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● **message from the President**

The latter half of 2007 was a particularly busy one with respect to the activities of our Society, with one workshop taking place and two meetings in which we sponsored symposia and speakers. I had the pleasure of attending two of these events. The second ISSS Workshop on Seed Ecology was held in Perth, Western Australia in September, and was a resounding success. Many thanks to Kingsley Dixon and his colleagues for their hard work in bringing this meeting to fruition. As well as memorable scientific and social sessions, I will remember this meeting as having the wettest field trip that I have ever been on (see right); even wetter than the one that occurred during our last conference in Brisbane. If you want to break a drought, invite the ISSS to hold a meeting in your area! The next Seed Ecology workshop will be organized by Susan Meyer, in Utah in 2010. Thus both of our major workshops that were held this year will also take place three years hence.



I was also able to attend, in November, the Pre-harvest Sprouting in Cereals symposium in Mendoza, Argentina, expertly organized by Roberto Benech-Arnold and colleagues. The relatively lower registration at the meeting enabled this to take on a workshop format, and many useful discussions

were conducted on what is an important practical issue. Consistent with the Society-related field-trips, the organized visit to a winery for dinner, and to taste the excellent Malbec wines produced in the region, was accompanied by a spectacular thunderstorm and downpour!

Also in September, a symposium on Translational Seed Biology, hosted by the Dept. of Plant Sciences at the University of California at Davis, and in which Kent Bradford played an organizational role. This was very well attended; the Society sponsored a symposium on Desiccation, Tolerance and Longevity, in which several of our members made invited presentations. Although I was not able to be present, several of our Executive members and Regional Representatives were, and their reports on the meeting were very positive and enthusiastic.

Other workshops and symposia are under discussion at the moment, including a possible one in association with the International Society for Horticultural Science in the second half of 2009, in Spain. But before that will be our next ISSS conference, in Olsztyn, Poland in July of 2008. Arrangements for that are well underway, and a call has gone out for abstracts, to be submitted by the end of January. Details are on the conference website, which can be located via our own.

As we move into the New Year, I extend my thanks again to the great support I have had from the Executive during this past twelve months; this has helped us become a more effective and active Society. In addition, the continuing support and enthusiasm of our membership is important in maintaining our viability.....please encourage your colleagues to join with us in developing a strong community of seed biologists. And of course I look forward to meeting many of you in Olsztyn.

J. Derek Bewley

● What do you do?

It is hard to define what you do when you are a seed scientist. When you answer, most people think that you are a 'sea scientist' (marine biologist) and are thoroughly confused when you tell them that the field work you do is "in the desert". After repeatedly engaging in such conversations for the first year of her PhD, Jitka Kochanek now defines herself as a 'conservation ecologist'.

Jitka's PhD journey began in 2004 with a trip to the Millennium Seed Bank (MSB), Kew Gardens, in the United Kingdom, which is home to a bomb-proof underground seed storage facility and to the MSB Project, an international project which aims to collect 10 % of the world's indigenous flora as seeds for conservation purposes and funds native plant and seed research. The task she was given was to identify whether environmental effects can influence seed longevity of wild species. Characteristic seed longevities exist for many crop species, but the degree to which this varies between populations of wild species was previously unknown.

Jitka's results have revealed that characteristic seed longevities do exist for wild species, but in some of these species environment plays a major role in modifying the mean seed longevity of the population and thus longevities can change between populations. The seed longevities of different species are sensitive to different environmental stresses and the data has shown, when contrasting both temperature and drought sensitive species, that it is the environment in which the parent has grown that is modifying the seed longevity of its offspring. The work has focussed on nine species from the Campanulaceae, Asteraceae and Plantaginaceae families.

These research findings have taken Jitka to conferences around the world and she has won two prizes for best oral presentations during 2007. In May she won the best oral presentation for two talks she gave at the International Seed Testing Association's conference in Brazil. In September, she again was awarded the best oral presentation at the International Seed Ecology conference held in

Perth. Jitka's work is particularly relevant in the context of climate change, as ecologists grapple with understanding how individual species and populations will be affected by the novel environments and extremes that are predicted or have already begun.

