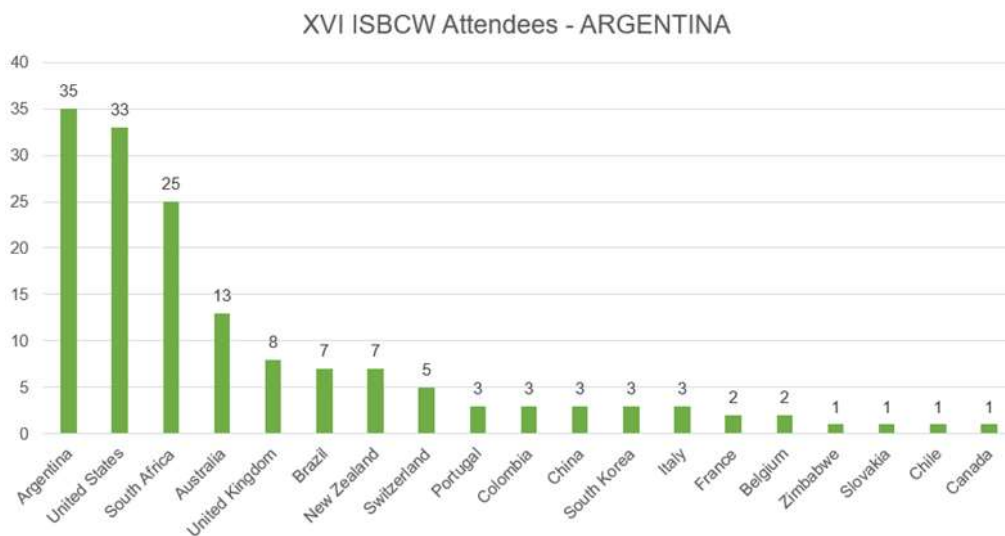
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## PREFACE

### Symposium synopsis

The XVI International Symposium on Biological Control of Weeds was held in Puerto Iguazú, Misiones, Argentina in May 2023. This was the first time the meeting took place in South America. The closeness of the venue to the Iguazú falls and the largest remnants of the Atlantic forest, a UNESCO World Heritage Site, added an extra perk to the meeting. We visited the falls during the mid-symposium tour on a wonderful cool sunny day, which allowed everyone to enjoy the scenery at its very best. Again, at the symposium's banquet, the view of the rainbow over the falls from the privileged vantage point of the gardens of the Gran Meliá Iguazú Hotel, is a memory we will keep forever close to our hearts.

The XVI ISBCW was organised in 11 scientific sessions, with 75 oral presentations and 100 posters by 156 participants from 19 countries and 64 institutions from all over the world. Given the post pandemic global economy and sanitary travel restrictions, these numbers are quite satisfactory. We had the highest percentage of female attendees ever (45%) while the percentage of first timers remained quite similar to previous meetings. The countries with the highest representation were, in order, Argentina, the United States of America and South Africa.



The meeting took place amidst a very relaxed and friendly atmosphere that stimulated the free exchange of ideas and fruitful discussions during both oral and poster sessions. Keynote speakers did a wonderful job at laying the foundations of each session, most speakers kept to their allotted time, making the job of moderators very easy. All in all, the scientific programme was completed as planned. Social gatherings were animated and good-spirited, with members of different delegations getting to know each other or meeting again in person after a long time. It was obvious that everyone was happy to be together again after the isolation imposed by the pandemic.

We are very proud of having hosted this edition of the ISBCW in Argentina and sincerely hope everyone enjoyed it as much as we did. We would like to thank all attendees for



coming, and for their contributions, as well as our sponsors, who helped us keep the very high-quality standards set by previous meetings. We will keep our shared time in Iguazú as one of our most cherished memories.