Jitka is currently in the writing-up phase of her PhD and aims to finish in early 2008. She is now comfortable with being termed a 'conservation ecologist' and hopes to continue down the path of ecological scientific discovery. Her PhD research and scholarship have been funded by the University of Queensland and the MSBP. She is under the supervision of Associate Professor Steve Adkins (SLCFS, UQ), Dr Kathryn Steadman (School of Pharmacy, UQ) and Dr Robin Probert (MSB, UK). Jitka completed a degree in Agricultural Science at UQ, St Lucia in 2002 with first class Honours and worked for a year at the Centre for Native Floriculture in Gatton (2003-2004).

Steve Adkins



Jitka Kochanek at the Seed Ecology II meeting

● meeting report

2007. September 9-13. Seed Ecology II. Seeds and the Environment. Perth, Australia.

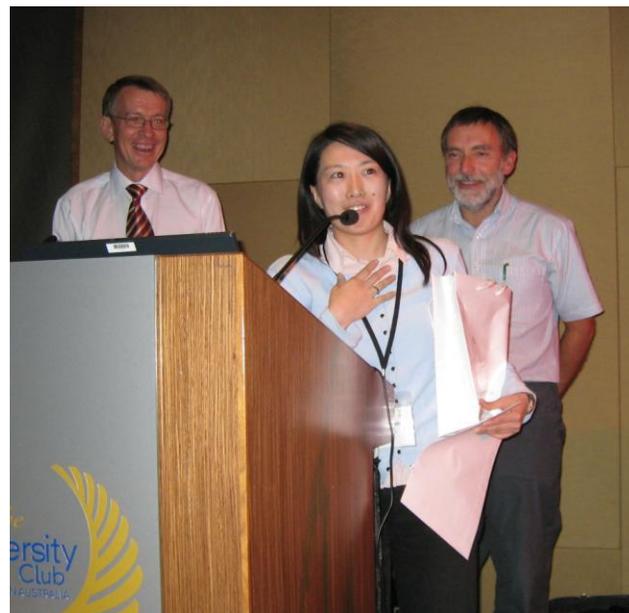
Following the success of the inaugural seed ecology conference in Rhodes in 2004, Perth was selected to host the second meeting in the global biodiversity hotspot of south west Western Australia. The host organization, Kings Park and Botanic Garden, the State botanic garden for Western Australia, provided sponsorship and organisational support including a mid-conference supper evening when delegates were able to visit the new conservation research laboratories, including state of the art seed science facilities.

The conference was a great success with 167 delegates from 27 countries, including 32 student delegates, enjoying three days of conference sessions and a 3-day pre-conference field trip to the biodiverse heathlands of the South West Australian Floristic Region. Two mid-week conference field trips – one to mini-hotspots in the Perth metropolitan region and the second to major restoration programs operated by Alcoa World Alumina – provided all delegates with first-hand exposure to the biodiverse plant communities found in Western Australia.

The conference themes reflected major emphases in seed ecology science that ranged from germination and dormancy research, dispersal ecology and seed bank dynamics. Regions from across the globe were represented, including ten countries with global biodiversity hotspot conservation issues. Two additional themes reflecting contemporary issues in seed ecology that received considerable attention, particularly in the face of global climate change, were applied seed biology and conservation and restoration seed science.

The oral sessions were well supported by 67 poster sessions again built around the main themes for the meeting.

A highlight of the meeting was the conference dinner held in The University Club. A feature of the evening was the presentation of student awards for excellence in seed science research. Highly commended oral presentations included Aaron Shiels for his presentation entitled “Fruit/seed vulnerability to introduced rats in Hawaiian forest” and Majid Iravani for “The bigger the better...? The importance of different sized animal species (red deer; narrow-headed ants) for seed dispersal in a subalpine grassland”. Best oral presentation went to Jitka Kochanek for her talk entitled “The effects of provenance and plant growth environment on seed longevity of the genus *Wahlenbergia* in Australia” (see “What do you do?” for more about Jitka). Best student poster was presented to Miki Yanazaki for “Distance- and density- dependent seed mortality caused by several fungal pathogens in temperate forest” (pictured right).



Significant sponsorship was provided in support of the meeting by Alcoa World Alumina, Rocla Quarry Products, Millennium Seed Bank and the ISSS. The success of the meeting was capped by a presentation by Susan Meyers promoting Utah in the US as the host for Seed Ecology II in 2010.

Ken Thompson and Kingsley Dixon



Attendees of the Seed Ecology II meeting in Perth, Western Australia, September 2007.

2007. September 17-21. Translational Seed Biology: From Model Systems to Crop Improvement. University of California, Davis, USA.

The Department of Plant Sciences and the Seed Biotechnology Center at the University of California, Davis hosted this major international symposium on Translational Seed Biology: From Model Systems to Crop Improvement. Over 275 scientists and students from academic institutions and seed companies from around the world participated in three days of meetings and discussions on the latest advances in seed biology and how these are being translated into improved products for agriculture and nutrition.

New approaches to increase seed size and number and therefore increase crop yields were described. Enhancements of seed nutritional content by modification of seed protein, carbohydrate, oil, vitamin and micronutrient composition are in the research and development pipeline. Ways to improve seed longevity were described that will enable better storage of plant genetic resources. Recent research on the regulation of seed germination, dormancy and vigor will lead to better seed quality for planting and new strategies for weed management. New techniques were described that can reduce costs and increase the reliability of production of seeds for planting.

The ISSS sponsored a session at the symposium on Desiccation Tolerance, Longevity and Vigor chaired by Bruce Downie and featuring Christina Walters (*pictured right*), Olivier Leprince, Christophe Bailly, Josh Armstrong, Bill Finch-Savage, and Juan Jordano. The first of an annual series of Plant Sciences Symposia sponsored in part by the UC Davis Department of Plant Sciences and the College of Agricultural and Environmental Sciences, the symposium received further financial support from the US National Science Foundation, the USDA National Research Initiative, the UC Discovery Program, and a number of corporate sponsors. The symposium was also supported by members of CSREES Regional Research Project W-1168 representing a number of land grant institutions in the U.S. The program and abstracts of 30 invited presentations and 65 posters displayed at the symposium can be viewed at www.plantsciences.ucdavis.edu/seedsymposium2007.



Kent Bradford

2007. November 5-9. 11th International Symposium on Preharvest Sprouting in Cereals. Mendoza, Argentina.

This was the 11th International Symposium on Pre-Harvest Sprouting in Cereals; previous meetings were held in Germany (1998), SouthAfrica (2001) and England (2004). The 11th Symposium was the first one sponsored by the International Society for Seed Science (ISSS). Other sponsors were the National Research Council (CONICET), the ANPCyT, University of Buenos Aires, Monsanto Argentina and Cargill Argentina.

Around 60 delegates from different countries attended the symposium, which was divided into five sessions: i) Agronomic Management, ii) Physiology of Dormancy and Germination, iii) Genetics and Breeding, iv) Molecular Biology of Dormancy and Germination, and v) Post-Harvest Management. All papers submitted were presented orally (no poster session was held). Each session was introduced by a keynote (invited) speaker. Invited talks were presented by Dr Daniel Miralles (University of Buenos Aires, session i), Dr Peter Chandler (CSIRO, Canberra, Australia, session ii), (ISSS Lecture) Dr Michael Foley (USDA, Fargo, USA, session iii), Prof Michael Holdsworth (University of Nottingham, UK, session iv) and Dr Robert Hill (University of Manitoba, Canada, session v).