### **Organising committee**

**Cabrera Walsh, Guillermo** (Chair). FuEDEI – Fundación para el Estudio de Especies Invasivas, AR.

**Anderson, Freda** (Vice-chair). CERZOS – Centro Recursos Naturales Renovables De La Zona Semiárida, CONICET-UNS, AR.

**Mc Kay, Fernando**. FuEDEI – Fundación para el Estudio de Especies Invasivas, AR.

**Sosa, Alejandro**. FuEDEI – Fundación para el Estudio de Especies Invasivas, AR.

**Hernández, M. Cristina**. FuEDEI – Fundación para el Estudio de Especies Invasivas, AR.

**Faltlhauser, Ana C.** FuEDEI – Fundación para el Estudio de Especies Invasivas, AR.

**Peard, Arabella**. FuEDEI – Fundación para el Estudio de Especies Invasivas, AR.

**Seal, Emilia**. FuEDEI – Fundación para el Estudio de Especies Invasivas, AR.

**Oleiro, Marina**. FuEDEI – Fundación para el Estudio de Especies Invasivas, AR.

### **Scientific committee**

**Anderson, Freda**. CERZOS, Centro Recursos Zona Semiarida, CONICET-UNS, AR.

**Barreto, Robert**. UFV, Universidade Federal de Viçosa, BR.

**Barton, Jane**. Contractor to Manaaki Whenua - Landcare Research, NZ.

**Bourdôt, Graeme W.** AgResearch, NZ.

**Cabrera Walsh, Guillermo**. FuEDEI, Fund. para el Estudio de Especies Invasivas, AR.

**Coetzee, Julie**. CBC, Centre for Biological Control, SA.

**Díaz, Rodrigo**. LSU, Louisiana State University, USA.

**Djeddour, Djami**. CABI, Centre for Agriculture and Bioscience International, UK.

**Hernández, M. Cristina**. FuEDEI, Fund. para el Estudio de Especies Invasivas, AR.

**Hight, Stephen**. Insects and Associates LLC, USA.

**Hill, Martin**. CBC, Centre for Biological Control, SA.

**Kumaran, Nagalingam**. CSIRO, Commonwealth Sc. and Indust. Research Org., AU.

**Kwong, Raelene**. DPI VICTORIA, AU.

**Mc Kay, Fernando**. FuEDEI, Fund. para el Estudio de Especies Invasivas, AR.

**Montemayor, Sara**. UNLP, Univ. de La Plata, AR.

**Patterson, Iain**. CBC, Centre for Biological Control, SA.

**Seier, Marion**. CABI, Centre for Agriculture and Bioscience International, UK.

**Shaw, Richard**. CABI, Centre for Agriculture and Bioscience International, UK.

**Smith, Melissa**. USDA-ARS, Invasive Plant Research Lab., Fort Lauderdale, Fl., USA

**Sosa, Alejandro**. FuEDEI, Fund. para el Estudio de Especies Invasivas, AR.

**Stiers, Iris**. VUB, Vrije Universiteit Brussel, BE.

**Vitorino, Marcelo**. FURB, Fundação Universidade Regional de Blumenau, BR

### **Local organisation**

Amerian Portal del Iguazú Hotel, Iguazú events and conventions centre  
Cuenca del Plata  
María Laura Romero Mirci



## **Symposium Production**

Cabrera Walsh, Anderson, Mc Kay, Sosa, Hernández and Faltlhauser managed general organisation. Faltlhauser was in charge of the general coordination and communication in social networks. Diluvio Comunicación and Hernández developed the logo. Diluvio Comunicación and Faltlhauser developed the web site. Hernández and Sosa handled abstracts. The scientific committee reviewed all abstracts and voted the awards. Hernández and Anderson did the technical editing and digital composition of the Book of Abstracts and Proceedings. Faltlhauser and Oleiro were in charge of the selection of gifts. Peard and Seal were in charge of the economic administration.

## **Acknowledgments**

Special thanks are due to the moderators for managing their sessions and to all members of the scientific committee for reviewing submitted abstracts and selecting oral presentations. We warmly acknowledge Camila Amarilla from Amerian hotel and Conventions Centre, Yazu Utzugi from Cuenca del Plata, and María Laura Romero Mirci for an impeccable assistance. Thanks to Emanuel Grassi, from Instituto Misionero de Biodiversidad, for local contacts. We are also very grateful to all the people that helped in publicising the event and shared their ideas and advice to help in the organisation. Finally, we are greatly indebted to all attendees from all over the world who trusted us and contributed with their presence, good work and high spirits to make this meeting a huge success.

## **Symposium sponsors**

The following Institutions contributed to the realization of the XVI ISBCW by funding or supporting student participation:

- United State Department of Agriculture – Agricultural Research Service, USDA-ARS.
- Fundación para el Estudio de Especies Invasivas, FuEDEI, Argentina.
- Commonwealth Scientific and Industrial Research Organisation, CSIRO, Australia.
- Agencia Nacional de Promoción Científica de la Investigación, el Desarrollo Tecnológico y la Innovación, Argentina.
- Ministerio de Ciencia Tecnología e Innovación- MinCTI, Argentina.
- Manaaki Whenua - Landcare Research, New Zealand.
- Centre for Biological Control- CBC, South Africa.
- Department of Primary Industries, New South Wales, Australia.
- Centre for Agricultural Bioscience International- CABI, UK and CH.
- Grupo AVINEA, Argentina.
- International Organisation for Biological Control – Global IOBC, supported the participation of 10 young researchers.

## **Venue of the Next ISBCW**

The XVII ISBCW will take place in Paihia, Bay of Islands, New Zealand's North Island in 2026 and will be organised by Manaaki Whenua – Landcare Research.

***Nassella trichotoma* (Poales: Poaceae) crown and root rot diseases in Argentina revisited: preliminary results**

Angeletti Bárbara<sup>1,2</sup>, Daddario Juan F.F.<sup>1,2</sup>, Loydi Alejandro<sup>1,2</sup> & Anderson Freda E.<sup>1</sup>

<sup>1</sup>CERZOS-CONICET Bahía Blanca, Buenos Aires, Argentina.

<sup>2</sup>Universidad Nacional del Sur, Bahía Blanca, Buenos Aires, Argentina.

E-mail address: bangeletti@cerzos-conicet.gob.ar

*Nassella trichotoma*, a grass species native to South America, has become a noxious weed in many regions of the world. In Australia and New Zealand, it has been targeted for classical biological control. Initial studies to identify potential fungal biocontrol agents started in Argentina in 1999 and ended three years later having discounted a rust and a smut fungus. Work on a crown rot associated with tussock die-back symptoms, and believed to be caused by a corticioid fungus at the time, was less detailed, and abandoned with inconclusive results. Almost 20 years later the problem is being revisited, with research focused on plants with die-back symptoms. New surveys have been conducted and diseased plants collected and studied in the laboratory. Surprisingly, five different corticioid fungi were found associated with the crowns and roots of declining tussocks. Several species of *Fusarium*, belonging to four different species complexes, were also isolated from crowns and/or roots of declining tussocks, while *Bipolaris* sp. was isolated from a seed of *N. trichotoma* recovered from a burial trial within a patch of diseased plants. Artificial inoculations with all the obtained isolates were carried out on healthy *N. trichotoma* plantlets. After many failed inoculation experiments, it was concluded that the corticioid fungi were not acting as pathogens but rather as secondary colonisers on senescing plant material. In contrast, all the plantlets inoculated with *Bipolaris* sp. and *Fusarium* spp. developed some degree of crown and root discoloration and rot, and the inoculated fungi were all re-isolated from affected tissues. Because these pathogens were also found associated with seeds recovered from the soil around diseased plants, healthy seeds were inoculated with *Bipolaris* sp. and one *Fusarium* isolate in a separate experiment, causing a great decrease in their germination compared with non-inoculated ones. Surviving seedlings were less vigorous than those grown from healthy seeds. Overall, although all the tested isolates (other than the corticioid ones) were shown to cause some level of disease, none of them produced the die-back symptoms observed in the field. It is now presumed those are caused by more than one of these pathogens acting together in an additive or synergistic manner. At least two of them have been shown to have an impact on plant recruitment processes. More work is needed to clarify the etiology of this disease in Argentina and to fully assess the suitability of the involved fungi as biocontrol agents.