The symposium format was designed in order to cover all different aspects of the pre-harvest sprouting problem in cereals. Overall, discussion was very much encouraged by the chairmen and, consequently, there was good participation from attendees.

The 12th International Symposium on Pre-Harvest Sprouting in Cereals will be organized by Dr Joseph Nyachiro in Alberta, Canada.



The Argentinean team. Front row (left to right): Guillermina Mendiondo, Roberto Benech-Arnold, Veronica Rodriguez, Veronica Arana, Gaby Auge and Gaspar Estrada. Back row (left to right): Nacho Alzueta, Joaquin Bercovich and Beto Micheloud.

● meetings and workshops

Numerous upcoming meetings are being sponsored in whole or in part by the ISSS. More information will be posted on the meetings page of the ISSS website as it becomes available.

2008. July 6-11. 9th ISSS Conference on Seed Biology. Olsztyn, Poland. Keep visiting www.seedbio2008.pl/ for up-to-date information. On line abstract submission form is available on the conference web site: http://www.seedbio2008.pl/index1.php?id=submit_abstract. You can also find there the instruction of abstract preparation (<http://www.seedbio2008.pl/index1.php?id=papers>). Please remember that deadline for submission of abstracts is **January 31st, 2008.**

Other meetings of interest to ISSS members

2008. May 18-20. Sleeping Beauties – dormancy and resistance in harsh environments – molecular, proteomic, and metabolomic aspects. A meeting focused on bringing together scientists studying these phenomena in various organisms. We will have people from fields such as cyanobacteria, plant seeds, animal cysts and resting stages, hibernation, etc. For detailed information go to <http://www.gmm.gu.se/SB> and look under "Events and News".

2008. August 17-22. XVI Congress of the Federation of European Societies of Plant Biology (FESPB) Tampere, Finland. Invited speakers: **Phil Benfey** (Duke University, USA), **Paul Christou** (Universitat de Lleida, Spain), **Caroline Dean** (John Innes Centre, UK), **Xinnian Dong** (Duke University, USA), **Joseph R. Ecker** (Salk Institute for Biological Studies, USA), **Ed Farmer** (Université de Lausanne, Switzerland), **Jirí Friml** (University of Göttingen, Germany), **Hiroo Fukuda** (University of Tokyo, Japan), **Jonathan Jones** (John Innes Centre, UK), **Olaf Kruse** (University of Bielefeld, Germany), **Dario Leister** (Ludwig-Maximilians-Universität, Germany), **Ove Nilsson** (Umeå Plant Science Center, Sweden), **Salomé Prat** (CNB-CSIC, Spain), **Outi Savolainen** (University of Oulu, Finland), **Julian Schroeder** (University of California, USA), **Alison Smith** (John Innes Centre, UK), **Jens Stougaard** (University of Aarhus, Denmark), **Tai-Ping Sun** (Duke University, USA), **Jan Traas** (ENS-Lyon, France), **Yves Van de Peer** (Ghent University, Belgium), **Jian-Kang Zhu** (University of California, USA). More information: <http://www.fespb2008.org/>

ISTA Workshops in 2008

April 07-11. Seed Health Testing Workshop. Pretoria, South Africa. For further details or to register please click on the following link <https://www.seedtest.org/stream/nl-l---1--%401eebcaa21736--68.html>

April 14-18. Seed Health Symposium. Berg en Dal, Kruger National Park, South Africa. For further details click on the following link <https://www.seedtest.org/stream/nl-l---1--%401eebcaa21736--69.za/conferences/ielc/>

April 15-18. Seed Vigour. Bologna, Italy

April 21-25. Species & Variety Testing / Verification. Freising-Munich, Germany.

June 30-July 04. Seed Moisture, Germination & Vigour. Nakuru, Kenya.

July 28-31. Germination & Tetrazolium Test on Tropical and SubTropical Seeds. Córdoba, Argentina.

September 22-26. Seminar on Statistics in Seed Testing. Roelofarendsveen, The Netherlands.

For detailed information or to register click on the following link and select the event of interest: <https://www.seedtest.org/stream/nl-l---1--%401eebcaa21736--60.html>

news from our representatives around the world

Please pass your news on to your regional representative. Find them at: <http://www.SeedSciSoc.org/execcomm.html>

● publications

Seeds: Biology, Development and Ecology edited by Adkins, Ashmore and Navie was published by CAB International in March 2007 and has now been distributed to all full registrants of the 8th ISSS Workshop on Seeds held in Brisbane in 2005.

Remember: members of the ISSS receive a 25% discount on all book titles published by CAB International. Please identify yourself as an ISSS member and quote the code AAD when ordering online, by email, or by phone. North American members should order through Oxford University Press to obtain the ISSS discount.

● reminder to renew your membership

ISSS Secretary Karen Koster reports that renewal notices have been sent to those of you whose memberships expired at the end of 2007. If you have not yet done so, please send your renewal forms promptly to ISSS Treasurer Ken Thompson, who will process your payments. Ken would be most grateful if you would type your information into the form before sending it on to him, as it ensures that we have your contact information correct. Further reminders will be sent to individuals at the end of January. Our “four years membership for the price of three” offer is still in effect, so be sure to take advantage of this offer. Not only does it save you money, it also saves you the trouble of submitting membership forms every year!

● ISSS notice of motion for the 2008 annual general meeting

The following is a Notice of Motion, put forward by the Executive Committee, to be discussed at the AGM to be held during the 9th ISSS Conference on Seed Biology, in Olsztyn, Poland, July 2008. A ‘trial run’ of these awards, using the noted criteria will take place at these meetings.

Awards and Presentations at the Triennial Conference

Student Presentation Awards

The ISSS offers Awards to undergraduate and graduate students for the best Oral and best Poster presentations of their research work.

- i. The Prize for the best Oral presentation is called the Daniel Côme Prize, and that for the best Poster presentation is called the President’s Prize. The value of each Prize is £100, which will be awarded along with a certificate. Up to two presentations may also be considered as worthy of an ‘Honourable Mention’ in each category, and be awarded a certificate in recognition of this.
- ii. To be considered for either Prize the student must be a member of the ISSS and be registered in a *bona-fide* undergraduate or graduate programme at the time of submission of the Abstract for the presentation.
- iii. The presentation may be co-authored. The thesis or project advisor (or supervisor) must attest in writing that the presented work is that of the student while under her/his direction. At the time of submission of the Abstract, the student must indicate that s/he wishes to enter the competition, and the advisor (supervisor) must indicate eligibility with respect to (ii). An appropriate form will be made available at the time of the call for Abstracts for the Conference (**Appendix I**).

- iv. For each Prize there will be an Awards Committee which will consist of four or five full members of the ISSS chosen by the President-elect or her/his designate. Where possible, the Committees will be composed of researchers whose expertise covers those areas of seed research that are to be presented by the competitors. The President-elect will receive a copy of the Abstracts of the competitor's presentations in advance of the Conference. The Committees will judge the students on the basis of the quality of the research, its novelty and scientific merit, the quality of the presentation and the student's ability to handle questions (where possible).
- v. The prizes and commendations will be made during the closing ceremony of the Conference.

Appendix I



To be submitted along with the Abstract by students entering the competition for best Oral (Daniel Côme Prize) or Poster (President’s Prize) Presentation.

Certification of Student Enrollment in a Degree Program, and Participation in the Research Program

This is to certify that the following student,, who has entered the Society competition for the best Oral/Poster (*circle appropriate one*) presentation at the upcoming ISSS Conference on Seeds is currently registered in the following degree program..... in the Department of.....at the University of

I am the advisor/supervisor of the student and attest that the research was conducted by the student while under my supervision.

***Name and signature
Address***

***Date
Fax
e-mail***